Nonprofit Hospitals Regulatory and Social Requirements for Improving Population Health

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A Dissertation Submitted to the Faculty of

The School of Health Professions

in Partial Fulfillment of the Requirements

for the Degree of Doctor of Philosophy in Population Health

in the Bouvé College of Health Sciences Department of Health Sciences

Northeastern University

Boston, MA

March 2020
Acknowledgements

I’d like to send heartfelt thanks to my advisors: Gary Young, Jean McGuire, Daniel Kim, and Simone Singh. Your invaluable advice, countless of rounds of edits, and endless reminders to hit my timelines were greatly appreciated. I am blessed to have such amazing mentors.

I’d also like to acknowledge John Griffith and Justin Manjourides for providing statistical input and guidance as well as Irina Todorova for her expertise on qualitative methods.

Thank you to my mother, Lorraine Rosen, and sister, Dianna Jackson, for the help and support you provided throughout my program. Thank you to Elizabeth Cramer and Jean McGuire for believing in me. Thank you to my friends. I could not have done this without you.

Most importantly, I dedicate this work to Adrienne and Ben. Your sacrifices while I embarked on this journey were almost too much to ask. I love you with all my heart and I hope I’ve made you proud.
Dissertation Abstract

The Patient Protection and Affordable Care Act (ACA) of 2010 significantly broadened the requirements for hospitals to think beyond community benefits as only charity care and toward playing a larger role in community health by requiring hospitals to conduct both community health needs assessments (CHNAs) and develop plans to meet identified needs. Beyond the ACA, there is an awareness that greater collaboration is needed between the health care delivery and public health sectors. Study 1 used a national sample of nonprofit hospitals to assess CHNA implementation activities and to determine whether hospitals reporting more activity spent more on community benefits. Study 2 sought to understand whether collaborative action between local health departments (LHDs) and nonprofit hospitals was associated with healthier self-reported behaviors. Social capital was tested as a possible effect modifier. Study 3 entailed a qualitative investigation of nonprofit hospitals’ efforts to comply with community benefit regulations.

In Study 1, hospitals that were part of a health system, located in an urban area, and had an accountable care organization (ACO) were more likely to report more progress. A significant and positive association existed between hospitals reporting the highest level of progress and spending on community health improvement activities. In Study 2, significant and positive associations were found between LHD–hospital collaborative action and risk behaviors, healthy nutrition/lifestyle behaviors, not smoking, eating vegetables daily, and vigorous exercise. Social capital was found to modify some of these relationships. In Study 3, community benefit departments did not have a consistent reporting structure. Eight of ten hospitals (80%) had a full-time community benefit administrator (CBA). CBAs reported three overarching barriers: data
availability, evaluation challenges, and resource constraints. In understanding their role within community benefits at a broad level, CBAs often felt caught in a state of uncertainty.

This dissertation offers three separate yet related papers on nonprofit hospital community benefit policies. While progress is being made, there remains a long way to go. Clarifying expectations for nonprofit hospitals seeking to impact social determinants of health is essential. Stronger oversight and enforcement are also needed.
# Contents

Dissertation Abstract ............................................................................................................................................... ii  
List of Tables ......................................................................................................................................................... vi  
List of Figures ........................................................................................................................................................ vii  
Abbreviations ........................................................................................................................................................ viii  
Chapter One: Introduction ................................................................................................................................. 1  
  Federal Policy Before the Affordable Care Act ............................................................................................... 3  
  State and Local Policies ................................................................................................................................ 4  
  Section 9007 of the Affordable Care Act ........................................................................................................ 5  
  Community Benefit Research ......................................................................................................................... 7  
  Conceptual Frameworks .................................................................................................................................. 9  
  Dissertation Overview ..................................................................................................................................... 12  
  Innovation/Contribution ................................................................................................................................. 13  
  References ....................................................................................................................................................... 14  
  Supplemental Appendix A ............................................................................................................................... 24  
Chapter Two: The Progress of US Hospitals in Addressing Community Health Needs ................................. 30  
  Introduction ...................................................................................................................................................... 30  
  Methods .......................................................................................................................................................... 32  
  Results ............................................................................................................................................................ 37  
  Discussion ....................................................................................................................................................... 38  
  Limitations ...................................................................................................................................................... 41  
  Public Health Importance ............................................................................................................................... 42  
  References ....................................................................................................................................................... 43  
Chapter Three: Joining Forces—Does Collaborative Action Between Local Health Departments and Nonprofit Hospitals Help Foster Healthy Behaviors in Communities? ........................................... 50  
  Introduction ...................................................................................................................................................... 50  
  Conceptual Framework ................................................................................................................................. 52  
  Methods .......................................................................................................................................................... 54  
  Results ............................................................................................................................................................ 58  
  Discussion ....................................................................................................................................................... 60  
  Limitations ...................................................................................................................................................... 63  
  Conclusions ...................................................................................................................................................... 65  
  References ....................................................................................................................................................... 66
Chapter Four: Hospitals and Community Benefit Requirements: Perspectives of Community Benefit Administrators in Massachusetts ................................................................. 77
  Introduction ........................................................................................................................................... 77
  Research Aims ........................................................................................................................................ 80
  Theoretical Framework ........................................................................................................................... 81
  Methods .................................................................................................................................................. 82
  Findings .................................................................................................................................................. 84
  Discussion ............................................................................................................................................... 97
  Limitations ............................................................................................................................................ 101
  Implications for Policy Makers ............................................................................................................... 102
  Conclusion ............................................................................................................................................ 104
  References ............................................................................................................................................. 105

Chapter Five: Conclusion ......................................................................................................................... 113
  The Problem .......................................................................................................................................... 113
  Research Findings .................................................................................................................................. 114
  Conclusion ............................................................................................................................................ 117
  Future Research .................................................................................................................................... 120
  References ............................................................................................................................................. 122
List of Tables

Table 2.1. Descriptive Statistics of Study Hospitals.................................................................44
Table 2.2. IRS Form 990 Schedule H Questions........................................................................45
Table 2.3. Hospital Spending on Community Benefits and CHNA Implementation Progress ....46
Table 2.4. CHNA Implementation Progress in relation to Hospital-level Institutional and Community Characteristics............................................................................................................48
Table 3.1. Comparison of included communities to full BRFSS Smart cohort.........................70
Table 3.2. Unstratified Odds Ratios of Individual-Level Health Behaviors...............................71
Table 3.3. Unstratified Odds Ratio of Individual-Level Healthy Lifestyle-Related Behaviors ....73
Table 4.1. Hospital Characteristics............................................................................................110
Table 4.2. Most Frequent Codes...............................................................................................111
Table 4.3. Community Benefit Leader and Community Benefit Department Characteristics ....112
List of Figures

Figure 1.1. National Health Expenditures as a Percent of Gross Domestic Product.................20
Figure 1.2. The Nation’s Health Dollar, Calendar Year 2017: Where It Came From...............21
Figure 1.3. The Nation’s Health Dollar, Calendar Year 2017: Where It Went.......................22
Figure 1.4. A Modified BARHII Public Health Framework for Reducing Health Inequities......23
Figure 1.5. Diagram of Regulations for Community Health in Massachusetts......................29
Figure 3.1. A Modified BARHII Public Health Framework for Reducing Health Inequities......75
Figure 3.2. A Map of Included Communities and their Social Capital Index Values...............76
Figure 4.1. Massachusetts Attorney General’s Community Benefit Principles, 2018..............108
Figure 4.2. Diagram of Federal and State Oversight of Massachusetts Nonprofit Hospitals Related to Community Health Improvement..........................................................109
Abbreviations

ACA – Affordable Care Act (2010)
AG – Attorney General
ARF – Area Health Resources Files (AHRF)
CB – Community Benefit
CBA – Community Benefit Administrator
CHNA – Community Health Needs Assessment
CMS – Center for Medicare and Medicaid Services
DoN – Determination of Need
HIP – The Health Impact Pyramid
IRS – Internal Revenue Service
LHD – Local health department
MDPH – Massachusetts Department of Public Health
NACCHO – National Association of County and City Health Officers, nonprofit organization
PILOT – Payment in Lieu of Taxes
SC – Social capital
SET – Social exchange theory
Chapter One: Introduction

“So do we not always find the diseases of the populace traceable to defects in society?”

Rudolf Virchow, 1848

The influence of social structures and environmental factors on health have long been recognized. Yet, it seems surprising that in the wealthiest country in the world, the health of the population often lags peer countries. In a recently published book, it was reported that the US spends more than any other country per capita on medical treatment, yet has worse indicators of population health, comparatively. The authors labeled this finding “The American Health Care Paradox.”

One of the postulated causes for the relatively poor health outcomes in the US compared to other similar industrialized countries is that our spending is skewed toward lower impact factors. The Health Impact Pyramid and County Health Rankings point to social, economic, and built environment factors as accounting for a greater influence on health outcomes than clinical factors. While there is no doubt that the market orientation of the US health care delivery system has provided many clinical and technological advances, those improvements only account for approximately 20% of overall health.

Interest in the social determinants of health in the United States is due, in part, to the significant increase in the cost of health care over the past few decades. As of 2017, the United States spent 17.9% of total gross domestic product (GDP) on health care compared to 5.0% in 1960 (see Figure 1.1). Many experts believe the US is on a trajectory to hit 20% in the next decade. A breakdown of where 2018 health care dollars originate and are spent can be seen in Figure 1.2 and Figure 1.3. During this period, however, public health has been underfunded.
Among health care providers, hospitals are a particularly important community asset because they possess knowledge, data, and human capital resources that are relevant for improving community health. Although over half of US hospitals are nonprofit, tax-exempt entities and therefore carry societal and governmental expectations to provide community benefits, hospitals have typically sought to meet this expectation by providing charity care to the poor or investing in health education and research activities. These efforts address important needs but do little to directly improve population health.

One simple solution may be to shift money from the health care delivery services sector to the public health sector. A more effective solution, however, may lay in fostering stronger collaboration between these two sectors. In general, local health departments (LHDs) have the mission to promote community health through programs aimed at disease prevention and emergency preparedness, whereas health care providers focus on patient-level treatment for acute and chronic health conditions. Gaps exist between these sectors due to differences in mission, language, and training of those in leadership positions. The professional work of clinicians has moved away from general practice toward specialization, often leaving little appreciation for population-based concepts of health. However, policy makers have recognized the trend toward increased hospital profitability due to specialization (among other reasons) on the one hand and low public health–hospital collaboration on the other. Updated guidelines and regulations to nudge hospitals toward greater transparency, increased activity in population health, and greater collaboration with public health are beginning to take effect. The following section offers a brief history of policies affecting nonprofit hospitals, including those that encourage them to take more of an active role in population health.
Federal Policy Before the Affordable Care Act

The first federal nonwartime income tax law, the Wilson–Gorman Tariff Act of 1894, exempted charitable organizations from paying federal taxes. The belief was that nonprofit organizations perform important functions that would otherwise require funding and support from the federal government. Hospitals were thought to improve the general welfare of the population and thus were deemed charitable institutions.

The following decades brought sequential efforts by the federal government to more specifically obligate the growing (and profitable) hospital industry to commit resources to clearly charitable purposes in exchange for the maintenance of their tax exemptions. The Hill–Burton Act of 1946 required hospitals to provide charity care to individuals who did not have the means to pay for their own care. In return, the government would provide grant funding. Future amendments to the Hill–Burton Act increased the enforcement of charity care provisions (1975) and established basic requirements that nonprofit hospitals would need to qualify for ongoing tax exemption (1979). In 1956, the Internal Revenue Services (IRS) more specifically tied charity care requirements to tax-exempt status eligibility and required such hospitals to provide “as much charity care” as the hospital could afford.

The landmark Medicare and Medicaid legislation of 1965 expanded insurance coverage for elders and the poor, and thus was expected to diminish the need for charity care required from hospitals. An IRS revenue ruling issued in 1969 refocused the tax exemption for nonprofit hospitals from solely providing charity care to providing “community benefits,” activities to promote health and wellness in the communities they serve. While this regulation added a focus on communities, uncompensated care remained a large component of hospitals’ community benefit spending.
Nearly forty years later, interest in nonprofit hospital community benefits arose from reports of aggressive hospital collections practices and perceptions of nonprofit hospitals not meeting the current charitable requirements. The Senate Finance Committee in the 2000s issued reports on the lack of transparency in nonprofit hospital community benefits provided under existing IRS regulations. The outcome of these reports was that hospitals would need to maintain records of community benefit spending (including charity care provided) and publicly report community benefit spending as a proportion of total expenses.

A Senate Finance Committee and Government Accountability Office (GAO) study on variations in nonprofit hospital spending showed that new definitions and data collection tools were required for the government to adequately oversee and enforce the current regulations. From this study, the IRS Form 990 for nonprofit entities was redesigned and an IRS Schedule (Schedule H) specifically for nonprofit hospitals was created. This tool was derived, in part, using the Catholic Health Association’s Community Benefit Standards and included metrics such as the number of persons receiving charity care and the percent of operating expenses dedicated to community benefits. The goal of the new Schedule H was to increase transparency, and the accompanying regulations included a penalty for not reporting—loss of tax-exempt status.

Parallel to federal government activities on nonprofit hospital community benefits, many states, including the Commonwealth of Massachusetts, were also actively drafting guidelines for nonprofit hospitals operating in their jurisdiction.

State and Local Policies

Although the Federal Government has long had regulations in place regarding hospital tax-exempt status and charity care, many states found that the lack of specific requirements made oversight difficult. State variation in Medicaid coverage and variations in population health
needs compelled state interest in assuring hospital commitment to their charity and community health obligations. Thus, states also sought to regulate nonprofit hospital community benefits.

In the absence of specific federal requirements for community benefits, some states have drafted more rigorous guidance, sometimes requiring nonprofit hospitals to certify their populations for community benefits, report the numbers of patients served, and account for the value of total community benefits. The depth and breadth of state regulations vary, but as of 2015, only five states require minimum threshold spending for community benefits. Additionally, there have been lawsuits filed by state and local governments against nonprofit hospitals for not providing adequate community benefits. In Massachusetts, nonprofit hospital community benefit regulations are overseen by the State Attorney General’s office.

Cities and municipalities may also partake in community health improvement efforts. In Massachusetts, the Commonwealth’s Department of Public Health, although not responsible for managing nonprofit hospital community benefits, mandates that hospitals requesting capital plan expansions include an assessment of community health in their request. The city of Boston requests tax-exempt hospitals make payments in lieu of property taxes. Overall, Massachusetts has a long history of being a leader in health policy, as the first state to draft community benefit regulations as well as the first state to attain nearly universal health care coverage. More detailed descriptions of the guidelines from the Massachusetts Attorney General, Massachusetts Determination of Need regulation, and the Boston PILOT program can be found in Appendix A.

Section 9007 of the Affordable Care Act

Because of ongoing compliance questions and a belief that expanded access to insurance would alter the ongoing need for charity care in the US, the drafters of the 2010 Affordable Care Act included three new requirements for federal tax-exempt hospitals regarding community
benefits: (a) perform community health needs assessments and develop implementation plans to address identified needs; (b) create and post financial assistance programs for patients needing financial assistance; and (c) comply with federal rules intended to limit aggressive charging, billing, and collection activities.\(^3\)

The community health needs assessment requirements under Section 9007 required nonprofit hospitals to perform a community health needs assessment (CHNA) at least once every three years. Similar to the Massachusetts regulations, a key objective of the CHNA provision was to encourage hospitals to gather input from the community as the hospital defined it, so long as that definition included vulnerable populations. Because the ACA did not offer a specific structure for nonprofit hospitals to follow, hospitals are given considerable latitude in deciding their own processes and programs related to community benefit programs.\(^4\) However, the ACA included two new compliance components for community benefits. First, hospitals are required to report the results of the CHNA, create an implementation plan to meet needs, and include a rationale for not meeting identified needs if not included in the implementation plan. Second, hospitals must submit audited financial statements in addition to Form 990, Schedule H. If hospitals do not comply, they are subject to an excise tax of $50,000 and loss of their tax-exempt status.\(^5\)

The Treasury Department, specifically the IRS, oversees enforcement of CHNA requirements. Although they may communicate with the Department of Health and Human Services in preparing reports of nonprofit hospital community benefit activities, it is unclear how equipped this organization is to effectively monitor community benefit activity outside of “checking the boxes.” Experts in the field of community health improvement have identified lack of expertise in public health as one flaw with the current oversight efforts at the federal
Due to the lack of specificity in the regulation, monitoring hospital compliance is a challenge.

An important aspect of Section 9007 was the requirement for nonprofit hospitals to work with public health experts in performing CHNAs. Specifically, to meet IRS section 501(r)(3), the instructions for Form 990, Schedule H state “CHNA must take into account input from persons who represent the broad interests of the community served by the hospital facility, including those with specialized knowledge or expertise in public health.”

**Community Benefit Research**

A review of tax-exempt hospital benefits using IRS data from 2009, prior to the ACA, revealed that hospitals, on average, spent 7.5% of their operating expenses on community benefits. Of this amount, 85% went to direct patient care benefits such as charity care, losses from Medicare and Medicaid, and unsubsidized hospital services, while only 5% of dollars spent went to community health improvement activities (defined as “activities or programs, subsidized by the health care organization, carried out or supported for the express purpose of improving community health. Such services do not generate inpatient or outpatient bills, although there may be a nominal patient fee or sliding scale fee for these services.”). Rosenbaum recently reported that the value of the nonprofit hospital tax exemption was $24.6 billion in 2011, of which Massachusetts ranked the highest for overall size of tax benefits per hospital.

Since the ACA, several small studies have been conducted to assess how hospitals are progressing in meeting the federal CHNA provision. Some have focused on CHNA-related collaboration as a key aspect of hospital progress in CHNA implementation. For instance, Beatty et al. reviewed hospitals’ publicly available CHNA reports in Missouri and surveyed staff at LHDs to assess LHDs’ involvement in the conduct of hospital-initiated CHNAs. They found
that communication between hospitals and LHDs regarding CHNAs was common, but that collaboration, the highest level of action defined within the study, was rare.\textsuperscript{15} Similarly, Pennel et al. reviewed CHNA reports in Texas and found strong collaborations to be an essential component in CHNA quality.\textsuperscript{45} The Public Health Institute found that many hospitals have been slow to take definitive action to address the needs identified from CHNAs.\textsuperscript{29,46} Study 1 of this dissertation sought to understand, from a national sample of nonprofit hospitals reporting to the IRS, the level of progress on CHNA implementation.

Becker and others described that performing community health needs assessments in rural areas was more complex than in urban areas because residents in rural communities tended to be skeptical and untrusting of outsiders, suffered from group think, and were often reluctant to speak negatively about organizations in their community (such as a local hospital).\textsuperscript{47,48} Hogg et al. studied how the participation of local hospitals influenced the level of public health activities from 1998 to 2012.\textsuperscript{49} They found that hospital participation varied, but when it occurred, it positively affected the amount of public health services available in a community.\textsuperscript{49} In their analysis, hospitals collaborated most frequently on needs assessments and policy advocacy but less on health programs.\textsuperscript{49}

Few studies have attempted to link hospital or collaborative activities to health outcomes. Recently, Mays et al. showed that greater collaboration among government public health agencies, hospitals, primary care providers, health insurers, employers, schools, and other community and faith-based organizations was associated with lower county-level mortality rates.\textsuperscript{50} There have been no published research studies assessing the relationships between LHD–hospital collaborative action and individual-level health behaviors.\textsuperscript{50} Study 2 of this dissertation sought to fill in this gap.
A recently published qualitative study of nonprofit hospitals across the US found that the community benefits process, from the hospital perspective, involved seven distinct stages.\textsuperscript{51} However, the authors concluded that only two of the stages were found to be standardized across hospitals (owing mostly to federal regulations).\textsuperscript{51} Nonprofit hospitals were therefore left to determine how to implement more than half of these processes on their own.\textsuperscript{51} A 2016 review of Massachusetts community benefit activities found that hospitals showed “little evidence of strategic thinking on health status improvement.”\textsuperscript{52} Study 3 of this dissertation sought to understand the perspectives of those on the frontlines of nonprofit hospital community benefits in Massachusetts.

**Conceptual Frameworks**

Conceptual frameworks for this dissertation vary by paper. Study 1 and Study 2 were informed by social exchange theory (SET). SET describes voluntary activity between organizations for the realization of their respective goals or objectives.\textsuperscript{53} Social exchange theory informs us that organizational actors, whom often provide a specific focus or function, seek out relationships with other organizations to procure necessary resources such as expertise, relationships, customers, or labor. If all elements necessary to each organization were in abundant supply and could be accessed without barrier, partnership between organizations would be nonexistent.\textsuperscript{53} Because this is not the case, organizations enter into an exchange relationship with another organization if resources are not available otherwise.\textsuperscript{53,54} The concept of local health department and hospital collaboration is directly informed by SET. Whether these two entities have overlapping goals and whether they have their own internal resources to meet those goals will drive whether they seek to collaborate. The ACA insinuated that hospitals should utilize the expertise of public health departments in meeting CHNA.\textsuperscript{42}
The working framework for Study 2 was adapted from the Bay Area Regional Health Inequities Initiative (BARHII, modified framework in Figure 1.4). BARHII is an innovative coalition of local public health departments in Northern California with the intent to “transform public health practice for the purposes of eliminating health inequities using a broad spectrum of approaches that create healthy communities.” The BARHII Framework was suitable for my work in that it recognized the importance of strategic partnerships between institutions. The framework also articulated that health behaviors are on the path to disease and mortality. Similar to the Community Health Rankings and Health Impact Pyramid, the BARHII Framework highlighted that social and environmental factors influence an individual’s potential health. Therefore, this framework offered a valuable perspective for assessing whether LHD–hospital collaborative action was associated with better health behaviors and, thus, better overall health for community residents.

The concept of social capital as a moderator of the relationship between LHD–hospital collaboration and healthy behaviors was also assessed as part of Study 2. There is a sizable body of literature on how social capital may affect health through both organizational and individual levels. The literature shows that social capital can influence an individual’s likelihood for engaging in risky health behaviors as well as fostering protective health behaviors.

Depending on the definition, social capital may be measured at multiple geographic levels (e.g., individual, county, or country). In a community context, social capital has been defined as the “source of the ability to identify problems and needs, achieve a workable consensus on goals and priorities, and work in partnership with others to achieve goals.” Putnam, in his seminal work *Bowling Alone*, described community-level social capital as being a “public good” whereby efforts from collective action may benefit the population at large.
As such, the level of social capital in a community could plausibly strengthen the ability of collaborating LHDs and nonprofit hospitals to implement initiatives that translate into actual improvements in healthy behavior. A community’s ability to both advocate for health needs by identifying relevant approaches to improve community health as well as cultivating involvement in programs that result from collaborations between hospitals and LHDs could impact individuals and their behaviors, which could lead to better health outcomes at the community level.

Study 3 used sense-making as a framework to understand how nonprofit hospital community benefit administrators (CBAs) perceived their roles and the challenges they faced in managing their hospital’s compliance with community benefit regulations. Sense-making, as defined by Dervin (1983), is “behavior, both internal (i.e., cognitive) and external (i.e., procedural), which allows the individual to construct and design his/her movement through time-space.” Per Dervin, sense-making’s central metaphor is “each new moment in time-space requires another gap-bridging step.”

Sense-making posits that it is possible to learn about an underlying phenomenon by asking those experiencing the lived reality to “make sense” of what they are doing and why. Sense-making, used in studies of organizational behavior and management, aims to elicit objective knowledge from subjective processes. As a theoretical framework, sense-making is useful when the current understanding of how something works is discrepant to how we think it should work or in situations where there are high levels of ambiguity. Thus, sense-making was a useful theoretical framework to approach the question of how Massachusetts nonprofit hospital CBAs understood their roles as they attempted to operationalize community health programs.
Dissertation Overview

The work presented in this dissertation aimed to address important gaps in the nonprofit hospital community benefit literature. These include the need to better understand the level of hospital progress in implementing programs aimed at meeting community needs, the level of collaboration with local departments of public health, and barriers to front-line staff who are charged with putting programs in place at the hospital.

Study 1: The Progress of US Hospitals in Addressing Community Health Needs

Study 1 used a national sample of nonprofit hospitals to assess community health needs assessment (CHNA) implementation activities and determine whether hospitals reporting more activity spent more on community benefits. Data for this study came from the 2013 Form 990, Schedule H—the first year in which Internal Revenue Service (IRS) reporting was required following the ACA. Regression analysis was used to identify the institutional- and community-level characteristics of hospitals making the most progress. This study is presented in Chapter Two of this dissertation.

Study 2: Joining Forces—Does Collaborative Action Between Local Health Departments and Nonprofit Hospitals Help Foster Healthy Behaviors in Communities?

Study 2 sought to understand whether collaborative action between local health departments (LHDs) and nonprofit hospitals was associated with healthier self-reported behaviors of individuals in their community. Data came from the Behavioral Risk Factor Surveillance System (BRFSS) Smart data set and the Forces of Change survey (National Association of County and City Health Officers). Social capital was tested as a possible effect modifier. Multilevel generalized linear models were used to account for survey weights and clustering within communities. This study is presented in Chapter Three of this dissertation.
Study 3: Hospitals and Community Benefit Requirements: Perspectives of Community Benefit Administrators in Massachusetts

Study 3 entailed a qualitative investigation of nonprofit hospitals’ efforts to comply with community benefit regulations. The study was conducted on a convenience sample of 10 hospitals across the Commonwealth of Massachusetts. Semistructured interviews were performed with questions focused on the organizational structures of community benefit departments, the way community benefit administrators (CBAs) perceived their roles in complying with regulations, and the barriers they experienced in carrying out their responsibilities. This study is presented in Chapter Four of this dissertation.

Innovation/Contribution

While policy papers abound, empirical analyses of nonprofit community benefits are few and far between. Study 1 of this dissertation aimed to provide evidence showing how nonprofit hospitals are progressing toward the societal and governmental expectations to improve population health. Studies that link hospital community benefit implementation activity to health outcomes are a challenge. Study 2 used novel data sources to assess whether public health department–hospital collaborative action on community health implementation programs was associated with the health of community residents. Finally, improvements in policy to guide nonprofit hospitals to focus on social determinants of health require an in-depth understanding of the lived realities of individuals currently performing the tasks. Therefore, Study 3 was a qualitative assessment of those on the frontlines of nonprofit hospital community benefit work.
References


41. Internal Revenue Service. Section 4959 Excise Tax for Failure to Meet the Requirements of Section 501(r)(3) and Noncompliant Facility Income Tax for Failure to Meet the Requirements of Section 501(r).


Figure 1.1

*National Health Expenditures as a Percent of Gross Domestic Product (CMS.gov)*

![Chart showing National Health Expenditures as a Percent of Gross Domestic Product (Percent) from 1965 to 2017](chart.png)
Figure 1.2

_The Nation’s Health Dollar, Calendar Year 2017: Where It Came From (CMS.gov)°_

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1 Includes worksite health care, other private revenues, Indian Health Service, workers’ compensation, general assistance, maternal and child health, vocational rehabilitation, Substance Abuse and Mental Health Services Administration, school health, and other federal and state local programs.

2 Includes co-payments, deductibles, and any amounts not covered by health insurance.

Note: Sum of pieces may not equal 100% due to rounding.

Figure 1.3

*The Nation’s Health Dollar, Calendar Year 2017: Where It Went (CMS.gov)*

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**THE NATION’S HEALTH DOLLAR ($3.5 TRILLION), CALENDAR YEAR 2017, WHERE IT WENT**

- **Hospital Care:** 33%
- **Physician and Clinical Services:** 20%
- **Other Professional Services:** 3%
- **Dental Services:** 4%
- **Prescription Drugs:** 10%
- **Nursing Care Facilities and Continuing Care Retirement Communities:** 5%
- **Government Administration and Not cost of Health Insurance:** 8%
- **Investment:** 5%
- **Durable Medical Equipment:** 2%
- **Other Non-Durable Medical Products:** 2%
- **Other Health Residential and Personal Care:** 5%
- **Home Health Care:** 3%
- **Public Health Activities:** 3%

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2 Includes Noncommercial Research and Structures and Equipment.

3 Includes expenditures for residential care facilities, ambulance providers, medical care delivered in non-traditional settings (such as community centers, senior citizens centers, schools, and military field stations), and expenditures for Home and Community Waiver programs under Medicaid. Note: Sum of pieces may not equal 100% due to rounding.

Figure 1.4

A Modified BARHII Public Health Framework for Reducing Health Inequities

[Diagram of the modified BARHII Public Health Framework for Reducing Health Inequities]
Supplemental Appendix A

A. Determination of need regulations.

In 1971, the Massachusetts legislature recognized the unequal access to and duplication of health care resources across the state. To help correct the issue of inequities, the Massachusetts Department of Public Health (MDPH) instituted the Determination of Need (DoN) process (105 CMR 100.000). The intent of the regulation is to

“encourage competition and the development of innovative health delivery methods and population health strategies within the health care delivery system to ensure that resources will be made reasonably and equitably available to every person within the Commonwealth at the lowest reasonable aggregate cost advancing the Commonwealth’s goals for cost containment, improved public health outcomes, and delivery system transformation.”

Embedded in this regulation is a platform to compel hospitals to focus on community needs. In fact, the DoN process mandates that 5% of all hospital expansion and construction project spending be set aside for community-based health initiatives (CHI), including both public health and social determinants programming. CHI is similar to yet different from community benefits because only hospitals with approved capital projects are subject to the provision.

In 2017, MDPH revamped its DoN regulations to help streamline alignment between the Federal community benefit regulations (IRS), Massachusetts Attorney General (AG) community benefit regulations, and MassHealth (i.e., the Massachusetts Medicaid program) policies to facilitate system transformation. The new guidelines allow hospitals applying for DoN to utilize their community health needs assessments performed under the AG or IRS regulations as evidence of community engagement and data usage standards. See Figure 1.5 for a diagram of the MDPH DoN (CHI) and the Massachusetts AG community benefit relationship. The updated DoN approach accomplishes three distinct goals: aligning hospital spending on both DoN (CHI) and non-DoN (community benefit) programs, setting health priorities for CHI entities receiving
funding, and encouraging local application of approaches for improving social determinants of health problems. The six DoN health priorities are social environment, built environment, housing, violence and trauma, employment, and education. The statewide DPH focus areas include substance use disorders, housing stability/homelessness, mental illness and mental health, and chronic disease, especially cancer, heart disease, and diabetes. Hospitals submitting DoN applications must choose strategies from both lists.

B. State community benefit regulations.

Massachusetts was the first state to adopt accountability and transparency guidelines for nonprofit hospital community benefit reporting in June 1994. In Massachusetts, the State Attorney General’s Office (AGO) is responsible for creating guidelines and operationalizing state-level community benefits reporting. Unlike community benefit regulations in other states, Massachusetts guidelines are strictly voluntary.

The AG guidelines underwent updates in 2002 and 2009 to ensure nonprofit hospitals were meeting their charitable expectations. In 2002, updates included the requirement for a community health needs assessment to be performed in conjunction with community groups as well as a requirement to increase reporting for transparency. In 2009, the update required hospitals to perform community health needs assessments and implementation strategy reports once every three years. Hospitals were required to develop mission statements surrounding community benefits and include programs aimed at vulnerable and disadvantaged individuals. Additionally, hospitals were expected to more actively engage with the community in priority setting and strategy selection.

In 2017, Maura Healy, the Massachusetts AG, convened an advisory task force to improve alignment of state CB efforts with federal regulations (IRS) and MDPH DoN. In
addition to the task force, the AG’s office held open discussions with multiple stakeholders including hospitals, health management organizations (HMOs), community members, nonprofit organizations, and other governmental agencies.

The new guidelines were published in February 2018 and went into effect in 2019. The updated guidelines are more detailed and prescriptive; however, they remain voluntary and do not set mandatory spending thresholds. The community benefit principles set forth in the AG’s report include the following:

A. The governing body of each nonprofit acute care hospital should affirm and make public a Community Benefits Mission Statement, setting forth its formal commitment to provide resources to and support its annual Implementation Strategy.

B. The hospital should demonstrate its support for its Implementation Strategy at the highest levels of the organization. The hospital’s governing board and senior management should be responsible for overseeing the development and implementation of the Implementation Strategy including designating the programs or activities to be included, allocating resources, and ensuring its regular evaluation.

C. The hospital should make community engagement a regular part of each stage of Community Benefits planning, implementation, and evaluation, with particular attention to engaging diverse perspectives.

D. To develop its Mission Statement and Implementation Strategy, the hospital should conduct a Community Health Needs Assessment, a comprehensive review of unmet health needs of the community, including negative health impacts of social and environmental conditions, by analyzing community input, available public health data, and an inventory of existing programs, which should facilitate regional collaboration.

E. The hospital should include in its annual Implementation Strategy the Target Populations it wishes to support, specific programs or activities that attend to significant needs identified in the Community Health Needs Assessment, and measurable short- and long-term goals for each program or activity.
F. Each hospital should submit an annual Community Benefits Report to the AGO for publication that includes: 1) its CHNA; 2) its Implementation Strategy; 3) the Self-Assessment Form; 4) information on its Community Benefits programs including program goals and measured outcomes; 5) information on its Community Benefits Expenditures; and 6) the optional supplement (if desired).

C. Payment in lieu of taxes.

Boston has a heavy concentration of nonprofit organizations, which are exempt from paying property taxes to the city. This puts a larger burden on residents and for-profit organizations. In 1980 Massachusetts voters passed Proposition 2 ½, a law to limit the amount local property tax increases per year to no more than 2 ½ percent without a public vote, further constraining funding at the local level.  

One solution to the loss of tax revenues has been “payment in lieu of taxes” or PILOTs. PILOTs are requests from institutions that do not pay property tax to provide payment to support local services. Boston began collecting these voluntary payments in the 1970s. In 2011, the program was overhauled, and the city began requesting that tax-exempt organizations with property holdings valued at more than $15 million pay 25% of what would be considered their taxable contribution if they were not tax-exempt.

Unlike community benefits or DoN, PILOT payments are not necessarily allocated to health. Reviews of PILOT payments show that many tax-exempt entities meet their obligations with “in-kind contributions” rather than cash. Boston allows hospitals to allocate 50% of their PILOT payment to ongoing “community benefits” so long as the hospital describes the programs and they align with city priorities. PILOT payments are voluntary. Critics have stated that PILOTs lack transparency and have variable compliance. In addition, some have pointed out that for-profit hospitals pay property taxes as well as contribute to their communities through community
benefits spending, even though they are not obligated to do so, challenging nonprofit hospitals to provide more support to their communities. 38
Figure 1.5

Adapted Diagram of Regulations for Community Health in Massachusetts

IRS – Form 990 Schedule H

Determination of Need, Community-Based Health Initiative (CHI) System Transformation Approach

AGO annual CB report

AGO works with hospitals for regular CHINAs

Shared communication between AGO and DPH

CHI/DPH under DoN only

DPH works with hospitals to approve CHI in coordination with CHINA

Hospital

CHINA

Data

Community Benefits

CHI
Chapter Two: The Progress of US Hospitals in Addressing Community Health Needs

Introduction

The Patient Protection and Affordable Care Act (ACA) expanded the requirements that nonprofit hospitals must meet to maintain their federal tax-exempt status. In particular, under Section 501 (r)(3) of the Internal Revenue Code which operationalized the ACA mandates, a federally tax-exempt hospital is now required to conduct a community health needs assessment (CHNA) every three years and to adopt an implementation strategy to meet the community needs identified through its CHNA.

The impetus for expanded requirements was twofold. First, policy makers and community groups have had ongoing concerns that tax-exempt hospitals are not held to sufficiently strict requirements for maintaining exempt status. Although tax-exempt hospitals are expected to provide some level of community benefits in exchange for their exempt status, there have been no federal standards setting out how much hospitals must spend on the provision of these benefits. Given that the value of tax-exemptions and charitable gifts to tax-exempt hospitals was recently estimated to be to $24.6 billion for 2011, critics have argued that more should be required of tax-exempt hospitals in return for tax-exemptions.

Second, the ACA aims to change the paradigm of health care in the U.S. from a reactive, acute-care system to a prospective, prevention-based system. This broad policy goal is also a factor in the requirement for tax-exempt hospitals to conduct CHNAs since proponents believe this activity can promote a stronger population health perspective in local communities. The CHNA requirement became effective for all hospitals on their tax returns starting after March 2012 (the second anniversary of the ACA). Final regulations issued by the IRS were published
in December 2014 although hospitals were equipped with draft regulations to guide activities since 2011.\textsuperscript{2,6}

Several small studies have been conducted to assess how hospitals are progressing in meeting federal CHNA requirements. Some have focused on CHNA-related collaboration as a key aspect of hospital progress in CHNA implementation. For instance, Beatty et al. reviewed hospitals’ publicly available CHNA reports in Missouri and surveyed staff at local health departments (LHD) to assess LHDs’ involvement in the conduct of hospital-initiated CHNAs.\textsuperscript{7} They found that communication between hospitals and local health departments regarding CHNAs was common but collaboration, the highest level of joint action defined within the study, was rare.\textsuperscript{7} Similarly, Pennel et al. reviewed CHNA reports in Texas and found strong collaborations to be an essential component in CHNA success.\textsuperscript{8} Other groups have analyzed select hospitals’ CHNAs and implementation plans and offered conclusions about the state of CHNA implementation based on small samples of hospitals. The Public Health Institute (PHI), for instance, assessed hospital progress in CHNA implementation through a review of 51 CHNA reports and 50 expert interviews. This assessment suggested that many hospitals have been slow to take definitive action to address the needs identified from CHNAs, possibly because they are having difficulty prioritizing needs.\textsuperscript{9,10}

We conducted a national study to investigate the progress of tax-exempt hospitals in meeting federal CHNA requirements. We sought to address the following questions: How much progress have tax-exempt hospitals made toward CHNA implementation? Is there considerable variation among hospitals and is more progress associated with a hospital’s institutional and community characteristics? Is there any relationship between a hospital’s CHNA implementation activity and its provision of community benefits?
Methods

Data Sources

Our primary data source was the 2013 Internal Revenue Service (IRS) Form 990 and related Schedule H, which all tax-exempt hospitals are required to file. Schedule H requires hospitals to report spending on community benefits and other community-related activities. We used 2013 data as it was the first year that the IRS required hospitals to report on CHNA implementation. We used these data to construct measures of a hospital’s spending on community benefits, operating budget, and profit margin. We obtained our data from GuideStar, a company that obtains, digitizes and sells data that organizations report on Form 990 and related schedules.

We merged the hospital IRS filings with data from the 2013 American Hospital Association annual survey, the Area Health Resource File from the U.S. Department of Health and Human Services and various files from the Centers for Medicare and Medicaid Services. By merging these data sets, we were able to create hospital-level profiles for structural and operational characteristics including number of hospital beds, case-mix index, profitability (high, normal, average), system affiliation (i.e., corporate entity that owns two or more hospitals), network affiliation (i.e., group of hospitals, physicians, other providers, insurers and/or community agencies that work together to coordinate and deliver a broad spectrum of services to their community), teaching status, contract managed (general day-to-day management of the hospital is delegated to another organization under a formal contract), church affiliation, sole community provider, ACO participation, market competition (defined by HHI), percent of publicly owned hospital beds in the local community, percent of for-profit hospital beds in the local community, urban location, percent uninsured in local community, per capita income, wage
index, state community benefit reporting requirements, state CHNA requirements and region of
the country (see Table 2.3 footnotes for details on variables). Additionally, we combined several
data sources to identify whether a hospital was, as of 2013, a participant in an accountable care
organization (ACO) participating in the Medicare Shared Savings Program (MSSP) or Pioneer
ACO initiative (Pioneer). These data sources were from government documents, a database
from a consulting firm that tracks ACO formation (i.e., Leavitt Partners), and our own primary
data collection. We used all three sources to confirm a hospital’s current or prior participation in
either a MSSP or Pioneer ACO. Finally, we obtained data from the Hilltop Institute
(http://www.hilltopinstitute.org) on whether a hospital was located in a state that required
hospitals to conduct CHNAs and to report their community benefit activities independent of the
federal requirement.

**Sample**

The study population comprised all tax-exempt, acute care hospitals that filed a Form
990, Schedule H for 2013. We obtained data for 1,593 tax-exempt hospitals which accounted for
approximately 55% of all nonprofit hospitals in the United States in 2013.\(^{11}\) The remaining tax-
exempt hospitals comprise those that were members of hospital systems that filed a consolidated
Form 990, Schedule H, under an IRS group filing exemption. We compared the two groups of
hospitals (i.e., those that file individual Schedule Hs and those that are covered by a group
exemption) on a range of hospital-level characteristics (i.e., number of beds, teaching status) and
found them to be very similar except that system affiliation was somewhat under represented
among hospitals that do file an individual Schedule H. This is consistent with a previous
comparison of the two groups based on 2009 data.\(^ {12}\) A description of hospitals included in the
study can be found in Table 2.1 (n=1,593). Our final analyses included all hospitals for which we had complete data (n=1,504).

**Key Variable and Measures**

Schedule H of the 2013 Form 990 included a set of questions for hospitals to complete regarding their activities in meeting federal CHNA requirements. Our examination of hospital responses to these questions indicated that, in 2013, virtually all hospitals reported they had conducted at least one CHNA as required by 501(r)(3). However, we found considerable variation among hospitals in their responses to eight questions on the Schedule H regarding whether or not they had undertaken activities for addressing community health needs as identified through their CHNA, a specific requirement of IRS section 501 (r)(3) (see Table 2.2). We drew from these questions to construct an index to represent hospitals’ progress in meeting federal CHNA requirements based on their reported activities.

Our goal in developing the index was to develop a practical tool that leveraged the information value of the eight questions included in Schedule H. In our review of these eight questions, we found them to be paired conceptually across four areas of CHNA implementation with two focusing on implementation strategy, two focusing on participation with community partners in a community-wide plan, two focusing on operational activities for addressing identified needs, and two questions related to priority setting. Two of the pairs, strategy setting and participation in community-wide development planning, included an adoption/development question and an execution question, leading us to examine a potential stepped activity pattern. More than 80% of hospitals that reported they had undertaken the adoption/development activity for these two pair of questions also reported that they had followed through with execution. For purposes of the index, we focused on the hospital’s response to the question regarding
adoption/development. The two questions pertaining to operational activities were maintained as separate items. We also found that over 75% of hospitals that indicated they developed a strategy also indicated that they prioritized both needs and services. This makes conceptual sense because prioritization of needs from the community health needs assessment seemingly should occur prior to setting a strategy to implement programs. Because of the overlap, we opted to leave the prioritization of needs and services out of the index. Our final index consisted of four activities for CHNA implementation: strategy formulation to address identified needs, participation in the development of community-wide plans, planning for the provision of community benefits, and budget development to address identified needs. The values of our indicator ranged from zero (not completing any of these activities) to four (completing all four activities). A higher score indicates more progress toward meeting the CHNA implementation requirements. The correlation between the 4-item index and an index comprised of all eight questions was high (0.95).

Finally, we included hospital spending on community benefits as a dependent variable for our third research question. We chose two measures of hospital spending on community benefits: total community benefit spending and community health improvement spending. Each hospital’s total spending is comprised of reported expenditures for the seven types of community benefits that hospitals were required to report to the IRS on Schedule H in 2013: charity care (financial assistance provided to patients), shortfalls from Medicaid and other means-tested government programs, health professions education, subsidized health services, research, community health improvement, and cash and in-kind contributions to community groups. In line with previous research, we constructed the community health improvement spending measure by summing a hospital’s expenditures for community health improvement and cash and in-kind
contributions.\textsuperscript{14,15} Cash and in-kind contributions refers to contributions from the hospital to community groups or other health care organization for community benefit activities, usually community health improvement initiatives.\textsuperscript{12} To standardize these measures for the scale and scope of a hospital’s patient care activities, we divided a hospital’s reported community benefit spending by its operating expenditures, which we also obtained from Form 990.

\textbf{Statistical Analysis}

We computed descriptive statistics to assess hospitals’ reporting of implementation activity as a measure of progress in meeting federal CHNA requirements. For the descriptive analysis, we assigned an index score to each hospital based on the number of the four activities it had reportedly undertaken, ranging from 0 to 4. We used regression analysis to assess whether a hospital’s institutional and community characteristics were associated with its progress in meeting federal CHNA requirements based on the four-item index. We estimated two different models, one using ordinary least squared regression (OLS) and the other using logistic regression using SAS 9.4 (Cary, NC).

For the OLS model, we specified the dependent variable as a continuous measure of our index based on the number of activities that a hospital reported. For the logistic model, we specified the dependent variable as one if the hospital reported undertaking all four activities and zero for any activity level less than four. As an additional analysis, we examined whether an association existed between a hospital’s progress toward meeting federal CHNA requirements and its spending on community benefits (as a percentage of its operating budget). The key independent variable was whether or not the hospital reported undertaking all four activities from the index (1=reported all four, 0=reported less than four). Two dependent variables were assessed: total spending on community benefits and spending on community health
improvement. For these analyses, we used OLS regression and included the same institutional and community characteristics as those included in the previous analysis. Because the index did not meet the OLS assumption of a normally distributed variable, we performed additional statistical analyses to check for consistency in our OLS findings. We inversed our index and applied both Poisson and negative binomial regression as count data using proc genmod. Negative binomial distribution provided the better fit of the two models comparing Akaike information criterion (AICs).

Results

As of 2013, hospitals varied widely in their reported activities on CHNA implementation. More than one-third of all hospitals reported undertaking all four activities within our index (n=574, 36%). Eleven percent of hospitals reported that they had not undertaken any of the activities (n=182). The remaining hospitals were spread evenly between reporting one, two, or three activities (18%, 18% and 17% respectively).

Of the four index activities, strategy formulation was the most frequently reported, with approximately 85% of hospitals in the study reporting they had formulated a strategy to address identified community health needs. The percentages for the remaining three activities were similar: participating in a community-wide plan (58.6%); operational planning (53.3%); and budget development (54.7%).

The regression results for the relationship between a hospital’s institutional and community characteristics and its index score can be found in Table 2.4. With respect to institutional characteristics, system affiliation and ACO participation were positively associated with a hospital’s index score. Church affiliation was negatively associated with a hospital’s index score. With respect to community characteristics, urban status was positively associated
with a hospital’s index score, whereas the proportion of uninsured persons in the community and per capita income were negatively associated with a hospital’s index score. As a robustness test for the OLS analysis, we re-examined the results using alternate methods described above. The findings largely matched those from the OLS regression.

Logistic regression results for the relationship between a hospital’s institutional/community characteristics and the undertaking of all four activities in the index can also be found in the supplemental Table 2.4. Contract management and a higher proportion of uninsured were negatively associated with reporting all four activities in the index. Location in a state that required community health needs assessments was positively associated with reporting all four activities.

Table 2.3 presents regression results for the relationship between a hospital’s reporting all four activities and its spending on community benefits. No statistical association existed between highest level of progress on CHNA implementation and spending on total community benefits. In line with previous studies, teaching status and location in a state with community health reporting requirements were significantly and positively associated with total community spending.\(^{12}\) Church affiliation and higher per capita income were associated with lower spending. However, a significant and positive association did exist between highest level of progress on CHNA implementation and hospital spending on community health improvement initiatives. Location in a state with a community health needs assessment requirement was also positively associated with community health improvement spending.

**Discussion**

Although much has been written about CHNA from a policy perspective, empirical analyses are scant. We conducted a nationwide study of hospitals’ progress in meeting federal
CHNA requirements based on their reporting of implementation activities as defined on Schedule H of Form 990 for 2013.

Our findings indicate that for the first year of mandatory reporting, considerable variation existed among hospitals regarding their progress in meeting the implementation provision of the federal CHNA requirements. Approximately one-third of the study hospitals appeared to be far along in implementing plans for addressing community health needs. These hospitals reported undertaking all four of the key implementation activities we used to construct an implementation index. As such, these hospitals appeared to have in place the basic elements of a sound implementation plan. The remaining two-thirds of the hospitals were seemingly at less advanced stages of the implementation process including some which had made little or no progress at all based on the fact that they reported that they had not undertaken any of the implementation activities.

Study results point to some factors that may influence a hospital’s progress regarding CHNA implementation. As both system affiliation and ACO participation were associated with higher index scores, hospitals that are members of larger organizational arrangements may be in a more favorable position to move forward with CHNA implementation. These arrangements may come with resources, both intellectual and material, that support hospitals’ effort to address community health needs.

Location in a state with laws specific to community benefits, independent of the federal CHNA requirement, may have provided hospitals in these states additional time to allow for an adequate progression from the initial needs assessment process to a more coordinated/organized focus on implementation activities.
Hospitals in communities with a relatively higher proportion of uninsured individuals seem to have made less progress on CHNA implementation. This finding could be because communities with higher levels of uninsured individuals may also have complex social issues. As noted, the Public Health Institute highlighted that prioritization of community services to meet identified health needs is difficult for most hospitals. Hospitals located in communities with substantial socio-economic challenges may be overwhelmed by the volume and extent of the community’s needs, which leads to inaction. Also, hospitals that serve relatively high levels of uninsured individuals may be focused on meeting charity care goals for patient care services, leaving little time or resources to focus on population health improvement.

We found an association between hospitals reporting all four activities on our index and higher community health improvement spending. Whether increased activity is driving increased investment in community health, or vice versa, cannot be determined by our study. Hospitals with high levels of community health improvement spending may have historically had stronger ties to their community. More research is needed to replicate and clarify this finding.

Finally, among the implementation activities that we examined, previous research suggests that hospitals may be particularly ineffective in partnering with community stakeholders for purposes of implementing plans to address community health needs. Some researchers have identified the lack of collaboration with local health departments as a significant threat to effective CHNAs. Our data are consistent with these findings. Only about half of all hospitals in our study reported partnering with community stakeholders in developing a community-wide CHNA implementation plan in 2013. The Ohio Research Association for Public Health Improvement found that lack of collaboration between hospitals and other stakeholders, especially local health departments, may stem from the differences in mission and focus.
Hospitals tend to focus on disease and access to care while health departments often focus on social determinants of health including a larger focus on mental health and substance abuse.\textsuperscript{18} As other researchers have observed, true improvements in population health need to blend both paradigms and that CHNA regulations have the potential to bridge the gaps.\textsuperscript{18}

**Limitations**

Our study has several limitations. First, our assessment of hospitals’ implementation progress was confined to those action items identified on Schedule H of IRS Form 990. Other activities not specifically queried by the IRS may also be relevant to a hospital’s implementation progress. Further, the data are self-reported by the hospitals. Thus, there exists the possibility of self-reporting biases that could skew our findings.

Second, we were unable to determine the quality of hospitals’ implementation plans, particularly their actual alignment with identified community needs. As such, even hospitals that reported undertaking all four implementation activities may or may not be making meaningful progress in addressing identified community health needs.

Third, the results are cross-sectional and represent a single year of data only. Our results are important but preliminary. A review of implementation activity over the next few years will add to our understanding of hospitals’ progress for meeting CHNA implementation requirements.

Finally, we are not capturing how hospitals develop their needs assessments or how they prioritize programs to meet those needs. A qualitative assessment of CHNA implementation reports from hospitals in the top and bottom decile of our index would yield interesting insights into these matters.
Public Health Importance

The Affordable Care Act expanded the requirements for tax-exempt hospitals to report community benefit activities. Many policy makers and health policy analysts are hopeful that federal CHNA requirements will help drive hospitals toward a population health focus. Research is just beginning to assess hospitals’ progress in meeting CHNA requirements. Our findings are consistent with ongoing IRS compliance reviews suggesting that as many as 25% of hospitals may not be in compliance with ACA exemption requirements including those pertaining to community benefit needs assessments. Whether hospitals have the know-how or proper incentives to make effective decisions regarding population health improvement is not yet well understood.

Future studies might investigate whether training and other supports for hospitals are needed if they are to be successful in using CHNAs for improving population health. As per our empirical results, this may be particularly true for hospitals serving areas with challenging socioeconomic conditions such as relatively high number of uninsured individuals. Additional qualitative assessments that “look under the hood” of the CHNA-related activities that hospitals are undertaking, especially as they pertain to the ACA’s goal of improving the social determinants of health, would be very valuable.
References

17. The Health Policy Institute of Ohio. Community health improvement planning and community health needs assessment: Moving toward collaborative assessment and community health action in Ohio. 2015.
18. Scott F, Drake A. Variation in process and priorities between local health department and hospital led community health assessments. 2015.
### Table 2.1

Descriptive Statistics of Study Hospitals

<table>
<thead>
<tr>
<th></th>
<th>Mean/Proportion</th>
<th>Number of hospitals (n = 1,593)</th>
<th>Standard deviation</th>
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</thead>
<tbody>
<tr>
<td><strong>Institutional characteristics</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. of beds</td>
<td>175.15</td>
<td>189.70</td>
<td></td>
</tr>
<tr>
<td>Case-mix index</td>
<td>1.43</td>
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<td>0.21</td>
</tr>
<tr>
<td>Profit margin—high</td>
<td>0.54</td>
<td>854</td>
<td></td>
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<tr>
<td>Profit margin—negative</td>
<td>0.27</td>
<td>425</td>
<td></td>
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<tr>
<td>System affiliation</td>
<td>0.53</td>
<td>849</td>
<td></td>
</tr>
<tr>
<td>Network affiliation</td>
<td>0.39</td>
<td>579</td>
<td></td>
</tr>
<tr>
<td>Teaching hospital</td>
<td>0.06</td>
<td>96</td>
<td></td>
</tr>
<tr>
<td>Contract managed</td>
<td>0.11</td>
<td>158</td>
<td></td>
</tr>
<tr>
<td>Church affiliation</td>
<td>0.14</td>
<td>216</td>
<td></td>
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<tr>
<td>Sole community provider</td>
<td>0.07</td>
<td>108</td>
<td></td>
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<tr>
<td>Participation an ACO (MSSP or Pioneer)</td>
<td>0.21</td>
<td>339</td>
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<td>Total community benefit spending</td>
<td>8.4</td>
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<td>Community health improvement spending</td>
<td>0.34</td>
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<td>0.636</td>
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<td><strong>Community characteristics</strong></td>
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<tr>
<td>Market competition</td>
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<td>0.34</td>
</tr>
<tr>
<td>Percent of publicly owned beds</td>
<td>0.06</td>
<td></td>
<td>0.16</td>
</tr>
<tr>
<td>Percent of for-profit beds</td>
<td>0.05</td>
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<td>0.13</td>
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<tr>
<td>Urban location</td>
<td>0.54</td>
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<td></td>
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<tr>
<td>Percent uninsured in local community</td>
<td>16.1</td>
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<td>Per capita income</td>
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<td>State CHNA requirement</td>
<td>0.29</td>
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<td>State community benefit reporting requirement</td>
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<td>Wage index</td>
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<td>Northeast region</td>
<td>0.24</td>
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<td>Midwestern region</td>
<td>0.38</td>
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*Note.* Authors’ analysis of data from 2013 IRS Schedule H, Form 990; American Hospital Annual Survey; Area Health Resource file from the U.S. Department of Health and Human Services and Center for Medicare and Medicaid Services; Hilltop Institute and proprietary ACO data.

*a*Means and standard deviations for continuous variables. Proportions for categorical variables. N = 1,593.
### Table 2.2

**IRS Form 990 Schedule H Questions**

<table>
<thead>
<tr>
<th>Sched. H question number</th>
<th>Question language</th>
<th>Percent responded “Yes”</th>
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<tbody>
<tr>
<td>6a.</td>
<td>Adoption of an implementation strategy that addresses each of the community health needs identified through the CHNA?</td>
<td>85.7</td>
</tr>
<tr>
<td>6b.</td>
<td>Did hospital execute the strategy?</td>
<td>71.0</td>
</tr>
<tr>
<td>6c.</td>
<td>Did hospital participate in the development of a community-wide plan?</td>
<td>58.6</td>
</tr>
<tr>
<td>6d.</td>
<td>Did hospital participate in the execution of a community-wide plan?</td>
<td>50.4</td>
</tr>
<tr>
<td>6e.</td>
<td>Hospital included CHN into operating plan?</td>
<td>53.3</td>
</tr>
<tr>
<td>6f.</td>
<td>Adoption of a budget for provision of services that address the needs identified in the CHNA?</td>
<td>54.7</td>
</tr>
<tr>
<td>6g.</td>
<td>Hospital prioritized health needs of community?</td>
<td>85.1</td>
</tr>
<tr>
<td>6h.</td>
<td>Hospital prioritized services to meet the health needs of the community?</td>
<td>77.7</td>
</tr>
</tbody>
</table>
Table 2.3

Hospital Spending on Community Benefits in Relation to CHNA Implementation Progress

<table>
<thead>
<tr>
<th>Variable</th>
<th>Total community benefit spending</th>
<th>Community health improvement spending</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coefficient</td>
<td>Standard error</td>
</tr>
<tr>
<td>CHNA Implementation Index (reporting 4 activities)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. of beds</td>
<td>0.15</td>
<td>0.11</td>
</tr>
<tr>
<td>Case-mix index</td>
<td>-0.24</td>
<td>0.91</td>
</tr>
<tr>
<td>Profit margin—high</td>
<td>-0.13</td>
<td>0.37</td>
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<tr>
<td>Profit margin—negative</td>
<td>0.56</td>
<td>0.41</td>
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<tr>
<td>System affiliation</td>
<td>-0.09</td>
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<td>Network affiliation</td>
<td>0.21</td>
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</tr>
<tr>
<td>Teaching hospital</td>
<td>3.04</td>
<td>0.74</td>
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<tr>
<td>Contract managed</td>
<td>-0.77</td>
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<td>Church affiliation</td>
<td>-0.98</td>
<td>0.43</td>
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<td>0.36</td>
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<tr>
<td>Participation in an ACO (MSSP or Pioneer)</td>
<td>0.20</td>
<td>0.35</td>
</tr>
<tr>
<td>Market competition</td>
<td>-0.35</td>
<td>0.58</td>
</tr>
<tr>
<td>Percent of publicly owned beds</td>
<td>-1.05</td>
<td>0.91</td>
</tr>
<tr>
<td>Percent of for-profit beds</td>
<td>-0.14</td>
<td>1.20</td>
</tr>
<tr>
<td>Urban location</td>
<td>-0.19</td>
<td>0.38</td>
</tr>
<tr>
<td>Percent uninsured in local community</td>
<td>0.02</td>
<td>0.04</td>
</tr>
<tr>
<td>Per capita income</td>
<td>-0.09</td>
<td>0.02</td>
</tr>
<tr>
<td>Wage index</td>
<td>5.61</td>
<td>1.38</td>
</tr>
<tr>
<td>State community benefit reporting requirement</td>
<td>0.83</td>
<td>0.35</td>
</tr>
<tr>
<td>State CHNA requirement</td>
<td>1.12</td>
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</tr>
<tr>
<td>Western region</td>
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<td>0.62</td>
</tr>
<tr>
<td>Southern region</td>
<td>0.38</td>
<td>0.55</td>
</tr>
<tr>
<td>Midwestern region</td>
<td>0.56</td>
<td>0.42</td>
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</tbody>
</table>

Note. Authors’ analysis of data from 2013 IRS Schedule H, Form 990; American Hospital Annual Survey; Area Health Resource file from the U.S. Department of Health and Human Services and Center for Medicare and Medicaid Services; Hilltop Institute and proprietary ACO data.

CHNA Implementation Index dichotomized into reporting all four activities (X = 1) or less than four activities (X = 0). See Table 2.2 table notes for additional details. The total number of hospital beds, a continuous variable, was rescaled to represent units of 100. A hospital’s case mix index is the average diagnosis-related group weight for all of a hospital’s Medicare patients. Medicare uses diagnostic related groups to compute case mix index values. Hospitals with case-mix values above 1 have patients whose diagnoses are relatively more resource intensive than the national average. Hospitals with index values below 1 have patients whose diagnoses are
relatively less resource intensive than the national average. Profit margin was computed by subtracting a hospital’s operating costs from its operating revenue and dividing the result by the operating revenue. High-margin hospitals were defined as those that had margins above 3%; negative margin hospitals were those that had margins at or below zero; the omitted reference group comprised hospitals that had margins of greater than zero and not greater than 3%.

System affiliation refers to hospitals that were members of a corporate entity that owns two or more hospitals (i.e., multihospital system). The omitted reference group comprised independent hospitals. Network affiliation refers to hospitals that participated in a strategic alliance or joint venture with one or more hospitals. Unlike system affiliation, these arrangements do not entail common ownership of the participating hospitals. The omitted reference group comprised hospitals that did not participate in networks. Hospitals classified as teaching are those institutions that were members of the Council of Teaching Hospitals (COTH). The omitted reference group comprised nonteaching hospitals. Contract managed refers to a hospital that had in place a contractual relationship with an outside company to manage its operations. The omitted reference group comprised hospitals that do not have such a contract. Church affiliation refers to hospitals that were owned and operated by a religious organization. The omitted reference group comprised secular hospitals. Sole community provider is a designation under the Medicare program for hospitals that meet at least one of several criteria (i.e., located at least 35 miles from other like hospitals). The omitted reference group comprised hospitals without this designation. Participation in an ACO was defined as any hospital participating in the Medicare Shared Savings Program (MSSP) or Pioneer ACO. The omitted reference group comprised hospitals without a designated ACO. Market competition was measured in accordance with the Hirschman–Herfindahl Index (HHI), which for purposes of the study was computed by summing the squared values of each hospital’s proportion of total hospital patients admitted to general, acute care hospitals within its market (defined as county). The theoretical range for the HHI is 0 to 1 where 1 indicates a monopoly (i.e., one firm in the market). For example, if there are two hospitals in a market, one with .25 share of total admissions and the other with .75 share of the admissions, the HHI would be .625 (.252 + .752).

Percent of hospital beds in each community that are owned by public institutions. Continuous variable. Percent of hospital beds in each community that are owned by for-profit institutions. Continuous variable. Hospitals classified as urban were those located within a metropolitan statistical area (MSA). The omitted reference group comprised rural hospitals. Percent of uninsured individuals residing in the community. Continuous variable. Income of community, continuous variable, rescaled into $1,000 increments. The Medicare wage index reflects geographic differences in hospital wage levels. A hospital’s index value reflects the wage level for its geographic area compared to the national average hospital wage level. Some states had community benefit reporting requirement laws in 2013. The omitted reference group comprised hospitals in states without a reporting requirement. Some states had community health needs assessment laws in 2013. The omitted reference group comprised hospitals in states without a CHNA state law. For geographic region, the omitted reference group comprised hospitals that were located in the Northeast region of the United States. p < 0.05 is significant for this analysis.
### Table 2.4

**CHNA Implementation Progress in Relation to Hospital-Level Institutional and Community Characteristics**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Continuous index (0-4): OLS</th>
<th>Fully implemented (Index = 4): Logistic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coefficient</td>
<td>Standard error</td>
</tr>
<tr>
<td><strong>Institutional characteristics</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. of beds&lt;sup&gt;a&lt;/sup&gt;</td>
<td>0.05</td>
<td>0.03</td>
</tr>
<tr>
<td>Case-mix index&lt;sup&gt;b&lt;/sup&gt;</td>
<td>−0.08</td>
<td>0.23</td>
</tr>
<tr>
<td>Profit margin—high&lt;sup&gt;c&lt;/sup&gt;</td>
<td>0.12</td>
<td>0.09</td>
</tr>
<tr>
<td>Profit margin—negative&lt;sup&gt;c&lt;/sup&gt;</td>
<td>−0.14</td>
<td>0.10</td>
</tr>
<tr>
<td>System affiliation&lt;sup&gt;d&lt;/sup&gt;</td>
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<td>0.08</td>
</tr>
<tr>
<td>Network affiliation&lt;sup&gt;e&lt;/sup&gt;</td>
<td>0.11</td>
<td>0.08</td>
</tr>
<tr>
<td>Teaching hospital&lt;sup&gt;f&lt;/sup&gt;</td>
<td>−0.15</td>
<td>0.19</td>
</tr>
<tr>
<td>Contract managed&lt;sup&gt;g&lt;/sup&gt;</td>
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<td>0.13</td>
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<td>Church affiliation&lt;sup&gt;h&lt;/sup&gt;</td>
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<td>0.11</td>
</tr>
<tr>
<td>Sole community provider&lt;sup&gt;i&lt;/sup&gt;</td>
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<td>0.15</td>
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<tr>
<td>Participation in an ACO (MSSP or Pioneer)&lt;sup&gt;j&lt;/sup&gt;</td>
<td>0.31</td>
<td>0.09</td>
</tr>
<tr>
<td><strong>Community characteristics</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Market competition&lt;sup&gt;k&lt;/sup&gt;</td>
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<td>0.15</td>
</tr>
<tr>
<td>Percent of publicly owned beds&lt;sup&gt;l&lt;/sup&gt;</td>
<td>−0.32</td>
<td>0.23</td>
</tr>
<tr>
<td>Percent of for-profit beds&lt;sup&gt;m&lt;/sup&gt;</td>
<td>0.57</td>
<td>0.30</td>
</tr>
<tr>
<td>Urban location&lt;sup&gt;n&lt;/sup&gt;</td>
<td>0.22</td>
<td>0.10</td>
</tr>
<tr>
<td>Percent uninsured in local community&lt;sup&gt;o&lt;/sup&gt;</td>
<td>−0.03</td>
<td>0.01</td>
</tr>
<tr>
<td>Per capita income&lt;sup&gt;p&lt;/sup&gt;</td>
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<td>0.00</td>
</tr>
<tr>
<td>Wage index&lt;sup&gt;q&lt;/sup&gt;</td>
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<td>State community benefit reporting requirement&lt;sup&gt;r&lt;/sup&gt;</td>
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<tr>
<td>State CHNA requirement&lt;sup&gt;s&lt;/sup&gt;</td>
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<td>0.09</td>
</tr>
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<td>Western region&lt;sup&gt;t&lt;/sup&gt;</td>
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<tr>
<td>Southern region&lt;sup&gt;t&lt;/sup&gt;</td>
<td>−0.08</td>
<td>0.14</td>
</tr>
<tr>
<td>Midwestern region&lt;sup&gt;t&lt;/sup&gt;</td>
<td>0.17</td>
<td>0.11</td>
</tr>
</tbody>
</table>

Note. Authors' analysis of data from 2013 IRS Schedule H, Form 990; American Hospital Annual Survey; Area Health Resource file from the U.S. Department of Health and Human Services and Center for Medicare and Medicaid Services; Hilltop Institute and proprietary ACO data.

a The total number of hospital beds, a continuous variable, was rescaled to represent units of 100.

b A hospital’s case mix index is the average diagnosis-related group weight for all of a hospital’s Medicare patients. Medicare uses diagnostic related groups to compute case mix index values. Hospitals with case mix values above 1 have patients whose diagnoses are relatively more resource intensive than the national average. Hospitals with index values below 1 have patients whose diagnoses are relatively less resource intensive than the national average. c Profit margin was computed by subtracting a hospital’s operating costs from its operating revenue and dividing...
the result by the operating revenue. High margin hospitals were defined as those that had margins above 3%; negative margin hospitals were those that had margins at or below zero; the omitted reference group comprised hospitals that had margins of greater than zero and not greater than 3%. dSystem affiliation refers to hospitals that were members of a corporate entity that owns two or more hospitals (i.e., multihospital system). The omitted reference group comprised independent hospitals. eNetwork affiliation refers to hospitals that participated in a strategic alliance or joint venture with one or more hospitals. Unlike system affiliation, these arrangements do not entail common ownership of the participating hospitals. The omitted reference group comprised hospitals that did not participate in networks. fHospitals classified as teaching are those institutions that were members of the Council of Teaching Hospitals (COTH). The omitted reference group comprised nonteaching hospitals. gContract managed refers to a hospital that had in place a contractual relationship with an outside company to manage its operations. The omitted reference group comprised hospitals that do not have such a contract. hChurch affiliation refers to hospitals that were owned and operated by a religious organization. The omitted reference group comprised secular hospitals. iSole community provider is a designation under the Medicare program for hospitals that meet at least one of several criteria (i.e., located at least 35 miles from other like hospitals). The omitted reference group comprised hospitals without this designation. jParticipation in an ACO was defined as any hospital participating in the Medicare Shared Savings Program (MSSP) or Pioneer ACO. The omitted reference group comprised hospitals without a designated ACO. kMarket competition was measured in accordance with the Hirschman–Herfindahl Index (HHI), which for purposes of the study was computed by summing the squared values of each hospital’s proportion of total hospital patients admitted to general, acute care hospitals within its market (defined as county). The theoretical range for the HHI is 0 to 1 where 1 indicates a monopoly (i.e., one firm in the market). For example, if there are two hospitals in a market, one with .25 share of total admissions and the other with .75 share of the admissions, the HHI would be .625 (.25^2 + .75^2). lPercent of hospital beds in each community that are owned by public institutions. Continuous variable. mPercent of hospital beds in each community that are owned by for-profit institutions. Continuous variable. nHospitals classified as urban were those located within a metropolitan statistical area (MSA). The omitted reference group comprised rural hospitals. oPercent of uninsured individuals residing in the community. Continuous variable. pIncome of community, continuous variable, rescaled into $1,000 increments. qThe Medicare wage index reflects geographic differences in hospital wage levels. A hospital’s index value reflects the wage level for its geographic area compared to the national average hospital wage level. rSome states had community benefit reporting requirement laws in 2013. The omitted reference group comprised hospitals in states without a reporting requirement. sSome states had community health needs assessment laws in 2013. The omitted reference group comprised hospitals in states without a CHNA state law. tFor geographic region, the omitted reference group comprised hospitals that were located in the Northeast region of the United States. p < 0.05 is significant for this analysis.
Chapter Three: Joining Forces—Does Collaborative Action Between Local Health Departments and Nonprofit Hospitals Help Foster Healthy Behaviors in Communities?

Introduction

In 2014, the United States ranked last among peer countries on measures of mortality and life expectancy while health expenditures per person were more than double the highest-ranking country.1,2 Within the US, significant health disparities exist within and across geographies.3-5 The pioneering work of the Robert Wood Johnson Foundation’s “Culture of Health Action Framework” and the Institute for Healthcare Improvement (IHI)’s “Triple Aim,” have proposed that health is a function of community assets and socioeconomic circumstances.6,7 Cross-sector partnerships between local public health departments and health care providers are a potentially important resource for improving community health and wellbeing.8

However, a longstanding chasm has existed between the public health and health care delivery sectors.9-11 In general, local health departments (LHDs) have the mission to promote community health through programs aimed at disease prevention and emergency preparedness while health care providers focus on patient-level treatment for acute and chronic health conditions. Among health care providers, hospitals are a particularly important community asset as they possess knowledge, data, and human capital resources that are relevant for improving community health.12 Although over half of US hospitals are nonprofit, tax-exempt entities and therefore carry societal and governmental expectations to provide community benefits,13 these hospitals have typically sought to meet this expectation by providing charity care to the poor or investing in health education and research activities. These efforts address important needs but do little to directly improve community health.13 Collaboration between LHDs and hospitals is
reportedly impeded in part by differences in mission, language and training of those in leadership positions.\textsuperscript{14}

At the same time, scant empirical research has examined the benefits that can be gained from greater collaboration between LHDs and hospitals. One of the few relevant studies found that when hospitals and LHDs do collaborate on community health needs assessments, the results are more comprehensive and detailed than when either entity (LHD and hospital) conducts an assessment independently.\textsuperscript{15} An ecological study conducted by Mays et al. showed that greater collaboration among stakeholders (including health system, government and other stakeholders) was associated with lower county-level mortality rates.\textsuperscript{16} However, these studies did not directly test whether greater collaboration between LHDs and hospitals was directly associated with health behaviors when measured at the level of the individuals.

In this study, we sought to address two key research questions: (a) are individuals residing in communities with long-standing LHD–hospital collaborative action on community-wide health promotion more likely to report healthier behaviors than individuals residing in communities with less collaborative action?; and (b) does the level of social capital of a community modify the relationships between long-standing LHD–hospital collaborative action and health behaviors of individuals?

We hypothesized that individuals residing in communities with long-standing collaborative action would report healthier behaviors. We believe that LHDs and nonprofit hospitals that engage in long-standing collaborative action benefit from the types of synergies that have been observed through research on collaboration outside of the health context.\textsuperscript{17} We also hypothesized that higher levels of community social capital could serve as a facilitator in these efforts. That is, social capital may be a catalyst for such collaborative action to be effective.
Conceptual Framework

While there are many relevant frameworks in the public health, sociology and economics literature addressing community health and welfare, we chose to adapt the framework created by the Bay Area Regional Health Inequities Initiative (BARHII, modified framework in Figure 3.1). BARHII is an innovative coalition of local public health departments in Northern California that has sought to “transform public health practice for the purposes of eliminating health inequities using a broad spectrum of approaches that create healthy communities.” Started in the 1990’s, BARHII has continued to expand its focus, now including diverse issues such as immigration, housing, climate change and racial equity, concepts previously tangential to or outside the scope of public health professionals. The BARHII Framework for Reducing Health Inequities has become a useful tool for LHDs seeking to better address social determinants. The BARHII framework is particularly suitable for our work in that it recognizes the importance of strategic partnerships between institutions and articulates that individual health behaviors are on the path to individual disease and mortality outcomes, therefore, this framework offers a valuable perspective for assessing whether LHD–hospital collaborative action may be associated with better health behaviors and thus, better overall health for community residents.

The literature on why organizations work together often cites social exchange theory. Social exchange theory posits that organizational actors, whom often provide a specific focus or function, seek out relationships with other organizations to procure necessary resources such as expertise, relationships, customers or labor for the realization of their respective goals or objectives. The BARHII framework highlights this form of collaboration as a mechanism for promoting community health.
One area of interest that is not explicitly identified in the BAHRII Framework is the concept of social capital. There is a sizable body of literature on how social capital may affect health through both organizational and individual levels. The literature shows that social capital can influence an individual’s likelihood for engaging in risky health behaviors as well as fostering protective health behaviors.

Depending on the definition, social capital may be measured at multiple geographic levels (e.g., individual, county, or country). For example, measures of individual-level social capital may include the level of a person’s trust in neighbors, government or other organizations, social cohesion and the strength of ties within an individual’s social network. Measures of community-level social capital may include levels of voter turnout (either on a local or national scale), community participation in committees and the density of nonprofit social and religious organizations available within a specified community (often defined as a county or micro/macro statistical area).

In a community context, social capital has been defined as the “source of the ability to identify problems and needs, achieve a workable consensus on goals and priorities, and work in partnership with others to achieve goals.” Putnam, in his seminal work *Bowling Alone*, described community-level social capital as being a “public good” whereby efforts from collective action may benefit the population at large.

As such, the level of social capital in a community could plausibly strengthen the ability of collaborating LHDs and nonprofit hospitals to implement initiatives that translate into actual improvements in healthy behavior. Health improvements can be achieved through what is described as “linking social capital.” Linking social capital is derived from relationships between persons across levels of hierarchy and power such as individuals within a community
benefiting from health promotion programs from their health department.\textsuperscript{25,38} It may be that certain communities have the linking social capital resources to facilitate programs that have been put in place by collaborative action. A community’s ability to both advocate for health needs by identifying relevant approaches to improve community health as well as cultivating involvement in programs that result from collaborations between hospitals and LHDs could impact individuals and their behaviors, which could lead to better health outcomes at the community level.\textsuperscript{39-41}

**Methods**

**Study Population**

Our study population consisted of 56,826 adults living in 32 metropolitan and micropolitan statistical areas (MMSA) which had individual-level responses (from BRFSS Smart) and a single LHD (from the NACCHO Forces of Change Survey).

**Outcomes**

Individual-level health behaviors came from the 2015 Behavioral Risk Factor Surveillance Survey (BRFSS) SMART dataset. The 2015 BRFSS SMART dataset is a subsample of the 2015 state BRFSS surveys based on geographies defined as metropolitan statistical areas, micropolitan statistical areas, and metropolitan divisions (collectively called MMSAs) made publicly available to researchers.\textsuperscript{42} In 2013, there were 929 MMSAs in the US and Puerto Rico.\textsuperscript{43} The 2015 BRFSS Smart dataset included 132 MMSAs where at least 500 BRFSS surveys were collected.\textsuperscript{42}

Individual health behaviors selected for this study were those identified by the Centers for Disease Control and Prevention (CDC) as “Winnable Battles”. Winnable Battles are health outcomes for which the CDC believes that public health can make significant progress in a
relatively short time frame (i.e., within one to four years) that have a large-scale public impact and have evidenced-based interventions readily available for ease of implementation. From the “Winnable Battles” list, we included the following modifiable behaviors/conditions into our analysis: smoking, wearing a seatbelt, binge drinking, eating vegetables daily, eating fruit daily, general exercise in a month, vigorous exercise (300 minutes) in a week and being overweight or obese (based on self-reported height and weight). Additionally, while not a “Winnable Battle”, flu shots are thought to be a central measure of community health where LHDs and nonprofit hospitals may collaborate and were thus included in our analysis. While we did not have access to the specific collaborative action strategies, the selected measures are commonly identified in CHNA reports as being health needs in the community.

In addition to modeling individual behaviors, we created two index variables to capture healthy behaviors: one index measuring behaviors of risk and another index measuring behaviors of a healthy lifestyle (healthy eating and exercise). We created these indices by summing the number of individual behaviors into two broader measures (zero to four for the risk index, zero to three for the healthy eating and exercise index) and analyzing them as continuous outcomes.

**Predictor Variables**

The data for assessing the level of collaborative action between LHDs and nonprofit hospitals came from the 2015 Forces of Change Survey administered by the National Association of County and City Health Officials (NACCHO). This survey was developed to measure the impacts of economic forces on the budget, staff, and programs of LHDs. The survey was administered to a subset of the nearly 3,000 LHDs across the country using stratified random sampling (on state and size of population in the LHD jurisdiction). Nine hundred and forty-
eight (948) LHDs were randomly selected, of which 690 LHDs participated (73% response rate). 50 Approximately 77% of the included LHDs reported having a nonprofit hospital in their jurisdiction (n=519).

We used each LHD’s responses to a single question to measure its collaborative action with nonprofit hospitals to implement initiatives pursuant to a community health needs assessment (CHNA) for the community where the LHD resides.50,51 The survey question asks “Is your LHD included in any nonprofit hospital’s implementation plan for the CHNA?”52 Response options included: no collaboration, participating in the development of a hospital implementation plan, listed as a partner in a hospital implementation plan, conducting an activity together in a hospital implementation plan, and using the same implementation plan as the hospital. While the survey question did not specify a defined time period for reported LHD–hospital collaboration, given that such CHNA implementation efforts can entail multiple years of activity, we interpreted the LHD responses to be reflective of relatively long-standing relationships (or lack thereof) between an LHD and the nonprofit hospital in its community rather than what existed at a specific point in time. As such, we created a binary variable indicating “collaborative action” for those LHDs that reported conducting an activity together or using the same implementation plan as the nonprofit hospital in their community.

**Effect Modifiers**

To assess whether community social capital moderated the relationship between LHD–nonprofit hospital collaborative action and health behavior, we used the 2014 Northeast Regional Center for Rural Development (NRCRD) social capital index as developed by Rupasingha et al. (2006).53 The NRCRD social capital index was created using principal component analysis based on four factors: the percentage of voters who voted in presidential elections, the response rate to
the Census Bureau’s decennial census, the number of nonprofit organizations in the county, and the number of social organizations and associations within the county.\textsuperscript{53}

\textit{Covariates}

In all models, we controlled for factors at the individual level (age, marital status, race, education, income and insurance status from the BRFSS, all as categorical variables except for age) and the county-level (median household income and percent black), derived from the 2010 U.S. Census and Area Resource File.\textsuperscript{54-56} Individual survey responses were linked to community-level characteristics from the NRCRD social capital index and NACCHO Profile Survey (2013).\textsuperscript{50,52,57} We included a variable indicating whether an LHD had more than the average number of FTEs from all LHDs responding to the 2013 NACCHO Profile survey.\textsuperscript{50} FTEs relate to a LHD’s resource availability that may affect collaborative action as well as health outcomes.\textsuperscript{58} We also controlled for the presence/absence of a local board of health, which has been shown to influence collaboration between nonprofit hospitals and LHDs.\textsuperscript{51} Finally, we controlled for whether the state had expanded Medicaid as of 2015.

\textit{Data Analysis}

Due to missing data for two key predictors, whether the individual identified as being insured and the individual’s salary (35\% and 18\%, respectively), we implemented a multiple imputation approach that made use of all available demographic data from the BRFSS survey for a more robust analysis (using proc mi, SAS 9.4).\textsuperscript{59} Missing data on the outcomes of interest (ranging from 4.3\% for not smoking to 13.2\% for vigorous exercise) were excluded from the respective analyses.

To examine the relationship between LHD–hospital collaborative action and an individual’s reported health behavior, we estimated hierarchical generalized linear models using
proc glimmix. We generalized the person-level logistic regression model for binary and continuous outcomes and incorporated both the characteristics of the community as well as person-specific predictors. All models incorporated random intercepts to capture the variation among communities and to adjust the estimates for the lack of independence and clustering of individual responses within each community. The multilevel model with survey weights included residual components for each level (individual and community) allowing for proper estimation and testing of associations. Hypothesis testing was two-sided with a type 1 error rate of 0.05.

For each outcome, we estimated three models. The first model included the key predictor of interest (i.e., LHD–hospital collaborative action) and covariates at the individual, community, and state levels. The second model included an interaction term between LHD–hospital collaborative action and county-level social capital (based on the median value). Given evidence of effect modification by social capital, we estimated a final model that stratified our results using the median value of county-level social capital.

Results

After linking the data, our sample contained 32 MMSAs across 25 states where we had a single LHD and individual response data (see Figure 3.2). The number of responses from each MMSA ranged from 632 (St. Cloud, MN) to 5,940 (Denver, CO) individuals. The total sample size was 56,826 respondents. Some demographic differences existed between the sample utilized for this study and the larger BRFSS Smart cohort. In particular, the included communities had higher proportions of individuals self-identifying their race/ethnicity as white (83.3% vs 79.6%, see Table 3.1) but other demographic characteristics were largely similar.

Within our sample, approximately 14% of the population reported smoking, 12% reported binge drinking, 11% reported not wearing a seatbelt and 51% reported not getting a flu
shot. Despite most of the individuals reporting that they ate fruits and vegetables daily (62 and 80% respectively), 65% of respondents still identified as being overweight or obese. Seventy-five percent (75%) of individuals reported that they performed some type of exercise monthly but only 38% reported vigorously exercising weekly.

Approximately 22% of LHDs reported collaborative action was reported (7 of 32) whereas 78% of LHDs did not (25 of 32). Those LHDs answering “I don’t know” were assumed to have no collaborative activity, an assumption previously used in the peer-reviewed literature.51

From our multilevel analyses, we found significant and positive associations between a high level of collaborative action and our index variables of risk behaviors (OR=1.18; 95% CI=1.10-1.28) and healthy nutrition/lifestyle (OR=1.12; 95% CI=1.05-1.19). Collaborative action was also significantly and positively associated with three individual outcomes: not smoking (OR=1.32, 95% CI=1.11-1.58), eating vegetables daily (OR=1.29; 95% CI=1.06-1.57) and vigorous exercise (OR=1.17; 95% CI=1.05-1.30).

Social capital was significantly and positively associated with both index measures (risk behaviors OR=1.15; 95% CI=1.05-1.25 and healthy nutrition/lifestyle OR=1.07; 95% CI=1.01-1.14) (Table 3.2 and Table 3.3), and with receiving a flu shot (OR=1.41; 95% CI=1.07-1.87) (Table 3.2 and Table 3.3).

In models that included the interaction term between collaborative action and social capital, we found a significant and positive interaction for two of our outcome measures: wearing a seatbelt (p for interaction=0.01) and general exercise (p for interaction=0.03). After stratification, collaborative action was not significantly associated with either behavior. The remaining behaviors and index variables did not show significant interactions.
Individual-level factors that were significantly and positively associated with fewer risky behaviors included being married, having a college degree, advancing age and having health insurance (Table 3.2). Men and those self-reporting as Hispanic were more likely to engage in risky behaviors.

Individual-level factors that were significantly and positively associated with a healthy lifestyle (eating and exercise) included being married, having a college degree and being insured (Table 3.3). Those who identified as Hispanic or Asian were less likely to engage in healthy eating and exercise. Only those individuals who identified as being Asian were positively associated with reporting as a healthy weight. Men, married and older individuals and those that self-identified as being Black or Hispanic were less likely to report being at a healthy weight (Table 3.3).

At a community level, higher median household income was significantly and positively associated with eating vegetables and vigorous exercise whereas a higher percentage of black residents was inversely associated with eating fruits and vegetables. From a public health resource perspective, having more full-time equivalents at the LHD was positively associated with residents not smoking while having a local board of health was inversely associated with eating vegetables (Table 3.3).

Across health behaviors, state Medicaid expansion was significantly and inversely associated with several healthy behaviors including not binge drinking, receiving a flu shot, eating vegetables, vigorous exercise and our index of risky behaviors.

Discussion

There is growing recognition that improving population health requires multi-sector collaboration. The Patient Protection and Affordable Care Act of 2010 (ACA) encourages
nonprofit hospitals to collaborate with local public health experts in the conduct of CHNAs for the larger goal of improving community health. However, the regulation stopped short of mandating nonprofit hospitals and LHDs collaborate on actions required to meet the identified needs. As such, collaborative action does not appear to be widespread. Evidence from the first year of IRS filings post-ACA implementation showed that only about half of nonprofit hospitals reported including public health experts in any of their implementation activities. Our findings, although from an LHD perspective, mirror those data in that 45% of the LHDs in this analysis reported no collaborative action on CHNA implementation with nonprofit hospitals in their community.

We set out to study whether LHD–hospital collaborative action has potential benefits for community health. We found that after controlling for a number of other factors, LHD–hospital collaborative action was significantly associated with several healthy behaviors.

Both of our composite health behavior indices showed significant positive associations, indicating that individuals living in communities with collaborative action were more likely to report fewer risky behaviors and a greater number of healthy eating and exercising behaviors than those living in communities without documented collaborative action. Associations with all measured behaviors were in the hypothesized positive direction and three of these associations were both positive and significant. Like Mays et al., we found that collaborations between organizations have the power to affect health. These findings also validate the BARHII Framework’s inclusion of strategic partnership at the institutional level. While it is unclear the exact mechanism affected by greater collaborative action (i.e., alterations in the physical, social or service environment), these data show interesting potential impacts of such strategic collaboration.
State Medicaid expansion showed an unexpected inverse association with healthy behaviors. This could reflect the longstanding population health impact of limitations in health care access. This finding should be explored in more depth in future research.

For social capital, there was some evidence of moderation in this analysis for two behaviors: wearing a seatbelt and general exercise. This is consistent with our hypothesis that community social capital resources may “prime the pump” for a community to benefit from implementation activities put forth through LHD–nonprofit hospital collaborative action. From these data, we believe our inclusion of social capital to the BARHII Framework is warranted; however, further study of the mechanisms by which social capital can benefit collaborative action between hospitals and LHDs would be useful.

Although we report a positive potential benefit from LHD–hospital collective action on health, only 22% of our sample reported collective action. There may be several factors that impede collaborative action between LHDs and nonprofit hospitals. First, nonprofit hospitals may choose to focus on strategies that directly impact their current patient market instead of targeting the social and economic barriers to health of residents, especially those that do not receive health care at their institution. This choice minimizes the need to partner with external organizations, including the LHD. Second, funding for action (i.e., implementing programs) may be a concern given the long-term nature of many strategies required to improve population health. From the LHD’s perspective, budgets have been challenging, leaving staff to do more with less.9,12 On the hospital side, insecurity from changes in reimbursement and payer mix may make nonprofit hospitals think twice before investing in multi-year community programs. While it is desired that implementation activities focus on upstream social determinants of health (such as housing, education or institutional racism), there have been relatively few accounts of this
occurring although widespread recognition of the need exists. Third, while current regulations state that nonprofit hospitals must seek input from public health experts to analyze community needs, there is no such expectation for the hospitals when prioritizing and implementing actions to meet those needs. Without state or federal laws that require such efforts, nonprofit hospitals may see no rationale to include LHDs in executing implementation strategies.

With or without regulations, however, LHDs may want to take the lead to build relationships with nonprofit hospitals in their community. In doing so, LHDs can clearly communicate their skills and expertise to help the hospital meet their community benefit goals. Close relationships with the community as well as other nonprofit and government agencies (housing and school system) are examples of what LHDs can bring to the table in collective action. Performing such outreach to hospitals, however, may take additional resources and marketing skills that LHDs may be struggling to mobilize for their own mission. In the current policy environment where investment in public health is static, if not declining, this additional burden on LHDs represents an increased challenge.

In return, however, LHDs may be able to better meet their mission and goals through an increase in knowledge and resources from the hospital. Sharing of skills and resources to achieve a common goal is the hallmark of social exchange theory and as this and other studies imply, may lead to the improved health of community residents.

Limitations

Our study adds to the literature by providing, to our knowledge, the first empirical example of how collaborative action between LHDs and hospitals may benefit community health behaviors. We believe we are also the first to assess whether social capital may play a role in
modifying this relationship and found sufficient evidence to adapt the BARHII Framework to include social capital for future research.

There are several limitations to our research. First, our data was observational in nature, mostly derived from surveys. These surveys are of high quality but include aspects of response bias traditionally seen in survey research. While the number of individual responses in this study was large, our results may not be generalizable to non-MMSA areas, although individuals from 25 of the 50 states were included in our sample.

As a cross-sectional study, we could not rule out reverse causation; however, due to the emerging nature of this research, 2015 was the first, and only year of available data on collaborative action between LHDs and nonprofit hospitals on CHNA implementation from the perspective of the local health department. In line with our conceptual framework, we expected our measure of collaborative action to be indicative of a broader construct of LHD–hospital collaboration that has developed over time in the communities studied. In prior research, those LHDs that reported partnering with nonprofit hospitals on CHNA implementation were substantially (i.e., over 43%) more likely to collaborate with hospitals on the assessment itself. The associations observed in this study may well represent the outcomes of long-term or stronger relationships between hospitals and LHDs.

Second, because we relied on a single item assessment of collaboration, it was not possible to assess which specific strategies the LHD and hospital were jointly implemented. It may be possible that the health behaviors we measured as outcomes were not directly related to the actions being undertaken through collaborative action. A qualitative analysis of CHNA implementation reports combined with interviews of hospital community benefit managers and
local health officials would be useful to further unpack the elements and strategies of collaboration.

Third, our measure of collaborative action captures the perspective of the LHD only and may or may not accurately reflect how hospitals in the community perceived the level of collaborative action around community health improvements activities with the LHD. Data from a prior study assessing collaboration with public health experts from the perspective of the nonprofit hospital showed similarly low levels of collaboration.\textsuperscript{14,62}

Finally, while we accounted for community and individual-level covariates, it is possible that factors omitted from our multivariate models could contribute to residual confounding.

\textbf{Conclusions}

Greater collaborations among various stakeholders is key to solving difficult challenges, such as continually improving the health of populations.\textsuperscript{17,66} Nonprofit hospitals appear to be collaborating with public health on assessing the needs of the community; however, collaborative action to meet those needs is lagging. While no single “ingredient” will be sufficient to achieve the Triple Aim, encouraging collaborative action between these two important community institutions may play a pivotal role in improving population health.
References


47. Presbyterian Healthcare Services. Community Health Implementation Plan (CHIP) Presbyterian Central New Mexico—Presbyterian Hospital, Kaseman Hospital, and Rust Medical Center Bernalillo, Sandoval, Torrance, and Valencia Counties. 2013.


64. Boston Medical Center, Boston Children's Hospital and Brigham and Women's Hospital Collaborate to Create Housing Stability in Boston [press release]. www.brighamandwomens.org, August 7 2019.


<table>
<thead>
<tr>
<th></th>
<th>Included MMSAs (% of all respondents)</th>
<th>Excluded MMSAs (% of all respondents)</th>
</tr>
</thead>
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<tr>
<td>College 4 years or more (College graduate)</td>
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<td>50-65</td>
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<td>Over 65</td>
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<tr>
<td>DK, Ref, Miss</td>
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<td>1.4</td>
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## Table 3.2.

### Unstratified Odds Ratios of Individual-Level Health Behaviors

<table>
<thead>
<tr>
<th>Wearing a seatbelt</th>
<th>Not smoking</th>
<th>Not binge drinking</th>
<th>Getting a flu shot</th>
<th>Risk behavior index</th>
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<tbody>
<tr>
<td></td>
<td>Odds Ratio</td>
<td>95% CI</td>
<td>Odds Ratio</td>
<td>95% CI</td>
</tr>
<tr>
<td>Collaborative action</td>
<td>1.55</td>
<td>0.96, 2.49</td>
<td>1.32*</td>
<td>1.11, 1.58</td>
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<tr>
<td>Social capital index</td>
<td>1.09</td>
<td>0.67, 1.76</td>
<td>0.94</td>
<td>0.80, 1.10</td>
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### Primary predictors of interest

<table>
<thead>
<tr>
<th>Variable</th>
<th>Odds Ratio</th>
<th>95% CI</th>
<th>Odds Ratio</th>
<th>95% CI</th>
<th>Odds Ratio</th>
<th>95% CI</th>
<th>Odds Ratio</th>
<th>95% CI</th>
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<tbody>
<tr>
<td>Male</td>
<td>0.49*</td>
<td>0.41, 0.58</td>
<td>0.63*</td>
<td>0.48, 0.82</td>
<td>0.47*</td>
<td>0.39, 0.57</td>
<td>0.79*</td>
<td>0.69, 0.91</td>
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<tr>
<td>Married</td>
<td>1.48*</td>
<td>1.12, 1.95</td>
<td>1.64*</td>
<td>1.31, 2.05</td>
<td>1.35*</td>
<td>1.00, 1.83</td>
<td>1.13*</td>
<td>1.01, 1.27</td>
</tr>
<tr>
<td>College</td>
<td>1.37*</td>
<td>1.09, 1.72</td>
<td>1.37*</td>
<td>1.17, 1.61</td>
<td>0.94</td>
<td>0.70, 1.24</td>
<td>1.25*</td>
<td>1.07, 1.46</td>
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<tr>
<td>Black</td>
<td>0.86</td>
<td>0.57, 1.30</td>
<td>1.02</td>
<td>0.72, 1.42</td>
<td>1.45*</td>
<td>1.06, 1.98</td>
<td>0.81*</td>
<td>0.69, 0.95</td>
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<td>Hispanic</td>
<td>1.10</td>
<td>0.76, 1.58</td>
<td>1.56*</td>
<td>1.13, 2.15</td>
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<td>0.72, 1.87</td>
<td>0.87</td>
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<td>0.68, 1.64</td>
<td>3.10*</td>
<td>1.05, 9.16</td>
<td>3.08*</td>
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<td>0.042, 2.32</td>
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<td>0.97</td>
<td>0.48, 1.99</td>
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<tr>
<td>Age</td>
<td>1.16*</td>
<td>1.11, 1.22</td>
<td>1.09*</td>
<td>1.01, 1.17</td>
<td>1.35*</td>
<td>1.24, 1.48</td>
<td>1.36*</td>
<td>1.29, 1.43</td>
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<tr>
<td>Insured</td>
<td>1.22</td>
<td>0.75, 1.97</td>
<td>1.64*</td>
<td>1.31, 2.04</td>
<td>1.06</td>
<td>0.85, 1.31</td>
<td>1.98*</td>
<td>1.46, 2.67</td>
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<tr>
<td>Salary &lt; 15k</td>
<td>0.94</td>
<td>0.47, 1.92</td>
<td>0.45*</td>
<td>0.33, 0.62</td>
<td>1.19</td>
<td>0.86, 1.65</td>
<td>0.88</td>
<td>0.64, 1.21</td>
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<tr>
<td>Salary 15k-75k</td>
<td>0.88</td>
<td>0.66, 1.19</td>
<td>0.68*</td>
<td>0.54, 0.86</td>
<td>1.13</td>
<td>0.95, 1.36</td>
<td>0.93</td>
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### Individual-level covariates

<table>
<thead>
<tr>
<th>Variable</th>
<th>Odds Ratio</th>
<th>95% CI</th>
<th>Odds Ratio</th>
<th>95% CI</th>
<th>Odds Ratio</th>
<th>95% CI</th>
<th>Odds Ratio</th>
<th>95% CI</th>
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</thead>
<tbody>
<tr>
<td>Median household income</td>
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<td>0.93, 1.16</td>
<td>1.03</td>
<td>0.97, 1.11</td>
<td>0.95</td>
<td>0.90, 1.01</td>
<td>1.07</td>
<td>0.96, 1.18</td>
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<tr>
<td>Percent Black</td>
<td>1.03</td>
<td>0.78, 1.36</td>
<td>0.93</td>
<td>0.83, 1.04</td>
<td>0.98</td>
<td>0.85, 1.12</td>
<td>0.91</td>
<td>0.82, 1.02</td>
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<tr>
<td>Above Average FTEs</td>
<td>0.99</td>
<td>0.64, 1.55</td>
<td>1.30*</td>
<td>1.09, 1.56</td>
<td>0.82</td>
<td>0.61, 1.12</td>
<td>0.76</td>
<td>0.56, 1.04</td>
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<tr>
<td>Local Board of Health</td>
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<td>0.49, 1.02</td>
<td>0.92</td>
<td>0.74, 1.13</td>
<td>1.11</td>
<td>0.83, 1.65</td>
<td>0.90</td>
<td>0.67, 1.23</td>
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</table>

### Community-level covariates

<table>
<thead>
<tr>
<th>Variable</th>
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<th>95% CI</th>
<th>Odds Ratio</th>
<th>95% CI</th>
<th>Odds Ratio</th>
<th>95% CI</th>
<th>Odds Ratio</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expanded Medicaid</td>
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<td>0.49, 1.08</td>
<td>0.86</td>
<td>0.74, 1.02</td>
<td>0.79*</td>
<td>0.63, 0.98</td>
<td>0.78*</td>
<td>0.67, 0.91</td>
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<tr>
<td>p-value for interaction</td>
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<td>0.46</td>
<td>0.17</td>
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<td>0.91</td>
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### State-level covariates

<table>
<thead>
<tr>
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<th>Odds Ratio</th>
<th>95% CI</th>
<th>Odds Ratio</th>
<th>95% CI</th>
<th>Odds Ratio</th>
<th>95% CI</th>
<th>Odds Ratio</th>
<th>95% CI</th>
</tr>
</thead>
</table>

**Note.** The social capital index was dichotomized into communities with an index above the median (1=yes) and below the median in our sample (0=no). Controls include individual covariates being male, being married, graduating college being Black, Asian, Hispanic or Other, having salary in specified range (<$15,000/year, 15,000 to 75,000/year) and being insured. The reference for education was having less than a college degree and the reference for salary was greater than $75,000 per year. The remaining predictors were 1=yes;
0=no. The number of FTEs at the LHD was 1 if the LHD had more than the average FTEs in the Profile 2013 survey (mean=65). Local board of health was 1 if yes, 0 if no. County-level controls included continuous measures of the population: percent black (Area Resource File, 2016; standardized by one standard deviation) and median household income (2014) standardized by $10,000. A second model with an interaction term between collaborative action and social capital was also analyzed. The p-value for the interaction is provided.

*p < 0.05.
Table 3.3

Unstratified Odds Ratio of Individual-Level Healthy Lifestyle-Related Behaviors

<table>
<thead>
<tr>
<th>Eating vegetables</th>
<th>Eating fruit</th>
<th>General exercise</th>
<th>Vigorous exercise</th>
<th>Healthy weight</th>
<th>Healthy lifestyle index</th>
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</thead>
<tbody>
<tr>
<td>Odds Ratio</td>
<td>1.29*</td>
<td>1.16</td>
<td>1.17</td>
<td>1.17</td>
<td>1.17*</td>
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<tr>
<td>95% CI</td>
<td>1.06, 1.57</td>
<td>0.99, 1.35</td>
<td>1.00, 1.38</td>
<td>1.05, 1.30</td>
<td>0.93, 1.21</td>
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<td>Primary predictors of interest</td>
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<td></td>
<td></td>
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<tr>
<td>Collaborative action</td>
<td>1.10</td>
<td>0.94, 1.29</td>
<td>0.92, 1.33</td>
<td>0.73, 1.13</td>
<td>0.92, 1.19</td>
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<td>Social capital index</td>
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<td>1.11</td>
<td>0.91</td>
<td>0.95</td>
<td>0.78, 1.17</td>
</tr>
</tbody>
</table>

| Odds Ratio        | 1.05        | 1.06             | 0.93             | 0.95          | 1.06                   |
| 95% CI            | 1.05, 1.19  | 0.93, 1.21       | 0.85             | 0.96          | 1.01                   |

Individual-level covariates

| Odds Ratio        | 0.64*       | 0.58, 0.87       | 0.99, 1.33       | 0.92          | 0.44*                  |
| 95% CI            | 0.57, 0.72  | 1.15             | 1.02             | 0.44*         | 0.35, 0.57             |
| Male              | 1.35*       | 1.09, 1.48       | 0.97, 1.45       | 1.07          | 0.80*                  |
| Married           | 1.16        | 1.14             | 0.90             | 1.15          | 0.92                   |
| College           | 0.59*       | 0.69             | 0.47             | 0.97          | 0.52*                  |
| Black             | 1.13        | 0.81, 1.18       | 0.74             | 0.86*         | 0.79                   |
| Hispanic          | 0.99        | 0.71             | 0.49             | 0.81          | 0.77                   |
| Asian             | 1.05        | 1.08             | 0.93             | 1.06          | 0.68                   |
| Other Race        | 1.07        | 0.66             | 0.51             | 0.43          | 0.82                   |
| Age               | 0.99        | 0.81             | 0.77             | 0.99          | 0.96                   |
| Insured           | 0.54*       | 0.70             | 0.37             | 0.70          | 0.92                   |
| Salary < 15k      | 0.79*       | 0.91             | 0.62             | 0.98          | 0.83                   |
| Salary 15k-75k    | 1.06        | 1.06             | 1.02             | 1.06          | 1.02                   |

Community-level covariates

| Odds Ratio        | 1.06*       | 0.98, 1.14       | 0.96, 1.18       | 1.05*         | 0.95, 1.10             |
| 95% CI            | 1.02, 1.10  | 1.02             | 1.02             | 1.02          | 1.00                   |
| Median household income | 0.89*      | 0.78, 1.00       | 0.82             | 1.01          | 0.93                   |
| Percent Black     | 0.97        | 0.91             | 0.75             | 0.91          | 0.97                   |
| Above Average FTEs | 0.82*      | 0.75, 1.14       | 0.82             | 0.85          | 0.96                   |
| Local Board of Health | 0.79*     | 0.94, 1.29       | 0.77, 1.10       | 0.73, 0.93    | 0.82*                  |
| 95% CI            | 0.65, 0.85  | 0.92             | 0.82             | 0.96          | 0.85                   |
| State-level covariates |
| Expanded Medicaid | 0.74*       | 0.92             | 0.96             | 0.95          | 0.90                   |
| 95% CI            | 0.65, 0.85  | 0.92             | 0.85             | 0.95          | 0.90                   |

*p-value for interaction* 0.23 0.46 0.03 0.40 0.14 0.13

Note. The social capital index was dichotomized into communities with an index above the median (1=yes) and below the median in our sample (0=no). Controls include individual covariates being male, being married, graduating college being Black, Asian, Hispanic or Other, having salary in specified range (<$15,000/year, 15,000 to 75,000/year) and being insured. The reference for education was
having less than a college degree and the reference for salary was greater than $75,000 per year. The remaining predictors were 1=yes; 0=no. The number of FTEs at the LHD was =1 if the LHD had more than the average FTEs in the Profile 2013 survey (mean=65). Local board of health was 1 if yes, 0 if no. County-level controls included continuous measures of the population: percent black (Area Resource File, 2016; standardized by one standard deviation) and median household income (2014) standardized by $10,000. A second model with an interaction term between collaborative action and social capital was also analyzed. The p-value for the interaction is provided.

* $p < 0.05.$
Figure 3.1

A Modified BARHII Public Health Framework for Reducing Health Inequities (adapted)
Figure 3.2.

A Map of Included Communities and Their Social Capital Index Values
Chapter Four: Hospitals and Community Benefit Requirements: Perspectives of Community Benefit Administrators in Massachusetts

Introduction

Nonprofit hospitals have been expected to provide community benefits since the early days of the federal tax code. However, federal policy on this matter has undergone significant changes over time. The Hill–Burton Act of 1946 established an expectation for nonprofit hospitals to provide charity care to individuals who did not have the means to pay for their own care. In return, the federal government would provide funding for hospital infrastructure and forgo the collection of taxes. In 1956, the Internal Revenue Services (IRS) more specifically tied charity care requirements to nonprofit status eligibility and required such hospitals to provide “as much charity care” as the hospital could afford.

The landmark Medicare and Medicaid Bill of 1965 expanded insurance coverage for elders and the poor and thus was expected to diminish the need for charity care required from hospitals. An IRS Revenue Ruling issued in 1969 expanded possibilities for nonprofit hospitals to qualify for tax exemption beyond charity care. This was an attempt to move hospitals away from defining community benefits (CB) solely as “charity care” provided to those who couldn’t afford hospital services. In 2008, the IRS adopted Form 990, Schedule H (for use in 2009) to better understand how hospitals were managing community benefits.

However, the largest and arguably most impactful development to federal tax policy for hospitals was the 2010 Affordable Care Act. Under Section 9007 of the ACA, nonprofit hospitals were required to create new financial assistance policies, limit charges and aggressive billing practices, improve emergency service policies, and conduct a community health needs assessment (CHNA) with implementation strategy once every three years.
Much of the published research on nonprofit hospital community benefit regulations to date has focused on the federal ACA requirements; however, state and local governments often have their own regulations pertaining to hospitals’ provision of community benefits. The Hilltop Institute’s “Community Benefit State Law Profiles” reports on differences between the varying levels of state community benefit requirements. In their most recent update in 2016, Hilltop identified 25 states as having at least one community benefit requirement. The strongest level of community benefit regulations typically involves setting a minimum spending threshold for community benefits; however, only five states have implemented this level of regulation.

The state of Massachusetts recently revised their nonprofit hospital community benefit regulations through the Massachusetts Attorney General’s Office (AG). The latest revision, drafted in 2018 for implementation in 2019, significantly increases transparency and accountability for Massachusetts hospitals. Overall, the changes increase the requirement for hospitals to focus on strategic planning, increase the amount of community engagement expected, require a more detailed assessment of where dollars are being spent relative to health needs and types of programs, promote joint collaboration and regional planning, direct hospitals to focus on key priorities at a state level, encourage best practices, and mandate that hospitals “self-assess” their community engagement efforts. The updated guidelines are focused on six driving principles (see Figure 4.1). These new guidelines provide a good opportunity to explore how hospitals adjust to changing community benefit expectations.

The updated Massachusetts AG guidelines, while more aligned with the ACA, still differ in a few ways. Most importantly, the AG requests significantly greater levels of detail about how individual programs match to discrete community needs compared to the IRS. In fact, the
AG guideline states “to promote transparency, facilitate community engagement, and enable
cross-filer collaboration, hospitals should break out their Community Benefits Program
Expenditures in two ways: by program and by health need addressed.” However, the AG
guidelines remain voluntary. Multiple nonprofit hospitals in Massachusetts do not submit AG
reports.

Beyond AG guidelines, some nonprofit hospitals in Massachusetts may need to comply
with the Massachusetts Department of Public Health (MDPH) Determination of Need (DoN)
regulations and, if located within the City of Boston, the City’s payment in lieu of taxes (PILOT)
requirements. See Figure 4.2 for a diagrammatic representation of these policies. The DoN
process mandates that 5% of all hospital expansion project spending is set aside for community-
based health initiatives (CHI), including both public health and social determinants of health
programming. DoN objectives only apply to those hospitals undertaking construction or
expansion projects. While the MDPH and PILOT regulations are not specific to community
benefit spending, nonprofit hospitals must still ensure compliance if these regulations apply.

Many organizations have responsibilities for community health including hospitals,
public health departments, community groups, and social service agencies. Hospitals play a key
role due to their stature within the communities where they are located. Within the hospital,

senior leadership is ultimately responsible for budgets and strategic decision making; however, it
is the community benefit administrators (CBAs) who are the most directly engaged in meeting
community and regulatory needs. Due to the changing expectations of their communities and the
Attorney General, little is known about how CBAs are incorporating these changes into their
work and what challenges new regulations may impose as they move forward in this evolving
policy area.
Research Aims

The goal of this research was to understand how hospitals are operationalizing their community benefit programs in Massachusetts given the newly drafted Attorney General regulations and ongoing federal expansion under the ACA. Hospital CBAs, as the middle-managers and critical implementers for these programs, provide a particular lens through which to appreciate this developing area.

A review of the community benefit literature found that tax-exempt hospital spending on community benefits prior to ACA implementation revealed that hospitals, on average, spend 7.5% of their operating expenses on community benefits. Of this amount, 85% went to direct patient care benefits such as charity care, losses from Medicare and Medicaid, and unsubsidized hospital services, while only 5% went to community health improvement activities (defined as health improvement programs the hospitals undertook directly). In comparison, a recent report found that the overall value of tax exemptions doubled from 12.6 to 24.6 billion dollars the decade between 2002 to 2011 (nominal dollars, increased 57% in constant dollars). These findings raise questions regarding whether nonprofit hospitals are meeting society’s needs given the value they derive from tax exemptions. Quantitative valuations of hospital community health improvement and differential tax exemptions continue. Closer inspection of hospital-based business models, decision-making strategies, and administrative practices related to community health investments will require structural and other qualitative analytic approaches.

The qualitative literature published to date assessing how nonprofit hospitals are operationalizing community benefits offer some relevant findings. A Public Health Institute study suggested that many hospitals have been slow to take definitive action to address the needs identified from CHNAs. Another recently published study of nonprofit hospitals across the
US found that the community benefits process involves seven distinct stages yet only two of the stages were found to be standardized across hospitals (owing mostly to federal regulations). The authors concluded that nonprofit hospitals had to figure out more than half of their work on their own. Similarly, a 2016 review of Massachusetts community benefit activities found that hospitals showed “little evidence of strategic thinking on health status improvement.”

I sought to add to these investigations by conducting semistructured interviews designed to gain an understanding of three questions related to nonprofit hospital community benefits in Massachusetts: (a) the internal hospital structures that support community benefits operations, (b) the barriers that nonprofit hospital CBAs face in carrying out their mission, and (c) how nonprofit hospital CBAs see their role within the hospital and within the community.

**Theoretical Framework**

To explore these research questions, I chose the theory of sense-making, which has been used in prior qualitative health care studies to understand how health care professionals deal with new structural and practice paradigms emerging from changing payment and regulatory reforms. Due to the evolving nature of nonprofit hospital community benefits, sense-making may assist in understanding how nonprofit community benefit administrators are conceptualizing their role.

Sense-making, as defined by Dervin (1983), is behavior, both internal (i.e., cognitive) and external (i.e., procedural), which allows the individual to construct and design his/her movement through time-space. Per Dervin, sense-making’s central metaphor is that “each new moment in time-space requires another gap-bridging step.”

Sense-making posits that it is possible to learn about underlying phenomena by asking those experiencing the lived reality about what they are doing and why. Sense-making, often
used in studies of organizational behavior and management, aims to elicit objective knowledge
from subjective processes. As a theoretical framework, sense-making is highly useful in
situations where there are high levels of ambiguity. Thus, sense-making is a useful theoretical
framework to approach how Massachusetts nonprofit hospital CBAs understand their roles as
they attempt to operationalize community health programs.

Methods

Study Design

I utilized semistructured interviews to collect data for this study. Qualitative analysis
allows for an understanding of phenomena that are difficult to capture quantitatively. I
employed thematic analysis to guide me in this endeavor. Thematic analysis is a flexible
qualitative research method used to gain insight into rich, often complex sets of data.

Sample Selection

As of 2017, Massachusetts was home to 62 acute care hospitals, of which 52 (84%) were
operated as nonprofit corporations and were thus subject to CB regulations. A convenience
sample of Massachusetts hospitals was targeted to ensure representation geographically and by
hospital classification. Hospitals are classified by the Massachusetts Center for Health
Information and Analysis (CHIA) as academic medical centers (AMCs), specialty hospitals,
teaching hospitals, community hospitals, or community hospitals with a high public payer
population. Geographically, I aimed to include hospitals in urban and nonurban locations as
well as hospitals in the eastern, central, and western parts of the Commonwealth.

During recruitment, I requested participation through unsolicited email or phone calls to
those individuals that I identified as potentially managing community benefit programs within
the hospital (online search). I also asked participants to make introductions to community
benefit leaders at other hospitals (snowball sampling method).

My final sample included nine nonprofit hospitals and one for-profit hospital. While for-
profit hospitals are not subject to federal or AG guidelines, they are subject to MDPH regulations
and often voluntarily comply with community benefit regulations. Inclusion of a for-profit
institution also lends a potential counter-perspective to working in the community benefits field
between the two types of hospitals. The for-profit hospital was the only historically faith-based
hospital in my sample.

Six of the 10 hospitals had more than 400 acute care beds. The sample included four
academic medical centers, one teaching hospital (non-AMC), one specialty hospital, and four
community hospitals with high public payer concentrations. Hospitals in the western, central,
and eastern parts of the state were included. See Table 4.1 for hospital demographics.

IRB approval through Northeastern University was secured for this research.

Recruitment began in December 2017 and continued until August 2018.

Data Collection

Thirteen community benefit administrators from 10 hospitals/hospital systems were
interviewed during the recruitment period. Data were collected through semistructured
interviews. Six interviews with community benefit administrators were performed one-on-one
and in-person at the individual’s office (located in or near the hospital). One interview was
performed via telephone due to scheduling challenges. Three interviews included two
individuals from a single hospital, a junior community benefit administrator, and a senior
community benefit administrator.
An interview guide was created and approved by the Northeastern IRB for use in maintaining consistency across interviews; however, I allowed conversations to move fluidly within the boundaries of the content I was seeking. I was fortunate to have some of the state’s thought leaders amongst those I interviewed.

All interviews were voice recorded using the Apple iPhone Voice Memo app. Transcription was performed by a third party and quality checked by me.

Data Analysis

I performed data analysis per Braun and Clarke (Thematic Analysis, 2006). I conducted an in-depth read of all transcribed interviews to ensure I was highly familiar with the data. When appropriate, I made notes for general impressions. I then uploaded all transcribed interviews into Atlas.ti v.8 for coding and analysis. Although a few concepts were identified a priori from my interview questionnaire, I predominantly followed an inductive and iterative approach to data analysis.

The most frequently identified codes are summarized in Table 4.2. Codes were grouped and relabeled to best describe the underlying phenomenon. Thirteen code groups were created (e.g., finance, data, organizational structure, collaboration) and pre-themes were identified with supporting text from the transcripts. Pre-themes and associated supporting evidence were reviewed by a second member of the research group for final theme development.

Findings

Research Aim 1: Hospital Organizational Structure

My first research aim was concerned with understanding the makeup and situation of community benefit departments within Massachusetts nonprofit hospitals. I found that community benefit departments varied considerably (see Table 4.3).
All but two hospitals had full-time community benefit administrators. Those who reported being part-time worked full-time but had other institutional responsibilities that were an equivalent or greater part of their overall roles. The tenure of community benefit administrators ranged from less than a year (two institutions) to greater than 10 years (three institutions). There was no consistency between hospitals as to whom the community benefits department reported to within the hospital.

The size of the hospital community benefit staff varied. Six hospitals had 1–2 community benefit staff members, two had 3–5 staff members, one had 5–10 staff members, and one hospital had more than 10 staff members. The size of the community benefit department appeared to be related to some degree with hospital size (number of beds). The two largest community benefit departments were both at larger hospitals—one independent hospital and one hospital that was part of a health care system. However, one large academic medical center did not have a community benefit department at all, assigning oversight of community benefit reporting to an individual in an unrelated department. A larger sample size may be needed to identify a relationship between hospital size and community benefit department size. The only for-profit community benefit department in my sample was amongst the smallest in hospital size by number of beds but was part of a large for-profit system. This community benefit department had a single, full-time employee.

CBAs came to their roles through different personal, professional, and institutional pathways. Many CBAs admitted to “falling into” their work rather than purposefully seeking out the role. Some CBAs stated that they were promoted into their jobs from within the hospital or came from the community. Other CBAs were clinicians who found community benefit management to be a nice blend of their clinical training and public health passion. One
interviewee brought up the issue of succession planning: “what would the hospital do if I left, I have so much knowledge and nobody taught me.” Those with less tenure expressed greater uncertainty around their roles.

All but two community benefit administrators stated that their department received an operating budget to cover salaries, consultant fees for community health needs assessment work, and grant-making to community organizations. The two hospitals that did not have an operating budget were the same hospitals that did not have full-time staff members. Discrete community benefit department budget values were not requested through this research. Hospital characteristics did not seem to directly impact the size of or internal reporting structure of the community benefit departments in my sample.

Research Aim 2: Barriers

My second research aim was concerned with the barriers that Massachusetts CBAs currently face in performing their work. Three main themes emerged related to Aim 2: (a) data challenges, (b) evaluation challenges, and (c) resource constraint and sustainable funding challenges.

Data challenges. Lack of real time, high quality data was a major concern for all CBAs. Many hospitals rely on public health, academic partners, or consultants to provide them with community level health data, especially during the CHNA process, which is mandated every three years at both the state and federal level. A lack of consistency in measured data within subgroups increased the burden for CBAs to justify why certain health needs were being prioritized.

So, if you’re trying to work in a particular neighborhood . . . you have to sort of go through and pick out what’s happening in each neighborhood. Or sometimes it is geographical, but it’s not tracked year over year. One year it might be colon cancer that’s the focus [of public health] and then the next year, colon cancer isn’t even mentioned.
Similarly, many hospitals struggled with lagging data.

As one administrator stated: “The data is 18 months to two years old. At best.” Hospital CBAs expressed pressure to deliver community benefit impacts in a relatively short period of time compared to public health organizations. Public health professionals expect investments to take years, sometimes decades, to show change. Massachusetts hospitals, however, are required to report outcomes to the AG annually. One large hospital system triangulated their internal data with the external data to overcome the issue of lag and help facilitate their community benefit processes.

One of our biggest struggles is data. So, we’re really good at knowing what’s happening when people come into our hospitals. I understand population data can’t be real time . . . but if we can look at our internal data and we can understand what’s happening with people who are at least coming into our system, and that is reflective, to a degree, of some large swaths of the population and then we compare that to the best that we’re getting out of DPH, which is like two years old. It’s incredibly hard to get people to make decisions based on data that are that old.

**Evaluation challenges.** CBAs expressed challenges in assessing impacts of CB programming. Program evaluation was mentioned in two contexts: (a) having access to data and (b) having the appropriate skills set and resources to analyze the data when it was available.

CBAs stated that many of the programs they run had no “outcomes” evaluated. Their inability to collect data on individuals who did not seek care at their facility was cited as one reason process measures, such as numbers of individuals served, were most frequently reported.

We have data on events and activities. We don’t have data that indicates a change [in behavior or outcomes].

Not all community benefit programs lacked evidence, however. Programs run by the hospital that did lend themselves to evaluation included those that could demonstrate direct hospital related outcomes, such as the number of emergency room visits. These programs tended to be long-term (in place for 5+ years), be clinical in nature (versus social or behavioral in
nature), and carry a financial outcome for the hospital (quality measures/pay-for-performance program). One hospital described measuring different programs in their current community benefit plan.

So we’ve been able to track data, do our calculations, publish papers for the community asthma initiative. We’ve got good data. On the other hand, our behavioral health program in schools where we’re providing both direct services as well as a lot of training and consultation for teachers. We have much less data. We have things that we track but it’s much more qualitative. We also have another program that focuses on kids who have learning disorders and ADHD in school. Again, that we’ve got number served, satisfaction, and those kinds of things. But not as much in terms of any hard and fast data. The lack of formal evaluation support and training was also a concern cited by some CBAs, especially those with less tenure and at smaller hospitals.

We don’t have the resources to do that. So, I’ve been looking at—for lack of a better word—courses, I guess. Or some kind of education so I can familiarize myself with the terminology more.

Only one large hospital reported having a full-time evaluation expert on staff in their community benefits department.

More than half of the hospitals outsourced community benefit evaluation to a local institute or university. Many of these relationships had been developed prior to the new AG guidelines, which are more prescriptive than prior guidelines about reporting outcome measures; however, a few administrators (especially those with less tenure on the job), were not aware of who to turn to for assistance in program evaluation. For these CBAs, programs that focused on process measures were more manageable for community benefit programming (e.g., educational events, health fairs, volunteer time, etc.).

This finding is in line with other published studies showing that evaluation of community health improvement aspects of community benefit regulations is one of the most challenging processes for hospitals.10
Resource constraint and sustainable funding. Resources for community benefit departments operations (number of staff) did not seem to be directly related to the size of the hospital. In my sample, one large nonprofit hospital had a department of two while another large nonprofit hospital had a department of more than 10. Two hospitals in my sample did not have a community benefit department at all, instead relying on part-time individuals holding other jobs in the institution. One of these hospitals was small (< 200 beds) and the other was large (> 400 beds). Both care for predominantly underserved populations.

In a rapidly changing payment and market environment, hospitals are constantly re-assessing capital and operating budget allocations. Hospital leaders make investments to improve the hospital’s bottom line—either in securing new patients, increasing reimbursements, or decreasing financial risk. Thus, non-revenue generating departments, like community benefits, may be amongst the last to be funded. One small hospital in my sample was seeking external funding for internal community benefit operations.

So, I’m actually applying for a [Name] Foundation Award to see if they will cover staffing. Somebody to help me. At least for this year. And then maybe keep it going after that. But I don’t know if that will come through.

The amount and sustainability of funding allocated to support external community benefit programs was thought to be insufficient by some CBAs. One CBA stated that they were hoping the new Attorney General guidelines would include a minimum operating percent for community benefits to address their lack of funding.

I was kind of hoping and holding my breath that from this AG guidelines that there would be some nugget there around a budget. I’ve been trying to plant softly, and I think it comes from some of our conversations around how year to year hospital finances are challenging. They’re going to continue to be challenging . . . . But with that said, community benefits cannot go away. It’s not going away . . . we are still a charitable not-for-profit, and we have an obligation. So no matter what our financial status, we still need to make some type of commitment and obligation. I think it would [show] an authentic commitment to the community.
Hospital CBAs identified sustainable funding for community benefit programs as another challenge. Money was often allocated from hospital determination of need dollars (when the hospital underwent construction projects) to assist local communities to create community health improvement plans (CHIPs); however, CBAs acknowledged they did not have ongoing CB funding for community benefits once the CHIP had assessed needs. They encouraged the communities to seek external funding to actualize the community health improvements they sought to address.

Many hospitals stated that they encourage external partners to seek grant funding to enable sustainable operations for their organizations after the community benefit commitments expire.

We also have used some DoN money to fund a community grant writer. So any of our grantees that we do fund, we connect them with the grant writer to also be looking at how they can be prospecting for other resources.

**Research Aim 3: How CBAs See Their Role**

Research aim 3 was concerned with understanding how nonprofit hospital CBAs conceptualize their role and the larger role of community benefits. Two themes emerged for Aim 3: *swimming upstream* and *hope and fear for future community benefits*. There were also some emerging concepts that were explored.

**Swimming upstream.** Across internal and external stakeholders, CBAs experienced confusion and disparate understanding about both the meaning and purpose of community benefits and, as a result, their own roles and responsibilities.

Community benefit administrators felt that it was difficult to share the message of the important work they were doing. Regulatory requirements with different definitions of community benefits made it difficult for CBAs to clearly describe their successes.
One hospital community benefit board asked their CBAs to track how they allocate their time in an effort to understand and evaluate the work the community benefits department was performing. Without having alternative methods to capture this information, a review of individual time spent was being implemented.

We started tracking—at least my board was asking me recently—just to track even what, you know, where I’m spending the most time. So, I started—because I’m going to go through my calendar and figure out where I was that month. So, I started tracking how much time that both of us are spending around substance abuse, mental health.

One community benefit administrator felt that their work, while prominently grounded in the hospital mission, was not actually aligned with their hospital’s strategic business goals.

Our strategic plan for the organization is not informed by our community health needs assessment.

This misalignment was frustrating for the CBA who felt that a win-win could be found if only the strategic plan was better aligned with identified community needs.

Hospital leadership is often not aware that community benefit funding is separate and distinct from determination of need funding. When hospitals embark on renovation or expansion projects, they are required to secure a Determination of Need (DoN) through the Massachusetts Department of Public Health. Under MDPH DoN requirements, 5% of total hospital construction funds must be set aside to support community health. This requirement is separate and distinct from community benefit requirements under the IRS or the AG’s office. CBAs expressed frustration that hospital senior leaders did not understand the differences and felt that a lack of understanding may be leading to less funding for their community benefit work.

I’ve been trying to advocate even just, first of all, a budget just so we can start from somewhere and continue to grow and build and work with our community benefit advisory councils. The pushback I get is when we have DoN investing, why do we need those community benefit budgets? And I say over and over again, DPH has made it very clear that DoN dollars are not to replace or supplant community benefit budget. And I
don’t think that that has quite resonated yet with the people here. So we’re still kind of internally swimming upstream in terms of that.

Another phenomenon CBAs experienced was being asked to demonstrate, or at least defend conceptually, return on investment.

If I’m going to make a pitch then I know that the CFO and the CEO are going to ask me about that, or the value add. It might not be specifically an ROI, but it will be the value add to us as an organization or to the community.

CBAs discussed the dilemmas of ROI expectations created for them.

There may never be something that tells you that that community garden has an ROI. And getting an evaluation for that may in itself cost more than the program money we’re investing.

There’s definitely a strong movement toward return on investment. And I—we have a very cautious effort of having a balance now of programs that we have a—that are going to have a return on investment. And then we know—like I said, we might have a small contribution, a couple thousand dollars, to this little elementary school so they can run an afterschool exercise class that we’re not going to—we know there's going to be a balance, a mix of that, but there is a very strong—that is where—that's where things are going. And we have things that—like the asthma. We are working—we have positive outcomes. We are doing the evaluation now and having formal studies done to show, in fact, the ROI. And that takes some time. And that’s the other challenge, too.

One hospital community benefit administrator highlighted how the calculation of ROI changed during her tenure:

You know, now it may be different. But for much of my first five years here, we were not at risk for the majority of the under-served patient cohort, right? So, any ROI—which is why I really had difficulty doing it—any ROI that I was going to do, had to be based off of . . . fee for service increases for someone coming in . . . if I remove them from coming in, then we’re not getting paid. That’s a bit of the crux of the issue.

CBAs found there was a great deal of overlap and hospital confusion between community health/community benefits and population health and population health management, such as the newly created Medicaid ACOs.

The term population health didn’t exist eight years ago. Population health management, which is different than population health, is where they’re focused. But they often shorten it to population health then nobody knows what anybody’s talking about anymore. I see people using community health and population health interchangeably,
but we need to be careful. So, when people start talking about population health—I say “okay, wait a minute, what is the focus?”

Most CBAs felt that community benefit programming should be aimed toward “financially at risk” patients but also go beyond those who receive care at their hospital. One large hospital system moved their community benefit department to be co-located with the population health management/Medicaid ACO program. In part, this may reflect the state’s requirements for Medicaid ACOs to address social determinants of health. A greater working relationship with the hospital’s ACO could improve the perceived understanding of the value of the CBA’s roles.

So, but the ACO and, like the, the business model around the provision of care related to population health really has made a lot of connection points with community health.

The desire for hospitals to better manage their ACO population is an evolving issue in health care reform, so the overlap between community benefits and population health management may be natural and expected. This phenomenon has been cited in other published studies of community benefit regulations. It may help the hospital financially if the community benefits department is focusing on those needs for which the hospital also has financial liability. However, this is a narrow use of what is intended to be a broader community health improvement benefit.

**Hopes and fears for regulatory impact.** CBAs were both hopeful and trepidatious that regulatory changes, mostly stemming from the Massachusetts Attorney General, would improve community health.

Overall, the most common concern was meeting the AG’s expectations. These concerns centered around three areas: worries about impacting large-scale social determinants (do they really expect hospitals to fix all social needs?), burdens of having to report long-term outcomes
when they have little confidence that this can be achieved, and the new expectations for community engagement and self-assessment.

It was clear that those performing the function of CBA fundamentally believed that health is driven by the circumstances in which you live and work. They were committed to the community benefit mission. As one CBA stated: “As a human being, I want us to do everything that we possibly can for our communities.” However, there was an interesting dichotomy between these professionals wanting to show the true benefits of their work yet knowing that doing so may never be fully possible.

Many CBAs stated that the new AG emphasis on the social determinants of health was a positive change. However, they indicated that showing improvements in social determinants would be a challenge and would likely require large sums of money and long time horizons. Most hospitals CBAs seemed willing to shift focus but highlighted the transition could negatively impact local community groups.

You can’t forget the direct programs and services too because when you go to communities and say we’re just going to focus on one area. . . . That’s really disheartening for communities.

From a theoretical standpoint, I wholeheartedly agree with what they were trying to do. . . . we could correct the opioid epidemic. . . . But what they don’t realize and what didn’t seem to come out is that money is going to support other programs that are doing good work. And if you take that money out and move it to the opioid epidemic, then you’ve got families who don’t have enough food, right? So, you’re squeezing one end of the balloon and it’s going to pop out somewhere else. And you have the risk of destabilizing what you built and the people that are benefiting from that.

While most CBAs agreed that hospitals should focus on the social determinates of health, they also felt the AG’s expectations were too high for a hospital.

You might find transportation is the main issue, highest data points. But then you say, okay, we’re a hospital. We cannot buy a city bus system.
And have we done anything about addressing obesity? And it’s like, we might have a budget? Yes, we have data for that. We can tell you some data. But with my little budget, little budget, you think you want to move—you can’t [move the needle on] that? I mean, what are they thinking?

I think that the AG’s new guidelines go too far . . . and . . . I wouldn’t have the vaguest idea of how to tackle the housing problem.

Not only were there apprehensions about the scope of the problems that hospitals were being asked to address, but there were also concerns about being able to adequately show progress given limited staff and available data. Ultimately, the community benefit administrators were concerned about being judged for “slacking” when they felt they were doing the best they could.

I can tell you how many people attended, how many people were screened, what happened when they screened positive, whether they got treatment. I can tell you all of that but to really know whether my, you know, my corner store initiative for food access is really having an impact. . . . Are they eating greens and is that changing BMI, right? That takes years and data. So, the thing is that to have the quantitative data, to be able to track incident rates of certain things. And in particular, to track social determinants of health because that’s really what we’re trying to address. . . . And so, we’re seeking a way, really, to get more validated data on an ongoing basis so that we could respond to the needs in a community that are not specific to a disease trajectory, but are related to health with a capital H. And that’s been the goal but it’s been going on almost five years now and we haven’t been able to get it.

If we’re going to put money in, let’s make sure we’re hitting the right people with the right service. And we’re having the results that we want to have. That makes sense. But I think some of the guidelines, like the way they want it reported, it’s going to be challenging because we don’t have the infrastructure built for that yet. I spent the last year trying to get set up for the AG regulations because they roll out this year. But I still don’t feel like I’m prepared to evaluate our community benefit program the way that we’re required to report on it now.

There were also concerns about the increased reporting requirements causing unnecessary burden on community benefits departments.

So then, now I’ve got a DoN process, I’ve got the AG process, I’ve got the schedule H (IRS), and I’ve got the PILOT. So, what’s going to happen is ultimately, we’re just going to be doing less.
When I look at all of the forms . . . What’s going to happen is, opposed to me being out in the community, I’m going to be sitting in my office doing forms.

New regulations on community engagement were also a concern for CBAs, although there was little in-depth discussion about how hospitals were planning to handle those items given the newness of the AG guidelines.

So, when the AG’s office mandated higher levels of community engagement—we’re already doing that. So, for us, it’s more keeping track of it. Because we did it, but we didn’t get them to fill out the forms. And we didn’t build a PowerPoint presentation. The sign-in sheets and all that. It’s in a folder somewhere, I’m sure, but it’s a little different now. So, now we have to report that. And I think that—I don’t know what other folks have said—but for me, I see the added reporting paperwork stuff as being kind of a challenge and a barrier. Because it’s more time doing that and less time actually meeting with partners and strategizing in how to develop programs that better serve people.

Participants identified strategies that might improve the community benefits process. The concept of anchor institutions was raised by multiple CBAs as a means to locate community benefits and overcome sustainability concerns. An anchor institution is defined as a placed-based entity, often a nonprofit institution, that is tied to their surroundings (their local communities) by mission, invested capital, or relationships to customers, employees, and vendors.30 There is burgeoning research on the impact such institutions make on the health and wealth of their communities.31 As one participant described the future of anchor institutions and community benefits:

Community benefits, I’ve always described as the tail wagging the dog. It’s really operational resources. The power of the organization is in our purchasing, it’s in our hiring, it’s in our business, the business that we do. And so it would be great if community benefits was further transformed such that the hospitals would be credited for operational investments. So that would then mean it’s no longer a battle and those battles are just a different battle. So the hiring strategy as well. The hospitals would love to make more investment in hiring . . . . It would make sense for them to invest in community-decreed job hiring pathways, career pathways, because it’s good business, but it’s also a hell of an investment for the community. So you can think about place-based investing.
The second idea for managing community benefit programming was the concept of a community innovation fund. An innovation fund is an account where an initial investment is made by the hospital which could then solicit funding from outside organizations, including the business sector, to tackle upstream social determinants of health that health care would not be likely to invest in independently. The discussion of community innovation funds was conceptual at best but highlights the deep thought that community benefit leaders are putting into solving the needs of their communities. These ideas also highlight how CBAs are still trying to make sense of both their roles as well as the larger frameworks for community benefits.

**Discussion**

In the US there have been long-standing societal expectations that nonprofit hospitals provide community benefits in return for their tax-exempt status. The new Massachusetts Attorney General guidelines are aimed at improving the effectiveness of community benefit programs. This research sought to provide insight into three current gaps in the community benefit literature: the nature of hospital organizational structures and their relationship to community benefit departments, barriers that nonprofit hospital CBAs in Massachusetts face, and how CBAs see their role.

While most participants in this study expressed hope that “they would get there,” they also expressed frustration with the changing expectations, uncertainty, and misperceptions that they believed the new community benefit regulations created for hospitals. At some hospitals, CBAs felt a discrepancy between the expectations for nonprofit hospitals to focus on community health and the lack of financial commitment by their hospitals. While this finding was more pronounced in small hospitals where resources are typically more challenging, I also found this in some large hospitals as well. In this small, single state sample, there did not seem to be a
relationship between hospital size or reporting structure and community benefit department operations. Hospital structure did not seem to directly influence CBAs experiences of their roles and responsibilities.

The only for-profit hospital in my study shared many of the same challenges as their nonprofit counterparts even though it was not subject to the same federal or state regulatory oversight on community benefits (they do need to comply with MDPH DoN requirements when seeking expansion project approval). In fact, this for-profit hospital performed tri-annual community health needs assessments per the IRS guidelines and reported to the AG despite not being required to do so. The CBA at this hospital attributed her hospital’s commitment to community benefits, including reporting to the Attorney General, to its Catholic tradition of prioritizing community health.

Across all hospital CBAs, there was general support for the updated AG guidelines in principle, especially regarding improved alignment between the IRS and MDPH. However, perceived difficulties (or the associated fear of difficulties) in meeting the AG expectations were a common concern among participants.

Some evolving themes emerged during the interviews. The concept of hospitals providing community benefit using their purchasing power (anchor institution) is an interesting although not entirely new concept that requires further exploration from a regulatory perspective. The creation of an innovation fund with the intent to grow hospital community benefit dollars through the solicitation of external funding may hold promise for impacting social determinants of health; however, this concept brings up many questions and potential concerns (i.e., who would have ultimate accountability of these funds, who would determine how the money is spent, does each hospital have one?).
Despite community benefit regulations having been in effect in Massachusetts since the mid-1990s and clear investment in community health over the years, there is no strong evidence of overall improvement in the health of communities. This sentiment was also conveyed by study participants. The updated AG guidelines are intended to encourage hospitals to more concretely measure population-level health outcomes and costs stemming from their community benefit investments; however, this paper shows that hospitals are concerned about their overall ability to meet this goal.

One recent success in Massachusetts regarding investments in upstream approaches to social determinants of health has been a concerted effort to address affordable housing. Multiple hospitals in the Boston area have chosen to invest in affordable housing and homelessness. It must be pointed out, however, that 100% of the hospital investments toward affordable housing have come from recent DoN dollars and not from hospital community benefit spending.

CBAs are ostensibly doing what they can to improve their community benefit programs; however, the lack of data to measure the impacts from investments beyond the hospital walls, the lack of sufficient resources at many hospitals, and the lack of sustainable funding to impact social determinants of health remain a challenge. Increased focus on community investment may help facilitate change; however, in and of itself, regulations may not be enough.

Differences between Massachusetts state and federal regulations for community benefits still exist despite the updated AG guidelines. For example, the federal community benefit rules allow for flexibility in hospital management of community benefit programming but carry an excise tax penalty for failure to meet reporting requirements ($50,000, Section 4959). Additionally, if a hospital does not comply with the broader requirements under Section 501(r) (financial assistance policies, CHNA, etc.), the IRS has the ability to withdraw tax-exempt
status.\textsuperscript{34} To date, there have been very few nonprofit hospitals that have been fined under Section 4959 or have had their tax-exempt status revoked.

In contrast, the Massachusetts AG guidelines are completely voluntary.\textsuperscript{15} The new guidelines require more transparency and details about community needs and programs to meet the needs. While these various regulatory levers are helpful in different ways, both the Section 501(r)(3) and Massachusetts Attorney General guidelines suffer from fundamental flaws.

Despite calls for clear, realistic expectations for hospitals to improve community health, there remains no consensus on what specifically society and regulators want from nonprofit hospitals in return for tax exemptions. Without a comprehensive, aligned set of expectations, hospitals on the one hand may try to be as responsive to their community as possible while on the other hand, given the evidence of little improvement over time, may be avoiding making meaningful commitments.

Stemming from the lack of clear expectations, it is difficult for regulators or community stakeholders to hold hospitals accountable. When there are no clear metrics to show success (or growth year over year), oversight is less effective. Any activity is accepted as meeting the requirements. As stated earlier, prior studies have found that nearly 70\% of community benefit operations are not consistent across hospitals.\textsuperscript{10}

One potential opportunity would be for more defined leadership from the Department of Health and Human Services focused on nonprofit hospital community benefit and population health reforms. This department would be better equipped than the IRS to determine whether hospitals are meeting expectations (assuming there are defined expectations). This newly formed division can also function as educators and facilitators and take currently available knowledge that is scattered among dozens of organizations and state agencies and create a
centralized “best practice” resource library for all hospitals in the US. States are currently innovating community benefit regulations, although per the Hilltop Institute, only half of US states are doing anything on this front. A federal group to coordinate and lead efforts across the country could be a respected partner for both states and hospitals as they try to meet societal expectations.

Finally, enforcement must have teeth. Without a meaningful deterrent to improper behavior, hospitals may not live up to social and regulatory expectations. A $50,000 fine may not be enough to ensure hospitals meaningfully invest in community health outside their walls, especially large, highly profitable hospitals.

There is still a great deal to learn about nonprofit hospital community benefit operations, even in Massachusetts. While uncertainty abounds, the CBAs remained optimistic that positive impacts will come over time. As one participant stated, “we’re building the road as we travel on it.”

**Limitations**

This study has several limitations. First the sample size was small, with only 10 hospitals/health systems and 13 individual CBAs participating. Using purposive sampling and the snowball method may have led me to oversample CBAs with a stronger network in community benefits in Massachusetts. Thus, perceptions from those involved may not represent all CBAs within Massachusetts.

Hospitals from the Eastern, Central and Western areas of the state were included, as well as hospitals from four of the five types defined by CHIA (no community hospitals without a high public payer population). Thus, I feel that overall, this sample was representative of hospitals in Massachusetts despite its small size. The included hospitals also varied in size ranging from
fewer than 200 beds to more than 700 beds. Most hospitals were part of health systems, a phenomenon that was difficult to avoid in Massachusetts. Unlike prior research, only one hospital in my sample was a faith-based institution (and was also a for-profit institution).

Second, Massachusetts hospitals may differ from a national sample of hospitals. These differences may occur for two distinct reasons. Massachusetts has a longer history of community benefit policy regulation than other states. Massachusetts CBAs may be more accustomed to general regulatory oversight as well. Additionally, Massachusetts residents tend to have more insurance coverage than in other states. As with CB regulations, Massachusetts was the first state to implement health care reform with an effort to provide health insurance coverage to all residents. It may be expected that higher insured populations lead to lower charity care expenditures by hospitals. Hospitals, thus, may have more money to allocate to community benefit programming. This hypothesis was not tested in this study, however. Regardless, prior research has shown that this is not always the case.\textsuperscript{12}

Finally, this study only focused on the perceptions of hospital CBAs and not on other stakeholders involved in improving community health. The perceptions of public health department professionals, government regulators, community organizations and community residents would also be necessary to optimize policies on nonprofit hospital community benefits. Additionally, interviews with hospital CFOs who make ultimate funding decisions would be useful to better understand their perspectives on funding for community benefit departments.

\textbf{Implications for Policy Makers}

The expectations for nonprofit hospitals to provide community benefits need clarification. Following clear expectations, policy changes will most likely be needed to ensure nonprofit hospitals make necessary investments in community benefits. Although the AG
expects hospitals to focus on social determinants of health, these need to be contextualized in the context of other public and private policy improvements. The amount of funding required and the longevity necessary to achieve societal impacts are difficult for hospitals who operate on annual budgets and are reimbursed for acute care episodes. There are ongoing efforts from the Robert Wood Johnson Foundation and similar organizations to create a coherent set of expectations for hospitals to invest in the social determinants of health.\textsuperscript{35,36} The output of these efforts is greatly needed.

However, hospitals are not powerless. The ability for nonprofit hospitals to use their advocacy power, as well as their understanding of how social determinants affect health, should not be underestimated. Surprisingly, the concept of being an advocate in the political and legislative process did not come up in any of the interviews. This could be because representatives from other departments, such as government affairs, were not directly involved in the study. Additionally, hospitals are starting to use DoN funding to impact social determinants of health. How this should be counted toward community benefits is an outstanding question.

One area of concern that was not captured in this study but remains a relevant issue is the need to ensure the financial viability of rural hospitals. Research in rural Appalachia found that many nonprofit CBAs face similar challenges to those identified in this study; however, rural hospitals have even less infrastructure and resources than most hospitals in Massachusetts.\textsuperscript{37} A redistributive program, such as the program MDPH recently implemented under the updated DoN guidelines, may be a useful model in funding community health programs in areas where no nonprofit hospitals exist. In the MDPH guidelines, a percent of all DoN money is set aside to distribute for strategic health issues to areas without available community benefit dollars.\textsuperscript{16}
Conclusion

Nonprofit hospital community benefit programs have failed to show significant community health improvement, and thus regulations are frequently being adjusted.\textsuperscript{33} The most recent IRS report to Congress (May 2018) shows decreased spending by private, tax-exempt hospitals on “community health improvement services and community benefit operations” (decrease of 9% between 2011 and 2014).\textsuperscript{38} Clear expectations, increased oversight, and stronger enforcement are required to ensure maximal societal benefit from these charitable organizations. Such changes should be considered at both the state and federal level.

Currently, individuals serving as nonprofit hospital CBAs are caught in a state of uncertainty. Many CBAs expressed frustration with limited resources and legitimacy internally and excessive expectations from the community and regulators externally. Yet, they remain hopeful that investments made by their hospitals today, and in the future, will improve the health of the communities they serve. These individuals are dedicated to the idea that social determinants of health are the driving factors affecting health in their communities. Nonprofit hospital CBAs should be encouraged to have a louder voice to advocate for what they need to ensure health in their communities, especially as they navigate the multiple layers of expectations.
References


34. United States Government. Section 4959 Excise Tax for Failure to Meet the Requirements of Section 501(r)(3) and Noncompliant Facility Income Tax for Failure to Meet the Requirements of Section 501(r). In: IRS, edUpdated 2019.


COMMUNITY BENEFITS PRINCIPLES

A. The governing body of each non-profit acute care hospital should affirm and make public a Community Benefits Mission Statement, setting forth its formal commitment to provide resources to and support its annual Implementation Strategy.

B. The hospital should demonstrate its support for its Implementation Strategy at the highest levels of the organization. The hospital’s governing board and senior management should be responsible for overseeing the development and implementation of the Implementation Strategy including designating the programs or activities to be included, allocating resources, and ensuring its regular evaluation.

C. The hospital should make community engagement a regular part of each stage of Community Benefits planning, implementation, and evaluation, with particular attention to engaging diverse perspectives.

D. To develop its Mission Statement and Implementation Strategy, the hospital should conduct a Community Health Needs Assessment, a comprehensive review of unmet health needs of the community, including negative health impacts of social and environmental conditions, by analyzing community input, available public health data, and an inventory of existing programs, which should facilitate regional collaboration.

E. The hospital should include in its annual Implementation Strategy the Target Populations it wishes to support, specific programs or activities that attend to significant needs identified in the Community Health Needs Assessment, and measurable short and long-term goals for each program or activity.

F. Each hospital should submit an annual Community Benefits Report to the AGO for publication that includes: 1) its CHNA; 2) its Implementation Strategy; 3) the Self-Assessment Form; 4) information on its Community Benefits programs including program goals and measured outcomes; 5) information on its Community Benefits Expenditures; and 6) the optional supplement (if desired).
Figure 4.2

Adapted Diagram of Federal and State Oversight of Massachusetts Nonprofit Hospitals Related to Community Health Improvement

Note. AGO = Attorney General’s Office, CB = community benefit, CHI = Community-based health initiative, CHNA = community health needs assessment, DoN = Determination of Need, DPH = Department of Public Health, IRS = Internal Revenue Service.
Table 4.1

Hospital Characteristics

<table>
<thead>
<tr>
<th>Identifier</th>
<th>Size</th>
<th>Teaching?</th>
<th>System or independent?</th>
<th>Predominantly underserved population</th>
<th>Hired consultants for CHNA (2013 or 2016)?</th>
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<td>Yes</td>
<td>Independent</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
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<td>System</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>C</td>
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<td>Yes</td>
<td>System</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>D</td>
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<td>No</td>
<td>System</td>
<td>No</td>
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<tr>
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<tr>
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<td>System</td>
<td>Yes</td>
<td>Academic partner</td>
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<tr>
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<td>System</td>
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*Note. Hospital size: small = 1–200 staffed beds, medium = 200–400 staffed beds, large = 400+ staffed beds.*
Table 4.2

**Most Frequent Codes**

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<th>Code</th>
<th>Frequency</th>
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<td>Cross-sector collaboration</td>
<td>52</td>
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<tr>
<td>Finance/money</td>
<td>46</td>
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<tr>
<td>Attorney General process</td>
<td>32</td>
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<tr>
<td>Perception of public health</td>
<td>28</td>
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<tr>
<td>Resource constraint</td>
<td>26</td>
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<tr>
<td>Data</td>
<td>25</td>
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<tr>
<td>Working with other hospitals</td>
<td>23</td>
</tr>
<tr>
<td>Social determinants</td>
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<tr>
<td>Determination of need</td>
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<tr>
<td>Regulatory agencies</td>
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<tr>
<td>Measure</td>
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<tr>
<td>Decision making</td>
<td>19</td>
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<tr>
<td>Sustainability</td>
<td>17</td>
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<tr>
<td>Initiative example</td>
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<tr>
<td>Role</td>
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<tr>
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<tr>
<td>Frustration</td>
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<tr>
<td>Accountable Care Organization</td>
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*Note. Codes used less than 15 times are not included*
<table>
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<th>Identifier</th>
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<th>Community benefit department characteristics</th>
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</tr>
<tr>
<td>B</td>
<td>Director of Community Relations</td>
<td>10</td>
</tr>
<tr>
<td>C</td>
<td>Director of Reporting and Compliance</td>
<td>17</td>
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<tr>
<td>D</td>
<td>Director of Mission and Community Partnership</td>
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</tr>
<tr>
<td>E</td>
<td>Director of Community Benefits</td>
<td>6</td>
</tr>
<tr>
<td>F</td>
<td>Vice President of Care Continuum</td>
<td>5</td>
</tr>
<tr>
<td>G</td>
<td>Community Relations/Community Health Manager</td>
<td>7</td>
</tr>
<tr>
<td>H</td>
<td>Executive Director of Community Health</td>
<td>4</td>
</tr>
<tr>
<td>I</td>
<td>Director of Community Benefits</td>
<td>&lt; 1</td>
</tr>
<tr>
<td>J</td>
<td>Manager, Community Relations and Community Benefit</td>
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</tr>
</tbody>
</table>
Chapter Five: Conclusion

The Problem

Health care in the US costs substantially more than in peer countries, yet health outcomes lag. The Institute for Health Improvement set a goal in 2007 to reduce costs, improve the patient experience, and improve population health simultaneously (i.e., Triple Aim).\(^1\) Since the first US tax code was written, tax-exempt hospitals have carried a societal expectation to provide charitable services in lieu of paying taxes.\(^2\) The definition of charitable services has changed over time, moving from simple (i.e., free care) to more complex, requiring hospitals to focus outside of their walls to improve the health and welfare of their surrounding communities (i.e., community health needs assessment [CHNA]).

Despite longstanding expectations for nonprofit hospitals to provide for the greater good, policy makers question whether nonprofit hospitals are living up to these expectations. Federal government inquiries and investigations identified that a lack of transparency shielded hospitals from scrutiny around their community benefit practices.\(^3\) Previously published studies showed that many nonprofit hospitals invested very little in community benefits outside of charity care (less than 5% of expenditures typically).\(^4\) This was in stark contrast to the value of tax exemptions, which were estimated as $24.6 billion in 2011.\(^5\)

Policy makers have been interested in better understanding what nonprofit hospitals are doing for these significant tax benefits and nudging them to think outside their walls. The 2010 Patient Protection and Affordable Care Act (ACA) included a section specifically aimed at increasing requirements for nonprofit hospitals. The ACA also asked nonprofit hospitals to describe how they were meeting their obligations as tax-exempt entities. Hospitals were required to create new financial assistance policies, limit charges and aggressive billing practices for
individuals meeting financial assistance thresholds, improve emergency service policies, and conduct a CHNA with an implementation strategy once every three years. This dissertation focused on the last of these new policy changes—CHNA.

**Research Findings**

In Chapter Two, I presented findings that showed wide variation in hospitals’ activity to address needs from their CHNAs. Hospitals operating as part of a health system, as well as hospitals participating in a Medicare accountable care organization (ACO), showed greater progress in CHNA implementation, whereas hospitals serving a greater proportion of uninsured showed less progress. I also found that hospitals reporting the highest level of CHNA implementation progress spent more on community health improvement.

Previous research suggested that hospitals may be particularly ineffective in partnering with community stakeholders for purposes of implementing plans to address community health needs. Some researchers have identified the lack of collaboration with public health partners as a significant threat to effective CHNA implementation. My data were consistent with these findings. Only about half of all hospitals in my study reported partnering with community stakeholders in developing a community-wide CHNA implementation plan in 2013.

In Chapter Three, I reported that within my sample, only 22% of local health departments (LHDs) reported a high level of collaborative action with a hospital in their community, leaving 78% of LHDs reporting relatively little or no collaborative action. This finding was in line with the low level of collaboration that hospitals reported with community stakeholders as presented in Study 1 (Chapter Two). I found significant and positive associations between a high level of collaborative action and my index variables of risk behaviors and healthy nutrition/lifestyle. A high level of collaborative action was also significantly and positively associated with three
individual outcomes: not smoking, eating vegetables daily, and vigorous exercise. In models that included an interaction term between the collaborative action measure and social capital, I found a significant and positive interaction for two of our outcome measures: wearing a seatbelt and general exercise. After stratification, collaborative action was not significantly associated with either behavior. The remaining behaviors and index variables did not show significant interactions.

In Chapter Four, I reported insights into how hospital community benefit administrators (CBAs) were managing community benefit programs in times of uncertainty (i.e., new Massachusetts AG guidelines). Barriers reported by community benefit administrators fell into three overarching themes: (a) data challenges, (b) evaluation challenges, and (c) resource constraint and sustainable funding. Data challenges were multifactorial. All CBAs stated that they worked with public health and/or academic partners/consultants to obtain and analyze population-level data. The lagging nature of the data and inconsistency in measurement across years and geographies were identified as challenges. CBAs identified challenges in evaluating impacts from community needs programs. The first challenge was having the skill set to acquire, analyze, and interpret data. Second, because many of the individuals that receive community benefit programs are not patients, the CBAs could not track long-term outcomes. Thus, they felt more comfortable tracking process measures rather than outcome measures. Many hospital CBAs cited resource constraints in relation to internal operations. All but two hospitals had an operating budget for the community benefit department. Some CBAs stated that with the increasing workload from the new AG guidelines, more staff were needed to manage ongoing activities and regulatory filing requirements. One hospital sought external grant money to
support additional staff. Additionally, some of the CBAs stated that they believed the hospital should be allocating more money to community efforts.

Two themes emerged for how CBAs were making sense of their role: swimming upstream and hope and fear for the future. A few hospital CBAs stated that their hospital leadership did not appreciate differences between Determination of Need (DoN) dollars under the Massachusetts Department of Public Health and community benefit spending under the IRS and Attorney General. CBAs felt that hospital leadership believed that because there was DoN money, the hospital did not need to budget for community benefit investments. Second, some CBAs identified overlap within the hospital between community health (as derived by community benefit regulations) and population health management (under financial terms such as Medicaid ACOs). Many of the CBAs identified that an alignment between the community benefit department and population health group would be beneficial for the hospital and for the patients that were at-risk but also acknowledged that providing community benefits was not solely for these purposes.

The new Attorney General guidelines were of foremost concern for the CBAs. Although they acknowledged federal IRS reporting as important, the AG guidelines were new and more rigorous in their expectations despite their being voluntary. The primary concerns were related to the types of programs the AG expected to see from hospitals (e.g., moving away from health fairs toward impacting housing, transportation, etc.), the amount and reporting of community involvement, and tracking outcome measures rather than process measures. Overall, nonprofit hospital community benefit administrators were optimistic that they would “get there” in terms of improving community benefits under the new AG guidelines. Unfortunately, CBAs anticipated the transition process would be difficult.
Conclusion

This dissertation sought to fill gaps in the literature on nonprofit hospital community benefits. Nonprofit hospital community benefits are a complex policy area, and hospitals are still struggling to make progress. Although most hospitals reported compliance in performing the mandated community health needs assessment, not all hospitals have fully invested in steps to meet community needs. Additionally, as reported for Study 1, hospitals did not report widespread partnership with outside organizations to implement plans. I found a similar trend from the perspective of local health departments in Study 2. Only 22% of my sample reported working closely with nonprofit hospitals in their jurisdiction to put in place programs to meet health needs.

This is particularly unfortunate because Study 2 also gives hope that such collaborative action could be useful in promoting community health. More research is needed to confirm and extend my findings, but collaborative action was associated with healthy behaviors at an individual level. Social capital may facilitate collaborative action by readying communities to be open to programs coming from LHD–hospital collaborative action. Continued research is needed.

While hospitals have taken many steps to become compliant with community benefit regulations, they are still underperforming in many respects. The new Massachusetts Attorney General guidelines added rigor to annual community benefit reporting that many hospitals were struggling to meet. CBAs stated a personal desire to impact community health but faced many barriers in carrying out their goals. Hospitals do not generate revenue from community benefit departments; thus, they may be underfunded and underappreciated within the institution despite “community” being listed as a key element of most hospitals’ mission. My findings from Study
were consistent with results from a survey of a national sample of community benefit professionals who reported gaps in effective community benefit processes with little evidence to guide them. The lack of realistic expectations on community benefit activities outside of charity care for hospitals that see no financial benefit is the biggest challenge. While social determinants of health have risen to the forefront of how policy makers envision meeting the Triple Aim, there must be a compelling reason for nonprofit hospitals to focus on these areas. Outside of Determination of Need dollars, hospitals in Massachusetts do not seem to be spending money on community health. This doesn’t mean they can’t do so, but there is currently no business case for them to prioritize these activities. Additionally, enforcement of community benefit regulations is weak.

Instituting a minimum spending amount may be necessary; however, care needs to be taken to ensure struggling hospitals (rural, critical access) are not unduly burdened and that hospitals currently spending above minimum thresholds don’t reduce their contributions. Hospitals and hospital systems that have had significant consolidation (especially in Massachusetts) and, thus, increased profitability should be able to meet a minimum spending amount. In a published report on the value of tax-exemptions, Massachusetts hospitals topped the list of nationwide hospitals receiving the most exemptions. Even with a minimum spending threshold, oversight is still essential to monitor the types of programs being instituted. At the federal level, the IRS should receive greater assistance from the Department of Health and Human Services (HHS). HHS should create a department to monitor and educate about community and population health initiatives, based in part on the many organizations that have drafted best practices and have ongoing research in this area (the Robert Wood Johnson
Foundation and the Public Health Institute, among others).\textsuperscript{8-10} The IRS is arguably not equipped to evaluate health. Having a central department within the federal government to oversee these disparate activities would be helpful.

The role of state governments in regulating nonprofit hospitals is important.\textsuperscript{8,11} Through state “experimentation,” the federal government has a historical insight into what works and what doesn’t. For example, from state level experimentation, it is known that instituting minimum spending values may reduce overall charitable giving by hospitals, if not managed appropriately.\textsuperscript{12} Understanding this will allow regulators to monitor and correct any negative behavior.

What is becoming clear 10 years following the enactment of the ACA is that hospitals are not making progress on CHNA implementation in any meaningful way. The reasons could range from not feeling confident in their abilities to not having the relationships needed to successfully implement programs or, more likely, not finding a compelling reason to take these regulations seriously. Given that hospitals make money on caring for the sick, even under payment reform programs such as value-based purchasing and accountable care organizations (ACOs), hospitals do not yet identify as purveyors of prevention and wellness. While many hospitals have purchased primary care practices, the impetus of doing so was to ensure downstream revenue from capturing well-reimbursed testing, such as labs, imaging, colonoscopies and biopsies, rather than keeping the community healthy. Only to the extent that patients with chronic conditions are part of hospital financial risk sharing programs do hospitals seem to notice social determinants of health. Unfortunately, they tend to think of these for individual patients rather than using their financial resources to improve conditions for the wider community.
Policy makers have continued to use regulation (i.e., a “stick”) to encourage nonprofit hospitals to comply with community benefit guidelines. Unfortunately, these regulations are ill designed with few clear expectations, inadequate oversight, and lax enforcement. One solution to this issue could be government initiatives (federal, local, or both) to address noncompliance with total revocation of tax-exempt status of nonprofit hospitals, thus mandating them to pay taxes at the federal, state, and local levels. While this may be a windfall for cash-strapped governments, it is not clear that money would be allocated to public health initiatives. Total revocation of tax-exempt status is not in the best interest of our citizens at this time.

In summary, nonprofit hospital community benefit regulations are not currently contributing to improved community health. The ability for a hospital to impact the Triple Aim is still an unproven hypothesis that needs more empirical research; however, as a policy, it is most likely here to stay. Thus, community benefit regulation requires all stakeholders to continue to seek evidence of what works and what doesn’t and find other mechanisms to engage hospitals in these endeavors. In cases where hospitals with the financial means to invest in their community do not live up to their societal and governmental expectations, loss of tax-exemption is a warranted step.

Future Research

A paper focusing on the relationship between nonprofit hospitals and public health in Massachusetts is forthcoming as part of Study 3 of this dissertation. Indications are that Massachusetts is substantially different than other states in its structure and provision of public health services. This finding led to interesting successes and challenges for Massachusetts nonprofit hospitals to meaningfully partner with public health departments to jointly implement programs aimed at community health improvement.
Additionally, I hope to look at Medicare innovation (payment) programs and their relation to community benefit spending. There have been few inquiries seeking to understand the myriad options by which HHS may incentivize (or disincentivize) hospitals to think outside of their walls. Assessing improvements in mortality—especially those in cardiovascular and cancer—from investments in new technology or treatments and comparing mortality to areas of underinvestment, such as in mental health and substance abuse, is an interesting research question looking to quantify community needs versus hospital behavior. One of the biggest challenges for hospitals is managing rapidly changing technology without crowding out investments in community health, especially if reimbursement is not aligned. Hospitals are reimbursed at higher rates in specialty areas that leverage new technology and thus may be failing to meet the needs of their communities, especially in those areas that are less technologically focused (and subsequently provide lower reimbursement). As technology advances, including artificial intelligence and machine learning that seeks to make hospitals and physicians more efficient, how can hospitals turn gains into doing more for their communities?

Finally, I seek to understand what hospitals are doing specific to climate change as an existential threat to communities. Climate change has the potential to negatively impact hospitals financially; thus, I would expect they are currently thinking about this phenomenon. Climate change is an area where hospitals will certainly need to collaborate with outside organizations including public health. This may be a win-win for hospitals and their communities specific to community benefit investments.
References


