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EVALUATING HOSPITAL COMMUNITY BENEFIT AND COMMUNITY HEALTH IMPROVEMENT REQUIREMENTS

Shelly Johnson, Ph.D.

Western Michigan University, 2022

The Internal Revenue Service's (IRS) hospital community benefit standard aims to improve the community's health, it is a test the IRS uses to determine whether a hospital is organized and operated for the charitable purpose of promoting health. Participation in this program is required of all not-for-profit hospitals in the US, who spend billions of dollars annually in community benefit in place of taxes. Hospitals must annually submit IRS form 990 Schedule H and are required to report costs associated with their provision of community benefit spending. In addition, a hospital must conduct community health needs assessment (CHNA) and implementation plan (IP) every three years; list their health improvement activities and spending under the community health improvement category on the Schedule H IRS form.

With annual spending of billions of dollars and minimal research, this is an opportunity to research whether these dollars are doing what the original law intended - to impact the community's health. To determine impact, County Health Rankings & Roadmaps (CHR&R) measures nearly every county's health in all 50 states and produces annual health outcomes and

health factors scores. This dissertation aims to analyze the relationship between hospital community benefit spending and CHR&R scores, whether there is any difference between hospitals in Medicaid expansion states and non-expansion states in community benefit spending and explore a single hospital in a health award-winning community CHNA and IP.

The study sample is rural, general acute care, not-for-profit hospitals in the US from a matched peer county group using the CHR&R county peer group 59.

This study identified a weak, negative relationship between hospital community benefit spending and the CHR&R Outcomes scores ($r=-.29$, $N=240$) and a weak, positive relationship between hospital community health improvement spending and CHR&R Outcomes scores ($r=.15$, $N=240$). There is a weak, positive relationship between hospital community health improvement spending and CHR&R Factor scores ($r=.29$, $N=240$). Six counties at the individual county level had statistically significant findings between community benefit spending and CHR&R scores.

A statistically significant difference was found between hospitals' profit margins in states that expanded Medicaid and hospitals located in states that did not. The expansion state hospitals had a ten-year profit margin mean of less than 1%, while the non-expansion states had a ten-year profit margin mean of 6.78%. Although there was a difference in profit, no difference in community benefit or community health improvement spending was found.

And lastly, in the Robert Wood Johnson Culture of Health award-winning community of Salinas, California, the sample hospital Salinas Valley Memorial Health System's CHNA and IP did meet the minimum IRS requirements. Still, they fell short of the best practices for community change found in the literature. The IP listed sources and was evidence-based; however, it was programmatic, not creating change at the system, policy, or environment level.

EVALUATING HOSPITAL COMMUNITY BENEFIT AND COMMUNITY HEALTH
IMPROVEMENT REQUIREMENTS

by

Shelly Johnson

A dissertation submitted to the Graduate College
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This dissertation is a work of love for the people of the United States, our rural communities, and, most importantly, our future collective health. Of course, this could not have been possible without the support of others.

First, to my better half, Scott encouraged me, gave me the space I needed, and never asked if I was done yet.

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CHAPTER 1

INTRODUCTION

Hospital Community Benefit

The Internal Revenue Service's (IRS) hospital community benefit standard aims to improve the community's health. Participation in this program is required of all not-for-profit, acute care, general hospitals in the US. In 1969, the IRS issued Revenue Ruling 69-545, which recognized the promotion of health as "one of the purposes in the general law of charity that is deemed beneficial to the community as a whole even though the class of beneficiaries eligible to receive a direct benefit... does not include all members of the community ..." (Somerville, 2021). A hospital must demonstrate that it benefits a class of persons broad enough to help the community and operate to serve a public rather than a private interest (Internal Revenue Service, 2020).

While initially started in 1969, the community benefit standard was revised with the Patient Protection and Affordable Care Act (the ACA), enacted March 23, 2010, by US Congress, adding new requirements for not-for-profit hospitals (Catholic Health Association, 2015). The IRS's 1969 Revenue Ruling remains in effect today alongside the ACA requirements (Somerville, 2021).

The Community Benefit Standard is a test the IRS uses to determine whether a hospital is organized and operated for the charitable purpose of promoting health. One criticism of the

standard is that it does not establish a minimum amount of community benefit spending that a hospital must provide to qualify for the exemption (Somerville, 2021). Many critics question whether not-for-profit hospitals deserve the tax exemption, especially given the prices charged to low-income uninsured patients compared to patients paying through insurance and the methods of collecting payment from patients (EveryCRSReport.com, 2010). While some tax advisors recommend not-for-profit hospitals make community benefit expenditures equivalent to their estimated tax liability, the IRS continues to use an assessment of facts and circumstances of hospital community benefit spending and practices to determine whether sufficient benefits to their communities to justify their qualification for tax exemption. The IRS, however, has provided little guidance as to how hospitals are expected to quantifiably satisfy the requirement (Somerville, 2021).

Community benefit for 501(c)(3) tax-exempt hospitals includes requirements that must be met as a condition of preserving their federal tax exemption:

1. Conducting a community health needs assessment (CHNA) and developing a corresponding implementation plan (IP) at least every three years (Somerville, 2021).
The assessment must be made publicly available and consider input from persons representing the broad community's interests, including those with public health knowledge or expertise (EveryCRSReport.com, 2010).
2. Establishing a financial assistance policy is widely publicized (Somerville, 2021). The financial assistance policy must address eligibility criteria for financial assistance, the application process, and whether the assistance includes free or discounted care. Other issues that must be addressed include the basis for calculating amounts charged to

patients, the actions that might be taken for nonpayment (EveryCRSReport.com, 2010).

3. Establishing an emergency medical care policy requires nondiscriminatory treatment of emergency medical conditions, regardless of the patient's ability to pay (Somerville, 2021). Hospitals may not charge individuals under the financial assistance policy more than the lowest amounts charged to those with insurance coverage. Hospitals are also prohibited from using gross charges. (EveryCRSReport.com, 2010)
4. Compliance with specified limitations on hospital charges and with billing and collections requirements, hospitals are required to make reasonable efforts to determine whether an individual is eligible for financial assistance before beginning extraordinary collection actions (Somerville, 2021).

Community Benefit Reporting

To create visibility and accountability, hospitals must annually submit IRS form 990 Schedule H, which lists IRS-approved community benefit categories. Hospitals are required to report costs associated with their provision of community benefits (Somerville, 2021). Hospital organizations use Schedule H to provide information on the activities and policies of, and community benefit spending provided by, its hospital during the tax year (Internal Revenue Service, 2020).

Schedule H contains six parts. Part I requires reporting financial assistance policies, and the cost of financial assistance and other community benefit activities and programs. Financial aid includes free or discounted health services provided to persons who meet the organization's

financial aid criteria and cannot pay for all or a portion of the services (Internal Revenue Service, 2020).

Part II quantifies the hospital's community-building activities, intended to impact a community's health positively. Examples are also known as the social determinants of health, outlined in Table 1.

During the initial public comment period, Schedule H did not include community-building activities to calculate community benefit. The Catholic Health Association (CHA), a national leader in community benefit, strongly opposed its exclusion. The CHA argued that "there is a clear consensus in the public health community that social and environmental factors are strong determinants of health for vulnerable populations," citing publications from the Centers for Disease Control and Prevention and other scholarly articles. (EveryCRSReport.com, 2010).

Part III quantifies the costs due to government program shortfalls and bad debts owed to the organization (EveryCRSReport.com, 2010). A hospital can report shortfalls or costs greater than what they were paid from government health programs such as Medicaid, a health program for individuals and families with low incomes. Other means-tested government programs are government-sponsored health programs where eligibility for benefits or coverage is determined by income or assets, such as the State Children's Health Insurance Program (SCHIP) (Internal Revenue Service, 2020).

Table 1-1
IRS Community Building Criteria

Criteria	IRS Definitions and Examples
Physical improvements and housing	Provision or rehabilitation of housing for vulnerable populations
Economic development	Assisting small business development in neighborhoods with vulnerable populations or creating new employment opportunities in areas with high rates of joblessness
Community support	Childcare and mentoring programs for vulnerable populations or neighborhoods, neighborhood support groups, violence prevention programs, and disaster readiness and public health emergency activities
Environmental improvements	Addressing environmental hazards such as the alleviation of water or air pollution, safe removal or treatment of garbage or other waste products, and other activities to protect the community from environmental hazards
Leadership development	Training in conflict resolution; civic, cultural, or language skills; and medical interpreter skills for community residents
Coalition building	Participation in community coalitions and other collaborative efforts with the community to address health and safety issues
Community health improvement advocacy	Efforts to support policies and programs to safeguard or improve public health, access to health care services, housing, the environment, and transportation
Workforce development	Recruitment of physicians and other health professionals to medical shortage areas or other areas designated as underserved, and collaboration with educational institutions to train and recruit health professionals needed in the community

Data Source: IRS

As a normal part of hospital operations, hospitals regularly engage in billing and collection; however, there is a time when debt has no potential for repayment. Per sound accounting practices, it is customary to write off these debts as bad debt on an organization's financial statement (EveryCRSReport.com, 2010). Bad debt is arguably a cost of doing business, and the inclusion of bad debt is not without controversy. The CHA noted that bad debt is affecting taxable and tax-exempt organizations alike. The CHA argued that “hospitals should

improve their charity care programs to identify these patients at the onset of treatment, rather than using bad debt to approximate the impact of these patients after the fact” (EveryCRSReport.com, 2010).

For the community benefit standard and the Schedule H reporting, a hospital is to report combined bad debt expense; provide an estimate of how much bad debt expense, if any, reasonably could be attributable to persons who likely would qualify for financial assistance under the organization’s financial assistance policy; and provide a rationale for what portion of bad debt, if any, the organization believes is community benefit (Internal Revenue Service, 2020).

Part IV requires disclosure of any joint ventures. Part V requests information about the health care facilities. Part VI is an area to narrate other charitable activities (EveryCRSReport.com, 2010).

County Health Rankings and Roadmap

While a hospital must conduct a CHNA and IP every three years, measuring community health is complex; one program, the County Health Rankings & Roadmaps (CHR&R), seeks to do just that. The Rankings measure nearly every county's health in all 50 states (County Health Rankings & Roadmaps, 2018).

They are working to improve health outcomes and close the health gaps between those with the most and least good health opportunities. Their work is “rooted in a deep belief in health equity, the idea that everyone has a fair and just opportunity to be as healthy as possible, regardless of race, ethnicity, gender, income, location, or any other factor.” The CHR&R

program provides data, evidence, guidance, and examples to build awareness of the multiple factors that influence health and support community leaders working to improve health and increase health equity (County Health Rankings & Roadmaps, 2018).

A partner to the CHR&R, the Robert Wood Johnson Foundation (RWJF) is the nation's largest philanthropy dedicated solely to health. Their goal is to "help raise the health of everyone in the United States to the level that a great nation deserves, by placing well-being at the center of every aspect of life." RWJF created an annual award for communities that show excellence in improving community health. The Culture of Health Award honors and elevates communities working at the forefront of advancing health, opportunity, and equity for all (Robert Wood Johnson Foundation, 2021).

Background

The Panel on Understanding Cross-National Health Differences Among High-Income Countries compared health outcomes in the US to 16 comparable countries and found a "strikingly consistent and pervasive pattern of higher mortality and inferior health" in the US. Not only is US health status worse, but the difference in life expectancy has been declining over the past 30 years (Woelf SH, Aron L, 2013). The US spends more on health care yet has the lowest life expectancy. In 2018, the US spent 16.9 percent of gross domestic product (GDP) on health care, nearly twice as much as the average OECD country (Organization for Economic Co-Operation and Development, 2020). Spending on health care has been steadily increasing for all countries because "health spending growth has outpaced economic growth, in part because of advances in medical technologies, rising prices in the health sector, and increased demand for

services" (Tikkanen, 2020).

Despite the highest spending among peers, the US has worse health outcomes. For example, Tikkanen and Abrams found that "life expectancy at birth in the US was 78.6 years in 2017 — more than two years lower than the OECD average and five years lower than Switzerland, which has the longest lifespan" (Tikkanen, 2020).

Research has shown that poor health outcomes and shorter life expectancy appear related to risk factors and disease burden. This was true before the CoVid19 pandemic. More than 25 percent of US adults reported they had been diagnosed with two or more chronic conditions such as asthma, diabetes, heart disease, or hypertension during their lifetime compared to 14 to 22 percent in all other peer countries (Tikkanen, 2020).

Tikkanen and Abrams' Commonwealth report states that "obesity is a crucial risk factor for chronic conditions such as diabetes, hypertension and other cardiovascular diseases, and cancer. The US has the highest obesity rate among the countries studied — two times higher than the OECD average. Issues that contribute to obesity include unhealthy living environments, less-regulated food and agriculture industries, and socioeconomic and behavioral factors" (Tikkanen, 2020).

And lastly, the US had fewer physician visits than peers in most countries and has the highest rates of avoidable mortality because of people not receiving timely, high-quality care, which may be related to a low supply of physicians in the US (Tikkanen, 2020).

How can the US do better? Research suggests the country may do better by focusing and funding in 5 key areas: genetics, social circumstances, environmental exposures, behavioral patterns, and healthcare, and that medical care itself plays a relatively minor role in the overall

health of a community. Impact in essential health measures can be found in addressing social circumstances, social determinants of health, and our health behaviors (Schroeder, 2007). US peer group countries typically achieve better health measures by balancing the funding across all the social determinants of health, rather than merely in their healthcare system spending (Corrigan, J. et al., 2015).

Relevance

The IRS Community Benefit standard continues to generate controversy. In 2020, following a year of inquiry, Senate Finance Committee Chairman Chuck Grassley (R-Iowa) addressed every member of the Senate Finance and Judiciary Committees about the need for new attention to the tax laws governing non-profit hospitals. Grassley highlighted the need to address billing, debt collection, and price transparency for patients. “...the issue of how the Internal Revenue Code should deal with non-profit hospitals is likely to remain an important question. Since the enactment of Section 501(r) into law ten years ago, I have heard from the healthcare industry that Section 501(r)’s requirements are overly strenuous for non-profit hospitals. Unfortunately, this inquiry has shown that, if anything, the requirements of 501(r) need to be strengthened rather than softened” (United States Senate Committee on Finance, 2020).

Not-for-profit hospitals in the US spent approximately 105 billion dollars in 2018 in community benefit in place of taxes (American Hospital Association, 2019). Schedule H focuses on inputs critical to improving the community's health; however, it does not require corresponding outcomes, a criticism of the standard, and the reporting requirements (Rubin,

Singh, & Jacobson, 2013). With annual spending of billions of dollars and minimal research, this is an opportunity to determine whether these dollars are doing what the original law intended - to impact the community's health.

This research can have direct policy implications on the IRS' Community Benefit standard's effectiveness and add to a new body of scientific research that explores this complex topic.

Significance of Research

A report by the American Hospital Association states that in 2018, hospitals provided \$105 billion in community benefits (American Hospital Association, 2021). According to a Johns Hopkins study, on average, tax exemptions save not-for-profit hospitals nearly 6% of total expenses or about \$11.3 million per hospital. There has not been a systematic comparison of the tax exemption value to the community benefit spending for hospitals from a national sample (Herring, Gaskin, & Zare, 2018).

This three-paper dissertation aims to analyze the following research questions:

- Paper One: Is there an association between hospitals' community benefit, community health improvement spending, and the corresponding CHR&R county's health outcomes and health factors scores from 2009-2019?
- Paper Two: Is there an association between profit margin, community benefit and community health improvement spending between hospitals in Medicaid expansion states and Medicaid non-expansion states?

- Paper Three: In a 2019 RWJF Culture of Health Award-winning community-does the hospital's community health needs assessment (CHNA) and implementation plan (IP) have the evidenced-based factors for success?

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CHAPTER II

EVALUATING THE RELATIONSHIP BETWEEN HOSPITAL COMMUNITY BENEFIT SPENDING AND COUNTY HEALTH RANKING SCORES

Background and Significance

Hospitals are an essential partner in improving the health of individuals and communities across the United States. Hospitals began from a historical mission towards charity; they started to provide care and custody for the ailing poor (America's Essential Hospitals, 2021). While in modern times, the typical hospital revenue comes by providing individual medical care, there is also a business and human case for hospitals to focus beyond the delivery of traditional healthcare, by improving the health of the community, they can prevent unnecessary deaths and reduce demands on the healthcare system (Norris, n.d.).

To this point, the US leads the world in healthcare spending per capita and as a percent of the GDP yet is not the world leader in many health measures (Schroeder, 2007). The National Research Council and the Institute for Medicine report found clues to these disparities between healthcare spending and measures of health are evident: in every area of health and social determinants of health; the US does not have a comprehensive, integrated healthcare system, the citizens have a "greater propensity for unhealthy behaviors," higher income inequality and childhood poverty (National Research Council (US); Institute of Medicine (US); Woolf SH, Aron L, 2013). The report recommends targeted investment strategies focused on the Healthy People 2020 and the National Prevention Council, 'both of which target the conditions responsible for the U.S. health disadvantage' (National Research Council (US); Institute of

Medicine (US); Woolf SH, Aron L, 2013). Despite a robust economy, the US has higher rates of poverty, especially among children, and income inequality than its peers and the US also has fewer safety net programs for those in poverty (National Research Council (US); Institute of Medicine (US); Woolf SH, Aron L, 2013).

In a 2007 New England Journal of Medicine article on health in the U.S., Schroeder stated, "we can do better" (Schroeder, 2007). The United States is the world leader in healthcare spending yet is not the world leader in many health statuses measures. Among 30 industrialized nations, the US ranks near the bottom on most standard health measures (Commonwealth Fund, 2021). US peer group countries typically achieve better health measures than the US by balancing the funding across all the social determinants of health, rather than merely in their healthcare system spending (Corrigan, J. et al., 2015).

One program that can be used to invest in better health is the Internal Revenue Service (IRS) hospital community benefit standard, with the purpose to improve the health of the community, and to provide charity care for individuals without insurance and without the ability to pay. While initially started in 1969, the community benefit standard was revised with the Patient Protection and Affordable Care Act (the ACA), enacted March 23, 2010, by US Congress, adding new requirements for not-for-profit hospitals (Catholic Health Association, 2015). The standard required hospitals to move out into the greater community to identify and address significant health needs outside of medical care. Hospital Community Benefit standard 501(c)(3) section 501(r) now requires not-for-profit hospitals in the US to use a portion of their expenses on community benefit, in place of taxes, in the areas as outlined in Figure 1, from the Internal Revenue Service (Internal Revenue Service, 2008).

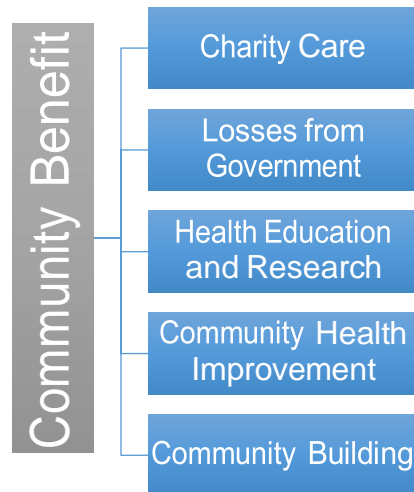


Figure. 2-1. Hospital Community Benefit Categories
Data Source: Catholic Health Association

According to the Catholic Health Association (2015), a leader in the hospital community benefit space:

'Community benefit is broadly defined as programs or activities that provide treatment or promote health and healing as a response to an identified community needs and meet at least one of these objectives: improve access to health care services, enhance public health, advance increased general knowledge, or relieve or reduce the burden of government to improve health.'

Part of the IRS Community Benefit standard requires hospitals to conduct a community health needs assessment (CHNA) every three years and, from this assessment, create an implementation plan (IP) to address the community's significant health needs. 'With increased public scrutiny, community benefit spending has taken on new relevance for governing body not-for-profit health care. Most directly, organizations' tax exemption depends on meeting the new requirements (Rozier, M., 2020).

To judge the merit of tax exemption, community benefit spending is often compared to tax exemption value. Researchers projected that community health spending would increase 3-fold if hospitals were required to spend a certain percentage of community benefit dollars on community health improvement; they recommended a 10% minimum increase as profit margins increased. The recent expansion of Medicaid has critics questioning whether tax-exempt status is justified, given the decrease in charity care (Rozier, M., 2020).

Community Health Needs Assessments

The IRS Hospital Community Benefit standard requires not-for-profit hospitals in the US to use a portion of their expenses on community benefit place of taxes (Catholic Health Association, 2015). Part of the community benefit standard also contains a requirement for not-for-profit hospitals to conduct a CHNA with an IP every three years, including the collection and analysis of data to understand the specific health issues a community faces and to develop strategies to address the identified significant health issues (Center for Disease Control, 2015). This is the mechanism, in theory, that shifts a hospital's focus to the community and provides funding to address the social determinants of health and our health behaviors.

A literature review identified gaps in the current standard: one researcher stated that the new IRS requirements allow monetary inputs on the required annual report form, Schedule H, but does not require the measurement of outcomes. Researchers argue the current IRS standard does not require hospitals to design community programs that make a measurable difference in their communities' health (Rubin, Singh, & Jacobson, 2013). There is also a misalignment between hospitals and other community partners; many community health improvement

activities across a community, each with varying areas of emphasis, processes, and structure (Public Health Institute, 2014).

County Health Rankings and Roadmaps

County Health Rankings & Roadmaps (CHR&R), a partnership between the University of Wisconsin at Madison and the Robert Wood Johnson Foundation (RWJF), provides a revealing snapshot of how health is influenced where we live, learn, work and play. Each year CHR&R scores every US county in two overall categories: health outcomes, which consist of quality and length of life, and health factors which consist of health behaviors, clinical care, socioeconomic factors, and physical environment. Each county is then ranked in relation to each other within the same state. They claim to provide a starting point for change in communities (County Health Rankings & Roadmaps, 2018).

Figure 2 from CHR&R outlines their categories: health outcomes and health factors. Health outcomes is created using length and quality of life metrics. Health factors is created from data including tobacco use, diet and exercise, alcohol and drug use, sexual activity, access to care, quality of care, education, employment, income, family and social support, community safety, air and water quality, housing, and transit. Each of these is then grouped into categories; for example, air and water quality and housing and transit are grouped into the physical environment category. Each of these categories is then combined into one health factor, and one health outcomes score.

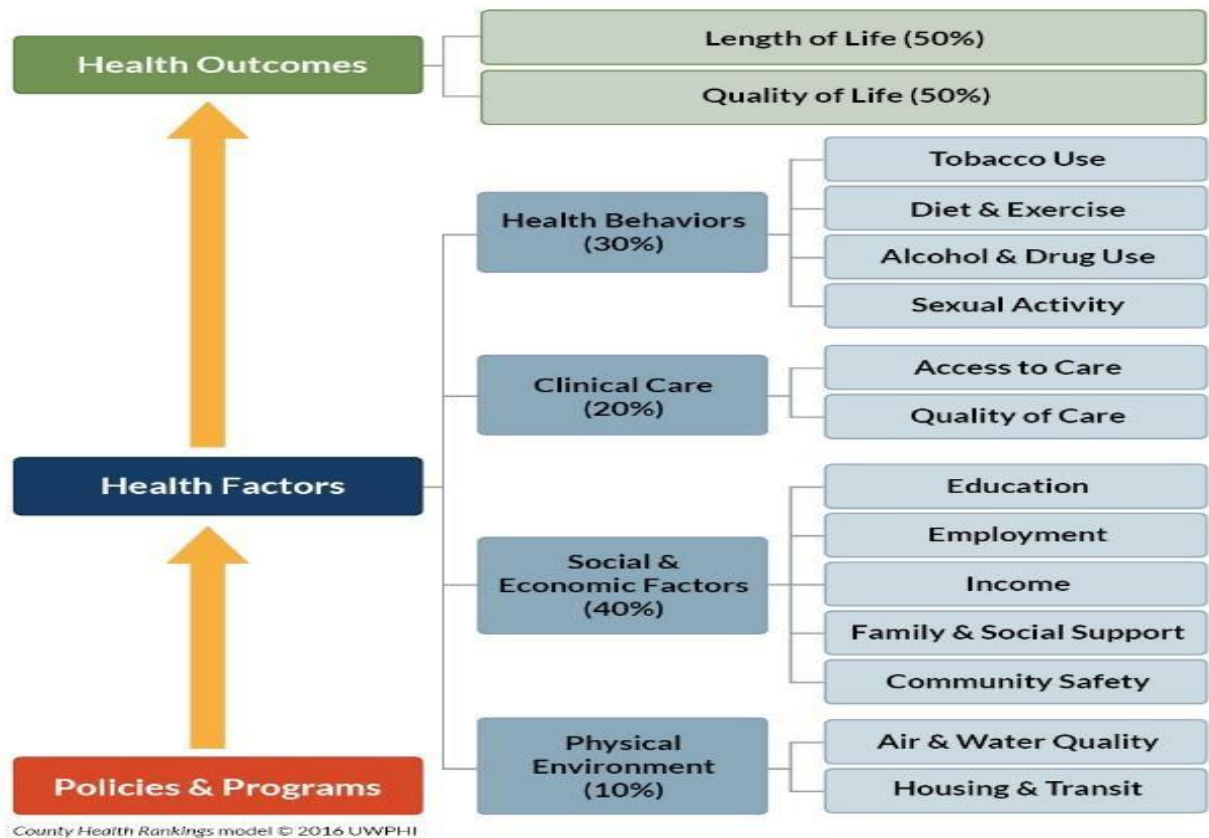


Figure. 2-2. County Health Rankings

From: The University of Wisconsin Population Health Institute. County Health Rankings & Roadmaps, 2022. www.countyhealthrankings.org. Online. <https://www.countyhealthrankings.org/explore-health-rankings/measures-data-sources/county-health-rankings-model>. Copyright 2021 by County Health Rankings and Roadmaps.

CHR&R goes through a careful and deliberate process when selecting measures. They consider measures to ensure they reflect essential aspects of population health that can be improved and are chosen based on their technical and analytical feasibility. The County Health Rankings are based on counties and county equivalents. Any entity that has its own Federal Information Processing Standard (FIPS) county code is included. They only rank counties and county equivalents within a state.

According to the CHR&R, the "County Health Rankings are compiled from many different types of data. To calculate the ranks, we first standardize each of the measures. The ranks are then calculated based on weighted sums of the standardized measures within each state. We standardize each measure within each state to the average of counties in that state. Recall that our measures are in several scales—some are percentages, some are rates, some are averages of survey responses or other metrics. Standardizing these measures transforms them to the same metric—a mean (average) value of 0 and a standard deviation (a measure of spread) of 1. We refer to these as Z-scores." (County Health Rankings, 2018).

For some measures, a higher score indicates better health or a more desirable value. For some, it is the reverse. Those measures compute the Z-score as usual but multiply it by -1 so that higher scores indicate poorer health. The measures reversed in this manner are food environment index, access to exercise opportunities, diabetes monitoring, mammography screening, high school graduation, some college (post-secondary education), and social associations (County Health Rankings, 2018).

In addition to standardizing the scores, they are also weighted to represent relative importance. A weighted composite is computed by multiplying each Z-score by its weight and adding them up. Composite scores are sorted from lowest to highest within each state. The lowest score (best health) gets a rank of #1 for that state, and the highest score (worst health) gets whatever rank corresponds to the number of units ranked in that state. This model supports all of this by policies and programs (County Health Rankings & Roadmaps, 2018).

A hospital's community benefit spending and activities can directly influence the factors that create these scores, especially clinical care, and health behaviors, and indirectly influence

social & economic factors and the physical environment. Hospitals can impact their communities' health through local economic development, assisting in improving health behaviors, and participating and funding their community partners to improve the social determinants of health (Lafiti, R., 2019).

Purpose of the Study

The US needs to increase funding for social determinants of health, public health, and positive health behaviors to improve health measures and health status outcomes. The purpose of this study was to examine the relationship, if any, between the hospital community benefit and community health improvement spending and the CHR&R health outcomes and health factors scores from 2009-2018.

Methods

Study Design

This study used an observational, population-based, ecological, retrospective study. The following publicly available data sources were used: the American Hospital Association database, IRS 990 schedule H forms found on Guidestar.org, and the CHR&R z-scores. The study sample are general acute care, not-for-profit hospitals in the US from a matched peer county group using the CHR&R county peer groups, originally from the Center for Disease Control (CDC).

Matching counties addressed the complexity of factors contributing to a community's health and to control for possible confounding variables. As outlined on the CHR&R website, “K-means cluster analysis was selected to determine the peer counties for CHSI 2015 as it is a well-regarded method for grouping entities based on measures of similarity. Peer groups were defined using 19 county-level variables” as outlined in Table 2-1 (County Health Rankings & Roadmap, 2020). These variables include demographics and social and economic determinants of health. County-level data were extracted for all 3,143 counties from the Census 2012 QuickFacts File and the American Community Survey (ACS) 2007-2011 five-year estimates tables. (Center for Disease Control, 2015).

All 3,143 counties were stratified by 2006 National Center for Health Statistics urban-rural codes, and six separate cluster analyses were run. Eighty-nine peer county groupings were created, with an average of 35 counties and at least three states per group (County Health Rankings & Roadmaps, 2015). Peer Group 59 were selected for this study, with 36 rural counties, as shown in Figure 2-3.

Table 2-1
CDC Community Health Status Indicators (CHSI.)

<u>Indicator</u>	<u>Metric</u>	<u>Indicator</u>	<u>Metric</u>	<u>Indicator</u>	<u>Metric</u>
<i>Population size</i>	Population number in millions	<i>Percent of foreign-born</i>	Percent of population foreign born	<i>Receipt government assistance</i>	Self-reported survey results from US Census Bureau Survey of Income and Program Participation
<i>Population growth</i>	The difference between the population of an area at the beginning and end of a time period, expressed as a percentage of the beginning population.	<i>Percent high school graduate</i>	High school graduate or higher, percent of population age 25 or older	<i>Income inequality</i>	Shares of aggregate household income received by each quintile and the Gini index, estimates of the ratio of income percentiles, the Theil index, the mean logarithmic deviation of income (MLD), and the Atkinson measure.
<i>Population mobility</i>	% of households with a change in the household's residence one year ago vs current.	<i>Single-parent households</i>	# of households with one parent and a child under 18	<i>Overall poverty</i>	% of households that fall below the family's poverty threshold.
<i>Population density</i>	Population per square mile	<i>Median home value</i>	Median value of owner-occupied housing units	<i>Elderly poverty</i>	% of population 65 and older who meet poverty criteria
<i>Percent of children</i>	Percent of population under 18	<i>Housing stress</i>	% of income used for housing expense	<i>Unemployment</i>	The proportion of the total 16 years old and over population that is in not the labor force
<i>Percent of elderly</i>	Percent of population 65 and older	<i>Percent owner-occupied</i>	Housing unit is owner-occupied if the owner or co-owner lives in the unit, even if it is mortgaged or not fully paid for		
<i>Sex ratio</i>	# females/# males	<i>Median household income</i>	Includes the income of the householder and all other individuals 15 years old and over in the household		

Data Source: County Health Rankings and Roadmaps.

Adapted from:

<https://www.countyhealthrankings.org/sites/default/files/media/document/resources/CHSIpeerMethodology.pdf>. Copyright County Health Rankings and Roadmaps, 2021.

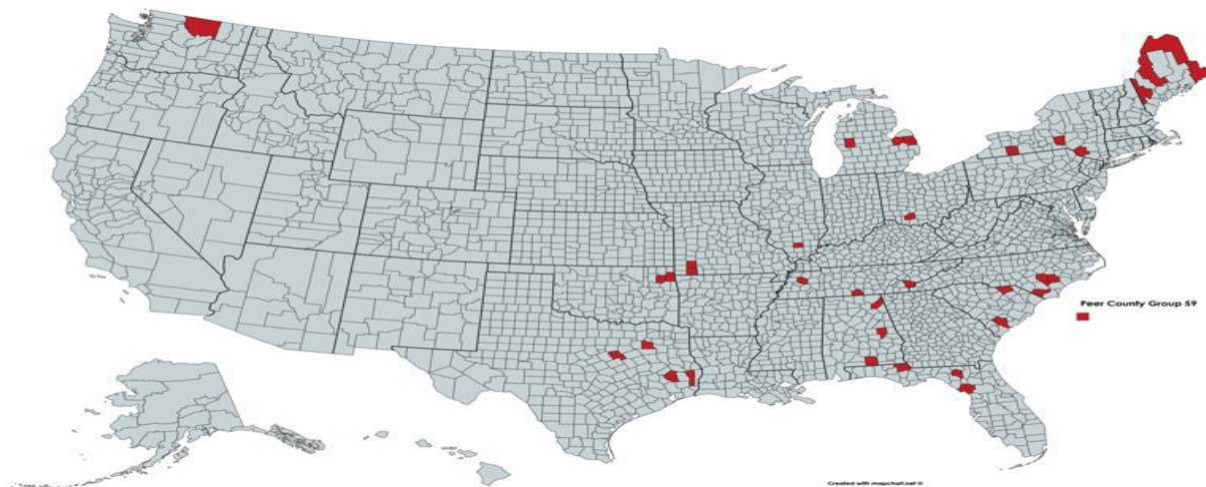


Figure. 2-3. CDC Community Health Status Indicators (CHSI.) County Peer Group 59
Data Source: County Health Rankings and Roadmaps and Center for Disease Control

Research Question

Is there an association between a county's hospitals annual community benefit and community health improvement spending, measured as a percentage of a hospital's annual expense, and the corresponding CHR&R county's health outcomes and health factors scores from 2009-2019?

Study Variables

The variables consist of the county's total hospital community benefit and community health improvement spending standardized as a percent of hospital expenses to account for various hospital sizes and the CHR&R Health Outcomes and Health Factors scores. Data for each hospital's community benefit spending are found on the publicly available IRS Form 990,

Schedule H, Part I, retrieved from Guidestar.org. The hospital's total community benefit and community health improvement dollar amount is divided by the same hospital's total expenses for a percentile sum. For counties with more than one hospital, the hospital spending amounts were combined, and the corresponding hospital expenses were also combined. Next these totals were divided by community benefit spending/hospital expenses and community health improvement/hospital expenses, for one spending percentage for each variable for the entire county. For example, Houlton Regional Hospital and Northern Maine Medical Center are both in Aroostook County, Maine. In 2018, Houlton Regional's community benefit spending amount was \$2,615,929 while Northern Maine's was \$4,725,100. The Aroostook County total community benefit spending was the sum of $\$2,615,929 + \$4,725,100 = \$7,341,029$. For hospital expenses, Houlton Regional expenses were \$47,586,153, while Northern Maine's were \$58,468,730, for Aroostook County total county hospital expenses of \$106,054,883. The total Aroostook County community benefit of \$7,341,029 is divided by the total Aroostook County hospital expenses of \$106,054,883=.069, multiplied by 100 for a percentage, which equals $.069 \times 100 = 6.9\%$. This expresses a total percentage of hospital community benefit spending as a percentage of hospital expenses for all hospitals within the same peer county. The American Hospital Association reports community benefit spending as a percent of expenses. Therefore, this research follows that format.

The remaining variables are CHR&R health outcomes z-score, and health factors z-score. As CHR&R only ranks within a state and not across states, z-scores from CHR&R were used to compare each county to the state mean and to standardize across states. The variables and their values are outlined in Table 2-2.

Table 2-2
Study Variables

Variable	Measurement	Type
Community benefit	Percent of expenses	Interval
Community Health Improvement	Percent of expenses	Interval
Health Factors	z-score	Interval
Health Outcomes	z-score	Interval

Data Collection

Rural counties were selected as rural Americans face numerous health inequities which contribute to health disparities, and they tend to be older and sicker than their urban counterparts. Rural areas could benefit from improved public health programs that support healthier behaviors and neighborhoods and better access to healthcare services, the very purpose of the community benefit standard (Center for Disease Control, 2017).

The following data collection methods were completed: the county peer group was selected; next, hospitals in these peer counties were identified from the American Hospital Association database. Their corresponding IRS 990 Schedule H forms were retrieved from Guidestar.org. Based on the Guidestar site's data, total community benefit spending from all hospitals within a county was combined into one total county hospital spending amount for each year starting in 2009 and ending in 2018. The process was repeated for community health improvement spending. The county health rankings data was retrieved from CHR&R to obtain

the corresponding county's health outcome and health factor z-scores. CHR&R calculated the z-scores.

Data Analysis

Univariate analysis for each variable was conducted to test for outliers and normality. The data for community health improvement did not have a normal distribution; the listed monetary amounts are small compared to large expenses; therefore, many of the percentages were less than 1%. To address this, the community health improvement data were transformed using logarithmic scaling.

Subsequent correlational analysis was completed to examine the relationship between hospital community benefit, community health improvement, and health outcomes and health factors z-scores for the combined, aggregate data. Pearson's correlation was performed.

Finally, for the individual county analysis, Spearman's Rho correlational matrix was used with bootstrapping at the 95% confidence interval, 1000 samples, simple method. Bootstrapping was performed due to the small datasets at the individual county level, which have a N of 10, one variable for each year, and because of the nonparametric data pattern within each county. Using the bootstrapping technique allowed for a way to account for the potential distortions due to the small and specific sample size that may not be fully representative of the population of hospitals across the US, and it gives more accurate sampling distribution means and confidence intervals.

Statistical significance set at the level ($p \leq 0.05$) for both the aggregate and individual data. The analysis was completed using SPSS version 28.

Table 2-3
Variable Data All Counties Combined

	Health Outcomes z- scores	Health Factors z- scores	Percent Community Benefit Spending Percent	Percent Community Health Improvement Spending Percent
N	240	240	240	240
Mean	.603	.367	7.03%	.88%
Std. Deviation	.604	.326	6.58%	2.43%
Minimum	-1.30	-.593	-18.69%	.58%
Maximum	1.97	1.22	41.20%	1.65%

Results

The initial county sample size is 36. After data collection for years 2009-2018, the final county sample size is 18 across 11 states, as outlined in Table 2-3. Within the initial 36 counties, there were 45 acute care not for profit general service hospitals. Four of those closed over the ten years of the study, 7 became part of a larger group 990 return, 6 are public hospitals not required to file a 990 return, and 4 had no 990 data for an unknown reason, leaving the final hospital count at 24 within 18 counties.

The correlations of hospital community benefit spending with County Health Rankings Health Factors were not significant, ($r = .07$, $p < .299$). The correlations of hospital community benefit spending ($r = -.29$, $p < .01$) and community health improvement spending ($r = .15$, $p < .05$) with County Health Rankings Health Outcome z-scores were significant. The correlations of

hospital community health improvement spending with County Health Rankings Health Factor z-scores were significant, ($r = .29$, $p < .01$).

Table 2-4

Aggregate Correlational Matrix R Results (all counties combined)

	Community Health Improvement Spending		Health Outcomes		Health Factors	
	R	CI	R	CI	R	CI
Community benefit Spending	.04ns	-.011, .096	-.29**	.150, .415	.07ns	-.370, .176
Community Health Improvement Spending	1		.15*	.083, .213	.29**	.174, .369

Ns=not significant * $p < 0.05$, ** $p < 0.01$ CI (Confidence Interval)

Table 2-5

Individual County with Statistically Significant Results for Community Benefit

	County	State	Health Outcomes		Health Factors	
			R	CI	R	CI
Hospital Community Benefit Spending	Chenango	New York	ns		-.83**	-.99, -.34
	Franklin	Illinois	.34*	-.52, .92	-.21*	-.90, .78
	Pike	Kentucky	.77**	.15, .99	-.65**	-.95, -.01
	Washington	Maine	.77**	.32, .96	ns	

Ns=not significant * $p < 0.05$, ** $p < 0.01$ CI (Confidence Interval)

Table 2-6

Individual County with Statistically Significant Results for Community Health Improvement

	County	State	Health Outcomes		Health Factors	
			R	CI	R	CI
Hospital Community Health Improvement Spending	Chenango	New York	ns		-.63*	-.95, -.20
	Covington	Alabama	.80*	.33, .97	ns	
	Pike	Kentucky	.89**	.55, 1.0	-.92**	-.1.0, -.52
	Oxford	Maine	ns		-.80**	-.94, .56

Ns=not significant * $p < 0.05$, ** $p < 0.01$ CI (Confidence Interval)

All counties with statistically significant findings had a negative relationship between hospital community benefit and community health improvement spending and County Health Rankings Health Factor z-scores and a positive relationship between hospital community benefit and community health improvement spending with County Health Rankings Health Outcomes z-scores. Only one county, Pike County, Kentucky, had a statistically significant relationship with hospital community benefit spending, hospital community health improvement spending, and County Health Rankings Health Outcomes and Health Factors z-scores.

The directionality of the correlation relationship was not consistent among the combined county data and the individual counties and the CHR&R Health Scores. Further research exploring this finding is a recommended next step.

Discussion

Health outcomes scores are based upon length and quality of life with equal weights between the two. Sub-measurements include premature death, life expectancy, premature age-adjusted mortality, infant and child mortality (County Health Rankings & Roadmaps, 2018). There is a weak, negative relationship between hospital community benefit spending and the CHR&R Health Outcomes scores with the aggregate data ($r=-.29$, $p=.001$) and a weak, positive relationship between hospital community health improvement spending and CHR&R Health Outcomes scores ($r=.15$, $p=.023$).

Health Factors scores consist of health behaviors, clinical care, socioeconomic factors, and physical environment, with 70% of socioeconomic factors and health behaviors (County Health Rankings & Roadmaps, 2018). There is a weak, positive relationship between hospital community health improvement spending and CHR&R Health Factor scores ($r=.29$, $p=.001$).

For the individual county data, 6/18 or 28% of counties had statistically significant relationships between the hospital community benefit spending, hospital community health improvement spending, and the CHR&R Health Outcomes and Health Factors scores. None of these counties were repeated within a state. Instead, they were from 5 different states (New York, Alabama, Kentucky, Maine, and Illinois). Only one county (Pike County, Kentucky) had a statistically significant relationship with both CHR&R Health Outcomes and Health Factors. Further repeat research with a larger sample to investigate and explore this relationship is recommended.

Although this relationship is weak, these counties were matched for 19 variables, and a

statistically significant relationship was still found. While correlation does not equal causation, these findings are an essential first step towards understanding what does and does not work regarding the IRS Community Benefit standard and launching future research literature on this subject to invoke policy change. Whether the hospital spending and efforts cause changes in the CHR&R scores, or the CHR&R scores, which reflect the health of the individuals in a community, cause a change in hospital spending, there exists a critical relationship worth further exploration.

At the individual county level, further research into these counties, especially Pike County, Kentucky, is recommended to explore the statistically significant relationships further.

There also appears to be ambiguity on how hospitals can engage with community agencies. Many hospitals are not clear on what approaches to addressing the social determinants of health or health equity can count towards IRS standard, nor do they have the expertise to do so. This ambiguity leads to a potential lack of rigor in the data. There is also no requirement for hospitals to address the social determinants of health or to partner with community agencies (Lafiti, 2019).

Some policy analysts believe that assessing a hospital's impact of their CHNA IP is a challenge; they think interventions targeting determinants of health can be challenging to evaluate, changing the root causes of poor health is a long-term effort, and it may be 'difficult to assess the contributions of various agencies and policy changes' (Crossley, 2015). This ambiguity speaks for the need for greater policy clarification, direction, and a collective impact approach to addressing the determinants of health and health behaviors. Rubin et al. stated a first step towards being able to evaluate the impact of hospital activities could be by assessing

changes in population health outcomes from one CHNA to the next, stating 'The IRS could assess hospitals' contribution to the health of their communities by noting the improvements in the population-health performance measures that hospitals specified in their implementation plans' (Rubin, Singh, & Jacobson, 2013).

Strengths and Limitations

The strengths of this study include matching the counties on 19 indicators to address potential confounders. It is also the first study to examine the relationship between hospital community benefit, community health improvement, and CHR&R Health Outcome and Health Factor scores. Study limitations include the lack of consistent data reported from hospitals, a small sample size at the individual county level, and other possible confounding variables not yet identified. In addition, this study does not address the time value of money over the 10 years of this study.

Implications for Policy

Recommendations for future work include repeating this study using multiple years of data and larger sample size. Many community health changes can take years to have measurable results. A study looking at the relationship over time would be an essential next step to evaluate the relationship between spending and specific factors linked to hospital activities such as clinical care or smoking rates. Additionally, there may be value in modifying the existing federal policy to require a certain percentage of expenses dedicated to community benefit spending and that hospitals partner with public health agencies to evaluate their spending and activities for

impact.

The tax benefit to not-for-profits hospitals is considerable: federal corporate income tax, state corporate income tax, state sales tax, and local property taxes. The research by Herrig, et al., 2018, showed that on average, "the number of community benefits was comparable to the value of the tax exemption, but there was considerable variation with little correlation between the two amounts, meaning there are many hospitals whose community benefits are less than their tax exemption" (Herring, Gaskin, & Zare, 2018).

Conclusion

There is evidence of a weak relationship between community benefit, hospital community health improvement, and CHR&R scores. This is complex subject worth future in-depth research. There is also no relationship between hospital community health activities and the dollar amounts reported on the IRS form; within this peer group, 70% of hospitals had no documented spending on required community health improvement activities; either hospitals are not doing the community health activities they report, or they are not capturing the expenditure on their required IRS forms. Technical assistance to hospitals in fully understanding and embracing the community benefit standard, the CHNA, the IP, and evaluating effectiveness is needed.

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CHAPTER III

THE RELATIONSHIP BETWEEN HOSPITAL COMMUNITY BENEFIT SPENDING AND MEDICAID EXPANSION

Background and Significance

A requirement at the federal level, the Internal Revenue Service (IRS) Hospital Community Benefit standard 501(c)(3) section 501(r), requires not-for-profit hospitals in the US to use a portion of their expenses on community benefit, in place of taxes, in these areas: charity care for low-income individuals without insurance, losses from government programs such as Medicaid and Medicare, community health improvement activities, and community building (Catholic Health Association, 2015).

The Community Benefit Standard is a test the IRS uses to determine whether a not-for-profit hospital is organized and operated for the charitable purpose of promoting health. One criticism of the standard is that it does not establish a minimum of community benefit spending that a hospital must provide to qualify for the exemption (Somerville, 2021).

According to the Catholic Health Association (2015), a leader in the hospital community benefit space:

'Community benefit is broadly defined as programs or activities that provide treatment or promote health and healing as a response to an identified community needs and meet at least one of these objectives: improve access to health care services, enhance public health, advance increased general knowledge, or relieve or reduce the burden of government to improve health.'

Within the community benefit standard are several components: community health improvement activities, defined as those carried out to improve community health, extend beyond patient care activities, and subsidize healthcare organizations. The activities must address specific health needs and goals. Examples can include community health education, community-based clinical services, such as health services and screenings for underinsured and uninsured persons, self-help programs, such as smoking cessation and weight loss programs, and programs that address social and environmental determinants of health (Catholic Health Association, 2015).

Community buildings are programs and activities that improve people's health by addressing social and environmental determinants that impact health, such as programs that address social and community factors, poverty and economic stability, education, neighborhood, and the built environment. Examples may include housing for vulnerable populations, creating new employment opportunities in areas with high rates of joblessness, child care and mentoring programs for vulnerable populations, violence prevention programs, alleviation of water or air pollution, training in conflict resolutions, civic, cultural, or language skills, and medical interpreter skills for community residents, participation in community coalitions, support for policies and programs to safeguard or improve public health, access to health care services, housing, the environment, and transportation (Catholic Health Association, 2015).

Community Benefit Reporting

To create visibility and accountability, hospitals must annually submit IRS form 990 Schedule H, which lists IRS-approved community benefit categories. Hospitals are required to

report costs associated with their provision of community benefits (Somerville, 2021). Hospital organizations use Schedule H to provide information on the activities and policies of, and community benefit provided by, its hospital during the tax year (Internal Revenue Service, 2020).

Schedule H contains six parts. Part I requires reporting financial assistance policies, the availability of community benefit reports, and the cost of financial assistance and other community benefit activities and programs. Financial aid includes free or discounted health services provided to persons who meet the organization's financial aid criteria and cannot pay for all or a portion of the services (Internal Revenue Service, 2020).

Part II quantifies the hospital's community health improvement and community building activities, intended to positively impact a community's health. Examples are health programs, housing improvements, economic development, community support, environmental improvements, leadership development, coalition building, community health improvement advocacy, and workforce development (EveryCRSReport.com, 2010).

Medicaid Expansion

The passage of the Affordable Care Act (ACA) in 2010 allowed states to decide whether to expand their Medicaid coverage by allowing them to expand Medicaid eligibility to nonelderly adults with incomes up to 138 percent of the federal poverty level (Mazurenko et al., 2018). The ACA allowed up to seventeen million Americans to gain healthcare coverage (Nikpay, Buchmueller, & Levey, 2016). This resulted in changes in the payer mix for hospitals

in states that expanded Medicaid eligibility by reducing uninsured patients and increasing patients covered by Medicaid (Mazurenko, Balio, Agarwal, Carroll, & Menachemi, 2018).

Hospitals in Medicaid expansion states saw a significant decrease in uncompensated care costs. In contrast, hospitals in non-expansion states experienced little change in uncompensated care (Dranove, Garthwaite, & Ody, 2016). By decreasing the number of uninsured patients and increasing those with insurance, hospital revenues improved while their charity care for uninsured patients declined. By increasing revenue and reducing costs, a profit margin grows. The tax benefits of non-profit hospitals, which are in part intended to promote the delivery of charity care services, remain the same for these hospitals regardless of the degree to which they have benefited from the ACA or whether their profit margin increased (Dranove, Garthwaite, & Ody, 2016).

However, not all states expanded Medicaid. Each state governor independently decided whether to expand Medicaid. Figure 1 from the Kaiser Family Foundation (Kaiser Family Foundation, 2020) shows which states chose to expand Medicaid eligibility and which states did not. Researcher Flagg explored the roles played in each governor's decision; electoral pressures, political party, governor's ideology, the state's policy heritage, stakeholder advocacy, and the economy in each governor's decision about whether to expand Medicaid. Electoral pressure was found to be the most significant factor (Flagg, 2016).

Purpose of the Study

According to the American Hospital Association, US, not-for-profit hospitals spent \$105 billion in 2018 on total community benefit, with 1.3% of expenses spent on direct community health improvements (American Hospital Association, 2021). If the hospital's revenue improved, it is unknown if this corresponded to an increase in its investment into community benefit spending and health improvement activities.

Research has demonstrated a clear relationship between social determinants such as education, housing, and economic equity and health outcomes in a diverse set of populations. Social, behavioral, and environmental factors contribute to more than 70-90 percent of cancer cases, heart disease, and stroke (Bradley, Canavan, Rogan, Talbert-Slagle, & Taylor, 2016). For example, housing vouchers, assistance with covering home energy needs, and supermarkets' availability have been associated with reductions in extreme obesity, diabetes, and nutritional risk among children (Bradley, Canavan, Rogan, Talbert-Slagle, & Taylor, 2016)

Methods

Study Design

This study used an observational, retrospective study. Data for acute care general not-for-profit hospitals in the US were retrieved from the publicly available and required IRS 990 Schedule H form, submitted annually. The IRS 990 records were retrieved at Guidestar.org.

The study sample used data from acute care general, not-for-profit hospitals in the US located within a matched county set. The counties comprising this study sample were matched

using the CHR&R county peer groups to address the complexity of factors contributing to a community's health and control for possible confounding variables (CDC, 2015). The CDC used 19 different variables to match counties across the US: population size, growth, mobility and density, percent children and elderly, sex ratio, percent foreign-born, percent high school graduation, single-parent households, median home value, housing stress, percent owner-occupied housing units, median household income, receipt government assistance, income inequality, overall poverty, elderly poverty, and unemployment (CDC, 2015).

From these indicators, the CDC created profiles for all 3,143 counties within the US, and from these profiles created matching county peer groups (CDC, 2015). Peer group 59, shown in Figure 2, was used. Within peer group 59, the counties were separated into those in states with Medicaid expansion and those in states that did not expand Medicaid. \

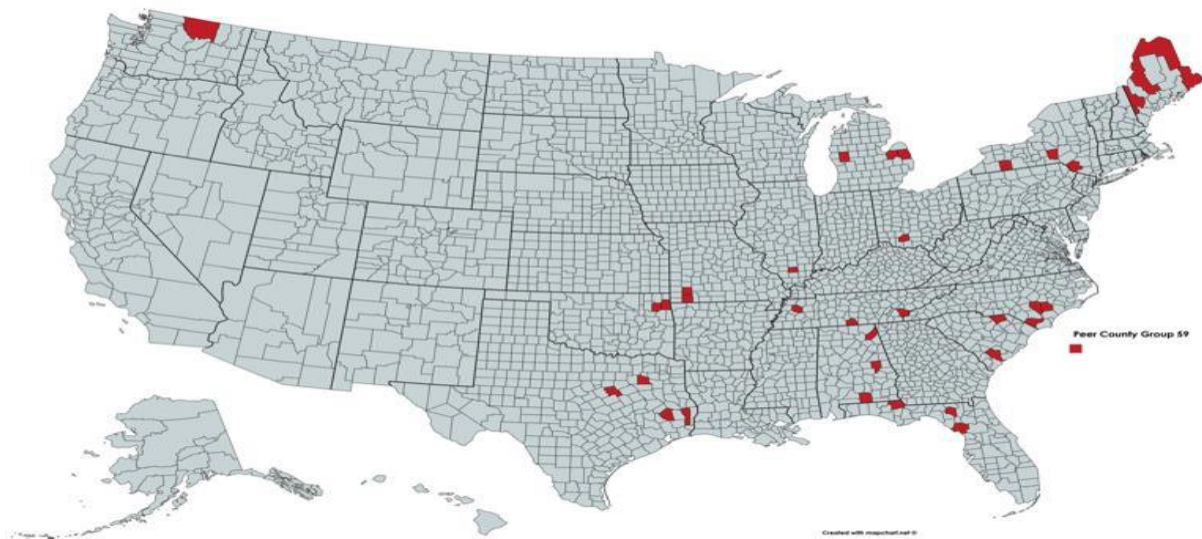


Figure. 3-2. CDC Community Health Status Indicators (CHSI.) County Peer Group 59
Data Source: Center for Disease Control

Research Question

Is there an association between profit margin, community benefit and community health improvement spending between hospitals in Medicaid expansion states and Medicaid non-expansion states?

Study Variables

The independent variable is dichotomous, whether the hospital was in an expansion state or a non-expansion state, with three continuous dependent variables, community benefit, community health improvement spending, and profit margin.

Each hospital was coded using a dummy variable (0,1) with Medicaid non-expansion states labeled as 0 and Medicaid expansion states labeled as 1. The American Hospital Association measures community benefit and community health improvement spending as a percent of expenses; therefore, this research follows that format. To obtain the percentage for this study, both community benefit and community health improvement spending totals are divided by a hospital's total expenses. Profit margin is the difference between the revenue and total expenses divided by the revenue and is expressed as a percentage. These variables are publicly available information found on the IRS 990 form Part I and Schedule H.

Data Collection

All data collected were from the years 2009-2018. All hospital financial data is a required part of the annual IRS 990 forms submitted. Medicaid expansion went into effect on

January 1, 2014; using the years 2009-2018 provides information on the six years prior and four years preceding Medicaid expansion.

Table 3-1
Study Variables

	Total N	Values Expansion States	Values Non- Expansion States	Type
Expansion/Non-expansion State	170/70	Coded 1	Coded 0	Dichotomous
Profit Margin ((Revenue- Expenses)/Revenue)	240	Range between -24.48%- 30.36%	Range between -5.68%- 23.38%	Continuous
Community Benefit Spending (Percent of hospital expenses)	240	Range between -18.7%- 29.9%	Range between - 10.9%-41.2%	Continuous
Community Health Improvement Spending (Percent of hospital expenses)	240	Range between 0-14.1%	Range between 0%-6.2%	Continuous

Data Management

After gathering financial data for each hospital, each year of data, including profit margin, community benefit spending, and community health improvement spending, was coded by the year number for this research. As there are ten years (2009-2018) for this study, the values were 1-10. This allows for repeated measures for every year of the research time frame.

Once the dataset was complete, univariate analysis for each variable was conducted to test for outliers and normality. The data for community health improvement spending did not

have a normal distribution; the listed monetary amounts are small compared to significant expenses; therefore, many of the percentages were less than 1%. In addition, there are outliers for each dependent variable that were verified as correct and were thus unchanged.

There was a total of 24 hospitals within 18 counties and 11 states. Each hospital was coded for 10 years of data. This aggregate dataset used the wide format with each row representing a single hospital with an N=240 for each variable. The data was switched to the narrow format to conduct the data analysis, with each repeated measure in its column by year and variable with an N=70 for hospitals in Medicaid non-expansion states and N=170 in Medicaid expansion states.

Data Analysis

A general linear mixed model was used to examine the association of outcomes with Medicaid expansion vs. non-expansion states. According to Field, “when a design includes some independent variables that were measured using different entities and others that used repeated measures, it is called a mixed design” (Field, *Discovering Statistics Using IBM SPSS Statistics* (5th Edition), 2017).

For this research question and data, the general linear mixed model analysis was completed using SPSS vs. 28.

Results

For our study sample, matched Peer Group 59, the initial county sample size is 36. After data collection for years 2009-2018, the final county sample size is 18 across 11 states. Within

the initial 36 counties, there are 45 general services hospitals, of which four had closed over the ten years of the study, 7 became part of a larger group 990 return, 6 are public hospitals not required to file a 990 return, and 4 had no 990 data for an unknown reason, leaving the final hospital count at 24 within 18 counties.

Table 3-2
CDC County Peer Group 59 Level Data

County	State	Expansion State	# Of hospitals in the study
Barry	MO	No	2
Columbus	NC	No	1
Covington	AL	No	1
Jasper	TX	No	1
Lawrence	MO	No	1
Monroe	TN	No	1
Allegany	NY	Yes	1
Aroostook	ME	Yes	2
Chenango	NY	Yes	1
Franklin	IL	Yes	1
Highland	OH	Yes	1
Oxford	ME	Yes	2
Pike	KY	Yes	1
Sanilac	MI	Yes	2
Somerset	ME	Yes	2
Sullivan	NY	Yes	1
Tuscola	MI	Yes	1
Washington	ME	Yes	2

The Mauchly's Test of Sphericity, an important assumption of a repeated-measures statistical test, was significant $p < .001$ and indicates that the assumption of sphericity has been violated. If this assumption is violated, then the F-ratio becomes inflated and the results of the repeated measures test become unreliable, therefore the Greenhouse Geiser correction was used.

The within-subject effect using Pillai's Trace for years ($F = (1.066, 594)$, $p = .377$) and years*expansion ($F = (.821, 594)$, $p = .726$) was not statistically significant. The univariate tests for any differences within the years was not significant $F = (1.282, 69.218)$, $p = .288$, community benefit spending $F = (1.948, 79.337)$, $p = .099$ and community health improvement spending $F = (.177, 27.015)$, $p = .728$. As this research study's sample had different sample sizes between the Medicaid expansion states ($N=170$) and Medicaid non-expansion states ($N=70$), the Levene's test was performed to test for the homogeneity assumption, that the distribution of the outcomes in each group are comparable and similar. Levene's test was non-significant, which confirms the equality of variances.

Tests of between subject effects found a significant difference in profit margin between hospitals in Medicaid expansion vs non-expansion states $F = (9.641, 220)$, $p = .005$, however there was no difference in community benefit spending $F = (.434, 22)$, $p = .517$ or community health improvement spending $F = (.165, 22)$, $p = .689$.

Discussion

This research found a statistically significant difference in hospitals' profit margins in states that expanded Medicaid and hospitals located in states that did not. The statistical analysis

showed the expansion state hospitals had a ten-year mean profit margin of less than 1%, while the non-expansion states had a mean of 6.78%. Although there was a difference in profit, no difference in community benefit or community health improvement spending from these same hospitals was found.

However, hospital profit margins are historically thin, especially in rural hospitals such as those in this study; the mean profit margin in the Medicaid expansion state in 2018, 4 years after the ACA was passed, was -0.1055%, while the hospitals in the Medicaid non-expansion states had a higher average mean profit margin in the same year of 3.2%. The higher profit margins in Medicaid non-expansion states from this research study are of note and are a research subject for further research. It may be those rural hospitals in non-expansion states that were struggling with low-profit margins closed, thus leaving the hospitals with stronger financial performances; within this group of non-expansion hospitals, four had closed. Conversely, those in expansion states were able to improve or continue economic viability. Regardless, changes in profit margin did not cause an associated change in community benefit or community health improvement spending for either group.

A recent article by Barnett indicated that since the passage of the ACA, revenue in more profitable hospitals had increased 15% while their charity care numbers dropped 35%. Recent studies also suggest that hospitals in Medicaid expansion states provided less total charity care (Barnett, 2020).

Strengths and Limitations

The study's strengths include using a county-matched set for the study sample to account for possible latent confounding variables. It is the first study to examine the difference between profit margin, hospital community benefit, and community health improvement spending between hospitals in Medicaid expansion or non-expansion states.

Limitations of the study are the small sample size, the unequal number of counties located in Medicaid expansion and non-expansion states, and the potential for errors from hospital filings. This study did not address losses from government programs.

Implications and Recommendations

This research could have policy implications for future government-funded healthcare programs and future changes to the hospital community benefit standard. Suppose further research confirms no association between hospital profit margin and community spending. In that case, additional regulatory changes may be necessary to meet the standard's intent: provide benefits to a class of persons broad enough to benefit the community and operate to serve a public rather than a private interest (Internal Revenue Service, 2020). A study by Chaiyachati et al. found that neither community benefit spending nor community-directed contribution amounted varied and did not reflect local needs. They recommended more substantial incentives to steer non-profit hospitals to invest in community health (Chaiyachati, 2018).

A cohort study of 2253 tax-exempt hospitals in the United States found that Medicaid expansion was associated with 2% reported reductions in the provision of charity care, typically

the most significant part of community benefit spending, and 2% reported increases in the provision of unreimbursed Medicaid expenses. The authors state that while tax-exempt hospitals in states that expanded Medicaid did not substantially change community benefit spending, the decreases in uncompensated care were offset by increases in unreimbursed Medicaid expenses (Stoecker & Demosthenidy, 2020). This research reflects the findings of this study and is a recommendation for future investigation.

Recommendations include repeating this study with a larger sample size, including nationwide research on whether differences exist between hospital profit margins, community benefit spending, or community health improvement spending between hospitals in expansion vs. non-expansion states.

While the study found a statistically significant difference in profit margin over ten years between a hospital in Medicaid expansion vs. non-expansion states, it is noteworthy that the four hospitals that closed over this study period were all from Medicaid non-expansion states, and none were from expansion states.

Conclusion

This research identified a statistically significant difference in profit margins between hospitals in Medicaid expansion states and hospitals in Medicaid non-expansion states. Previous research found that non-profit hospitals spent 5.9% (CI: 5.8%-6.0%) of their total expenses on community benefits; 1.3% (CI: 1.2%-1.3%) on charity care; and received 4.3% (CI: 4.2%-4.4%) of total expenses in tax exemptions. However, 38.5% of non-profit hospitals did not provide more community benefit, and 86% did not provide more charity care than the value of their tax

exemption. The study found several characteristics of hospitals more likely to provide more community benefit than the value of their tax exemption: those with fewer beds, those providing residency education, and located in high poverty communities, while system affiliation had a negative association (Zare, 2021).

While according to a Johns Hopkins study, on average, tax exemptions save not-for-profit hospitals nearly 6% of total expenses or about \$11.3 million per hospital, there has not been a systematic comparison of the tax exemption value to the community benefit spending for hospitals' national sample (Herring, 2018).

Replication and further studies on this complex area are needed. A more nuanced policy approach to the partnership between healthcare and public health is required to further fund and improve the health of our communities.

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CHAPTER IV

INVESTIGATING SUCCESS FACTORS IN HOSPITAL COMMUNITY HEALTH IMPROVEMENT: A CASE STUDY IN AN AWARD-WINNING COMMUNITY

Background and Significance

Since the Affordable Care Act (ACA) passage in 2010, not-for-profit hospitals must conduct community health needs assessments (CHNA) and develop an implementation plan (IP) to address significant community health needs. The Internal Revenue Service (IRS) Hospital Community Benefit standard 501(c)(3) section 501(r) requires not-for-profit hospitals in the US to use a portion of their expenses on community benefit in the areas of charity care for low-income individuals without insurance, losses from government programs such as Medicaid and Medicare, community health improvement activities, and community building (Catholic Health Association, 2015). Not-for-profit hospitals in the US spent approximately 105 billion dollars in 2018 in community benefit in place of taxes (American Hospital Association, 2021).

According to the Catholic Health Association (2015), a leader in the hospital community benefit space:

'Community benefit is broadly defined as programs or activities that provide treatment or promote health and healing as a response to an identified community needs and meet at least one of these objectives: improve access to health care services, enhance public health, advance increased general knowledge, or relieve or reduce the burden of government to improve health.'

Community buildings are programs and activities that improve people's health by addressing social and environmental determinants that impact health, such as programs that address social and community factors, poverty and economic stability, education, neighborhood, and the built environment. Examples may include housing for vulnerable populations, creating new employment opportunities in areas with high rates of joblessness, child care and mentoring programs for vulnerable populations, violence prevention programs, alleviation of water or air pollution, training in conflict resolutions, civic, cultural, or language skills, and medical interpreter skills for community residents, participation in community coalitions, support for policies and programs to safeguard or improve public health, access to health care services, housing, the environment, and transportation (Catholic Health Association, 2015).

Part of the community benefit standard also contains a requirement for not-for-profit hospitals to conduct CHNA with an IP every three years three, including the collection and analysis of quantitative and qualitative data to understand the specific health issues a community faces and to develop strategies to address the identified significant health issues (Center for Disease Control, 2015). The CHNA and IP must also be made widely available to the public (Internal Revenue Service, 2008).

The 2010 ACA mandated that tax-exempt hospitals develop community health strategies and report on their implementation. The CHNA process allows health care organizations to engage with community members and other partners to identify community and social determinant-related activities relevant to the community's improved health and the potential to improve population health and equity (Pennel, McLeroy, Burdine, & Matarrita-Cascante, 2015).

The CHNA seeks to refocus hospital spending upstream to address the social and behavioral determinants of health and catalyze community health improvement (Stoto & David, 2019). This requires input from community members and public health officials with a collaborative process to prioritize community health needs and a plan to address those needs (Pennel, McLeroy, Burdine, & Matarrita-Cascante, 2015). The hospital community benefit policy offers the most direct route to measurable progress. But all too often, collective impact practice stops at the programmatic level (Wolff, et al., 2021).

This is where hospitals can partner with public health, primary care, and community organizations to reduce health inequities and disparities in their communities. A recent New England Journal of Medicine article states that health inequities are “inequalities that are deemed to be unfair, unjust, avoidable, or unnecessary, that can be reduced or remedied through policy action” (Evans, 2020). The US Health Resources and Services Administration defines health equity, the flip side of health inequity, as “the absence of avoidable differences among socioeconomic and demographic groups or geographical areas in health status and health outcomes such as disease or mortality” (Evans, 2020).

Statement of the Problem

The purpose of the CHNA was for hospitals to look beyond patients to understand and address their communities' significant health needs. However, the hospital business model and expertise focus on providing the best care to patients rather than longer-term prevention efforts that address health and equity's social determinants. While slowly changing, the current hospital

financial incentives remain fee-for-service and high-volume rather than population-driven reimbursement approaches (Begun & Hanh, 2019). Stoto and Davis found that fulfilling the promise of CHNA's requires a transformation towards reimbursement based on value, where healthcare systems are accountable for improving health outcomes, and the involvement of community collaborations involving healthcare providers, public health agencies, and many other organizations, along with data systems to support them (Stoto, 2019). Rosenbaum and others argue that the Internal Revenue Service needs to broaden the definition of community health improvement to encourage upstream investment by hospitals (Begun & Hanh, 2019).

For communities that experience chronic underinvestment in health equity and social determinants of health, funds made available by hospitals through their community health improvement activities may be insufficient and unreliable. Historically, the hospital's community health improvement projects have often lacked a solid evidence base, are often home-grown, and proper health system-community collective impact partnerships are relatively uncommon. (Skinner & Gardner, 2016). There is wide variation in how hospitals receive input from community members, set priorities, collaborate with other organizations, and measure performance and evaluate strategies to improve population health. Stoto and Davis found that hospitals focus on the CHNA processes and on conducting the CHNA s rather than implementing procedures, monitoring, and evaluating results (Stoto, 2019).

Research on Success Factors

An extensive literature review found several success factors for those hospitals or

communities that measurably improved the community's health. The most common factor was relationships and strong partnerships between healthcare, public health agencies, and other community organizations. One common approach is to use the collective impact model, with each organization identifying common community health goals, and each undertakes specific programs consistent within their capabilities and resources (Stoto, 2019). While many scholarly articles and industry publications recommend the collective impact approach to improve community health; recent literature critiques this approach. Wolff et al. states, “collective impact fails to embrace advocacy and systems change as core strategies, retains a hierarchical approach to community engagement, and does not address the root causes and contexts of social problems.” (Wolff, et al., 2021).

The Collaborating for Equity Impact recommends six principles: explicitly address issues of social and economic injustice and structural racism, focusing on employing a community development approach in which residents have equal power in determining the agenda and resource allocation, using community organizing as an intentional strategy and as part of the process, work to build resident leadership and power, focus on policy, systems, and structural change, build on the extensive community-engaged scholarship and research over the last four decades that show what works, construct core functions for the collaborative based on equity and justice that provide basic facilitating structures and build member ownership and leadership (Wolff, et al., 2021).

In research on health extension in physician practices, the researchers found lessons learned regarding the successes and challenges, especially the importance of building sustained relationships with community coalitions, achieving diverse outcomes of meaning to various stakeholders, and being prepared for political struggles over turf (Kaufman et al., 2019). Roussos & Fawcett identified the factors that determine whether collaborative partnerships are effective at creating change. They included:

(1) having a clear vision and mission; (2) having an action plan for community and systems change; (3) leadership that was competent in communication, meeting facilitation, negotiation, and networking; (4) documentation and evaluation systems that capture intermediate outcomes to help document progress, celebrate accomplishments, identify barriers, and redirect activities when necessary; (5) technical assistance and support; (6) financial resources; and (7) making outcomes matter (Roussos & Fawcett, 2000).

Rozier and Singh found that hospitals' community health improvement process efforts have seven distinct stages: budgeting, assessing needs, developing strategy, allocating resources, implementing programs, evaluating, and communicating results. They found that assessing needs and communicating results are similar across hospitals. Budgeting, allocating resources, and evaluating programs, showed high variation across organizations and often lacked a formal process (Rozier & Singh, 2020).

Table 4-1

Literature Review Factors of Community Health Improvement Success

Factor	Research Finding	Author
Address health and racial inequities	Explicitly addressing racism and health inequities	Wolff et al.
	Construct core functions for the collaborative based on equity and justice that provide basic facilitating structures and build member ownership and leadership	Wolff et al.
	Achieving diverse outcomes of meaning to various stakeholders	Kaufman et al
Shared power and decision making between leaders and community members	Shared power among organizations and community residents	Wolff et al.
	Employ community organizing as an intentional strategy and as part of the process	Wolff et al.
	Work to build resident leadership and power	Wolff et al.
	Being prepared for political struggles over turf	Kaufman et al
	Building sustained relationships with community coalitions	Kaufman et al
Systematic change focus	Focus on policy, system, and environmental change	Wolff et al.
	Making outcomes matter	Roussos and Fawcett
Process metric	Clear mission and vision	Roussos and Fawcett
	Documentation and evaluation systems that capture intermediate outcomes to help document progress celebrate accomplishments, identify barriers, and redirect activities when necessary	Roussos and Fawcett
	Technical assistance	Roussos and Fawcett
	Having an action plan for community and systems change	Roussos and Fawcett
	Dedicated budget	Roussos and Fawcett
	Leadership that was competent in communication, meeting facilitation, negotiation, and networking	Roussos and Fawcett
	Budgeting, allocating resources, and evaluating programs, showed high variation across organizations and often lacked a formal process	Rozier and Singh
Evidence-based interventions	Build on what works	Roussos and Fawcett

Relationships and community engagement can be challenging to quantify. There are, however, tools for assessing community engagement; the CDC's continuum of community engagement and the Public Participation Spectrum developed by the International Association for Public Participation are two such tools. These help community groups differentiate between token participation and authentically shared decision-making (Wolff et al., 2021).

Hospitals can also improve their community's health by taking on an anchor institution's role by hiring, purchasing, and contracting services locally. Hospitals can also engage in improving housing, vocational training, employment coaching centers, and other activities to improve the local economic conditions, especially if partnered with existing community agencies (Skinner & Gardner, 2016)

Significance of the Research

Not-for-profit hospitals in the US spent approximately 105 billion dollars in 2018 in community benefit spending in place of taxes (American Hospital Association, 2021). Schedule H focuses on inputs critical to improving the community's health; however, it does not require corresponding outcomes, a criticism of the standard, and the reporting requirements (Rubin, Singh, & Jacobson, 2013). With annual spending of billions of dollars and minimal research, this is an opportunity to determine whether these dollars are doing what the original law intended - to impact the community's health.

Robert Wood Johnson Foundation

One program whose mission is to positively impact community health is The Robert Wood Johnson Foundation (RWJF), which awards an exclusive annual Culture of Health prize to those communities that have “come together around a commitment to health, opportunity, and equity through collaboration and inclusion, especially with historically marginalized populations and those facing the greatest barriers to good health” (Robert Wood Johnson Foundation, 2021). At RWJF, “building a Culture of Health has become the central aim of what they do, with a goal of giving every person across the nation an opportunity to live the healthiest life possible” (Robert Wood Johnson Foundation, 2020) RWJF has selected the winners of this prize annually from 2013-2019. Each year only five communities are awarded this prize, including rural, suburban, and urban communities.



Figure. 4-1. RWJF Culture of Health Prize Winners 2013-2019

From: Robert Wood Johnson Foundation and County Health Rankings & Roadmap, 2021. Online.

<https://www.countyhealthrankings.org/learn-from-others/rwjf-culture-of-health-prize/past-winners>.

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The Culture of Health prize recognizes the entire community. The following criteria are used to determine the award winners: defining health broadly, sustainable system changes and policy-oriented solutions, fair and just opportunities for all to reach their best health, maximizing the collective power, making the most of resources, and measuring progress and results. The winners receive a \$25,000 prize and opportunities to share their stories and lessons learned with the country (Robert Wood Johnson Foundation, 2020).

Purpose of the Study

There is an opportunity to investigate and inform hospitals and policymakers on the success factors in top-performing communities and how hospitals contribute to that success. Given that the purpose of the standard was to improve health and focus attention outside the hospital, examining the relationship and impact of a hospital's community spending is imperative, especially now, given the awareness of health inequities. There is very little literature that examines the effects of the hospital's IRS-required CHNA and IP and how or whether it improves the community's health.

Methods

Study Design

This study used a qualitative, exploratory, case study approach to obtain an in-depth appreciation of the complexity of improving the health of a community in its natural, real-life context. This study provides insight for best practices and future research.

Research Question

Is there an association between the 2019 RWJF Culture of Health Award-winning Community-Factors for success and the hospital's community health needs assessment (CHNA) and implementation plan (IP)?

Data Collection

A literature review reveals that rural communities often have worse health outcomes and have less access to care than urban communities (James, et al., 2017). One study found that rural health challenges are exacerbated by elements of the current public health and health care systems; they suggest that biases in current financial models of health care funding, “which treat health care as a service for an individual rather than as infrastructure for a population, are innately biased in favor of large populations” (Probst, Eberth, & Crouch, 2019).

More racial/ethnic minorities reported their health as fair or poor, that they had obesity, and that they could not see a physician in the past 12 months because of cost (James, et al., 2017). Racial/ethnic disparities in health and quality of and access to health care are a well-documented and persistent problem (James, et al., 2017). Across many health indicators, access to care, and health care quality, racial/ethnic minorities fare worse than whites. Compared with non-Hispanic whites, Hispanics more often were uninsured (James, et al., 2017).

For these reasons, the rural community of Gonzales, California, with a large population of Hispanic migrant workers, a 2019 RWJF Culture of Health Award winner, was selected as the case study sample community. On the RWJF Culture of Health winner website, Gonzales,

California, worked with the Salinas Valley Memorial Healthcare System. The case for this study is the current CHNA and IP plans that include the year 2020 from Salinas Valley Memorial.

Data was collected from publicly available data and documents: the publicly available community health needs assessment and implementation plan and hospital website. Hospitals are required to publicly post their current CHNA and IP on their website and make both reports widely available. The CHNA and IP were reviewed to determine if the plans explicitly outline all success factors.

Data Analysis

The data from the CHNA and IP was coded using the hierarchal deductive coding method with the codes listed below. A deductive approach is a top-down approach to qualitative coding data using pre-set coding schemes. For this paper, schemes emerged from a literature review as outlined in Table 4-2.

Salinas Valley Memorial Hospital's CHNA and IP were both coded for thematic codes using the above table. In addition to the main principles, each was further coded by the sub-code and color-coded. After completing the document coding, the results were reviewed for the findings and the codes/sub-codes missing. The results of this analysis are outlined in the results section.

Table 4-2
Research Based Deductive Codes

Code	Sub-Measurement
Address health and racial inequities	<ul style="list-style-type: none"> • Is racism explicitly addressed in the plan? • Were the IP stakeholders diverse? • Were outcomes explicitly diverse?
Shared power and decision making between leaders and community members	<ul style="list-style-type: none"> • Is shared power and decision-making explicit in the plan to include community members that are not part of an organization? • Were any laypersons included/listed in the IP? • Is power-sharing explicit?
Systematic change focus	<ul style="list-style-type: none"> • Does the IP address any policy, system, or environmental change? • Does an evaluation system exist?
Process metric	<ul style="list-style-type: none"> • Does the IP include a clear mission and vision? • Does the hospital obtain technical assistance from public health? • Does the IP include an action plan for community and system change, or is it programmatic-focused? • Does the IP include a budget? • Was any funding listed on the IRS 990 Schedule H under community health improvement or community building? • Does IP leadership have an advanced degree or specific training in the criteria listed?
Evidence-based interventions	<ul style="list-style-type: none"> • Is a source listed as proof of an evidence-based intervention?

Results

The first code was whether the hospital addressed health and racial inequities by explicitly addressing racism in the CHNA or IP, having diverse IP stakeholders and explicitly diverse outcomes. This research found that the IP does discuss racial diversity in their county; for example, on IP page 3, “The ethnic makeup of the county is highly diverse: More than half

(58 percent) of the population is of Latinx b ethnicity, and more than one in five are of “some other race.” The CHNA and IP discuss the ethnic and racial diversity and what differences/disparities exist, but it does not explicitly address racism, defined by Webster Dictionary as, “the systemic oppression of a racial group to the social, economic, and political advantage of another (Merriam-Webster, 2020).

The CHNA stakeholders were surveyed from the community, including those of different economic, racial, and ethnic backgrounds. To be included as a significant health need of the community, the CHNA stated, page 5, “the need had to meet the definition of a health need, be present in at least two data sources, and either be prioritized by multiple key informants or focus groups or at least three indicators had to miss a benchmark.” To select the health needs for the hospital to address, the SVMHS Executive Management Team selected the health needs from the CHNA to address in the IP. “After prioritizing the ten health needs...the Executive Management Team, by consensus, determined that it would merge the health needs of Diabetes and Obesity with Food and Housing Insecurity into a health need called Healthy Lifestyles. Then, again by consensus, and considering the community's priorities, the Executive Management Team selected the following three health needs: Behavioral Health, Health Care Access and Delivery, and Healthy Lifestyles”. The outcomes were not explicitly racially diverse.

The next code was shared power and decision-making between leaders and community members. This was measured through explicit shared power and decision-making to include community members not part of an organization, laypersons included/listed in the IP, and explicit power-sharing. As outlined under the first code, explicit racism, there is no explicit

power-sharing or inclusion between the hospital executive team, the community, or laypersons. The IP does not explicitly have any power-sharing or decision-making with the community or laypersons.

The following code was systemic change focused on addressing any policy, system, or environmental changes and an evaluation system in the IP. The Salinas Valley Memorial Hospital's IP has no specific policy, system, or environmental changes included in the document. It does include specific programmatic evaluation; for example, on page 25, "SVMHS partners with local safety net providers and community-based nonprofit organizations to fund programs and projects that address health needs identified through its triennial CHNA. Community partnership grant funding supports organizations and programs with a demonstrated ability to improve the health status of the selected health needs through data-driven solutions and results. Grantees are asked to explain the data and information that justifies the need for and effectiveness of the proposed program strategies". The IRS outlines criteria that focus on policy, systems, and environmental change for hospitals in Table 4-3.

The IP does include long-term goals, "Increase the proportion of people with access to coordinated behavioral healthcare services (mental health and substance use services), increase the ability of community members to have good mental health, address the systemic/institutional barriers to mental health." It also has goals for each health need, "Improved access to mental/behavioral healthcare and supportive social services among vulnerable populations, and to increase access to social non-medical services that support health for low-income and vulnerable populations." While not measurable goals, they also include the anticipated impact,

for example, “Reduced avoidable emergency department and hospital utilization, increased English literacy and reduced long-term poverty rates.”

Table 4-3
IRS Community Building Criteria

Criteria	IRS Definitions and Examples
Physical improvements and housing	Provision or rehabilitation of housing for vulnerable populations
Economic development	Assisting small business development in neighborhoods with vulnerable populations or creating new employment opportunities in areas with high rates of joblessness
Community support	Childcare and mentoring programs for vulnerable populations or neighborhoods, neighborhood support groups, violence prevention programs, and disaster readiness and public health emergency activities
Environmental improvements	Addressing environmental hazards such as the alleviation of water or air pollution, safe removal or treatment of garbage or other waste products, and other activities to protect the community from environmental hazards
Leadership development	Training in conflict resolution; civic, cultural, or language skills; and medical interpreter skills for community residents
Coalition building	Participation in community coalitions and other collaborative efforts with the community to address health and safety issues
Community health improvement advocacy	Efforts to support policies and programs to safeguard or improve public health, access to health care services, housing, the environment, and transportation
Workforce development	Recruitment of physicians and other health professionals to medical shortage areas or other areas designated as underserved, and collaboration with educational institutions to train and recruit health professionals needed in the community

Data Source: IRS

The fourth code is the inclusion of process metrics; a clear mission and vision, technical assistance from public health, an action plan for community and system change, or is it programmatically focused; a budget, any funding listed on the IRS 990 Schedule H under

community health improvement or community building and IP leadership have an advanced degree or specific training in the criteria listed. While not listed as an explicit mission statement, a purpose was included in the IP, “SVMHS’s annual community benefit investment focuses on improving the health of our community’s most vulnerable populations, including the medically underserved, low-income, and populations affected by health disparities.” While the hospital did use a research firm to assist with the CHNA, no technical assistance was obtained from public health. Many of the IP was programmatically focused, for example, “Support programming for bullying prevention. Support school-based violence prevention programs, including group counseling. Support school-based programs.” The IP does list assistance to community agencies that may support policy, system, and environment change, “Support organizations making efforts related to basic needs, including food, water, shelter, hygiene, and social services for the homeless or insufficiently housed.” While outlined in the IP, there are no specifics as to which agencies receive the funding, what health need they address, or if the agency focuses on systems, policies, and environmental changes. There is no budget addressed, nor was this researcher able to obtain a copy of the hospital’s IRS 990, Schedule H filing to determine the financial assets spent, if any. The leader of the IP is part of the executive team as the Chief Administrative Officer, Wellness, is a certified wellness coach with degrees in Business Administration with an emphasis on Human Resources and Psychology.

Lastly, the code for evidence-based interventions with a source listed as proof of an evidence-based intervention. The IP had references listed for every intervention, and each was evidence-based.

Discussion

Salinas Valley Memorial Health System's CHNA and IP meet the minimum IRS requirements as outlined in the IRS standard, Community Benefit for 501(c)(3) tax-exempt hospitals: conducting community health needs assessment (CHNA) and developing a corresponding implementation plan (IP) at least every three years (Somerville, 2021). The assessment must be made publicly available and consider input from persons representing the broad community's interests, including those with public health knowledge or expertise (EveryCRSReport.com, 2010).

They completed every 3-year community health needs assessment, hired an outside vendor to conduct interviews and survey community members, and created a CHNA for the hospital and the community. It is shared publicly.

It is at the IP where the rigor starts to lessen. Although it is also here that the IRS requirements become vague. Racism has been identified as a major public health issue by the CDC, and the CHNA describes the health outcomes negatively for populations of color, yet it is not addressed in the IP. Like most other health organizations and even the sources in this paper, the Caucasian ethnic group is framed as the default standard, and other ethnic groups deviate from that normal. In a community where, according to Salinas' IP, "the ethnic makeup of the county is highly diverse: more than half (58 percent) of the population is of Latinx ethnicity, and more than one in five is of some other race", it may be time to reframe how hospitals, and healthcare, discuss the health of the citizens of their communities.

Some could argue that the hospital's IP is an implicit form of racial bias; they are a powerful health system that frames Caucasian health as the default when over half of the population is not Caucasian, and they do not include community laypeople of color in decision making. Implicit bias is the stereotypes, attitudes, beliefs, judgments, prejudices that affect our thinking and behaviors in ways that we do not realize (Merriam-Webster, 2020). These biases, which encompass both favorable and unfavorable assessments, are activated involuntarily and without an individual's awareness or intentional control (Farley, 2020). At a minimum, it could appear as a form of paternalism, especially as there was no power-sharing and decision-making with the community or laypersons on what would be included or not in the implementation plan.

A more nuanced way forward may be found in other countries. An article on global death tolls from CoVid19 segments the population into "vulnerable populations," defined as older adults, people living in densely populated areas, lower socioeconomic status, migrants, refugees, and minorities (Shadmi, 2020). They are defined as vulnerable because of the effects on health equity, such as crowded housing, poor housing conditions, poor sanitation, food insecurity, loss of health insurance, and poor access to healthcare (Shadmi, 2020). Perhaps future population segmentation efforts to identify populations struggling with health equity can mature and become more refined, less reliant on race or ethnicity, and more on social and environmental factors.

The IP evaluation system was general, not specific, with phrases like “improve or reduce.” When not using a programmatic focus and intending to improve the health of a community, this is difficult to capture for a single hospital without technical expertise.

There was no funding or budget included in the IP, and the 990 was not publicly available. Previous research by this author found no relationship between hospital community health activities and the dollar amounts reported on the IRS form; within the research peer group, 70% of hospitals had no documented spending on required community health improvement.

Finally, while sources were listed and evidence-based, they were programmatically based, not system, policy, or environmental. This is where organizations such as County Health Rankings & Roadmaps and the Robert Wood Johnson Foundation can assist. It is also an opportunity to expand beyond one hospital and community and take a regional or even state-level approach to policy and system changes.

As a note of interest, although not listed on Salina Valley Memorial’s IP, their website shows they provide an unknown type of support to the county Blue Zone initiative, which does works at the policy level. They also support a primary care clinic in the underserved area of the county. The lack of comprehensiveness in the IP is additional validation of the need for improvements in the IRS Community Benefit standard.

Strengths and Limitations

The study's strengths include a comprehensive look at the research literature about improving community health and a complete qualitative research study on a hospital’s CHNA

and IP. It is the first to investigate the potential role of a local hospital in an award-winning, high-performing communities' health improvement work. It is also the first to explore a hospital CNHA and IPs within the RWJF Culture of Health award winners.

The study's limitations include the possibility of incomplete or data errors in the hospital's CHNA and IP. The study also uses coding criteria from research, not from regulations. The sample is convenient; the research sample was selected from a hospital in a community already doing well by the RWJF award. Further research in this area is recommended.

Implications and Recommendations

The IRS has the option to require hospitals' community benefit processes to use a collaborative approach as outlined in this paper and provide clarity as to which investments, such as affordable housing and environmental improvements that address the "upstream" social determinants of health, qualify as community benefit under the current standard. The IRS regulations are not specific on how the community should be defined; given the wide variety of hospital structures and communities, ambiguity can create or exasperate existing inequities. The CHNA determines the community's significant health needs; however, deciding which to address is critical, but there is no standard methodology or guidance on selecting them. Given their area of expertise, hospitals often choose clinical priorities or activities that are already underway. The IRS can require hospitals to use their CHNAs as a guide to address upstream social determinants of health and root cause factors such as housing and food insecurity in their community benefits

programs (Stoto, 2019).

Strengthening the CHNA regulations to require that hospitals report the evaluation measures they intend to monitor based on an established community health improvement model could help communities demonstrate impact (Stoto, 2019).

Robert Wood Johnson Foundation can assist in changing the norms for hospital community health improvement work by including the hospital's CHNA and IP in the Culture of Health Award criteria.

Conclusion

The US has a critical need for an increase in our investment in public health. A study by Singh et al.; found that tax-exempt hospitals spent a median of \$130 per capita on community benefit activities. In comparison, median state and local health department spending amounted to \$82 and \$48 per capita, respectively (Singh, Bakken, Kindig, & Young, 2016). Research has demonstrated a clear relationship between social determinants such as education, housing, and economic equity and health outcomes in a diverse set of populations. Social, behavioral, and environmental factors contribute to more than 70-90 percent of cancer cases, heart disease, and stroke (Bradley, Canavan, Rogan, Talbert-Slagle, & Taylor, 2016).

The US health care system is a microcosm of American society, in which power and resources are not allocated fairly among races, sexes, or classes (Evans, 2020). This directly impacts health equity and health disparities; COVID-19 highlights a growing realization that mortality is inequitably distributed among vulnerable populations (Shadmi, 2020). For example, people holding essential roles, usually from lower-paying jobs, are more exposed to the public

and thus also to being infected (Shadmi, 2020).

Some policy analysts believe that assessing a hospital's impact of their CHNA IP is a challenge; they think interventions targeting determinants of health can be challenging to evaluate, changing the root causes of poor health is a long-term effort, and it may be 'difficult to assess the contributions of various agencies and policy changes ' (Crossley, 2015). This ambiguity speaks for the need for greater policy clarification, direction, and a collective impact approach to addressing the determinants of health and health behaviors. Rubin et al. stated a first step towards being able to evaluate the impact of hospital activities could be by assessing changes in population health outcomes from one CHNA to the next, stating 'The IRS could assess hospitals' contribution to the health of their communities by noting the improvements in the population-health performance measures that hospitals specified in their implementation plans' (Rubin, Singh, & Jacobson, 2013).

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CHAPTER V

CONCLUSION

Together, these research findings highlight the urgent need for more action in the health of our communities, especially given the consequences of the current CoVid19 pandemic. This crisis has highlighted the critical need for investment into public health and the increased need to better partner or even merge public health and healthcare.

A study by Singh et al.; found that tax-exempt hospitals spent a median of \$130 per capita on community benefit activities. In comparison, median state and local health department spending amounted to \$82 and \$48 per capita, respectively (Singh, Bakken, Kindig, & Young, 2016).

A 2019 study of not-for-profit hospitals in North Carolina found that hospitals direct most of their community benefit spending to patient care financial assistance rather than population health, with “virtually no investments in community-building activities that address socioeconomic determinants of health” (Fos, 2019).

At a policy level, Stoto and Davis recommend five strategies from the Internal Revenue Service (IRS) regarding the current standard to improve the regulations impact: clarify community benefit requirements and expectations, create a standard definition of community, standardize the process for priority setting, require collaborative approaches, and require standard and clear evaluation measures (Stoto, Davis, & Atkins, 2019).

Summary

Study One (Chapter II)

The IRS Hospital Community Benefit standard 501(c)(3) section 501(r) requires not-for-profit hospitals in the US to use a portion of their expenses on community benefit place of taxes (Catholic Health Association, 2015). Part of the community benefit standard also contains a requirement for not-for-profit hospitals to conduct CHNA with an IP every three years, including the collection and analysis of data to understand the specific health issues a community faces and to develop strategies to address the identified significant health issues (Center for Disease Control, 2015).

County Health Rankings & Roadmaps (CHR&R), a partnership between the University of Wisconsin at Madison and the Robert Wood Johnson Foundation (RWJF), provides a revealing snapshot of how health is influenced where we live, learn, work and play. Each year CHR&R scores every US county in two overall categories: health outcomes, which consist of quality and length of life, and health factors which consist of health behaviors, clinical care, socioeconomic factors, and physical environment. Each county is then ranked in relation to each other within the same state. They claim to provide a starting point for change in communities (County Health Rankings & Roadmaps, 2018).

CHR&R outlines their categories: health outcomes and health factors. The data used in their scoring include tobacco use, diet and exercise, alcohol and drug use, sexual activity, access to care, quality of care, education, employment, income, family and social support, community

safety, air and water quality, housing, and transit. Each of these is then grouped into categories; for example, air and water quality and housing and transit are grouped into the physical environment category. Length and quality of life are metrics for health outcomes.

The purpose of this study was to examine the relationship, if any, between the hospital community benefit, community health improvement spending, and the CHR&R health outcomes and health factors scores from 2009-2018.

There is a weak, negative relationship between hospital community benefit spending and the CHR&R Health Outcomes scores with the combined aggregate data ($r=-.29$, $N=240$) and a weak, positive relationship between hospital community health improvement spending and CHR&R Health Outcomes scores ($r=.15$, $N=240$). There is a weak, positive relationship between hospital community health improvement spending and CHR&R Health Factor scores ($r=.29$, $N=240$).

For the individual county's, 6/18 or 28% of counties had statistically significant relationships between the hospital community benefit spending, hospital community health improvement spending, and the CHR&R Health Outcomes and Health Factors scores. None of these counties were repeated within a state; instead, they were from 5 different states (New York, Alabama, Kentucky, Maine, and Illinois). Only one county (Pike County, Kentucky) had a statistically significant relationship with both CHR&R Health Outcomes and Factors. While this relationship is weak, these counties were matched for 19 variables, and a statistically significant relationship was still found.

Study Two (Chapter III)

The Internal Revenue Service (IRS) Hospital Community Benefit standard 501(c)(3) section 501(r) requires not-for-profit hospitals in the US to use a portion of their expenses on community benefit in the areas of charity care for low-income individuals without insurance, losses from government programs such as Medicaid and Medicare, community health improvement activities, and community building (Catholic Health Association, 2015).

The 2010 ACA mandated that tax-exempt hospitals develop community health strategies and report on their implementation. The CHNA process allows health care organizations to engage with community members and other partners to identify community and social determinant-related activities relevant to the community's improved health and the potential to improve population health and equity (Pennel, McLeroy, Burdine, & Matarrita-Cascante, 2015). The CHNA seeks to refocus hospital spending upstream to address the social and behavioral determinants of health and catalyze community health improvement (Stoto & David, 2019). This requires input from community members and public health officials with a collaborative process to prioritize community health needs and a plan to address those needs (Pennel, McLeroy, Burdine, & Matarrita-Cascante, 2015). This is where hospitals can partner with public health, primary care, and community organizations to reduce health inequities and disparities in their communities.

The passage of the Affordable Care Act (ACA) in 2010 allowed states to decide whether to expand their Medicaid coverage by allowing them to expand Medicaid eligibility to nonelderly adults with incomes up to 138 percent of the federal poverty level (Mazurenko, et al.,

2018). This resulted in changes in the payer mix for hospitals in states that expanded Medicaid eligibility by reducing uninsured patients and increasing patients covered by Medicaid (Mazurenko, Balio, Agarwal, Carroll, & Menachemi, 2018).

Hospitals in Medicaid expansion states saw a large decrease in uncompensated care costs; in contrast, hospitals in non-expansion states experienced little change in uncompensated care (Dranove, Garthwaite, & Ody, 2016). The tax benefits of non-profit hospitals, which are in part intended to promote the delivery of charity care services, remain the same for these hospitals regardless of the degree to which they have benefited from the ACA or whether their profit margin increased (Dranove, Garthwaite, & Ody, 2016).

This study investigated any difference in profit margin, community benefit and community health improvement spending between hospitals located in Medicaid expansion states and Medicaid non-expansion states over ten years, from 2009-2018.

This research found a statistically significant difference in hospitals' profit margins in states that expanded Medicaid and hospitals located in states that did not. The statistical analysis showed the expansion state hospitals had a ten-year mean profit margin of less than 1%, while the non-expansion states had a mean of 6.78%. Although there was a difference in profit, no difference in community benefit or community health improvement spending from these same hospitals was found.

However, hospital profit margins are historically thin, especially in rural hospitals such as those in this study; the mean profit margin in the Medicaid expansion state in 2018, 4 years after the ACA was passed, was -0.1055%, while the hospitals in the Medicaid non-expansion states had a higher average mean profit margin in the same year of 3.2%. The higher profit margins in

Medicaid non-expansion states from this research study are of note and are a research subject for further research. It may be that rural hospitals in non-expansion states that were struggling with low-profit margins closed, thus leaving the hospitals with stronger financial performances; within this group of non-expansion hospitals, four had closed. Conversely, those in expansion states were able to improve or continue financial viability. Regardless, changes in profit margin did not cause an associated change in community benefit or community health improvement spending for either group.

Study Three (Chapter IV)

Salinas Valley Memorial Health System's CHNA and IP meet the minimum IRS requirements outlined in the IRS standard. They completed every 3-year community health needs assessment, hired an outside vendor to conduct interviews and survey community members, and created a CHNA for the hospital and the community. It is shared publicly.

It is at the IP where the rigor starts to lessen. Although it is also here that the IRS requirements become vague. Racism has been identified as a significant public health issue by the CDC, and the CHNA describes the health outcomes negatively for populations of color, yet it is not addressed in the IP. Like most other health organizations and even the sources in this paper, the Caucasian ethnic group is framed as the default standard, and other ethnic groups deviate from that normal.

Some could argue that the hospital's IP is an implicit form of racial bias; they are a powerful health system that frames Caucasian health as the default when over half of the

population is not Caucasian, and they do not include community laypeople of color in decision making. At a minimum, it could appear as a form of paternalism, especially as there was no power-sharing and decision-making with the community or laypersons on what would be included or not in the implementation plan.

A more nuanced way forward may be found in other countries. An article on global death tolls from CoVid19 segments the population into “vulnerable populations” (Shadmi, 2020). Perhaps future population segmentation efforts to identify populations struggling with health equity can mature and become more refined, less reliant on race or ethnicity, and more on social and environmental factors.

The IP evaluation system was general, not specific, with phrases like “improve or reduce.” There was no funding or budget included in the IP, and the 990 was not publicly available. Finally, while sources were listed and evidence-based, they were programmatically based, not system, policy, or environmental.

As a note of interest, although not listed on Salina Valley Memorial’s IP, their website shows they provide an unknown type of support to the county Blue Zone initiative, which does works at the policy level. They also support a primary care clinic in the underserved area of the county. The lack of comprehensiveness in the IP is additional validation of the need for improvements in the IRS Community Benefit standard.

Together, these three papers add to the burgeoning research on the IRS policy of tax-exemption US not-for-profit hospitals, county health rankings, and community health improvement spending. While weak relationships were found between hospital community

benefit and community health improvement spending and CHR&R Scores, further research to explore this area is needed to fully understand and explore the complexities of this relationship. One of the struggles with hospital community health needs assessments is the difficulty in measuring impact. Partnering with a sophisticated organization that measures community health could be a bell-weather test for hospital efforts. Further policy improvements and technical assistance to hospitals on measuring impact and outcomes would be a policy recommendation.

The sample hospitals for this research were from rural communities, where small hospitals typically struggle financially. Repeating this research with a larger rural sample or with hospitals in urban communities to verify this finding is recommended. While creating a one size fits all approach to a required percent of expenses a hospital must spend on community benefit and community health improvement activities may be difficult, the literature review for the paper found that 38.5% of non-profit hospitals did not provide more community benefit, and 86% did not provide more charity care than the value of their tax exemption (Zare, 2021). There needs to be a more equitable and just distribution of resources, especially as the Zare study found that hospitals more likely to provide more community benefit than the value of their tax exemption were those with fewer beds, which are often rural, those providing residency education, those located in high poverty communities, while hospitals with a system affiliation had a negative association (Zare, 2021).

Kevin Barnett stated it best, “Given the predominance of fee-for-service financing to date, there has been limited motivation for hospitals to move beyond a reactive approach to community benefit budgeting. One national study documented that only 5% of community

benefit spending focuses outside of clinical settings, and only a small portion of that focuses on the social determinants of health” (Barnett, 2020).

Barnett found, however, that investing in the social determinants of health can be in a hospital's best financial interest by lowering readmission rates, “a recent review of studies of expenditures on social determinants of health found 12 of 39 studies focused on housing, and 10 of those 12 documented improvements to health outcomes or reduced costs” (Barnett, 2020).

Changes to the IRS policy and how hospitals are financially incentivized will be required to shift the current financial paradigm. This includes the expansion of risk-based reimbursement, increased transparency in health care costs, reduced fee for service models, and attention to geographic patterns in service utilization (Barnett, 2020).

Limitations

There are several limitations to these studies: although the counties were matched, the final N was small, and there were outliers in the data. The hospital IRS filings do not match their reported activities; technical assistance for hospitals is recommended for rigorous data. The spending over 10 years did not account for the time value of money. These counties were also rural, the findings may be different for urban areas, and lastly, the hospitals did not have a broad geographic footprint; most were from the eastern portion of the US.

Implications

As outlined in several research studies, the current IRS policy appears to be a “blunt instrument” that may exacerbate current inequities. It is unequally applied and creates little value for the community. Beyond charity care and losses from government programs, refining the policy and outcomes towards community health improvement could redistribute funds to community organizations and health departments that address health equity and social determinants of health, improving health. Policymakers could consider being more explicit in specifying certain levels of community benefit spending not-for-profit hospitals as a requirement and be willing to revoke the non-profit status to those hospitals deemed to be providing insufficient community benefit spending, especially in the areas of community health improvement and community building (Herrig, 2018).

The new requirements for the Affordable Care Act (ACA) have created opportunities to highlight policy opportunities. Crossley stated better alignment with community health could arise with more transparent and accountable guidance related to CHNAs (Crossley, 2015). Rubin et al. suggested that assessing outcomes such as community-level health measures would be better than considering inputs such as CHNAs or spending. Other authors have suggested that population health goals would benefit from clarifying the 'community building' category; non-profit hospitals are better incentivized to invest in the social determinants of health (Rozier, 2020).

Future Research

In the health policy arena, we can begin by recognizing health care as a human right so that everyone, regardless of race or socioeconomic status, has a fair and just opportunity to be as healthy as possible (Evans, 2020). Ethics, its principles of respect for persons, beneficence, and justice are also fundamental to equitable health care, health care access, and health outcomes (Evans, 2020).

Further research into the causality between hospital community benefit and community health improvement spending, community building, and community health outcomes is necessary and recommended. Research at the national level or with a large sample size is also recommended. This research is a beginning on shining a light on how this spending has impacted the lives of our citizens and our communities.

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Appendix A

Copyright Approval County Health Rankings and Roadmaps

Hello Shelly,

Thank you for your patience as I processed your request.

Yes, you may use the image of our model of health in your dissertation and in any publication of your dissertation. I have attached a high-resolution image of our model of health that you may use, and you can find our preferred citation below:

The University of Wisconsin Population Health Institute. County Health Rankings & Roadmaps, 2022. www.countyhealthrankings.org

Please let me know if you need anything else.

Best Regards,

Colleen M. Wick (*She/Her*)

Communications Specialist

County Health Rankings & Roadmaps

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The University of Wisconsin Population Health Institute

Appendix B

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Oriana Wesolowsky

Appendix C

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