

THE LAST SHALL BE FIRST? MISSION VERSUS MARGIN AND THE ROLE OF
CONSUMER GOVERNANCE IN FEDERALLY QUALIFIED HEALTH CENTERS

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ABSTRACT

David Bradley Wright: The Last Shall Be First? Mission versus Margin and the Role of Consumer Governance in Federally Qualified Health Centers
(Under the direction of Jonathan B. Oberlander, Ph.D.)

Federally qualified health centers (FQHCs) provide primary care services to a disproportionate number of low-income, uninsured patients. They are required to have a governing board of which at least 51% of the board members are FQHC consumers. The objective of this study is to evaluate the effect of FQHC board composition on service provision and financial performance.

In a multi-method study, I use six years of quantitative data from the Uniform Data System and Area Resource File, supplemented with four years of board data from FQHC grant applications. I classify board members as non-consumers, non-descriptive consumers (whose socioeconomic status does not resemble the typical FQHC patient), and descriptive consumers (whose socioeconomic status resembles the typical FQHC patient).

Using a mix of OLS and Poisson regressions with FQHC-level fixed effects, I model the relationship between the proportion of consumers on the board and a set of four mission-oriented and four margin-oriented dependent variables. Using Chamberlain's conditional logistic regressions, I use board member characteristics to model both the likelihood of holding executive committee office and the likelihood of serving as board chair. To complement the statistical analysis, I conduct in-depth interviews with a purposive stratified sample of FQHC board members (N = 30) to obtain data on board function and board members' perceptions of consumer governance.

I find that a minority of board members are descriptive consumers, that descriptive consumers are less likely than others to hold board leadership positions, and that under certain conditions the proportion of descriptive consumers on the board is negatively associated with FQHC operating margin. The proportion of descriptive consumers on the board is not associated with other mission and margin variables. However, the composition of descriptive consumers on the executive committee is positively associated with both the scope of enabling services and financial self-sufficiency. Therefore, including descriptive consumers on the board, while excluding them from the executive committee, may mean enduring the financial disadvantages of consumer governance, without enjoying the potential advantages it brings to service provision and financial performance.

For Laura

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PREFACE

A portion of this dissertation's title, "The Last Shall Be First?" is a reference to a verse in the Christian scriptures. In the Book of Matthew, a parable of the kingdom of heaven is presented, which tells the story of an estate owner who hires several men to work in his vineyard for the day. He pays each of the men the same wages—wages they agreed to at the outset—although some of the men are hired later in the day than others.

When the time comes to be paid, those who have labored a full day are no longer happy to be paid the same amount as the workers who labored only part of the day. But the estate owner replies: "I haven't been unfair. We agreed on the wage of a dollar, didn't we? So take it and go. I decided to give to the one who came last the same as you. Can't I do what I want with my own money? Are you going to get stingy because I am generous? Here it is again, the Great Reversal: many of the first ending up last, and the last first." (Matthew 20:13-16)

The owner of the estate saw potential in everyone and put them to work, and—by his definition—he treated all of them equally, including those who had been overlooked earlier in the day and who were looked down upon by the other workers. In fact, from the perspective of the workers, the last—those who had worked the least—were made first in terms of their rate of pay.

In the same way, health centers do not overlook or ignore the vulnerable populations they serve, nor do they look down on them in the way that the workers in the parable did. Instead, they acknowledge the potential of these individuals to contribute to the health center

and give them majority control of the organization. In this way, those whom society would typically consider the “last” on the basis of their socioeconomic status are made “first” when they compose the majority of the governing board. Ideally, the goal is that the underserved are elevated from a position of powerlessness to a position of power. However, the extent to which this occurs is uncertain. Thus, the title is posed as a question: “The Last Shall Be First?” This dissertation strives to answer that question.

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LIST OF ABBREVIATIONS

AIC	Akaike Information Criteria
ARF	Area Resource File
BLS	United States Bureau of Labor Statistics
BPHC	Bureau of Primary Health Care
CAA	Community Action Agency
CAP	Community Action Program
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CHC	Community Health Center
COPC	Community Oriented Primary Care
DHEW	Department of Health, Education, and Welfare
FIPS	Federal Information Processing Standard
FOIA	<i>Freedom of Information Act</i>
FPL	Federal Poverty Level
FQHC	Federally Qualified Health Center
FTE	Full-Time Equivalent
GAO	Government Accountability Office
GWU	George Washington University
HRSA	Health Resources and Services Administration
HSA	Health Systems Agency
IOM	Institute of Medicine
OEO	Office of Economic Opportunity

OLS	Ordinary Least Squares
PDF	Portable Document Format
SCHIP	State Children's Health Insurance Program
SOC	Standard Occupational Classification
UDS	Uniform Data System
2SLS	Two-Stage Least Squares

CHAPTER 1

INTRODUCTION

Federally qualified health centers (FQHCs) are primary care facilities that provide care to the country's most vulnerable populations. The federal program that funds FQHCs is authorized by section 330 of the Public Health Service Act and administered by the Bureau of Primary Health Care (BPHC) of the Health Resources and Services Administration (HRSA). By law, health centers are mandated to provide medical care to all without regard for their ability to pay, to operate an income-sensitive sliding-fee scale, and to provide a variety of non-clinical enabling services, which are designed to increase access to care.

As a result of their legally mandated mission, health centers serve a disproportionate share of uninsured and low-income persons and are a critical source of care for medically underserved populations in both urban and rural areas. While they do receive federal grants and enhanced Medicaid and Medicare payments, these funds often fail to fully offset the costs of the uncompensated care provided. Consequently, health centers face the difficult challenge of maintaining the organization's finances while pursuing their mission.

In addition to these requirements, health centers are required to have a consumer-majority governing board.¹ This means that at least 51% of the board members must be

¹ The members of the board who receive their care at the health center are frequently referred to by a variety of names, including: patients, clients, consumers, and users, among others. I have chosen to refer to them as "consumer board members" as that is the official language employed by the Bureau of Primary Health Care in its policy information notice on health center program expectations (Bureau of Primary Health Care, 1998a). However, in all other instances, I refer to non-board member users of the health center as "patients."

patients of the center. For decades, the assumption has been that this makes health centers more responsive to the needs of the communities and patients they serve:

“Community governance means that patients can – and must – take charge of their healthcare systems...So empowered, boards actively involve themselves in being a part of the solution to local problems...the board model creates a forum for bringing real and immediate problems to the table for action, for gaining real-time feedback from the people who receive care, and for generating action to meet pressing community needs such as affordable housing, improved water supply and sewer systems, or better consumer information...(Hawkins & Rosenbaum, 2005)”

Consumer governance has been labeled instrumental in “the selection of key staff, service priorities, hours of service, budgets, recruitment of outreach workers and other local personnel and grievances (Zwick, 1974).” It has even been posited as an explanation for health centers providing a broader scope of non-health services and increasing access to primary health care (Davis & Schoen, 1978). To be sure, few health center advocates are ambivalent when it comes to consumer governance, proclaiming that “the real key to [health centers’] success has always been the community’s feeling of ownership over their centers... (Dan Hawkins quoted in Lefkowitz, 2007).”

Yet, no consensus regarding the value of consumer governance has been reached. For all of the examples of consumer-majority governing boards heading up successful centers, there are anecdotal cases of boards gone bad, leading centers into debt and even closure (Lefkowitz, 2007). Still, there has recently been a renewed call for direct citizen participation in health care (Morone & Kilbreth, 2003).

Despite the long debate over the value of FQHC consumer governance, few studies have been conducted on the topic, and none of those has empirically evaluated the relationship between the composition of the board and the performance of the health center. Therefore, it remains unclear whether consumer governance has any tangible effect on health

center outcomes. Thus, the purpose of this study is to gain a better understanding of FQHC board composition and function and to evaluate the effect of FQHC board composition on service provision (i.e., mission) and financial performance (i.e., margin). In pursuit of these objectives, the study attempts to answer the following specific research questions:

- (1) To what extent do consumer board members resemble the health center's patient population with regards to socioeconomic status?**
- (2) What is the relationship between the proportion of consumers on the board and the health center's provision of services consistent with the FQHC mission?**
- (3) What is the relationship between the proportion of consumers on the board and the health center's financial performance?**
- (4) Does the composition of the board's executive committee moderate the relationship between the proportion of consumers on the board and the health center outcomes being studied?**
- (5) Are consumer board members more or less likely than other board members to (a) serve on the board's executive committee or (b) serve as board chair? Does the likelihood depend on the extent to which consumer board members resemble the health center's patient population?**
- (6) How do consumer-majority governing boards function, and how does this function explain the relationship between board composition and organizational outcomes?**

To answer these research questions, I conduct a multi-method study combining quantitative analysis of the relationship between board composition and health center outcomes with qualitative interviews that provide additional data on board function and the dynamics of board decisionmaking. Specific directional hypotheses and research methods are informed by theories of representation, status generalization, and agenda setting.

Significance and Policy Implications

The findings from this research have the potential to contribute more to our understanding of the link between board composition and organizational outcomes in the context of non-profit health care governance with non-elected consumer board members. Such knowledge may be meaningful in other contexts where the input of consumers, citizens, or other community members is sought. Examples of such contexts include citizens' juries (prevalent in Canada and the United Kingdom) and community-based participatory research (Gooberman-Hill, Horwood, & Calnan, 2008; Lasker & Weiss, 2003; Menon & Stafinski, 2008).

Prior studies of consumer governance in health care have been conducted in a variety of domestic and international contexts, including Canadian regional boards of health (Contandriopoulos, 2004), lay health boards in the United Kingdom (Pickard et al., 2002), health maintenance organizations (Cross, 2002; Schwartz, 1964), health systems agencies (HSAs) (Vladeck, 1977), community mental health centers (Robins & Blackburn, 1974) and, to a lesser extent, community health centers.

Most of these studies find consumer governance to be fraught with significant implementation challenges, including dominance by social elites (Robins & Blackburn, 1974), low levels of consumer participation (Windle, Bass, & Taube, 1974), disparities in working knowledge between consumers and non-consumers (Paap, 1978), and unanswered questions about the effect of consumer governance on actual measurable outcomes (Dudley, 1975; Grant, 2007; Scherl & English, 1969; Thomson, 1973). As the first study to explicitly test the relationship between consumer governance and health center outcomes, this study has the potential to answer some of these unanswered questions.

The findings from this research also have the potential to inform federal health policy. At the same time as the health center program has been permanently authorized and received the largest funding increase in its history, there is an ongoing debate about the effectiveness of consumer governance and the appropriateness of restricting federal funding only to organizations with consumer-majority boards. Many hospitals, free clinics, and other safety-net providers without consumer-majority boards are ineligible for the federal grant funds and enhanced Medicaid reimbursement rate that FQHCs enjoy.

Despite the sizable financial benefits it would confer, most of these organizations are unwilling to adopt a consumer-majority board. Hospitals, for one, are not amenable to ceding control of their clinic operations to members of the patient community or lay public (Larson, 2003). Not surprisingly, these entities wish for the consumer governance provision to be abolished or amended so that new funding becomes available to them. Thus, determining the value of the consumer governance provision is a critical next step in the ongoing policy debate.

The remainder of this dissertation is organized as follows: Chapter 2 provides an overview of the history of health centers and the origins of consumer governance. Chapter 3 reviews the relevant literature to create a theoretical framework and generate directional hypotheses for the study. Chapter 4 describes the empirical methods used to test these hypotheses and answer the research questions from Chapter 1. Chapters 5 and 6 present the respective results from the quantitative and qualitative analyses. Finally, Chapter 7 integrates the quantitative and qualitative results with each other and the existing literature, discusses the implications of the findings for both policy and theory, acknowledges some study limitations, and proposes directions for future research.

CHAPTER 2

HEALTH CENTER BACKGROUND

This chapter describes the history of the health center program, the challenges health centers face in meeting their obligations to mission and margin, and how consumer governance may affect their operation for better or worse. It also provides background on the concept of maximum feasible participation, from which the consumer governance provision originated.

The Origin of Health Centers

The community health center movement was introduced to the United States in 1965 by Dr. Jack Geiger, who brought home the lessons he had learned while shadowing Drs. Sidney and Emily Kark at the Pholela Health Centre in South Africa during the late 1950s. At Pholela, the focus was on the combination of public health and medicine, a process termed community-oriented primary care (COPC) (Cassel, 1955). The main idea was to understand and address the needs of the whole community, not just individual patients. These needs were assessed by “analysis of the clinical records...[and community] surveys (Cassel, 1955).”

These surveys, which sought input on community needs directly from community members, are part of the foundation of the consumer governance espoused by community health centers today. The other part of the foundation of consumer governance comes from

the need for legitimacy and community buy-in. John Cassel, a central figure in the COPC movement, writes, “A fundamental working principle was that new concepts and practices should never be imposed upon the community; rather, they should be integrated into the culture through active popular participation (Cassel, 1955).” Echoing Cassel, fellow COPC pioneer Oscar Lewis (1955) writes:

“Those who enter a community to engage in an action program must recognize the implications of the fact that they are not entering a power vacuum. In every human community there exists a network of relations between individuals. It is to the interest of many of these individuals to maintain this system of relationships. Any group of outsiders moving into a community will be seen by some as potentially disruptive, even if they plan no action. If they do plan action, whatever positive measures they undertake, no matter how benign, will be perceived by some community members as a threat to their own status and interests (p. 431)”

When he entered office, President Lyndon Johnson made the eradication of poverty his top domestic priority, going so far as to declare a “War on Poverty.” As the Office of Economic Opportunity (OEO)—the lead agency of Johnson’s effort—began to fund Community Action Programs (CAPs) across the country, it became clear that the poor were not only impoverished, but also in poor health. That, and the fact that the academics President Johnson tasked with developing the OEO were advocates for empowering disadvantaged communities directly, made health centers and COPC a natural fit with the War on Poverty (Moynihan, 1969).

Through that effort, the OEO provided funding for the first neighborhood health centers in 1965.² The first two health centers were the Tufts-Delta Health Center, located in

² Health centers have gone by a number of different names during the course of their history. From 1965 to 1975, they were known as “neighborhood health centers.” Beginning in 1975, they became known as “community health centers”—a name by which they are still known today. Then, in 1989, the additional label of “federally qualified health centers” came into being. The relationship between the two is such that all community health centers are FQHCs, but not all FQHCs are community health centers. In writing about the history of health centers, I make every attempt to refer to them using the term that was applicable to them at that time.

the town of Mound Bayou, in Bolivar County, Mississippi, and the Columbia Point Health Center in Boston, Massachusetts (Geiger, 2002). More than mere medical care, the health center movement aimed to break the cycle of poverty in which many Americans were stuck. While health centers certainly sought to heal the sick, they also sought to prevent illness, educate people, and employ low-income individuals in the community as health center staff. In short, OEO officials saw health care as one way to begin improving the lives of underserved individuals (Davis & Schoen, 1978).

One of the specific ways in which the OEO sought to do this, was to require the “maximum feasible participation” of community members in all new poverty programs, including health centers (Geiger, 2002). The origins of maximum feasible participation are discussed later in more detail, but for now suffice it to say that OEO officials suggested that maximum feasible participation would ensure that the CAPs targeted the needs of the poor, achieved buy-in from community residents, and made lasting differences in the lives of vulnerable populations.

The earliest neighborhood health centers practiced COPC and defined health to include not only physical, but also “mental, social, economic, environmental, and political aspects. Thus, improved housing, better sewer and water systems, employment, job training, community economic development, counseling, advocacy with other social services and, perhaps most important, personal and minority group power building were all major goals of neighborhood health programs (Davis & Millman, 1983).” Since the 1960s, however, health centers and the health care system in which they operate have grown increasingly more complex.

Beginning in the 1970s, health centers became more exclusively focused on the provision of clinical health care services when funding for less traditional services such as job training, agricultural co-operatives, and sanitation was limited by the Nixon administration's dismantling of OEO and transfer of the health center program to the Department of Health, Education, and Welfare (DHEW) (Davis & Millman, 1983). By May 1973, DHEW announced that health centers must "recover the maximum amount possible from sources of funding other than federal grants" and "become self-sustaining, community-based operations with diminishing need for ... [federal] support (Sardell, 1988)."

As funding became tighter, most centers began to focus exclusively on the provision of basic primary health care services, and many of the earlier services provided to combat poverty were eliminated. As early as 1974, services like transportation were well-established (provided by 93% of centers that year), while environmental services were losing traction (only 67% of centers provided them in 1976) (Reynolds, 1976).³

Congress reauthorized health centers in 1973 and 1974, but President Nixon—who was continuing to grow more concerned with the amount of federal spending on domestic programs—vetoed the 1974 bill. The bill was reintroduced in 1975 and again passed Congress, but was again vetoed—this time by President Ford. However, Congress overrode Ford's veto to enact the *Special Health Revenue Sharing Act of 1975* (P.L. 94-63), which authorized and appropriated funds for health centers—now called community health centers—through 1977. In addition, the legislation established a number of program requirements as outlined in Figure 1.

³ Environmental services refer to sanitation and hygiene efforts. For example, in the earliest days, some health centers worked to install indoor plumbing in the community. While such services can clearly benefit the public's health, they were non-clinical, and often the first to be threatened with elimination when health centers faced funding cuts.

Figure 1. Federally Qualified Health Centers Must

- Serve a medically underserved area or population
- Provide comprehensive primary care and enabling services
 - Provide care on a sliding-fee scale, regardless of ability to pay
 - Meet strict governance requirements, including:
 - Must have between 9 and 25 members
 - **A majority (51%) must be registered users of the FQHC**
 - Of the other 49%:
 - No more than half may be health professionals (receiving more than 10% of their annual income from health care)
 - **Group should be representative of patients and community**
 - Board member, their spouse or relative may not be a FQHC employee

Source: 42 U.S.C. § 254b (Emphasis added)

After being reauthorized by the *Health Services Extension Act* (P.L. 95-83), the program survived and even grew during the Carter administration, before once again facing difficulties during the Reagan administration. Following a failed attempt to convert the health center program into a block grant, substantial budget cuts were made and nearly one in four centers were de-funded. Of the remaining centers, two-thirds faced significant funding cuts, and the other third were forced to operate at between 90 – 100% of the previous year's funding level (Sardell, 1988).

By May of 1982, some 186 health centers had been de-funded by the federal agency based on the relative need of the health center's service area, the center's performance on indicators of administrative efficiency, the center's billing and revenue collection performance, the most recent financial audit, and comments from state officials and administrators (Sardell, 1988). Still, the program survived, largely because of the efforts of career bureaucrats who supported the principles of the health center movement even when political support for the program waned (Sardell, 1988).

The passage of the *Omnibus Budget Reconciliation Act of 1989* (P.L. 101-239) created the designation of federally qualified health centers (FQHCs). In return for meeting the legal requirements outlined in Figure 1, health centers are designated as FQHCs and are eligible to receive federal grant funding, an enhanced Medicaid payment rate, and liability coverage under the *Federal Tort Claims Act* (McAlearney, 2002).

While the passage of this legislation bolstered the program financially, the 1990s were an uncertain time for health centers. First, it was unclear how, or even if, they would exist in the context of managed competition proposed by President Clinton's *Health Security Act*. Then, when reform was defeated in Congress, President Clinton's goal of reducing the deficit made annual budget appropriations a concern (Lefkowitz, 2007). However, thanks to the support of key members of Congress and the strong lobbying efforts of the National Association of Community Health Centers, Congressional appropriations routinely exceeded President Clinton's budget request for health centers during this time, growing funding for the program from \$734 million in 1994 to \$925 million by 1999 (Taylor, 2004).

During the last decade, thanks to bipartisan support, health centers have enjoyed unprecedented increases in funding as shown in Table 1. In 2002, President George W. Bush launched the President's Health Center Initiative, which doubled the amount of federal grant appropriations for health centers from \$1.1 billion to \$2.2 billion over 8 years (Iglehart, 2008). The increased financial support continued under the administration of President Barack Obama with a one-time infusion of \$2 billion provided to health centers under the *American Recovery and Reinvestment Act of 2009* and the permanent authorization of the health center program under the health reform law known as the *Patient Protection and Affordable Care Act*, which also provides health centers with \$12.5 billion between 2011 and

2015 (Adashi, Geiger, & Fine, 2010). While some of these funds are being used to establish new centers, existing FQHCs are also using the additional funds to invest in more delivery sites, hire more staff, and provide more uncompensated care (Lo Sasso & Byck, 2010).

Table 1. Federal Appropriations for FQHC Program

Fiscal Year	Appropriation (millions of real dollars)	No. of Centers	Average Appropriation per Center (millions of 1998 dollars)
1998	\$825	694	\$1.19
1999	\$925	691	\$1.30
2000	\$1018	730	\$1.31
2001	\$1169	748	\$1.45
2002	\$1433	843	\$1.54
2003	\$1505	890	\$1.50
2004	\$1618	914	\$1.52
2005	\$1735	952	\$1.51
2006	\$1782	1002	\$1.44
2007	\$1988	1067	\$1.47

Source: Bureau of Primary Care, Health Resources and Services Administration, available at: <http://bphc.hrsa.gov/programs/CHCPrograminfo.asp>; National Association of Community Health Centers available at: <http://nachc.com/client/documents/Charbook%202008%20FINAL.pdf>

As of 2009, there were 1,200 FQHC grantees caring for approximately 20 million patients at some 7,500 delivery sites (National Association of Community Health Centers, 2009). According to the most recent data available compiled from multiple sources by the National Association of Community Health Centers, 70.7% of FQHC patients have incomes below the federal poverty level (FPL), and 91.9% have incomes less than or equal to 200% FPL. FQHCs also serve a disproportionate share of racial and ethnic minorities. In 2008, 36.3% of FQHC patients were white, compared to 36.1% Hispanic, 23.0% African American, 3.5% Asian, and 1.1% American Indian. FQHC patients also tend to be uninsured (39.8%) or publicly insured by Medicaid/SCHIP (35.1%), Medicare (7.5%), or another public program (2.3%).

While health centers are extremely cost-effective primary care providers (Streeter, Braithwaite, Ipakchi, & Johnsrud, 2009), federal funding does not entirely cover the costs of this care. In 2000, the average annual cost of care for an FQHC patient was \$406, while federal funding per uninsured patient was only \$226. By 2007, the average annual cost of care per patient had risen to \$552, while federal funding per uninsured patient had only increased to \$270, increasing the funding gap from \$180 to \$282 (National Association of Community Health Centers, 2008).

Clearly, FQHCs are shouldering an increasing share of the burden of uncompensated care. In fact, the average FQHC operating margin inclusive of grants over the 2000 – 2007 period was only 0.85%. This has been compounded by the fact that federal funding of the safety net has not increased at the same rate as the demand for safety net services, leading to a net decline of 8.9% in federal safety net spending per uninsured during the 2001 – 2004 period (National Association of Community Health Centers, 2008). The next section explores in more detail the tradeoffs safety net facilities face in balancing the organization's financial health against the strong demand for service provision.

Mission versus Margin: The Financial Difficulties of the Safety Net

The U.S. health care system is often described not as a system at all, but rather as a haphazard patchwork of patients, payers, and providers. For many, health care is inaccessible, unaffordable, and of insufficient quality. Barriers and coverage gaps pose a significant challenge to vulnerable populations and limit their ability to utilize health care. The obstacles are especially great for the nearly 51 million U.S. residents without health insurance, but lacking insurance is far from the only barrier many residents face (U.S. Census Bureau,

2010). For some with insurance, the inadequacy of their coverage leaves them insufficiently protected from the high cost of care. For others, transportation or language barriers may exist, hours of operation may be inconvenient, or cost-sharing may be prohibitive.

For the multitudes that wind up falling through the cracks, there is a last resort aptly labeled the “health care safety net.” The safety net is made up of a variety of organizations ranging from public hospitals to community health centers, from free clinics to private physicians who write-off uncompensated care for office visits. According to the Institute of Medicine (IOM), the safety net includes any provider that “organizes and delivers a significant level of health care and other health-related services to uninsured, Medicaid, and other vulnerable patients (Lewin & Altman, 2000).”

The IOM further defines a group of core safety net providers that are uniquely characterized by an “open door” policy and the amount of uncompensated care they provide. Specifically, core safety net providers are required by law or by organizational mission to provide care to anyone regardless of insurance status or ability to pay. Consequently, they are easily identified by the high proportion of uncompensated care they provide relative to all care provided (Lewin & Altman, 2000). Federal legislation requiring that health centers provide care to all who enter their doors ensures that FQHCs are an essential part of the core safety net.

The financial demands placed on core safety net providers are enormous. They are required to provide services to individuals whom the market has failed, and forced to shoulder the burden of caring for a disproportionate share of uncompensated care without adequate means to cost-shift onto insured individuals (Lewin & Altman, 2000). Since the first years of the health center movement, federal funding for non-medical services has dried

up, and the scope of such services provided by FQHCs has narrowed significantly (Lefkowitz, 2007). As Dr. Jack Geiger (2005), co-founder of the U.S. health center movement, writes: “the early health center focus on social determinants and community development is greatly attenuated, as the costs of simply providing medical care have grown nearly overwhelming.”

Indeed, the notion that a health center’s financial performance may come at the expense of fulfilling its mission is made explicit as far back as a 1978 report by the U.S.

Government Accountability Office:

“HEW [The Department of Health, Education, and Welfare] no longer requires centers to become financially self-sufficient. However, its emphasis on having centers obtain as much revenue as possible from non-federal sources may be having an adverse impact on the main objective—serving the medically underserved.”

One of the greatest threats to health centers’ continued viability comes from increased demand—in the form of higher patient volume and increased patient morbidity—that is outpacing available resources. In the most recent study of health center financial performance available, McAlearney (2002) finds that as a result, many FQHCs are struggling financially, with “more than half of all [FQHCs reporting] operating deficits in 1997, 1998, and 1999.” Additionally, a report from the Government Accountability Office (GAO) cites Health Resources and Services Administration (HRSA) data on the organizational success of health centers, noting that 40 percent of centers are generally successful, 50 percent are “viable but...experiencing some operational problems” and the organizational viability of the other 10 percent is in question as they contend with financial struggles.

The report indicates that approximately 2 percent of centers lose their federal grant funding each year. These centers have frequently failed to adapt accordingly to changes in the health care market, are slow to respond to Medicaid payment reforms, and do not

compete successfully for privately insured patients. The report concludes that centers with boards actively involved in oversight and that are able to balance the demands of both mission and margin are typically the most successful, while other centers that tend towards either extreme of mission or margin are more likely to encounter problems (U.S. Government Accountability Office, 2000b). As these pressures mount, tension is likely to develop between the boards' obligations to mission and margin. While a commitment to the mission of caring for the underserved is a critical component of the FQHC model, it is equally important for FQHCs to remain solvent and competitive in today's complex health care system.

A significant literature finds that many of these same pressures are faced by other non-profit health care organizations. In fact, non-profits tend to prioritize margin over mission when they are forced to compete with for-profits operating in close proximity (Schlesinger & Gray, 2006). In such cases, non-profits may emulate for-profits by avoiding low-income areas, opting against offering services that the uninsured use, and denying access to care for those without insurance or unable to pay for services (Marmor, Schlesinger, & Smithey, 1985). Health centers are not immune from these competitive pressures, and depending on the competitive context in which they operate, may behave similarly to other non-profits in adopting for-profit behaviors. That is, they may sacrifice mission at the altar of margin if it seems necessary for organizational survival.

There is evidence that despite their mandate to serve all who seek services, some health centers turn patients away or establish waiting lists in the face of capacity constraints (Jacobson, Dalton, Berson-Grand, & Weisman, 2005). When patients cannot pay in full, some health centers allow them to pay whatever they are able and write-off the

uncompensated care as bad debt. Others set up payment plans or use a collection agency to collect unpaid balances. Still others deny treatment and refer patients to other providers (Cunningham, Bazzoli, & Katz, 2008; Gusmano, Fairbrother, & Park, 2002). Lastly, FQHCs may respond by revising their mission—either literally or in practice—to incorporate a more business-oriented focus that includes fee increases and reduced service provision deemed necessary to keep the centers operational (Jacobson et al., 2005).

When times are tough—as they often are for health centers—some centers opt to cut back on mission-oriented services (Breyer, 1977; Feldman, Deitz, & Brooks, 1978; Ricketts, Guild, Sheps, & Wagner, 1984). One of the areas where the tension between mission and margin is likely to be the greatest for FQHCs is that of enabling services. Enabling services refer to non-clinical services provided in an effort to reduce or eliminate barriers to health care access (e.g., transportation, translation, child-care, after-hours appointments, etc.). By law, they are a defining characteristic of the health center program, and have been demonstrated to have economic, health and social benefits, which accrue to those who use them (Sandler & Duncan, 1998).

While FQHCs are required to provide case management, substance abuse and mental health treatment referrals, outreach services, transportation, translation, and patient education, other enabling services are optional (Bureau of Primary Health Care, 1998a). Thus, there is variation in the scope of services provided by each center. However, the scope of enabling services varies less than the volume of services provided (Wells, Punekar, & Vasey, 2009). Furthermore, there is variation in how services are provided. Specifically, a center may provide and pay for a service, may pay for a service but refer the patient elsewhere, may refer the patient elsewhere and *not* pay for the service, or not provide the service at all.

Despite the critical role they play in increasing access to health care, most enabling services are not reimbursed by public or private insurance (Park, 2006). Thus, providing such services can be a drag on FQHC finances (Lewin & Altman, 2000). There is evidence that providing more enabling services leads to financial deficit, but that FQHCs with the financial slack to do so are targeting marginal funds towards the provision of these much-needed, but poorly reimbursed services (Roby, 2006). It also seems that the more enabling services a center provides, the higher its average cost per medical encounter will be and the less financially self-sufficient it will be (Martin, Shi, & Ward, 2009).

Indeed, a GAO report indicates that “enabling services are often the first to be reduced when [health center] revenues decline. Centers may reduce the number of staff providing a service or the scope and volume of services (U.S. Government Accountability Office, 2000a).” Similarly, another study found that, in the wake of Medicaid rate cuts, centers responded by reducing their scope of services, focusing first on traditionally non-covered enabling services (Hoag, Norton, Rajan, Determination, & Island, 2000).

The tradeoff is apparent: FQHCs are legally required to provide certain enabling services and often choose to provide additional ones because their vulnerable patient populations rely on them, yet the competitive financial performance of the FQHC can be threatened if too many unprofitable services are provided. The situation can be best understood as a zero sum game:

“Because [health centers] derive most of their income from grants, they largely operate on fixed annual budgets. From its budget, the center is left to determine the optimal mix of services it will provide to the community. If the center is operating at full efficiency, this will necessitate trade-offs among the number of persons to be served, the range of services to be offered, and the amount of care to be provided to any registrant seeking care. Each alternative the center faces in this type of decision is equally grievous in terms of

contradicting the goals of the [health center] program (Reynolds, 1976, p. 67).”

A line must often be drawn between mission and margin, and legally, the FQHC governing board is responsible for making that determination (although in practice such decisions may be left to the CEO). As shown in Figure 2, some boards may be more margin-oriented, while others may be more mission-oriented, although mission and margin are not mutually exclusive. The question is what role, if any, consumer governance plays in organizational decisionmaking as FQHCs strive to navigate the tension between mission and margin. The next section begins to answer this question by exploring the origins of consumer governance.

Figure 2. Margin-Oriented versus Mission-Oriented Boards

		Mission-Orientation⁴	
		Low	High
Margin-Orientation	High	Financially efficient Few enabling services Less uncompensated care	Financially efficient Wide range of enabling services More uncompensated care
	Low	Financially inefficient Few enabling services Less uncompensated care	Financially inefficient Wide range of enabling services More uncompensated care

⁴ “Mission-orientation” refers to a board’s focus on the provision of care and services explicitly targeted to the vulnerable populations health centers are mandated to serve. Elsewhere in the literature, this concept has been called “community orientation” and has been investigated in the context of the level of “community benefit” being provided by non-profit hospitals in return for their tax-exempt status (Proenca, 1998; Proenca, Rosko, & Zinn, 2000). Similarly, “margin-orientation” refers to a board’s focus on the organization’s financial performance.

Maximum Feasible Participation

President Lyndon B. Johnson came into office with a large Democratic majority in Congress, but the centerpiece of his agenda, the War on Poverty, was implemented not only because of the political balance of power, but also because the effort was linked to the Civil Rights Movement, which allowed the idea of empowering the vulnerable and disenfranchised to gain traction (Morone, 1998).

Maximum feasible participation—a central tenet of the War on Poverty programs—was a widely used, but poorly understood phrase (Rubin, 1969). Yet, despite the ambiguity of its intent, the phrase’s origin is much clearer. The maximum feasible participation language was inserted into the legislation at the insistence of Richard Boone in an exchange recounted by Adam Yarmolinsky (1969):

“The phrase ‘maximum feasible participation’ entered into our discussions...[by] Dick Boone....At one point after he had used it several times, I said, ‘You’ve used that phrase four or five times now.’ ‘Yes, I know,’ he replied. ‘How many more times do I have to use it before it becomes part of the program?’ ‘Oh, a couple of times more,’ I told him. So he did, and it did become part of the program (p. 51).”

As interpreted by Yarmolinsky (1969), who was involved in the development of the OEO programs, the language of maximum feasible participation was included to encourage “the residents of poverty areas to take part in the work of community-action programs and to perform a number of jobs that might otherwise be performed by professional social workers (p. 49).” The original idea, it seems, was involvement of the poor, not leadership by the poor. In fact, the first CAPs established by OEO required only that representatives of the poor had to reside in the program’s service area, not that they must be poor themselves (Levitan, 1969).

Richard Boone (1972) suggests that the motivation for maximum feasible participation was drawn from the participatory democracy of the Civil Rights Movement, and a strong sentiment of “antiprofessionalism” that sought to help the poor help themselves. Perhaps not surprisingly, the resultant undefined phrase “maximum feasible participation” was interpreted in wildly different ways depending on who was referring to it. Primary questions included to whom the phrase referred, precisely how many persons constituted the “maximum” and in what capacity participation was to take place (e.g., did this mean staff employment, advisory boards, or formal governance?) (Strange, 1972).

In one CAP memo, OEO clarified that the law was only intended to ensure that the representatives of the poor had the best interests of the poor in mind when making decisions. They did not actually have to be poor themselves. The memo, from July 1965 stated:

“The requirement for resident participation in a community action program—as stated in the Act and in the CAP Guide—refers to ‘residents of the areas and members of the groups’ to be served. This requirement is met—in part—by including on the governing body or policy advisory committee of the CAA at least one representative selected from each of the neighborhoods or areas in which the CAP will be concentrated....Be sure that you do not equate our requirements for resident participation in policy-making with the fact that one or more poor persons may be placed on the governing body or policy advisory committee. In determining whether the requirement for representation has been met, it is not the incomes of the representatives that we are concerned with; it is the degree to which they truly represent the persons to be served by the community action program. We do not require that such representatives themselves meet an income test (Wofford, 1969, pp. 82-83).”

There were many questions about how maximum feasible participation was to be formally operationalized. According to political scientist James Morone (1998):

“An early task force announced that maximum feasible participation meant ‘at least one representative’ from each neighborhood served by the agency....[Then in] 1965, the requisite number had expanded to ‘roughly one third’ of the agency’s governing board, chosen by ‘democratic techniques’.”

Representatives were chosen by a variety of means including special elections, town meetings and otherwise specially established local committees, although low turnout in the elections fostered a sense of program illegitimacy, which led the OEO to ban the practice (Morone, 1998).

In the period shortly after the creation of OEO, maximum feasible participation was considered as “an average representation on the governing board of a community-action agency of 30 per cent from target areas to be served....[which] Congress amended...[in 1966 to] mandate that a minimum of 33 per cent of the community-action-agency board be democratically selected from the target areas of the program (Kravitz, 1969).” Despite rather optimistic rhetoric, real citizen involvement and community control was not easily achieved. The one-third rule is interesting, because as James Sundquist (1969) points out, “A literal interpretation of ‘maximum’ would have been all, not one-third (p. 239).”

There were also concerns about the competency of local representatives. While a member of Sargent Shriver’s OEO task force said, “I don’t think it ever occurred to me, or to many others, that the representatives of the poor must necessarily be poor themselves (James N. Adler quoted in Moynihan, 1969),” this became the assumption, and maximum feasible participation got blamed for installing program participants who lacked fiscal responsibility and financial competence (Morone, 1998). In his book *Maximum Feasible Misunderstanding*, Daniel Patrick Moynihan (1969) expounds, “They are going to get hold of a lower level of...genuine leaders who are—what?—inarticulate? Irresponsible? Unsuccessful?”

Some critics argue that maximum feasible participation was a cleverly contrived effort to dupe the poor into believing that power was being shared with them, thereby diffusing their hostility towards those in traditional positions of authority and thwarting any

prospects for true empowerment of the disenfranchised and substantively meaningful social change (Brieland, 1971). Ironically, according to Morone (1998), “Congress never intended maximum feasible participation as anything more than a rhetorical flourish.” Instead, it became the linchpin of the entire movement.

Even among those who enacted the legislation, the concept of community participation was not well understood, nor was it carefully considered before the legislation was passed. According to James Sundquist (1969):

“One can search the hearings and debates in their entirety and find no reference to the controversial language regarding the participation of the poor in community-action programs. The whole novel concept of community action—the definition of the community, the nature of the community-action agency, the content of its program, all of which were to have a profound impact on federal-state-local relations and on the social and governmental structures of participating communities—was left to OEO in an exceptionally broad grant of discretion (p. 29).”

Politically, the CAP programs caused quite a stir, as the federal government bypassed state and local governments to provide funding and authority directly to local residents operating community programs. Those groups benefiting from the status quo tended to be threatened by—and resistant to—the proposed changes. Many members of Congress, especially southern conservatives, opposed the War on Poverty, and as early as December 1965, plans to dismantle OEO were presented to President Johnson (Lemann, 1988).

Over the next decade, most of the programs created under OEO were, in fact, dismantled and the emphasis on maximum feasible participation faded quickly (Naples, 1998). Still, between 1964 and 1974, at least ten federal laws were enacted that included a call for consumer participation in health care, and health centers were one such program that managed to survive (Koseki & Hayakawa, 1979).

The FQHC Consumer Governance Requirement

For health centers, the concept of maximum feasible participation was formally defined by the passage of the *Special Health Revenue Sharing Act of 1975*. This legislation specified for the first time that health centers must have a governing board that:

“...is composed of individuals, a majority of whom are being served by the center and who, as a group, represent the individuals being served by the center, and meets at least once a month, selects the services to be provided by the center, schedules the hours during which such services will be provided, approves the center’s annual budget, approves the selection of a director for the center, and...establishes general policies for the center...” (Section 330, Public Health Service Act)

Health center program expectations elaborate by completely defining who should be considered as a consumer for the purposes of the requirement:

“Since the intent is for consumer board members to give substantive input into the health center’s strategic direction and policy, these members should utilize the health center as their principal source of primary health care. A consumer member should have used the health center services within the last two years. A legal guardian of a consumer who is a dependent child or adult, or a legal sponsor of an immigrant, may also be considered a consumer for purposes of board representation (Bureau of Primary Health Care, 1998a, p. 22).”

They also explain that consumer board members are required, as a whole, to “represent the individuals served by the health center in terms of race, ethnicity, and gender (Bureau of Primary Health Care, 1998a, p. 22).” The Bureau of Primary Health Care (BPHC) is, however, aware that consumer board members, while perhaps necessary, are not sufficient:

“The board should be comprised of members with a broad range of skills and expertise. Finance, legal affairs, business, health, managed care, social services, labor relations and government are some examples of the areas of expertise needed by the board to fulfill its responsibilities (Bureau of Primary Health Care, 1998a, p. 22).”

In sum, FQHC governing boards are simultaneously required to have a consumer majority and sufficient technical and professional expertise required for effective governance.

Given a fixed number of board seats, striking this balance may prove a challenge, unless board members are both consumers and technical or professional experts. In this case, however, the consumer board members would not likely resemble the average health center patient, with which the law seems at least partially concerned.

Lessons from the Health Systems Agencies

The experience of health systems agencies (HSAs) provides an instructive case for a study of consumer governance. A decade after the creation of the first community health center, Congress passed the *National Health Planning and Resources Development Act of 1974 (P.L. 93-641)*, which established a nationwide network of health systems agencies designed to incorporate consumer input into health care systems planning at the local level.

As written, the law required the HSA boards to have a consumer majority ranging between 51 and 60 percent, with consumers defined as “consumers of health care...broadly representative of the social, economic, linguistic, and racial populations...[and] geographic areas” of the HSA (*P.L. 93-641 §1512(b)(3)(C)(i)*). The remaining 40 to 49% of the HSA board was to be comprised of health care providers, at least one-third of which were direct providers of clinical care (Vladeck, 1977).

The legislation took every effort to achieve “mirror-like” levels of representation by including at least one representative from any major health care provider in the area (e.g., the Veterans Administration, local health maintenance organization, etc.) and requiring that all HSA board members reside in the local area and be present on the board in the same rural-urban proportion as seen in the community population (Vladeck, 1977).

This approach, however, amounted less to community representation and more to interest group representation (Marmor & Morone, 1980). That is, a particular individual from the community would not be selected at random, but rather would be selected because they represented the local business community or the school board, for example, with the result being a rather fragmented HSA, with little capacity for making meaningful changes to the health care system in the community (Vladeck, 1977). For the HSAs to be truly responsive to their communities, consumer board members would have to have been knowledgeable about health care issues and held strong leadership positions (Checkoway, O'Rourke, & Bull, 1984). This was seldom the case.

At least in terms of socioeconomic status, many HSA consumer board members were not representative of the communities they served (Checkoway, 1982). Consumer members were overwhelmingly drawn from high-income census tracts, while low-income census tracts tended to be excluded from participation (Checkoway & Doyle, 1980). And, even if consumer board members had been more representative, records indicate that consumers' attendance rates at HSA meetings were quite low. In fact, despite the requirement that they constitute at least 51% of the board, in practice their absence typically meant that consumers were in the minority at planning meetings (Greer, 1976). Furthermore, there is evidence that consumer board members—despite being in the majority—were less influential than provider board members (Steckler, Dawson, Dellinger, & Williams, 1981). This finding is also supported by ethnographic evidence of the HSAs that demonstrates that consumer board members, while technically co-equals with health care provider board members, tended to defer to the opinions of professionals during the decisionmaking process (Paap & Hanson, 1982).

Ultimately, the HSAs never achieved a meaningful level of consumer participation or consumer influence, but rather experienced communication problems and information gaps between consumers and health professionals, despite consumers holding a majority of seats on the HSAs (Riddick, Cordes, Eisele, & Montgomery, 1984). Consumer representation failed, Marmor and Morone (1980) claim, primarily because the law authorizing HSAs failed to specify a formal process to guide the selection of board members.

Various groups filed lawsuits claiming that they were being denied their right to representation on the HSA, and questions about who constituted an adequate representative of any particular group were raised. In short, in the case of HSAs, the absence of a formal mechanism for representation, combined with the inherent status differentials between consumer board members and health professionals, resulted in the maintenance of the status quo rather than effective consumer governance.

Conclusion

It is clear that health centers are providing critical health care services—including a unique variety of enabling services and incomparable amounts of uncompensated care—to a population that desperately needs them. It is also clear that, in so doing, health centers are operating under some of the most resource-limited conditions in health care. What remains unclear is what effect consumer governance may have on health center service provision and financial performance. The next chapter uses existing theories of representation, status generalization, and agenda setting to create a theoretical framework, which explains how and why consumer governance may be related to health center outcomes.

CHAPTER 3

THEORETICAL FRAMEWORK

Daniel Patrick Moynihan (1969) described maximum feasible participation as a rhetorical device used to legitimate the Community Action Programs (CAPs) as being responsive to the poor, even when the programs failed to yield results that were beneficial to the poor. It was a concept that had broad appeal to the public and promised to achieve lofty goals, but which was never clearly articulated by Congress and consequently never well implemented. To some extent, the same may be true today. This chapter outlines a theoretical framework for considering the relationship between governing board composition and organizational outcomes.

Theories of Representation: A Typological Framework

Two basic concepts underlie the consumer governance mandate: representation and participation. Specifically, the aim is to ensure representation of the frequently under-represented by requiring the participation of federally qualified health center (FQHC) consumers as board members. Participation is clearly understood as involvement—and while the magnitude or specific mechanism may vary, the concept remains the same. Representation, however, is more complex.

As classically described by Hanna Pitkin (1967), representation can take on a number of different conceptual forms including formal, descriptive, and substantive representation.

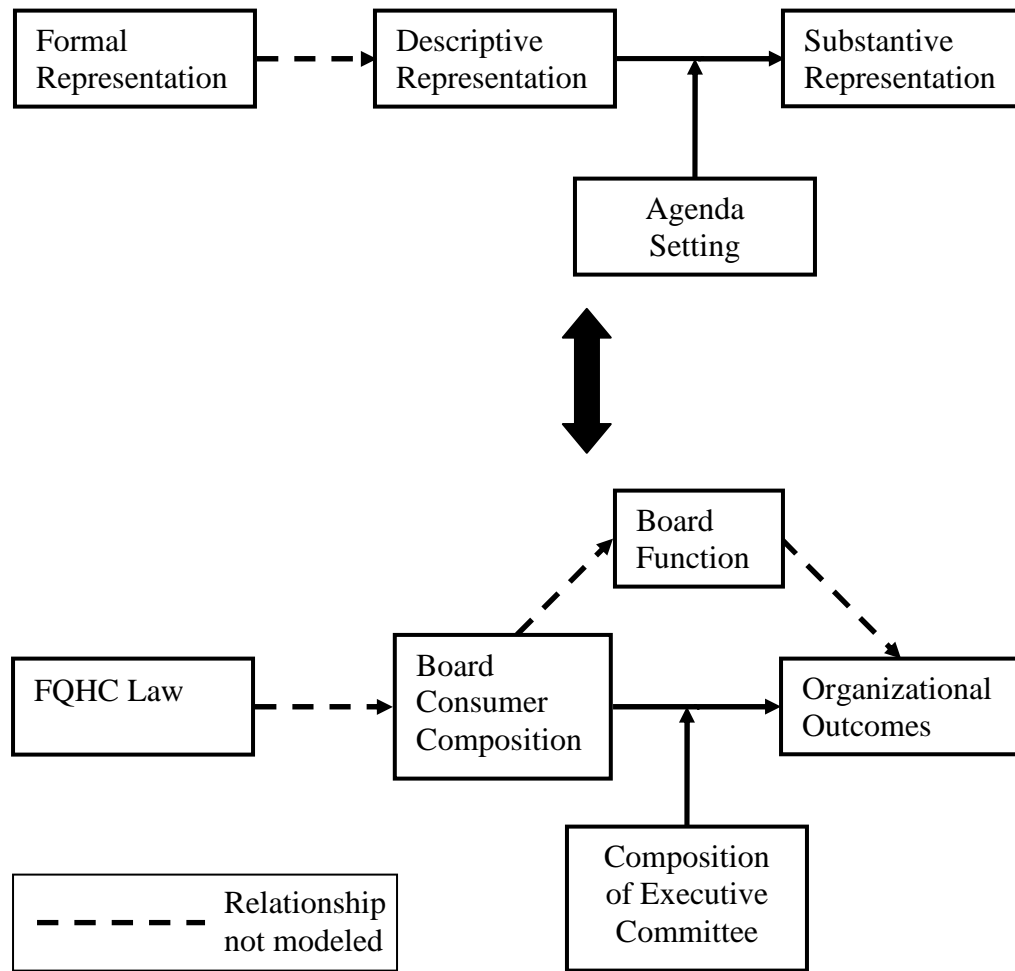
Formal representation refers to the process by which representatives are chosen (e.g., election, nomination, etc.), while descriptive representation describes the degree to which a representative shares relevant characteristics with constituents. Socioeconomic status, race, and gender are examples of various potential dimensions of descriptive representation. In short, descriptive and formal representation focus on representational structure and process (i.e., who does the representing and how).

Conversely, substantive representation is concerned with representational outcomes. Specifically, substantive representation is the degree to which a representative represents the true interests of constituents (Pitkin, 1967). Measuring substantive representation can be challenging, because the true interests of constituents are not always known, sometimes even to the constituents themselves.

As shown in Figure 3, there are strong parallels between Pitkin's concept of representation and the assertions made by consumer governance advocates. Specifically, proponents of the FQHC consumer governance mandate claim that having more consumers on the board will make the health center better serve the patient community. What they are asserting in theory, is that formal representation designed to require descriptive representation will lead to substantive representation.

Additionally, I have indicated the possibility that agenda setting may moderate the relationship between descriptive and substantive representation. In the health center context, this is depicted as the composition of the executive committee moderating the relationship between board composition and health center outcomes. The theory behind this is motivated in a later section.

Figure 3. Types of Representation in the FQHC Context



The framework depicted in Figure 3 rests on three theoretical premises:

- 1) Formal representation leads to descriptive representation.
- 2) Descriptive representation leads to substantive representation.
- 3) Agenda setting moderates the relationship between descriptive and substantive representation.

Formal Representation Leads to Descriptive Representation

The first premise is that the legal requirement for health centers to have consumer-majority governing boards actually leads to descriptive representation. The extent to which this premise is true is likely to depend on how consumer board members are selected. In the case of health centers, community members have no formal mechanism by which to authorize consumer board members or to hold them accountable. Initially, there was such a mechanism, as consumer board members were elected to advisory boards by the community, however, low turnout led to criticism that the program failed to truly represent the community and the elections were discontinued (Hollister, 1974; Peterson, 1970).

Consequently, achieving descriptive representation can be a real challenge. Certain groups will rightly argue that they are not being represented by the board (Chesney, 1982; Cross, 2002; Lipsky & Lounds, 1976). For instance, defining who is or is not a “consumer” is fraught with a number of questions. As Hochbaum (1969) writes:

“Does the term ‘consumer’ apply equally to the individual with a broken finger who comes to a clinic into which he has never set foot so far and probably will not set foot again for a long time if ever, as well as to the individual who conscientiously comes for his yearly check-up in addition to seeking medical advice whenever appropriate reasons exist?... Are the better educated and more affluent members of, say, the urban black ghetto really true representatives, or are they almost as far removed from the people for whom they are to speak as are the professionals themselves? Or should these representatives be selected from the very segments of the population which heretofore have been its most disadvantaged? If so, would they not be so uneducated, so naïve about health services and about planning, so incompetent as to be unable to contribute meaningfully to the planning? Moreover, would attempts to communicate between them and the professionals be so difficult as to be almost futile?”

The trouble here is that descriptive representation can lead to tokenism. While, for example, most black men may hold similar opinions on an issue, including a black man on the board is no guarantee that he will vote as another black man would have. The same is true

for any demographically-defined group. Whether or not this matters is debatable. Indeed, there are some cases where descriptive representation is clearly unfavorable. For example, “a lunatic may be the best descriptive representative of lunatics, but one would not suggest that they be allowed to send some of their numbers to the legislature (Pitkin, 1967, p. 89).”

Furthermore, it is nearly impossible to achieve descriptive representation completely. It simply is not feasible to try to recreate the complex demographic profile of a large population within a governing board with a relatively small and fixed number of board members. As Pitkin (1967) puts it, “the most perfect replica in miniature will not duplicate every characteristic of the original (p. 87).”

Today, absent a strong mechanism of formal representation, it remains unclear whether FQHC boards are descriptively representative of the patient population. Health center board members may be selected in ways that result in differing levels of descriptive representation. Some boards may value the contribution of the patient’s voice more than others who may view technical and professional expertise as essential to proper governance. Still others may try to satisfy both criteria simultaneously. There is even evidence that FQHC executive directors find ways to meet the consumer governance requirement that potentially undermine the original intent of the provision. For example, in some cases, they first identify potential board members, recruit them, and then encourage them to become consumers (Bracken, 2007).

In the only national survey of its kind, Samuels and Xirasagar (2005) find that FQHC board chairs—nearly two-thirds of whom self-identified as consumers—are significantly more likely than the average FQHC patient to be male and/or white. Thus, while more board

boards are consumers than non-consumers, it seems likely that few board chairs are descriptively representative with regards to race and gender.

Based on this literature, I anticipate that most boards will not be descriptively representative of the typical health center patient. However, the current study does not explicitly test the level of descriptive representation. Instead, I use descriptive statistics to assess the extent to which consumer board members are socioeconomically representative of the patient population.

Descriptive Representation Leads to Substantive Representation

The second—and perhaps most important—premise underlying consumer governance is that a member of a group will accurately represent the views of that group (Phillips, 1998). Using Pitkin's (1967) framework, higher levels of descriptive representation ought to result in higher levels of substantive representation. In exploring the potential link between the two, it is first helpful to consider each separately.

Again, descriptive representation is concerned with the concordance between the representative and the represented along some set of agreed upon characteristics (Pitkin, 1967). Put simply, the idea is that the representative(s) should “look like” the represented, though this is not limited to visible traits. The focus here is not on the actions taken by representatives, but rather on the degree to which they resemble their constituents.

Substantive representation, on the other hand, focuses on the outcomes of the representative process. In this view, the decisions themselves, and not who makes them, are what matters. Ideal substantive representation requires a representative to possess both the influence to affect outcomes and a commonly held position on an issue of importance to his

or her constituents. The problem, again, is the difficulty posed in ascertaining constituents' interests which they may not even know themselves (Peterson, 1970). This can be especially troublesome in the case of health centers, where different patient groups may have competing interests. The question then becomes whether substantive representation is improved by the degree of descriptive representation present. Fortunately, this topic has been widely studied in other settings.

The link between descriptive representation and substantive representation has been investigated by race (Scherer & Curry, 2010), ethnicity (Preuhs, 2007), gender (Wängnerud, 2009), and sexual orientation (Herrick, 2009). The majority of studies find that there is indeed a positive association between descriptive and substantive representation, but they also find that descriptive representation alone is not necessarily as dominant a factor as political party affiliation, the degree to which issues being deliberated are crystallized, or even other demographic factors not in question.

Political scientist Suzanne Dovi (2003) explores the relationship between descriptive representation and substantive representation and makes a case that the value of descriptive representation varies according to the quality of the descriptive representative (i.e., some descriptive representatives are better than others). Dovi argues that simply including descriptive representatives is insufficient and that more attention must be paid to establishing "criteria for identifying preferable descriptive representatives....[that] have strong mutual relationships with dispossessed subgroups." At the center of Dovi's claim is the idea that descriptive representation is a necessary, but not sufficient basis for the substantive representation of the interests of disenfranchised and under-represented groups. It is a

tremendous oversimplification to assume that all women think and believe alike, or that all blacks share the same views on the issues. The problem of tokenism returns.

Beyond mere visible similarities (e.g., gender, race, age, etc.), a preferable descriptive representative is one who shares “similar interests, opinions, and perspectives” with their constituents. To the extent that there is concordance between a person’s race and their life experiences, race is an acceptable proxy for representation. However, two individuals of the same race with quite different experiences would be unlikely to represent each other as well.

In selecting criteria for identifying a preferable descriptive representative, the thinking is that only members of the disadvantaged group have the legitimate authority to identify the criteria that they want in a descriptive representative. As Dovi (2003) explains, if the views of the disadvantaged group are well-known, then anyone could adequately represent the group. If the views are only known within the group by its own members, then it only makes sense for the group to nominate a representative.

Dovi’s central tenet is that the relationship between the descriptive representative and the represented is one of mutual agreement and understanding. Constituents must view the descriptive representative as “one of us.” She claims that this relationship is just as important as assessing the concordance between the substantive outcomes of representation and the wishes of the constituency (Dovi, 2003). Using Dovi’s framework, a low-income black health center patient would be a better descriptive representative than a wealthy black health center patient, primarily because while both individuals share a common race with a sizable portion of the health center patient population, the experiences and attitudes of the low-income individual are more likely to resemble the experiences and attitudes of the typical health center patient who lives in poverty.

Jane Mansbridge (1999) echoes Dovi's opinion, asserting that descriptive representation improves substantive representation in cases where disadvantaged groups are distrusting of those in power and where the views of the disadvantaged groups are not well known to persons outside of the group. She further suggests that while one descriptive representative in a deliberative body might seem sufficient for raising a given point of view, if the goal is to actually influence the substantive outcomes of deliberation, then a larger number of descriptive representatives may be needed to reach "critical mass." This is especially true when an issue is sensitive and the minority representative is afraid to raise it without adequate support from others in the group. It also helps representatives to develop their thoughts in much the same way that the dynamics of a focus group draw out more information than a series of separate interviews as participants respond to the issues raised by others. In the case of a governing board, which does much of its work in committees, it is important to have multiple descriptive representatives so that disadvantaged groups are represented in each of the various committees, which would be difficult for one individual to achieve.

Finally, Mansbridge (1999) questions the potential for harm inherent in descriptive representation, and debates whether ongoing descriptive representation is warranted. Descriptive representation can harm substantive representation, Mansbridge claims, if constituents assume that they are being represented because of the descriptive characteristics their representative shares with them. In turn, they may be less likely to hold their representatives to a high standard of accountability. Descriptive representation may be warranted initially, but then grow unnecessary "...when the systemic barriers to participation

have been eliminated through reform and social evolution [and] the need for affirmative steps to insure descriptive representation will disappear (Mansbridge, 1999).”

The literature on representation theory reviewed here suggests a generally strong positive association between descriptive and substantive representation with a few exceptions in cases where the level of descriptive representation is inadequate or the views of the under-represented are widely known. In the health center context, this suggests that having more descriptively representative consumers on the board is likely to result in the board making decisions that are in the interest of the majority of patients.

Unfortunately, data on actual patient interests are not available. Therefore, I was left to assume that the provision of uncompensated care and enabling services were in the best interest of the majority of patients. Given that the majority of patients are low-income and many are uninsured, this seemed a reasonable assumption to make. Additionally, both of these service areas are integral to the mission of FQHCs. Armed with this assumption and guided by representation theory, I hypothesized that:

H1.1: The percentage of board members who are descriptive consumers will be positively associated with the scope and volume of enabling services provided by FQHCs, the per capita number of enabling full-time equivalent staff (FTEs), and the ratio of uncompensated health care spending to federal grant funding.

H1.2: The percentage of board members who are not descriptive consumers will not be associated with the scope and volume of enabling services, the per capita number of enabling FTEs, and the ratio of uncompensated health care spending to federal grant funding.

Likely to be equally as important to patients, however, is that their health center remains financially sound and able to maintain operations in order to continue providing services. However, given that the typical health center patient is low-income, uninsured, and likely to be poorly uneducated, descriptively representative consumer board members may

lack the expertise needed to govern a complex organization. Indeed, involving consumers in a program has been shown to make the program less efficient (Howell, Devaney, McCormick, & Raykovich, 1998), and there is evidence that health centers that provide more services have poorer financial performance (Breyer, 1977).

While health center consumers may be able to contribute their unique experience of receiving care at the center—or even raising the community’s needs before the board—health center governance is a complex task, requiring a board to possess a variety of technical competencies (e.g., law, business, accounting) that the typical low-income, poorly educated health center patient is unlikely to possess. Consumer participation in governance may make organizations more responsive to patient demands, but the potential “technical expertise gap” between consumers and non-consumers may have important implications (LeRoux, 2009). As Gaventa (1998) writes, “Mandates for participation from ‘above’ must be linked with pre-existing capacities for participation ‘from below’.” Consequently, I hypothesized that:

H2.1: The percentage of board members who are descriptive consumers would be positively associated with the percentage of costs attributable to enabling services and the average cost per medical encounter, but negatively associated with operating margin and self-sufficiency.

H2.2: The percentage of board members who are not descriptive consumers will not be associated with the percentage of costs attributable to enabling services, the average cost per medical encounter, operating margin, or self-sufficiency.

Measuring Power: Decisions, Non-Decisions, and Agenda Setting

Substantive representation can be attributed to descriptive representation only when descriptive representatives are truly empowered to act. Consumer governance—even where consumers are in the majority—is not synonymous with consumers having decisionmaking

ability in practice (Kramer, 1969; Paap, 1978). The effective consumer board member must not only be knowledgeable of the patients' needs, but must also be able to present those needs to the board in a way that affects policy outcomes. (Kramer, 1969).

Knowledge of the patients' needs may come from a variety of sources, including a board member's own experience as a consumer, their interactions with other patients, and their connections as an employee and/or resident of the community. Yet, absent the capacity for meaningful participation, descriptive consumer board members are unlikely to affect substantive outcomes. The law as it is written requires only that 51% of the board be comprised of health center consumers. It does nothing to ensure the active involvement of these board members in decisionmaking, or to preclude non-descriptive board members from dominating the decisionmaking process. This may or may not be the intention of more powerful members of the organization.

Power has been described as the sum of authority and influence and is realized as the ability to affect the outcome of the decisionmaking process (Altshuler, 1970). Authority is the legal right to compel another to act in accordance with one's wishes, while influence is the ability to compel another to act in accordance with one's wishes absent any legal authority for doing so (Altshuler, 1970). Every member of a governing board has been legally granted authority, but not every member is equally influential. For instance, the board chair possesses more influence than the ordinary board member (Donahue, 2003).

In *Who Governs?* Robert Dahl (2005) describes the pluralist concept of power, which sees not a single elite, but a dynamic multitude of interests which compete with each other hoping to realize their preferred outcome. A major critique of Dahl's work, however, is that he examines only the outcomes of decisions, and ignores the power inherently leveraged, but

not displayed, in setting the agenda—marked as much by non-decisions as decisions—that determines which items will be decided upon, and which will not even be considered.

According to Bachrach and Baratz (1962):

“...[P]ower is exercised when A participates in the making of decisions that affect B. But power is also exercised when A devotes his energies to creating or reinforcing social and political values and institutional practices that limit the scope of the political process to public consideration of only those issues which are comparatively innocuous to A. To the extent that A succeeds in doing this, B is prevented, for all practical purposes, from bringing to the fore any issues that might in their resolution be seriously detrimental to A’s set of preferences...In each [case], A participates in decisions and thereby adversely affects B. But...in the one case, A openly participates; in the other, he participates only in the sense that he works to sustain those values and rules of procedure that help him keep certain issues out of the public domain. True enough, participation of the second kind may at times be overt; that is the case, for instance, in cloture fights in the Congress. But the point is that it need not be. In fact, when the maneuver is most successfully executed, it neither involves nor can be identified with decisions arrived at on specific issues (p. 948).”

These non-decisions, even if nearly impossible to observe or measure, are equally important to consider, because of the power of agenda setting (Kingdon, 1995). For instance, when the executive director and other key staff present reports at the board meeting, they are able to at least partially control what information is being provided to the board. They can present highly technical content during meetings, schedule meetings at times and in locations that are inconvenient for consumer board members to attend, use the by-laws and modified versions of Robert’s Rules to run meetings in ways that minimize the consumer board members’ voice, and reinforce—through board training and other means—that there is a knowledge and skill divide between consumer board members and others that cannot be resolved (Paap, 1978; Steckler & Herzog, 1979).

In this way, they may—at least for a while—manage to keep poor performance hidden from view. However, agenda setting can go much farther than this to ensure consumer

board members are kept on the sidelines. They may also oversee the process by which new board members are selected, use carefully crafted selection criteria to ensure that only “safe” consumers are added to the board, and prevent consumers from holding positions of power within the board—particularly those on the executive committee—relegating them instead to low-priority committees (Steckler & Herzog, 1979).

Similarly, Paap (1978) outlines three ways that consumers’ influence may be limited. First, consumers have restricted access to information, which is filtered to them through established professional networks. Second, health center boards are often forced to act quickly to meet deadlines, and thus consumer input is often not sought out by professionals before submitting applications. Third, consumer board members’ interactions with providers are limited to their board work, while non-consumer board members interact with providers on a variety of social and professional levels outside of the board meeting (Paap, 1978). Many studies of the CAPs in the 1960s and 1970s found that community boards acted in an advisory role, but lacked any real authority, and also that policies favorable to the community could be passed, but implemented in such a way as to have no benefit to the community (Campbell, 1971; Gittell, 1977; Peterson, 1970; Veatch & Branson, 1976).

The literature on power and agenda setting makes it clear that those in positions of power have the potential to keep certain issues on the agenda while ensuring that others are never brought to the board for a vote. In this way, agenda setting has the potential to moderate the relationship between board composition and health center outcomes. For example, if members of the executive committee share the same position on an issue with the consumers on the board, they would be in a position to prioritize that issue for action.

Conversely, if they held the opposing view, the members of the executive committee could push the issue to the bottom of the agenda, ensuring that it never gets discussed.

The chief executive officer (CEO) and members of the executive committee (chair, vice-chair, secretary, and treasurer) are likely to possess such *de facto* power. However, because the current study focuses on board composition, and because CEO data are not available, I solely consider the composition of the executive committee as it pertains to agenda setting. Specifically, I use agenda setting theory to hypothesize that:

H3.1a: The number of descriptive consumers on the executive committee will increase the magnitude of the relationship between the proportion of descriptive consumers on the board and the mission and margin outcomes to be modeled.

H3.1b: The number of descriptive consumers on the executive committee will decrease the magnitude of the relationship between the proportion of non-descriptive consumers on the board and the mission and margin outcomes to be modeled.

H3.2a: The number of non-descriptive consumers on the executive committee will decrease the magnitude of the relationship between the proportion of descriptive consumers on the board and the mission and margin outcomes to be modeled.

H3.2b: The number of non-descriptive consumers on the executive committee will increase the magnitude of the relationship between the proportion of non-descriptive consumers on the board and the mission and margin outcomes to be modeled.

As noted earlier, the link between descriptive and substantive representation can be greatly affected by the extent to which descriptive board members serve on various committees, and the executive committee is the most powerful of these (Mansbridge, 1999). Therefore, it is important to assess how the likelihood of holding an executive committee position changes as a function of individual board member characteristics. Furthermore, the board chair occupies a position distinct from even the rest of the executive committee

officers. Therefore, it is also important to assess how the likelihood of serving as board chair changes as a function of individual board member characteristics.

Status generalization theory suggests that small groups tend to organize themselves hierarchically according to the status characteristics of the group members as understood within the larger societal context (Berger, Cohen, & Zelditch Jr, 1972; Moore Jr, 1968; Webster Jr & Driskell Jr, 1978). Indeed, there is evidence to suggest that board members with professional expertise are viewed—both by themselves and others on the board—as more competent than community, lay, or consumer board members and that higher status individuals tend to exert greater influence over other board members than their lower status counterparts (Partridge & White, 1972). Low social status can even make an individual feel that their opinion will not be valued enough to change the outcome of a decision and this has been associated with decreased participation rates in a variety of settings ranging from jury deliberations (Strodtbeck, Simon, & Hawkins, 1965) to voting behavior (Campbell, Converse, Miller, & Stokes, 1960).

Given that descriptive consumer board members belong, by definition, to a low socioeconomic status group, while board leadership positions are inherently superior to non-leadership positions in the governance hierarchy and have been used as an indicator of board member influence (Latting, 1983), I used status generalization theory to hypothesize that:

H4.1: Descriptive consumer board members will be less likely than other board members to hold any board office (defined as chair, vice-chair, secretary, or treasurer).

H4.2: Descriptive consumer board members will be less likely than other board members to serve as board chair.

In the next chapter, I propose a set of methods for answering the research questions posed in Chapter 1 and testing the hypotheses presented here.

CHAPTER 4

METHODS

This chapter describes in detail the methods used to answer the research questions posed in Chapter 1. Building on the theoretical framework and hypotheses outlined in Chapter 3, it begins with a general overview of the study design and data sources. Next it provides a detailed explanation of the construction of the primary independent variable of interest, which is central to all study aims. Finally, it provides an aim-by-aim overview of the analytic methods, data sources, and measures, including a detailed discussion of the empirical model and specification tests used in each analysis.

Study Design and Rationale

This study is comprised of four specific aims, designed to address the research questions posed at the conclusion of Chapter 1, while overcoming some of the limitations of prior federally qualified health center (FQHC) governance studies discussed in Chapter 3.

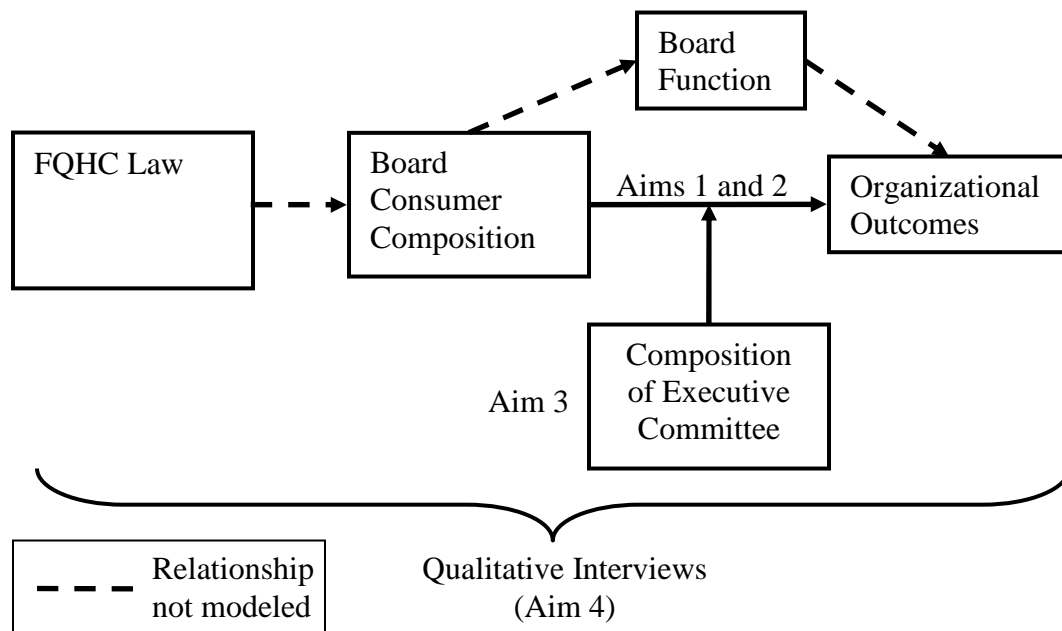
The specific aims of the study are:

- (1) To determine the association between consumer governance and the organization's provision of services consistent with the FQHC mission and mandate.**
- (2) To determine the association between consumer governance and organizational financial performance measures.**
- (3) To determine the association between a board member's consumer status and their likelihood of (a) serving on the executive committee and (b) serving as board chair.**

(4) To use semi-structured interviews to complement Aims 1 through 3 by exploring board members' perceptions of the role consumer governance in FQHCs.

To address each of these aims, this study employs a multi-method design. As shown in Figure 4, quantitative methods are used to model the association between the extent of consumer composition on FQHC governing boards and both the provision of services targeted to the needs of the underserved (Aim 1) and the financial performance of FQHCs (Aim 2). Quantitative methods are also used to estimate the likelihood of consumer board members holding executive committee positions (Aim 3). Because the available quantitative data alone are insufficient for understanding the dynamics of board decisionmaking, semi-structured interviews were conducted to gather this information (Aim 4). The University of North Carolina at Chapel Hill Public Health-Nursing Institutional Review Board determined this study (#09-2194) to be exempt from human subjects review on November 30, 2009.

Figure 4. How Specific Aims Address the Question of FQHC Consumer Governance



Previous FQHC governance studies have been limited in important ways. For instance, most qualitative studies have used a limited sample of board chairs and/or executive directors, and both quantitative and qualitative studies have tended to have a limited geographic focus. To overcome these limitations, this study extends interview eligibility to all board members (not just chairs) in the qualitative analysis, and uses a nationally representative sample of FQHCs for the quantitative analysis. Most importantly, this study is the first to estimate quantitative models of health center outcomes as a function of consumer governance.

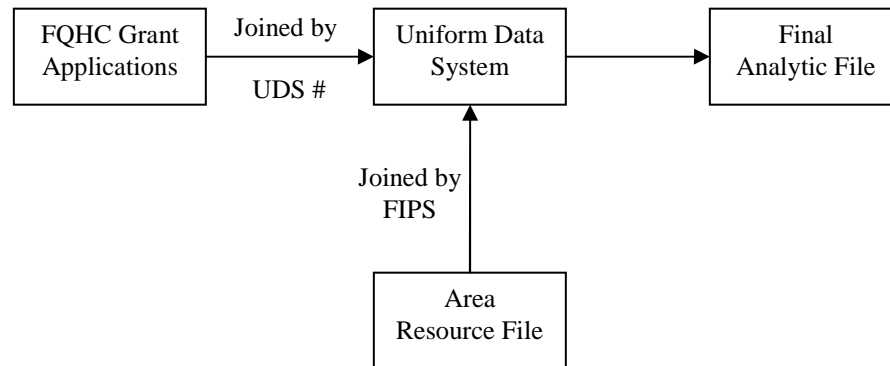
The data used to address each aim were drawn from a variety of sources over a number of years as shown in Table 2. Aims 1 and 2 relied on data from the Uniform Data System (UDS), the Area Resource File (ARF), and hard copy data from Exhibit D of FQHC grant applications, while Aim 3 relied solely on data from Exhibit D of FQHC grant applications. These datasets were merged using UDS identifiers and Federal Information Processing Standard (FIPS) codes as shown in Figure 5. Finally, Aim 4 relied on primary data collection in the form of qualitative interviews. Each of the data sources is described in more detail in subsequent sections specific to each aim.

Table 2. Overview of Data Sources

Data Source	Years
Uniform Data System	2002 – 2007
Area Resource File	2002 – 2007
Exhibit D of FQHC Grant Applications*	2003 – 2006
Board Member Interviews	2010

* Obtained by Freedom of Information Act request.

Figure 5. Construction of the Analytic Data File



A Note on Board Member Consumer Status

The key independent variable for all quantitative aims is board member consumer status. The Bureau of Primary Health Care (BPHC) defines consumers as “individuals who have at least one encounter during the year” (Bureau of Primary Health Care, 1998a) and defines encounters as “documented, face-to-face contacts between a consumer and a provider who exercises independent professional judgment in the provision of services to the consumer (Bureau of Primary Health Care, 1998a).”

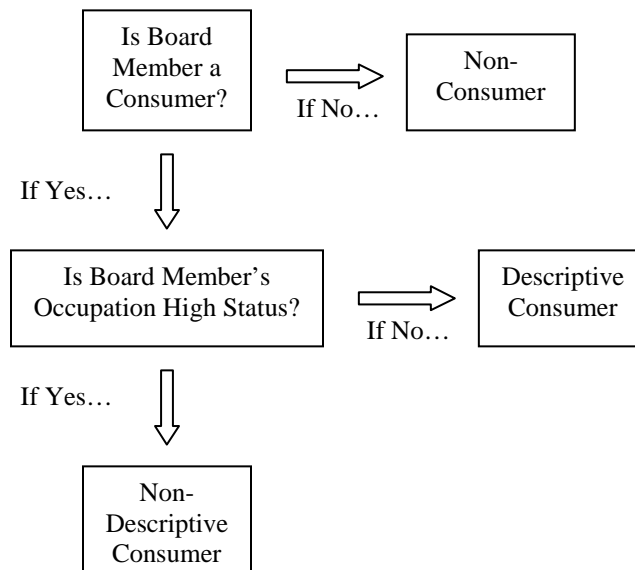
However, data on board members’ consumer status, which comes from Exhibit D of FQHC grant applications, are self-reported. This raises a concern about the validity of the measure, because some consumers are likely to be more descriptively representative of the patient population than others. For example, a low-income consumer board member is more descriptively representative of the patient population than is a high-income consumer board member.

To address this concern, data on board member occupation were coded to conform to Standard Occupational Classification (SOC) Codes used by the U.S. Bureau of Labor Statistics (BLS) (U.S. Bureau of Labor Statistics, 2010a). These codes uniquely identify

occupations and allow them to be linked to data on average annual income, which are also available from the BLS (U.S. Bureau of Labor Statistics, 2010b). In this way, based on their self-reported occupation and BLS data, each board member was assigned to a high or low status occupation. Occupations with a mean annual income greater than 200% of the federal poverty level for a family of four in 2009 (\$44,100) were considered high status. This cutoff was used not because it absolutely reflects high status occupations, but because it reflects a socioeconomic status superior to the overwhelming majority (>90%) of FQHC patients.

Using this information, the dichotomous consumer variable reported on FQHC grant applications was recoded categorically to include non-consumers, descriptive consumers, and non-descriptive consumers as shown in Figure 6. This variable is constructed at the FQHC-level (as the percentage of descriptive and the percentage of non-descriptive FQHC consumers on the board) for Aims 1 and 2, and at the individual level for Aim 3.

Figure 6. Flowchart Depicting Consumer Categorization of FQHC Board Members



Appendix D provides a table indicating how SOC codes were applied to the board member occupation data. There were 293 cases where occupation was missing as well as 27 cases where occupation could not be clearly coded using the SOC codes. All of these cases (N = 320) were coded as “other” and treated as a low-status occupation. The goal of this was to code as conservatively as possible, making it more likely to have assigned someone of high socioeconomic status to an SOC with a lower mean income than to have assigned someone of low socioeconomic status to an SOC with a higher mean income. This approach is more likely to overestimate rather than underestimate the proportion of descriptive consumers. To the extent that this affects the results, it will bias them towards the null, rather than overstating them. In the next section, the specific analyses used to empirically test the relationship between this categorical board member variable and several dependent variables of interest are described in more detail.

Analyses for Aims 1 and 2

Aims 1 and 2 are discussed jointly here because they rely on the use of the same data, sample, general methodological approach, and independent variables, and differ only in their dependent variables. Both aims are concerned with the relationship between consumer governance and organizational outcomes. Specifically, Aim 1 is focused on mission-oriented outcomes, while Aim 2 is focused on margin-oriented outcomes, which are defined in the data and measures section.

The first aim of the study was to determine the association between consumer governance and the organization’s provision of services consistent with the FQHC mission and mandate. Using the theories of descriptive and substantive representation, I hypothesized

that, at the FQHC level, the percentage of board members who are descriptive consumers would be positively associated with the scope and volume of enabling services provided by FQHCs, the per capita number of full-time equivalent enabling staff (FTEs), and the ratio of uncompensated health care spending to federal grant funding. I also hypothesized that there would be no relationship between these factors and the proportion of non-descriptive consumers on the board.

Similar to the first aim, the second aim of the study was to determine the association between consumer governance and organizational financial performance measures. Again using theories of descriptive and substantive representation, I hypothesized that, at the FQHC level, the percentage of board members who are descriptive consumers would be positively associated with the percentage of costs attributable to enabling services and the average cost per medical encounter, but negatively associated with operating margin and self-sufficiency. I also hypothesized that there would be no relationship between these factors and the proportion of non-descriptive consumers on the board.

Data Sources

To address these aims, the FQHC board member dataset was collapsed to the FQHC level. This resulted in the loss of individual level characteristics, replaced by a dataset of means at the health center level. For example, the data no longer indicate if an individual board member is a consumer or not. Rather, they report the percentage of board members at an FQHC comprised of consumers. In addition to the board member data, Aims 1 and 2 use data from the Uniform Data System and the Area Resource File.

The Bureau of Primary Health Care (BPHC) of the Health Resources and Services Administration (HRSA) is responsible for collecting annual data on each of the consolidated health center programs, including community health centers, migrant health centers, rural health centers, school-based health centers, and health care for the homeless programs. This data is collectively referred to as the Uniform Data System (UDS). The UDS, which was initially established in 1996, is reported on the basis of the calendar year, and any health center that receives federal funding for any part of the calendar year must submit a UDS report, unless funding began after October 1. The UDS contains data on health center patient demographics and health status, staffing, scope and volume of services, number of delivery sites, caseload, and finances (Bureau of Primary Health Care, Multiple years.).

Specifically, the UDS collects aggregate data on patients' age, gender, race, ethnicity, insurance status, and income as a percentage of the federal poverty level. It also includes data on health center staffing and service area, the number of patient encounters, and the number of unique patients. Service areas reported include medical care, dental, mental health, substance abuse, other professional health services, pharmacy services, and enabling services. Financial variables include costs for medical care, other clinical services, enabling services, and administration as well as revenues by source (e.g., third-party, self-pay, grants), and amounts written off as bad debt or as part of the sliding fee scale.

Beginning in 2005, select financial and enabling service variables were deemed proprietary and were no longer released to the public. However, complete UDS data through 2007 were obtained for this study through a data use agreement with the George Washington University (GWU) Department of Health Policy, which had obtained the data directly from Congressman Henry Waxman who requested it from HRSA in his oversight role as chairman

of the House Energy and Commerce Committee. Congressman Waxman shared the data with GWU on the condition that it be used solely for educational purposes, which permitted its use in this dissertation. Consequently, much of the data in this study is unavailable to other researchers even under the *Freedom of Information Act* (FOIA).

HRSA also compiles data from a variety of sources to create the Area Resource File (ARF). The ARF contains county-level data on “health facilities, health professions, measures of resource scarcity, health status, economic activity, health training programs, and socioeconomic and environmental characteristics” and is used to control for a variety of community characteristics in my analyses (Health Resources and Services Administration, Multiple years.).

Sample and Exclusion Criteria

Some FQHCs were excluded from this study using a set of criteria designed to limit the analysis to fully operational federally-funded health centers. At a minimum, such centers should have at least one full-time medical provider and at least one full-time administrative staff person. Similarly, FQHCs with fewer than 5,000 annual encounters have previously been labeled as less than fully operational (Wells et al., 2009). Therefore, to be eligible for participation in this study, each health center had to:

- 1) be federally-funded with a CHC grant⁵;

⁵ FQHCs consist not only of community health centers (CHCs), but also include grantees of the migrant health, health care for the homeless, public housing, and school-based health center programs. These entities are eligible for a waiver of the consumer governance requirement if, and only if, they do not also receive funding from the community health center program (Bureau of Primary Health Care, 1998b). Therefore, because this study is concerned with the effect of the consumer governance requirement on organizational outcomes, non-CHC grantees were omitted from the sample. CHC grantees who also received one of the other FQHC grants remained in the sample and binary variables were created to indicate which type of additional FQHC grant program funding a center received.

- 2) have at least two FTE staff persons at least one of whom is a medical provider;
- 3) report at least 1 patient and 5,000 patient encounters per year; and
- 4) be located in 1 of the 50 United States or the District of Columbia

Using these criteria, 592 centers were excluded because they did not receive a CHC grant and another 21 were excluded because they received no federal funding from the BPHC. Fifteen health centers were excluded because they had fewer than two FTE staff persons, and an additional 158 centers were excluded because they had fewer than 5,000 patient encounters per year. Two health centers reporting negative total costs were also dropped from the sample, because no fully operational center could accurately report negative total costs. Lastly, 164 health centers operating in the U.S. territories were excluded.

This left a starting sample of 4,716 FQHC-Years for FQHC-level analyses representing 907 unique health centers. However, as shown in Table 3, the sample is ultimately constrained by the availability of grant application data, which was only received for 71.4% of the total number of FQHCs operating in each year.

Table 3. Annual Number of FQHCs in Operation, 2002 – 2007

Year	Total Number of FQHC Grantees	Number Excluded	Total FQHC Sample	Total Number of Grant Applications
2002	843	156	687	Not Requested
2003	890	154	736	397 (54%)
2004	914	146	768	297 (39%)
2005	952	155	797	767 (96%)
2006	1,002	160	842	784 (93%)
2007	1,067	181	886	Not Requested
Total	5,668	952	4,716	2,245

Because centers for which data are available may differ from centers for which data are unavailable, it is important to determine how representative the sample is, which may limit the generalizability of the results beyond the centers studied here. To do so, a binary variable was created as an indicator of observations that were missing FQHC grant data. A logistic regression of this binary variable on the full set of available dependent and independent variables for all 3,143 FQHCs in the sample between 2003 and 2006 indicated that the sample was largely representative, with a few notable exceptions.

Most importantly, compared to the 2,245 FQHC-years in the sample, the 898 FQHC-years without data are likely to have a higher operating margin, a lower average medical cost per medical encounter, and a lesser degree of financial self-sufficiency. In other words, health centers with missing data are likely to be more financially efficient and have lower costs relative to revenues, but a greater share of their revenue is likely to come from grant funding.

Specifically, using the average of the probabilities method to generate average marginal effects from the probit model on sample exclusion, each ten percentage point increase in operating margin is associated with a 1.5 percentage point increase in the probability of having missing data, each ten percentage point increase in financial self-sufficiency is associated with a 3.1 percentage point decrease in the probability of having missing data, and each \$10 increase in the average medical cost of a visit is associated with an 0.5 percentage point decrease in the probability of having missing data.

While statistically significant, the magnitude—and therefore practical significance—of these differences is small, as very large changes in these variables are required to generate small changes in the probability of missing data. For example, a 30 percentage point increase

in self-sufficiency, which is a very large change, only changes the probability of missing data by 9.3 percentage points.

Additionally, FQHCs that receive grant funding under the health care for the homeless program are 5.9 percentage points more likely to have missing data, while those receiving school-based grants are 6.7 percentage points more likely to have missing data. There were also county-level differences between FQHCs with and without missing data. For instance, each \$1,000 increase in per capita income is associated with an 0.6 percentage point increase in the probability of missing data and each one percentage point increase in the unemployment rate is associated with a 3.2 percentage point increase in the probability of missing data. Each additional doctor per capita is associated with a 3.6 percentage point increase in the probability of missing data and each one percentage point increase in the rate of uninsured persons is associated with a 1.4 percentage point decrease in the probability of missing data. It is important to keep these differences in mind when interpreting the study results.

Missing data were not a concern in the ARF or the UDS. In fact, according to the BPHC, blank entries in the UDS are not missing data and are to be considered synonymous with zero. Therefore, all “missing” values in the UDS data were recoded to zero. The effect of this ranged from 1 observation missing a value for physician FTEs to 1,174 observations missing a value for unreported race.

Measures

The measures for Aims 1 and 2 are summarized in Table 4. As the key independent variables (the proportion of descriptive and non-descriptive consumers on the board) have

already been discussed in an earlier section, the remainder of this section defines the dependent variables, identifies each of the control variables, and motivates their inclusion in the econometric models.

Table 4. FQHC-Level Measures for Analyses of Aims 1 and 2

Key Independent Variable	Aim	Model	Source
% Descriptive Consumers % Non-Descriptive Consumers	1,2	1 – 8	FQHC Grant Applications
Dependent Variables	Aim	Model	Source
Scope of Enabling Services (% out of 15)	1	1	UDS
Volume of Enabling Services / 1,000 Consumers	1	2	UDS
Enabling FTEs / 1,000 Consumers	1	3	UDS
\$ Uncompensated Care / \$ BPHC Grants	1	4	UDS
Operating Margin	2	1	UDS
Average Medical Cost per Medical Encounter	2	2	UDS
% of Costs Attributable to Enabling Services	2	3	UDS
Financial Self-Sufficiency	2	4	UDS
Control Variables	Aim	Model	Source
County-Level Context Factors	1,2	1 – 8	ARF
FQHC-Level Context Factors	1,2	1 – 8	UDS
FQHC-Level Design Factors	1,2	1 – 8	UDS & FQHC Grant Applications

Mission-Oriented Outcomes

The mission-oriented outcomes are so named because they measure core aspects of the FQHC mission and mandate to provide services to the underserved that are not typically associated with significant reimbursement or the generation of revenue. They include the scope and volume of enabling services an FQHC provides, the number of FTE staff an

FQHC maintains to provide those enabling services, and the amount of uncompensated care an FQHC provides relative to the amount of its federal health center grant.

[1.1] **Scope of Enabling Services** is a count variable measuring the number of enabling services a health center offers of the 15 enabling services reported by the UDS. These include: case management, child care (during visit to the center), discharge planning, eligibility assistance, environmental health risk reduction (via detection and/or alleviation), health education, interpretation/translation services, nursing home and assisted-living placement, outreach, transportation, out stationed eligibility workers, home visiting, parenting education, special education programs, and “other.” The measure captures the variety of enabling services an FQHC provides or refers and pays for. Enabling services for which the FQHC provides referral but does not pay are not counted. Values of this variable range from 0 to 14 with a mean of 8.2.

[1.2] **Volume of Enabling Services** is a continuous variable equal to the number of patient encounters for enabling services that a center has in a calendar year standardized per 1,000 unique patients. This measure provides an additional dimension to the scope of enabling services provided, by focusing on the quantity of enabling services provided. Values of this variable range from 0 to 7,560 with a mean of 245.8, which is roughly the equivalent of providing 1 enabling service a year to one-fourth of patients.

[1.3] **Enabling FTEs** is a continuous variable equal to the number of full-time equivalent staff employed to provide enabling services standardized per

1,000 patients. This variable provides information on the amount of personnel resources an FQHC devotes to providing enabling services. Values of this variable range from 0 to 16.2 with a mean of 0.64.

[1.4] **Uncompensated Care Ratio** is the ratio of the total financial costs of uncompensated care provided by the FQHC (reported as bad debt and sliding fee discounts in the UDS) to the total amount of federal BPHC grant funding the FQHC received in the same year. This measure, constructed from UDS data, is used by the BPHC to ensure that FQHCs are using grant funds appropriately to provide care to the uninsured (Health Resources and Services Administration, 2006b). Values of this variable range from 0 to 11.1 with a mean of 1.08. An FQHC that provides an amount of uncompensated care exactly equal to the amount of its federal grant will have a value of 1 for this variable.

Margin-Oriented Outcomes

The margin-oriented outcomes include the percentage of costs attributable to enabling services, the average medical cost per medical encounter, operating margin, and financial self-sufficiency. These measures were selected because they are commonly used to measure the efficiency, self-sufficiency, and profitability of FQHCs (Finkler et al., 1994; Finkler, 1995; Shi, Collins, Aaron, Watters, & Shah, 2007). Taken collectively, these measures can be used to predict the likelihood of organizational survival (Shi et al., 1994) and have been used in the construction of an FQHC comparative performance scorecard (Radford, Pink, & Ricketts, 2007).

[2.1] **Percentage of Costs Attributable to Enabling Services** is a continuous variable constructed directly from UDS data by dividing the total costs of enabling services by total program costs. Because these services are poorly, if at all, reimbursed, centers with a greater proportion of their costs attributable to the provision of enabling services are likely to prioritize mission over margin. Values of this variable range from 0 to 59.8% with a mean of 7.4%.

[2.2] **Average Medical Cost per Medical Encounter** is a continuous measure constructed by dividing the total accrued medical costs by the total number of annual medical encounters. It is useful as a measure of the efficiency of health center operations. A center with a lower average medical cost per medical encounter can be considered to be more efficient. Indeed, this measure is used by the BPHC to track financial performance and program efficiency (Health Resources and Services Administration, 2006c). Values of this variable range from \$38.81 to \$676.84 with a mean of \$117.70.

[2.3] **Operating Margin** is a continuous measure constructed by dividing total revenue minus total costs by total revenue. As such, it contains both positive and negative values. It provides a measure of profitability, which is important because while FQHCs are non-profit entities, they must generate enough total revenue (inclusive of grants) to remain operational. This measure is frequently used as an indicator of an organization's financial health (McAlearney, 2002; Radford et al., 2007) and may be reduced by a focus on mission-oriented services (Breyer, 1977; Feldman et al., 1978).

Values of this variable range from -140.2% to 56.7% with a mean of -4.5%.

An FQHC that “breaks even” would have a value of zero, while positive values indicate revenues in excess of costs, and negative values indicate costs in excess of revenues.

[2.4] **Financial Self-Sufficiency** is a continuous measure constructed by dividing total non-grant revenues by total costs. It is a valuable measure of how much revenue a center is able to generate from its patients. Centers with low levels of self-sufficiency are potentially at a greater risk of ceasing operations, because they depend more heavily on grant funding, which has the potential to be reduced or eliminated for a variety of reasons, some of which are unrelated to the performance of the center (Ricketts et al., 1984). This measure is used by BPHC to track financial performance (Health Resources and Services Administration, 2006a) and has also been used in other FQHC studies (Feldman et al., 1978; Wells et al., 2009). Values of this variable range from 0.9% to 152.1% with a mean value of 53.8%.

Control Variables

In addition to the key independent and dependent variables, each of the econometric models controls for a variety of other factors at both the county and FQHC level. County-level factors include: a binary indicator of metropolitan area, which has been both positively (Wells et al., 2009) and negatively (Martin et al., 2009) associated with self-sufficiency; the per capita number of active non-federal office-based physicians, which has been negatively associated with operating margin (Rosko, 2001); the number of short-term general hospitals

and the number of FQHCs, which may drive demand and need for care as well as represent competition for the FQHC; and several measures of county demographics (% male, % non-white, % Hispanic) and socioeconomic status (per capita income, % uninsured, % unemployed), which have been positively associated with the amount of enabling services (Wells et al., 2009) and uncompensated care (Rosko, 2001) provided by FQHCs, but negatively associated with their self-sufficiency (Feldman et al., 1978).

At the FQHC level, context factors include caseload, which has been positively associated with self-sufficiency (Wells et al., 2009) and aggregate case-mix by age, gender, % non-white, and income (defined relative to the poverty level), which are likely to have a direct effect on organizational outcomes. A measure of chronic disease burden (% of encounters for diabetes, asthma, and/or hypertension), which has been negatively associated with self-sufficiency, is also included (Wells et al., 2009). Finally, the proportion of an FQHC's caseload by insurance status, which has been positively associated with self-sufficiency (Radford et al., 2007; Wells et al., 2009), but negatively associated with operating margin, is included (Gurewich, 2002).

The models also control for other FQHC-level design factors such as board size, which has been negatively associated with consumer influence (Latting, 1983); the number of delivery sites an FQHC operates, which may have implications for organizational outcomes (Wells, Vasey, Lawrence, & Politzer, Unpublished manuscript); the number of FTE staff, which has been negatively associated with operating margin (Gurewich, 2002); and the number of physicians as a percentage of total staff, which has been positively associated with self-sufficiency (Wells et al., 2009).

Specific to the composition of the governing board, a binary variable is included to indicate the presence of at least one physician on the board. This variable is included because of the possibility that boards with a physician presence may operate differently than boards without physicians. An alternative model specifying the number of physicians on the board was also estimated, but as shown in Table 5, a comparison of the R-squared values in each case indicated that the physician count variable did not increase the explanatory power of the model, so the binary physician variable is used.

Table 5. Specification of Board Physician Variable

Model	Binary Variable (Model R ²)	Ordinal Variable (Model R ²)
1.1	0.122	0.122
1.2	0.129	0.129
1.3	0.158	0.158
1.4	0.074	0.074
2.1	0.072	0.068
2.2	0.291	0.292
2.3	0.052	0.050
2.4	0.124	0.124

To assess the moderating role of the executive committee on the relationship between board composition and organizational outcomes, the composition of the board's executive committee was initially modeled using three alternate specifications. The first used two binary variables to indicate the presence of at least one descriptive and at least one non-descriptive consumer on the executive committee. A second, similar specification used two binary variables to indicate whether the board chair was a descriptive or non-descriptive consumer. The third specification used two ordinal variables to count the number of descriptive and non-descriptive consumers on the executive committee. As shown in Table 6,

the R-squared values from each model specification were compared, and modeling executive committee composition using the count of descriptive and non-descriptive consumers contributed the most explanatory power to the model.

Table 6. Specification of Executive Committee Variable

Model	Binary Committee Variable (Model R ²)	Binary Chair Variable (Model R ²)	Ordinal Committee Variable (Model R ²)
1.1	0.122	0.122	0.122
1.2	0.125	0.121	0.129
1.3	0.157	0.152	0.158
1.4	0.073	0.067	0.074
2.1	0.050	0.052	0.072
2.2	0.281	0.282	0.291
2.3	0.053	0.051	0.052
2.4	0.112	0.117	0.124

Analytic Methods

To test the Aim 1 and Aim 2 hypotheses, I estimated a series of fixed effects models at the FQHC level using board composition to predict eight different organizational outcomes. Four of the eight organizational outcomes modeled are considered mission-oriented outcomes specific to Aim 1, while the other four are considered margin-oriented outcomes specific to Aim 2. As described in the measures section, each of these eight dependent variables is modeled as a function of board composition, executive committee composition, the interaction between them, general time trends, other FQHC-level design factors, and several county-level and FQHC-level context factors (Marathe, Wan, Zhang, & Sherin, 2007), and can be represented by Y in the equation:

Main Regression Equation

$$Y_{ijt} = \alpha_o + \text{Consumer}_{i(t-1)}\beta + \text{Office}_{i(t-1)}\chi + \text{Consumer}*\text{Office}_{i(t-1)}\delta + W_{it}\gamma + T_t\lambda + \mu_i + \varepsilon_{it}$$

where j is one of the eight dependent variables of interest, i identifies the health center and $t = 1, \dots, T$ indicates the year between 2004 and 2007. *Consumer* is a matrix containing the categorically constructed measure of the proportion of the board consisting of descriptive consumers, non-descriptive consumers, and non-consumers (reference group). *Office* is a matrix of two variables indicating the number of (a) descriptive and (b) non-descriptive consumer board members on the executive committee. *Consumer*Office* is a matrix containing a total of four interaction terms between the variables represented by *Consumer* and *Office*. *W* is a matrix of FQHC-level and county-level controls, *T* is a matrix of binary year indicator variables, μ is a matrix of FQHC-level fixed effects, and ϵ represents the unobserved time-varying error.

The set of coefficients on the consumer and consumer-office interaction variables gives the relationship between the composition of consumers on the board and the organizational outcome being modeled. The set of coefficients on the interactions can be interpreted as the moderating effect of executive committee composition on the relationship between board composition and organizational outcomes. Because a delay between the composition of the board at any given time and the appearance of measurable outcomes resulting from the board's decisionmaking is to be expected, the key explanatory board composition variables are lagged by one year, as indicated by the $t-1$ subscript.

Specification Tests

Before running the final models, a number of specification tests were conducted for the purpose of model selection. This section discusses analytical issues of concern including multicollinearity, heteroskedasticity, autocorrelation, normality, functional form, and

endogeneity. It describes the specification tests used to test for each of these concerns, presents the results of these specification tests, and discusses the steps taken to correct the biased estimates and loss of efficiency that can result from ignoring these issues.

Pairwise correlations between all explanatory variables were examined to assess the extent of pairwise associations, which can reduce the efficiency of the models to be estimated. This is a problem insofar as it produces lower t-statistics, which may lead to the conclusion that there is no statistically significant effect when in fact, there might be. Exploration of the data revealed no cases of perfect collinearity and, while some variables were highly correlated with each other as shown in Table 7, the relationships observed were as expected. This loss of efficiency, while less than ideal, is preferable to the biased coefficients that would result if these variables were eliminated from the model.

Table 7. Correlation Coefficients in Select Variable Pairs

Variable 1	Variable 2	Correlation Coefficient
FQHC FTEs	FQHC Patient Encounters	0.94
% Patients in Medicare	% Patients Age 65 and Older	0.85
# Hospitals	# FQHCs	0.77
Per Capita Income	Total Physicians per Capita in County	0.75
FQHC Patient Encounters	FQHC Delivery Sites	0.70
FQHC FTEs	FQHC Delivery Sites	0.69
% Descriptive Consumers	% Non-Descriptive Consumers	-0.68
% Uninsured in County	% Hispanic in County	0.67

Theory suggests that two variables (board size and site count) in the general model for Aims 1 and 2 may have non-linear effects. Both smaller board size and larger board size may convey distinct advantages to an organization, because smaller boards have been shown to work more efficiently, while larger boards have been shown to benefit from the availability of a wider range of personal resources (Dalton, Daily, Johnson, & Ellstrand,

1999). Consequently, boards that are “too small” or “too large” may be less ideal than a more moderately-sized board, leading to an inverse U-shaped trend (provided more positive outcomes are labeled on the y-axis), or conversely, moderately-sized boards may fail to realize the benefits associated with either smaller or larger boards, in which case the relationship between board size and organizational outcomes would appear U-shaped. A similar non-linear relationship might be reasonably expected with regard to the number of delivery sites an FQHC grantee operates.

Table 8. Results of Tests of Functional Form

Model	Variable Tested	Result		Conclusion
1.1	Board Size ²	z = 0.08	p = 0.940	Safe to exclude
	Site Count ²	z = -0.27	p = 0.786	Safe to exclude
1.2	Board Size ²	t = 0.74	p = 0.458	Safe to exclude
	Site Count ²	t = -1.96	p = 0.05	Include in model
1.3	Board Size ²	t = 0.27	p = 0.787	Safe to exclude
	Site Count ²	t = -1.25	p = 0.213	Safe to exclude
1.4	Board Size ²	t = 1.28	p = 0.199	Safe to exclude
	Site Count ²	t = -0.82	p = 0.412	Safe to exclude
2.1	Board Size ²	t = 0.99	p = 0.325	Safe to exclude
	Site Count ²	t = -1.69	p = 0.092	Safe to exclude
2.2	Board Size ²	t = -2.16	p = 0.031	Include in model
	Site Count ²	t = 1.59	p = 0.111	Safe to exclude
2.3	Board Size ²	t = 0.07	p = 0.947	Safe to exclude
	Site Count ²	t = -0.55	p = 0.580	Safe to exclude
2.4	Board Size ²	t = 0.61	p = 0.541	Safe to exclude
	Site Count ²	t = 0.29	p = 0.772	Safe to exclude

Therefore, an alternate version of each of the eight models was run to test the functional form of board size and site count by including the square of each term. The t-statistic on each squared term in each model was examined to determine whether or not to include the higher order term in the final model. Site count squared was significant for model 1.2 (volume of enabling services), while board size squared was significant for model 2.2

(average medical cost per medical encounter). The null hypothesis of no effect could not be rejected for any of the other quadratic terms tested were able to be safely excluded from the remaining models. These results appear in Table 8.

The first model estimates the number of enabling services a health center offers, and because the values of this variable can never be less than zero, a count model is often the preferred choice. While it is also possible to model this outcome using ordinary least squares regression (OLS), the linear model may generate negative predicted values that cannot technically exist, and many of the OLS assumptions may be violated by the data, leading to biased, inconsistent, and inefficient coefficient estimates.

Count models are often estimated using either Poisson regression or negative binomial regression. The former imposes an assumption of equidispersion (i.e., that the mean equals the variance). Often, this is not the case, and the data are overdispersed (i.e., the mean is less than the variance). In this case, the negative binomial model is appropriate (Cameron & Trivedi, 1998).

The descriptive statistics for the total number of enabling services offered indicated that the data were actually underdispersed (i.e., the mean of 8.2 was greater than the variance of 4.7). In such cases, the negative binomial model is not appropriate (Cameron & Trivedi, 1998). This was confirmed by running the negative binomial model and conducting the LR test on the null hypothesis that $\alpha = 0$. The results ($\text{Chibar2}(1) = 0.00$, $p = 1.000$), failed to reject the null, indicating no overdispersion and suggesting that the Poisson model is preferred to the negative binomial. Furthermore, the variable did not contain a significant number of zero values, making a zero-inflated or two-part model unnecessary. After running the Poisson model, the results of a goodness-of-fit test ($\text{Chi2}(1352) = 137.43$, $p = 1.000$)

indicated that the Poisson model was appropriate. Manually including a dummy variable for each FQHC allows time-invariant health center characteristics to be controlled for using a fixed effect Poisson model.

However, when the model was run using OLS with fixed effects, the residuals appeared to be normally distributed with a mean of 0.000004 and a 95% confidence interval between -1 and 1. To decide between the Poisson and the OLS model, both with fixed effects, I generated the predicted values of the dependent variable after estimating each model. The predicted values from the fixed effect Poisson model ranged from $1.53e-7$ to 13.74. This range lies within the range of possible values for this variable (0 to 15) and very close to the actual range of values for this variable in the data (0 to 14). By contrast, the predicted values from the OLS model ranged from 2.64 to 17.91. The upper end of this range exceeds the maximum possible value for this variable and only partially overlaps the true range in the data (0 to 14). Therefore, based on the predicted values generated, the Poisson distribution seemed to model the data better than the normal distribution assumed by OLS. Therefore, the scope of enabling services is modeled using Poisson regression.

However, the Poisson model is heteroskedastic by definition, and in the case of underdispersion, the standard errors are likely to be too large (Cameron & Trivedi, 1998). Left unaddressed, this may lead to underestimation of significant results. Using clustered standard errors at the FQHC-level corrects for this as well as any serial correlation between repeated observations of a given FQHC over time. Because the count data include zero values, logging the dependent variable was not considered.

The remaining seven models, which are now discussed, all estimate continuous dependent variables. Because there is data available for each FQHC grantee over multiple

years, I ran a model that controls for unobserved time-invariant heterogeneity by including fixed effects dummy variables at the FQHC level. Thus, all of the characteristics of a health center that do not change over time and that might be associated with the other explanatory variables and/or the dependent variable, will be pulled out of the error term and explicitly included in the model. Such unobserved time-invariant center characteristics have been shown to be strong predictors of FQHC outcomes (Gurewich, 2002).

After running each of the eight models and including fixed effects, a series of F-tests indicated that the fixed effects variables were jointly significant, meaning that fixed effects is preferred over ordinary least squares (OLS) in each case. These results are shown in Table 9.

Table 9. Results of Joint F-Test of FQHC-Level Fixed Effects

Model	Result	Conclusion
1.2	$F(816, 1354) = 15.67, p < 0.0000$	Fixed effects preferred over OLS
1.3	$F(816, 1354) = 14.53, p < 0.0000$	Fixed effects preferred over OLS
1.4	$F(816, 1354) = 10.20, p < 0.0000$	Fixed effects preferred over OLS
2.1	$F(816, 1354) = 13.59, p < 0.0000$	Fixed effects preferred over OLS
2.2	$F(816, 1354) = 11.76, p < 0.0000$	Fixed effects preferred over OLS
2.3	$F(816, 1354) = 3.50, p < 0.0000$	Fixed effects preferred over OLS
2.4	$F(816, 1354) = 6.85, p < 0.0000$	Fixed effects preferred over OLS

However, because fixed effects models include a binary indicator variable for each group, it is not necessarily an efficient model. An alternative is random effects, which differs from fixed effects by assuming that the time-invariant error component is uncorrelated with the other explanatory variables in the model. If this assumption is true, the random effects model is both consistent and efficient. However, if this assumption is violated, random effects yields inconsistent estimates, and fixed effects is preferred.

While the existence of unobserved time-invariant FQHC characteristics that are associated with the included explanatory variables seemed highly likely, a confirmatory series of Hausman tests were performed to decide whether to use a fixed or random effects model. As expected, the results shown in Table 10 indicate that the fixed effects model is clearly preferred over not only OLS, but also random effects.

Table 10. Results of Hausman Test for Fixed vs. Random Effects

Model	Result	Conclusion
1.2	Chi2(41) = 92.28, $p < 0.0000$	Fixed effects preferred over random effects
1.3	Chi2(41) = 224.09, $p < 0.0000$	Fixed effects preferred over random effects
1.4	Chi2(42) = 69.66, $p = 0.0046$	Fixed effects preferred over random effects
2.1	Chi2(42) = 103.39, $p < 0.0000$	Fixed effects preferred over random effects
2.2	Chi2(42) = 177.39, $p < 0.0000$	Fixed effects preferred over random effects
2.3	Chi2(42) = 64.00, $p = 0.0159$	Fixed effects preferred over random effects
2.4	Chi2(42) = 173.20, $p < 0.0000$	Fixed effects preferred over random effects

Two other issues that often arise, especially in panel data, are heteroskedasticity and autocorrelation. While they do not bias coefficient estimates, they do bias standard errors thereby making the models less efficient and potentially invalidating the results of hypothesis tests. Therefore, it is important to test and control for the presence of both in the data.

The presence of heteroskedasticity in all eight models was confirmed by the results of a series of White tests as shown in Table 11. Before deciding on a remedy for this, the Wooldridge test for serial correlation in panel data was used to check for autocorrelation in each model (Drukker, 2003; Wooldridge, 2002). The results, shown in Table 12, indicate that all models in Aims 1 and 2 with the exception of equation 1.4 suffer from some unspecified form of autocorrelation.

Table 11. Results of White Test for Heteroskedasticity

Model	Result	Conclusion
1.1	Poisson model is heteroskedastic by definition	
1.2	Chi2(45) = 115.08, p = 4.67e-08	Heteroskedastic error
1.3	Chi2(45) = 355.04, p = 8.74e-50	Heteroskedastic error
1.4	Chi2(45) = 193.65, p = 2.39e-20	Heteroskedastic error
2.1	Chi2(45) = 164.93, p = 1.37e-15	Heteroskedastic error
2.2	Chi2(45) = 226.74, p = 4.45e-26	Heteroskedastic error
2.3	Chi2(45) = 90.44, p = .00007	Heteroskedastic error
2.4	Chi2(45) = 106.75, p = 6.25e-07	Heteroskedastic error

Table 12. Results of Wooldridge Test for Serial Correlation in Panel Data

Model	Result	Conclusion
1.1	Test not conducted because robust clustered standard errors used	
1.2	F(1, 272) = 60.15, p < 0.0000	Error terms serially correlated
1.3	F(1, 272) = 22.06, p < 0.0000	Error terms serially correlated
1.4	F(1, 272) = 0.618, p = 0.4324	No autocorrelation detected
2.1	F(1, 272) = 24.96, p < 0.0000	Error terms serially correlated
2.2	F(1, 272) = 9.098, p = 0.0028	Error terms serially correlated
2.3	F(1, 272) = 10.954, p = 0.0011	Error terms serially correlated
2.4	F(1, 272) = 11.614, p = 0.0008	Error terms serially correlated

While Huber-White robust standard errors are an effective correction for heteroskedasticity, they do not account for serially correlated error terms. However, clustered standard errors can control for both heteroskedasticity and serial correlation that occurs within the cluster, although they do not control for serial correlation between clusters. It seems likely, however, that the error terms will be correlated within the FQHC over time rather than across different FQHCs, especially because fixed effects are used to control for all of the time-invariant unobserved heterogeneity between FQHCs that would otherwise be a sizeable component of the error. Therefore, the model uses clustered standard errors at the

FQHC level, which improves the efficiency of the model by controlling for both the heteroskedasticity and the autocorrelation by estimating consistent standard errors.

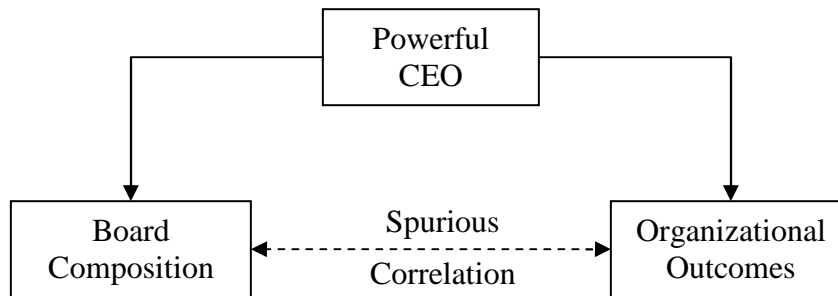
After conducting a visual inspection of the residuals from each model using Stata's *qnorm* procedure, which suggested that the errors in all models are likely to be normally distributed, a series of Wooldridge tests were conducted to determine whether or not to use the logged form of the dependent variable in each case. The results, shown in Table 13, indicated that the unlogged form of the dependent variable was preferred for all but one of the models. The Wooldridge test could not be meaningfully conducted on models 1.1 or 2.3, because the dependent variables contain negative values or zeroes which, by definition, cannot be logged. Therefore, these models also use an unlogged form of the dependent variable. The Wooldridge test results for model 2.4 (financial self-sufficiency) indicated that the logged form of the dependent variable was preferred.

Table 13. Results of Wooldridge Test for Functional Form of Dependent Variable

Model	Result		Conclusion
1.1	Dependent variable "Scope of Enabling Services" contains values of zero which cannot be logged.		
1.2	Unlogged R^2 :	0.0358	Unlogged DV preferred
	Logged Pseudo- R^2 :	0.0036	
1.3	Unlogged R^2 :	0.0253	Unlogged DV preferred
	Logged Pseudo- R^2 :	0.0052	
1.4	Unlogged R^2 :	0.0916	Unlogged DV preferred
	Logged Pseudo- R^2 :	0.0306	
2.1	Unlogged R^2 :	0.0804	Unlogged DV preferred
	Logged Pseudo- R^2 :	0.0285	
2.2	Unlogged R^2 :	0.0195	Unlogged DV preferred
	Logged Pseudo- R^2 :	0.0072	
2.3	Dependent variable "Operating Margin" contains negative values which cannot be logged.		
2.4	Unlogged R^2 :	0.0002	Logged DV preferred
	Logged Pseudo- R^2 :	0.0014	

It is possible that some unobserved factor(s) may be associated with both board composition and organizational performance leading to omitted variable bias. For example, a powerful chief executive officer (CEO) might exert influence on the board member selection process and also be responsible for the health center's performance through day-to-day administration of the center as shown in Figure 7 (Hermalin & Weisbach, 1998).

Figure 7. An Example of Omitted Variable Bias



This form of endogeneity represents a potentially problematic model specification error that can lead to biased estimates at best and completely spurious correlation at worst. The direction of bias depends on the direction of the correlation between the omitted variable and the dependent variable and the omitted variable and the included right hand side variable. However, eliminating as many sources of bias as possible is preferable to interpreting the potential magnitude and direction of bias in a post-estimation context.

While I do estimate fixed effects models to control for all time-invariant unobserved heterogeneity at the FQHC-level and higher (e.g., city, county, state, region, etc.), these models do not control unobserved time-varying heterogeneity. In this case, one approach is to use an instrumental variable to conduct two-stage least squares (2SLS). The difficulty here is identifying a good instrument, which must be both strong and valid. That is, an

instrumental variable must be correlated—preferably highly—with the endogenous explanatory variable (i.e., be strong) and it must be uncorrelated with the error of the structural equation of interest (i.e., the instrument should only be related to the dependent variable through its effect on the endogenous variable.) In panel data, identifying a strong and valid instrument is even more of a challenge, because the instrument must predict variation in the endogenous variable over time.

The model contains several potentially endogenous explanatory variables. They are: the percentage of FQHC patients uninsured, the percentage of descriptive and non-descriptive consumers on the board, board size, and the presence of one or more physicians on the board. The percentage of FQHC patients who are uninsured would typically be considered exogenous. However, I spoke with the CEO of one FQHC during model development who suggested turning away uninsured patients as a strategy that, though unlikely, could conceivably be employed to help the bottom line. The other elements all relate specifically to the composition of the board itself and are treated as endogenous because board members are identified and selected for service by other board members and senior health center staff.

Therefore, an attempt was made to identify variables in the available data that could potentially serve as instruments for each of these endogenous variables. Several potential instruments were identified, and their strength was determined in a series of first stage regressions of the endogenous variable on the instrument and the other exogenous explanatory variables in the model. For instance, an indicator of metropolitan area was considered as an instrument for board size, with the thinking that FQHCs in more urban areas might have both a greater need for a larger board, as well as more potential board members to

choose from. The key results of these regressions, shown in Table 14, indicate that none of the variables made for very strong instruments. While some of the potential instruments were significant predictors of the endogenous variables according to the results of a series of t-tests, the explanatory power of the first stage regressions was considerably lower than ideal.

Table 14. Results of First Stage Regressions of Potentially Endogenous Variables

Endogenous Variable	Potential Instruments	T-test	F-test [†]	R ²
% Patients Uninsured	% Uninsured in community	t = 1.66 p = 0.10	---	0.572
% Descriptive Consumers	Per capita income	t = -0.98 p = 0.33	F(3, 2196) = 7.9 p = 0.000	0.112
	Unemployment	t = 4.14 p = 0.00		
	% Non-white	t = 0.33 p = 0.74		
% Non-Descriptive Consumers	Per capita income	t = 0.33 p = 0.74	F(3, 2196) = 1.7 p = 0.167	0.230
	Unemployment	t = -0.31 p = 0.76		
	% Non-white	t = 2.23 p = 0.03		
Board Size	Metro area dummy	t = -0.58 p = 0.56	---	0.093
Physician on board	# of physicians in community	t = 6.10 p = 0.00	---	0.117

[†] The F-test results for single variables are not shown, as they are equal to the square of the T-test.

Despite the usefulness of 2SLS, significant problems can arise from the selection of a weak instrument. In fact, sometimes a simple model is best, especially when the alternative is a weak instrument (Murray, 2006). Furthermore, it is possible to argue that each of the potential instruments may have a direct effect on the dependent variables. For example, metropolitan area may be associated with the scope of enabling services provided, because

certain services like transportation may be less necessary in urban environments where distances are walkable or public transportation is readily available. To the extent that they provide care to low-income and/or uninsured persons, the number of physicians in the county may have a direct bearing on how much uncompensated care remains for the FQHC to provide. In such cases where the instrument is not validly excluded from the main equation (i.e., it is directly associated with the main dependent variable), the results obtained will be biased (Newhouse & McClellan, 1998).

While there are tests for exclusion validity, those tests require more than one instrumental variable for each endogenous variable in the model. Since this overidentification condition is not met, exclusion validity relies solely on theoretical arguments, which are not strong in this case. Moreover, the potential instruments are not strong enough to be particularly appealing, especially given the problems presented by weak instruments—even validly excluded weak instruments. Therefore, I opt against using a 2SLS approach, and use fixed effects to control for all of the endogeneity that would otherwise result from time-invariant unobserved variables at the level of the health center.

This approach comes at its own cost, however, as omitting any unobserved variables whose values change over time and are correlated with the other explanatory variables in the model will lead to biased coefficient estimates. For example, some unobserved factor or set of factors may explain how board members are selected, making the proportion of descriptive and non-descriptive consumers on the board endogenous. To the extent that those factors do not vary for the duration of the study period, the fixed effects will adequately control for them. For example, if the powerful CEO depicted in Figure 7 held that office in all years of

the study, the effect of his or her selection of board members would be controlled for with the fixed effects.

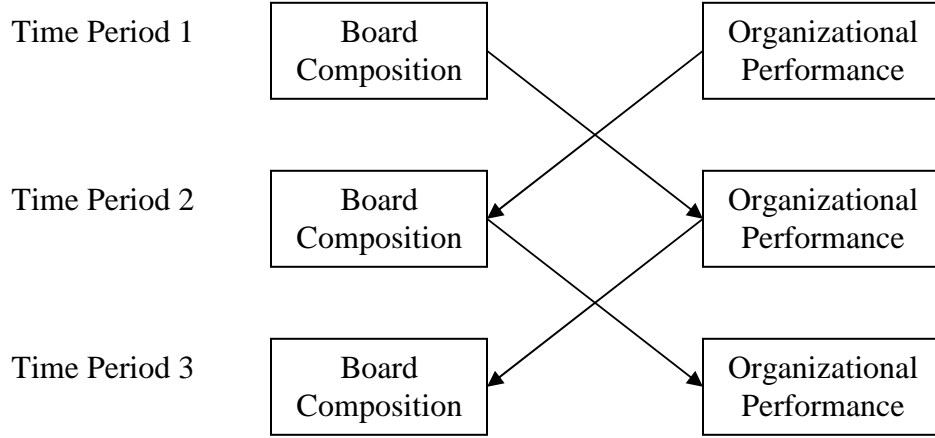
However, if there was a change in CEO during the study period, the fixed effects would no longer be sufficient, and the coefficients might be biased. The direction of that bias can be inferred from careful consideration of the anticipated association between the omitted variable and the included explanatory variable and the association between the omitted variable and the dependent variable. The implications of this are discussed in more detail in Chapter 7.

The final models for Aims 1 and 2 are estimated using OLS regression with fixed effects at the FQHC level and clustered standard errors at the FQHC level. In addition to t-tests on individual parameters of interest, a series of F-tests were conducted on constructs of interest including poverty level of FQHC patients, insurance status of FQHC patients, and other (i.e., non-CHC) BPHC grant type. These results, together with an interpretation of marginal effects, are reported in Chapter 4.

Auxiliary Regressions

While the general models in Aims 1 and 2 suppose that board composition determines organizational performance via board function, it is possible as shown in Figure 8, that organizational performance may determine board composition (e.g., an FQHC that is struggling financially may recruit board members to the board who are skilled in the area of finance) (Baysinger & Butler, 1985; Davidson III & Rowe, 2004; Hermalin & Weisbach, 2003).

Figure 8. An Example of Intertemporal Endogeneity



While fixed effects are able to control for a substantial amount of endogeneity in the model, the issue of inter-temporal endogeneity depicted in Figure 8 remains a concern, and is not addressed by the use of the fixed effects model. Instead, the issue of temporality and the direction of possible causation between board composition and organizational outcomes is tested using a cross-lagged regression technique (Davidson III & Rowe, 2004; Hermalin & Weisbach, 2003; Rogosa, 1980).

This method works by reversing the econometric model as follows:

Equation R1

$$\% \text{ Descriptive Consumer}_{it} = \alpha_o + \text{Outcomes}_{i(t-1)}\beta + T_t\lambda + \mu_i + \varepsilon_{it}$$

Equation R2

$$\% \text{ Non-Descriptive Consumer}_{it} = \alpha_o + \text{Outcomes}_{i(t-1)}\beta + T_t\lambda + \mu_i + \varepsilon_{it}$$

where i indexes the health center and $t = 1, \dots, T$ indexes the year between 2003 and 2006.

The proportions of descriptive and non-descriptive consumers on the board initially used as independent variables are now used as dependent variables in two separate regressions.

Outcomes is a matrix containing the original set of mission and margin outcomes now being

used as explanatory variables. T is a matrix of binary year indicator variables, μ is a matrix of FQHC-level fixed effects, and ε represents the unobserved time-varying error.

To estimate a model wherein organizational outcomes predict changes in the composition of the board, the key explanatory variables are lagged by one year, as indicated by the $t-1$ subscript. If the coefficients on lagged outcomes are found to be significant, it will suggest that organizational performance is a determinant of FQHC board composition. However, if these coefficients are not significant, it is safe to conclude that board composition is not the result of organizational performance. The set of coefficients on the year dummies can be interpreted as the effects of general time trends on board composition.

These models are estimated using fixed effects with FQHC-level clustered standard errors. This specification was selected in both cases based on the results of an F-test that indicated that the fixed effects were jointly significant (% Non-Descriptive: $F(783, 1350) = 7.27, p < 0.001$; % Descriptive: $F(783, 1350) = 5.99, p < 0.001$), a White test indicative of heteroskedasticity (% Non-Descriptive: $\text{Chi}^2(45) = 69.264, p = 0.012$; and % Descriptive: $\text{Chi}^2(45) = 96.05, p = 0.00001$) and a Wooldridge test indicative of serial correlation (% Non-Descriptive: $F(1, 273) = 34.085, p < 0.001$; % Descriptive: $F(1, 273) = 12.929, p = 0.0004$). Additionally, a Wooldridge test for the functional form of the dependent variable indicated that both variables should be modeled in logged form (% Non-Descriptive: $R^2 = 0.0025$, Wooldridge Pseudo- $R^2 = 0.0033$; and % Descriptive: $R^2 = 0.0000$, Wooldridge Pseudo- $R^2 = 0.0001$).

The results, shown in Table 15, strongly suggest that organizational outcomes in one time period do not predict board composition in a subsequent time period one year later.

Only one of the eight coefficients estimated on the organizational outcome variables (scope of enabling services) was statistically significant.

Table 15. Results of a Reverse Fixed Effects OLS Regression Model

	Coefficients	
	Log (% Non-Descriptive Consumers)	Log (% Descriptive Consumers)
<i>Outcomes (Lagged One Year)</i>		
Scope of Enabling Services	-0.00629 (0.0231)	0.0806* (0.0367)
Volume of Enabling Services	9.38e-05 (0.000124)	5.54e-05 (0.000117)
Enabling FTEs per Capita	-0.0294 (0.0656)	-0.00802 (0.0963)
Uncompensated Care Ratio	2.99e-05 (0.0269)	0.0286 (0.0327)
% Costs from Enabling Services	0.00305 (0.0103)	-0.00212 (0.0148)
Avg. Medical Cost per Medical Encounter	0.000958 (0.00195)	-0.00247 (0.00201)
Operating Margin	0.00251 (0.00248)	0.000366 (0.00341)
Financial Self-Sufficiency	-0.00112 (0.00391)	0.00198 (0.00499)
Year 2003	0.0961 (0.0850)	-0.0448 (0.111)
Year 2004	0.146* (0.0692)	-0.0201 (0.0763)
Year 2005	0.183** (0.0686)	-0.174* (0.0859)
Constant	3.299*** (0.373)	2.369*** (0.499)
Observations	2145	2145
Number of Groups	784	784
R ²	0.011	0.015

Clustered standard errors in parentheses

*** p<0.001, ** p<0.01, * p<0.05

According to this result, for each additional enabling service an FQHC offers in year one, it will decrease the proportion of descriptive consumers on its governing board by 8.1%. It is important to note that this is a relative percentage change and not an absolute percentage point change. With the exception of a board that is composed entirely of descriptive consumers, when they are equal, the former is a smaller effect than the latter. However, this result might be driven by an outlier(s). When the same regressions were run on a limited sample in compliance with laws regarding board size and proportion of consumers on the board (described in the next section), the statistically significant association disappeared. Therefore, it seems reasonable to conclude that organizational performance does not factor greatly, if at all, into determining board composition.

Sensitivity Analyses

In addition to the eight main models of interest and the two auxiliary models estimated to assess the presence of reversely causal relationships between consumer governance and organizational outcomes, two sensitivity analyses were conducted. First, because the conceptual framework considers the consumer composition of the executive committee as a potential moderator of the relationship between board composition and organizational outcomes, eight regressions were estimated which were identical to the main models of interest with the exception that they omitted all six of the board leadership variables (two executive committee composition variables and their corresponding four interaction terms).

The alternate specification models the four mission-oriented and four margin-oriented outcomes as a function of board composition, general time trends, other FQHC-level design factors, and several county-level and FQHC-level context factors:

Alternate Model Specification

$$Y_{ijt} = \alpha_o + Consumer_{i(t-1)}\beta + W_{it}\gamma + T_t\lambda + \mu_i + \varepsilon_{it}$$

The set of beta coefficients gives the relationship between the composition of consumers on the board and the organizational outcome being modeled in the absence of any controls for executive committee composition. Like the main models, the key explanatory board composition variables are lagged by one year, as indicated by the *t-1* subscript. Comparisons of the adjusted-R-squared values between the main models and these alternate models were made to see how much explanatory power the executive committee composition variables contributed to the model.

Second, because not all FQHC governing boards in the data were fully compliant with the legal requirements concerning board size and consumer representation, another set of regressions was estimated using the original eight main models of interest, but excluding these “non-compliant” centers. The purpose of this sensitivity analysis was to assess how robust the coefficient estimates were to removing outliers from the sample.

A total of 186 boards were excluded (46 with fewer than 9 members, 3 with more than 25 members, and 137 with a proportion of consumers below 51%). Thus, the sample size for this set of regressions was 1,976 FQHC-years representing 791 unique FQHCs. Apart from slight expected changes in the coefficients, few meaningful differences were detected. Notable changes are summarized along with the rest of the quantitative results in Chapter 5.

Analyses for Aim 3

The third aim of the study was to determine the association between a board member's consumer status and their likelihood of (a) serving on the executive committee and (b) serving as board chair. Using status generalization theory, I hypothesized that descriptive consumer board members would be less likely than other board members to hold any executive committee office (defined as chair, vice-chair, secretary, or treasurer) or the board chair position.

Data and Measures

The Aim 3 analyses use available data from Exhibit D of FQHC grant applications for the years 2003 through 2006. To receive federal grant funds, primary care organizations must demonstrate that they meet all FQHC program requirements by filing a standardized section 330 grant application. In Exhibit D of these FQHC grant applications, each FQHC provides information on its governing board including the total number of governing board members and their name, occupation, board tenure, position on the board (e.g., chair), and consumer status. These applications are processed and maintained by HRSA, and are publicly available through the *FOIA* request process. However, these records are provided in hard copy.

The hard copies of these grant applications from 2003 through 2006 were manually scanned using a high-speed digital scanner with an automatic feed, which converted the paper documents into Adobe PDF files. Because the PDF files were not editable, the data was extracted from the files one at a time and converted into Microsoft Excel format using the software program Able2Extract (Investintech.com, 2010). Finally, the data was read into

Stata (StataCorp, 2007) to create a single electronic dataset, which was subsequently cleaned and coded.

Table 16. Aim 3 Sample by Year

Year	Board Members
2003	6,117
2004	3,968
2005	10,547
2006	10,536
Total	31,168

The dataset includes 31,168 board members from 963 FQHCs. Many, but not all, health centers are observed in more than one year, resulting in a total of 2,517 FQHC-year observations. The number of board members represented in each year is shown in Table 16. The variation in the sample from year to year reflects both the growth in the number of FQHCs over time and, more importantly, the fact that only 71.4% of the data requested via the *FOIA* process were received as previously discussed. Using these data, I model the likelihood of serving on the board's executive committee and holding board chair as a function of board members' consumer status and tenure, while controlling for time-invariant FQHC-level effects as shown in Table 17.

Table 17. Board Member-Level Measures for Aim 3 Analyses

Key Independent Variable	Dependent Variables	Control Variables
Consumer status - Non-consumer - Descriptive consumer - Non-descriptive consumer	Board chair held Executive committee office held - Chair - Vice-chair - Secretary - Treasurer	Board member tenure FQHC fixed effects

Board member tenure was included as a covariate, because it has previously been positively associated with board member influence (Latting, 1983). In addition, the bivariate association between tenure and board office was significant as shown in Table 18. For this analysis, board member tenure is converted to months. Board members who have been on the board less than 1 year, and for whom no specific month value is reported, are given an imputed value of 6 months (N = 87). If a board member's tenure is reported as greater than some number of years, they are top-coded to the highest known value (e.g., >1 year = 12 months, or >10 years = 120 months). In addition, 301 board members with missing data for tenure are given an imputed value of 6 months. No meaningful differences were detected between a model that omitted observations with missing data for tenure and the model that imputed a value of 6 months for observations with missing tenure.

Table 18. Board Member Tenure by Board Office Held

<u>Board Office Held</u>	<u>Mean Tenure (months)</u>
Chair	92.9
Vice-Chair	78.2
Secretary	74.9
Treasurer	73.5
Non-Officer	52.0

Analytic Methods

To test the Aim 3 hypotheses, I estimated the following two equations (3.1 and 3.2) using Chamberlain's conditional (fixed effects) logit model. Analyses were conducted at the individual board member level with FQHC-year fixed effects.

Equation 3.1

$$\Pr(\text{Executive Committee Officer}_{it} = 1) = f(\text{Consumer Status, Board Tenure, FQHC-Year Level Fixed Effects})$$

Equation 3.2

$$\Pr(\text{Chair}_{it} = 1) = f(\text{Consumer Status, Board Tenure, FQHC-Year Level Fixed Effects})$$

While fixed effects logistic regression is typically thought of as modeling repeated observations of an individual over time, the motivation is slightly different here. The fixed effects logistic model using FQHC-year fixed effects is used because the number of positive outcomes per board per year is known to be fixed. For example, in these data, which are collected at a single point in time, each FQHC board has exactly one chairperson in any given year. While there may be a change in the chair during the year, that change will be reflected when the next year's data are reported.

By creating a unique identifier for each FQHC in each year and using this as the grouping variable (analogous to the individual), only variation between board members within each FQHC-year (analogous to repeated observations over time) is used in the analysis. In short, only the differences between board members at a given FQHC in a given year are used to predict the likelihood of a board member holding a board leadership position at that FQHC in that year. Other variables (e.g., board size) that might ordinarily vary over time within an FQHC are dropped from the model as there is no variation in these variables when the group is defined at the FQHC-year level. However, such factors are still controlled for in the model, as they are treated as fixed effects across individual observations.

An alternate modeling approach using either a bivariate probit or multinomial logit at the board member level that failed to group observations by FQHC-year would neglect the fact that board members are first selected to join the board and that executive committee officers are subsequently elected from among the current members to occupy a fixed number

of positions. Instead, such approaches would treat all board members as vying equally for some number of board leadership positions. In essence, this would pool all board members together and fit a model that maximizes the likelihood of observing whatever the number of chairs and other executive committee officers happens to be in the data, without regard for how many health centers or how many years of data the observations represent. This limitation could be addressed by manually including a series of dummy variables to estimate FQHC-year fixed effects, which could then be integrated out to maintain model efficiency, but, by not estimating a separate coefficient for each center, Chamberlain's conditional logit streamlines this process.

Specification Tests

Before the final models were estimated, I conducted several specification tests. I examined the pairwise correlations between variables in the model, which indicated no cases of perfect collinearity, and no significant associations between independent variables greater than -0.5, which was observed between the descriptive and non-descriptive consumer variables as expected.

To specify the correct functional form of board member tenure, three competing models were estimated for the model predicting the likelihood of holding executive committee office and the Akaike Information Criteria (AIC) values from each were compared. The first included board member tenure (AIC = 4.590), while the second model also included the quadratic form of the variable, tenure squared (AIC = 4.428). The third model treated tenure by using splines with knots at intervals that created quintiles containing equal numbers of board members in each (AIC = 4.276). The model with the greatest

explanatory power, which modeled tenure using splines, was selected. The same analysis was repeated to confirm the correct specification for tenure in the model to predict the likelihood of serving as board chair. The results were similar (Tenure only: AIC = 11.025; Tenure squared: AIC = 10.667; Splines: AIC = 10.279) and tenure is modeled using quintile splines.

The results of a White test ($\chi^2(3, 4.72)$, $p = 0.19$) did not find evidence of heteroskedasticity in equation 3.2. A similar test could not be conducted on equation 3.1, because the data were not 1-k matched (i.e., each group contained four positive outcomes). However, there was concern that the model might suffer from serial correlation. Therefore, two versions of the model were run, one with clustered standard errors at the FQHC-level and one without. Because post-estimation correction of the standard errors in conditional logistic regression is controversial and no changes in the statistical significance were observed with the use of clustered standard errors, the final model uses unadjusted standard errors.

A small number of observations (approximately 1%) were missing data on the board office variable. Specifically, 30 FQHCs (315 board members) failed to identify their board chair and 10 of these 30 (87 board members) also failed to identify any executive committee officers. As a result, the value of the dependent variable was zero for all of these observations and they were dropped from the analysis. The final estimate of equation 3.1 was based on 31,081 board members grouped into 2,507 FQHC-years, while the final estimate of equation 3.2 was based on 30,853 board members grouped into 2,487 FQHC-years.

In both cases, after estimating each model, model fit was assessed using a specification link test, which provided no evidence of specification error in either model. However, this test cannot identify misspecification in the case of omitted variables, and it

seems possible that certain individual level factors such as race, gender, and education level—for which data are unavailable—may be important omitted variables. To the extent that these factors are correlated with both the included right hand side variables and the dependent variable of interest, the coefficient estimates will be biased.

It is impossible to know for certain the magnitude of any potential bias, but the direction of the bias can be reasoned. For instance, the coefficient on descriptive consumer status would be biased downward by the omission of years of education, which is likely to be negatively correlated with descriptive consumer status, but positively correlated with serving as board chair. The same is true of male gender. In the case of non-white race, which is likely to be positively associated with descriptive consumer status, but negatively associated with serving as board chair, downward (i.e., negative) bias would also be expected. For all of these measures, the reverse is true for non-descriptive consumer status, which would then suffer from upward (i.e., positive) bias.

The magnitude of the bias depends on the strength of the associations between the omitted variables and the variables in the model. For instance, because the categorical construction of consumer status relies on occupation and income data, it is likely to be highly correlated with years of education. However, education tends to explain much of the variation in income (Crissey, 2009). Therefore, while the direct effect may be biased, the indirect effect is not biased. Another way of saying this is that the occupation and income data used to distinguish descriptive and non-descriptive consumers is really a proxy for other closely related, but omitted factors.

To interpret the magnitude of the effects after estimating each model, it is necessary to determine the probability of the outcome conditional on the number of successes per group.

This is straightforward for equation 3.2, because there is one and only one chair, and the default predicted probability in Stata is conditioned on a single successful outcome.

For equation 3.1, however, it is necessary to obtain the predicted probability conditional on a maximum of four successful outcomes. Doing this is computationally complex. An algorithm designed to obtain this probability by calculating all possible combinations of board member positions and executive committee positions ran on a university server with four processors operating in parallel and was terminated by the server after running for one month without calculating a solution. Therefore, in Chapter 4, results are reported as odds ratios and marginal effects are discussed in terms of changes in predicted probabilities only for the board chair model. The next section discusses the qualitative methodology employed in Aim 4 used to provide context for the results of the methods described for Aims 1 through 3.

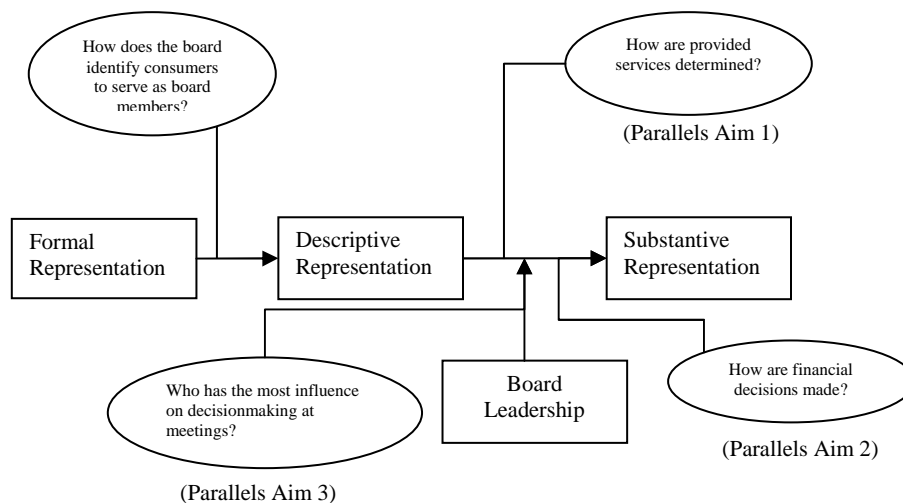
Qualitative Methods for Aim 4

Qualitative methods are useful both for obtaining information in cases where quantitative data is lacking, and for contributing meaning and deeper understanding to available quantitative data (Sofaer, 1999). Because of concerns that the available quantitative data might prove insufficient for answering the research questions, Aim 4 sought to complement the quantitative analysis of Aims 1 through 3 through the use of semi-structured interviews.

Interviews were designed to explore board members' perceptions of the advantages and disadvantages of consumer governance, the degree of influence the board has vis-à-vis the executive director on decisionmaking about FQHC service provision and finances, the

role of the health center’s mission in decisionmaking, and organizational responses to budgetary constraints and adverse conditions. Specifically, the qualitative phase of the study helps to address each of the specific aims by supplying additional data on board function that may help to explain the relationship between board composition and health center outcomes as shown in Figure 9.

Figure 9. Use of Qualitative Interviews to Complement Quantitative Aims



Sampling Strategy

Interviews were conducted with board members from a purposive stratified sample of FQHCs in order to reflect a wide variety of viewpoints, ensure that different realities were uncovered, and produce more generalizable results. Using quantitative descriptive statistics, FQHCs were stratified into one of four categories as described below. Additionally, centers were selected to ensure adequate representation by geographic region, rural/urban location, and patient load. Geographic strata were based on the 4 U.S. census regions, which each

consist of between 9 and 16 states (plus the District of Columbia) per region as shown in Table 19.

Table 19. U.S. Census Regions

Census Region	States within Region
Northeast	CT, ME, MA, NH, NJ, NY, PA, RI, VT
South	AL, AR, DE, DC, FL, GA, KY, LA, MD, MS, NC, OK, SC, TN, TX, VA, WV
Midwest	IA, IL, IN, KS, MI, MN, MO, NE, ND, OH, SD, WI
West	AK, AZ, CA, CO, HI, ID, MT, NV, NM, OR, UT, WA, WY

Source: U.S. Census Bureau. Available at: <http://www.census.gov/popest/geographic/>

After constructing the previously described dependent variables for Aims 1 and 2, all FQHCs in the UDS meeting previously discussed inclusion criteria for years 2004 – 2007 (the years of data corresponding to the outcomes of interest in the primary regression models) were combined (N = 3,702 FQHC-years). In addition, only centers operating solely with CHC grants were retained. Consequently, 393 non-CHC grantees, 471 migrant health center grantees, 356 healthcare for the homeless grantees, 141 school-based health center grantees, and 60 public housing grantees were dropped from the sample. This was done to eliminate any possibility that centers with governance waivers—non-CHC grantees that are not required to have consumer-majority boards—would remain in the sample.

Summary statistics on each of the eight dependent variables (4 mission, 4 margin) provided the median values for each. A binary variable was created for each dependent variable, which was equal to 1 if the FQHC’s value for that variable was above the median, and 0 otherwise, with the exception of two variables. Because a lower average medical cost per medical encounter and a lower percentage of costs attributable to enabling services are considered indicators of stronger margin orientation, the binary variable created for these two

variables was equal to 1 if the FQHC's value for that variable was below the median, and 0 otherwise.

Next, two summary variables ("mission" and "margin") were created that were equal to the sum of each of the 4 binary mission variables and the sum of each of the 4 binary margin variables, respectively. In other words, the value of these variables could range from 0 to 4. Centers with scores of 3 or 4 for these summary mission and margin variables were labeled as "High Mission" and "High Margin" respectively, and as "Low Mission" and "Low Margin" otherwise. Then, each center-year was classified into one of four cells as shown in Table 20.

Table 20. Mission versus Margin Sampling

		Mission		
		Low	High	Total
Margin	High	N = 602	N = 190	792
	Low	N = 744	N = 745	1,489
	Total	1,346	935	2,281

Recruitment of Interview Participants

Once all FQHCs were stratified into one of the four cells, random samples were generated via a random number generator available at www.random.org. Four centers were selected within each cell, and the CEO at selected centers was contacted by email with a personalized copy of the invitation letter shown in Appendix A. The letter asked the CEO to voluntarily identify up to two board members (one consumer and one non-consumer, if

possible) for participation in the study. If a center declined to participate, it was replaced and another center was randomly selected and contacted. This process was continued as needed within each stratum until a sufficient number of centers willing to participate in the study were identified.

A balance of census regions, urban and rural locations, and large and small centers (cutoff of 9,293 users) was sought over time as respondents agreed to participate. Once a quota had been filled, a randomly selected center that would exceed the quota was replaced and another center was randomly selected. If a selected center had been classified in more than one “mission-margin” cell (possible because FQHC-years were sampled), that center was not eligible to be contacted and another center was chosen at random. This occurred twice. The final sample of 30 board members from 16 FQHC governing boards was not perfectly balanced, but does adequately reflect the diversity of FQHC programs across the country.

Data Collection

Once an FQHC had agreed to participate in the study, the board members were contacted by email and/or telephone to schedule a mutually convenient time for the interviews. Telephone interviews were conducted and digitally recorded, and were kept semi-structured through the use of an interview guide containing a mixture of open-ended and fixed-response questions. A copy of the interview guide is contained in Appendix B.

The specific questions were formulated based on the literature review and were designed to complement the quantitative aims of this study. Early drafts of the interview guide were revised to arrange questions in a logical order that would help the interview to

flow smoothly. The interview began with relatively straightforward questions to help respondents feel more comfortable, proceeded to ask the most challenging questions in the middle of the interview, and concluded with demographic information, which would be easy for the participants to answer at a time when they might be growing fatigued. In practice, the interview guide was closely followed, although the question order was sometimes altered as the interview evolved and not all participants were asked all questions.

At the conclusion of each interview, the digital audio file was uploaded to a secure file hosting site and professionally transcribed by Pierce Group Atlanta, LLC. The interviews generated approximately 23 hours of recorded audio and 363 pages of transcribed data. Each interview participant was sent a copy of their transcript by email along with a \$10 gift card to Amazon.com and invited to review and approve their transcript. Instructions included in this email indicated that participants could provide me with any edits or clarifications that they wished. Only 5 of the 30 interview participants responded by providing corrections for typographical errors—none of which significantly altered the substantive content of their comments.

Data Analysis

All transcripts were reviewed once for editing and where there was any question about the accuracy of the transcripts, the transcript was compared against the original audio file to resolve the discrepancy. Transcripts were reviewed a second time for substance, with a goal of increasing familiarity with the general content of the interviews and beginning to better understand the data. In a third review of the transcripts, a set of start codes was applied to the data using Atlas.ti, with additional codes being created as dictated by the data in a

quasi-open coding approach. Responses were not aggregated by health center. Rather, each individual board member's responses were considered independently.

As a validity check, a subsample of 6 randomly selected transcripts (representing 20% of all interviews) was independently coded by a research assistant who was provided a copy of the codebook shown in Appendix C. Discrepancies in coding were resolved by a process of discussion until consensus was reached. Additional codes were created as needed, some codes were consolidated, and other sections of the transcripts were recoded. Following the consensus process, these changes were applied to all transcripts as appropriate. Then, using Atlas.ti, the codes were linked to one another in an axial coding process to build a conceptual framework for understanding the interview data, which was used to craft a storyline memo that formed the outline of the qualitative results which are presented in Chapter 6 (Corbin & Strauss, 2008).

CHAPTER 5

QUANTITATIVE RESULTS

This chapter presents the findings from Aims 1, 2, and 3 of the study. It provides an overview of descriptive statistics, presents the results of the multivariate regression models that were estimated, and interprets marginal effects of interest. Finally, it addresses each of the research questions posed at the end of Chapter 1, and discusses the results of the tests used to evaluate each of the hypotheses generated in Chapter 3.

The results of the empirical models estimated in Chapter 4 find that the majority of consumer board members on federally qualified health center (FQHC) boards are not descriptively representative of the typical FQHC patient. They also find that while the proportion of consumers on the *board* does not have a significant effect on the provision of mission-oriented services, there is some evidence that agenda setting may be important, as the proportion of descriptive consumers on the *executive committee* is associated with the increased provision of mission-oriented services. However, a greater proportion of descriptive consumers on the board is associated with poorer financial performance as measured by operating margin. Finally, the results confirm that descriptively representative consumer board members are less likely than other board members to hold a position on the executive committee or serve as board chair.

Descriptive Statistics

Before presenting the results in the context of each specific research question, it is important to examine the descriptive statistics for the study sample. Because the exclusion criteria used to limit the sample for Aims 1 and 2 were not used for Aim 3 and the datasets were constructed at different levels, there are two sets of descriptive statistics.

The descriptive statistics for the sample used for Aims 1 and 2 appear in Table 21. During the study period, an average health center with a staff of just over 100 employees working at one of six delivery sites saw almost 16,000 patients and nearly 62,000 encounters annually. Of these, 70% were either uninsured or enrolled in Medicaid, almost half (48%) had asthma, diabetes, or hypertension and nearly half (49%) had incomes below poverty.

These data are broken out by year to reveal the stability of the variables and identify any readily apparent trends over time. From these data, it appears that there may be a slight decrease in the scope and volume of enabling services being provided by health centers over the study period. It also appears that health center grant funding is not keeping pace with the amount of uncompensated care FQHCs are providing, as evidenced by the increase in the uncompensated care ratio from 2003 to 2006. The nearly \$16 increase in the average medical cost per medical encounter from 2003 to 2006 is likely reflective of medical inflation, rather than any change in the efficiency of health centers, although this cannot be confirmed from the data. There is almost no change in either the average operating margin, which is just slightly negative, or financial self-sufficiency, which hovers just above 50%, over the study period.

Table 21. Sample Specific Mean Descriptive Statistics for Select Variables

Variable	2003	2004	2005	2006	Overall
Scope of Enabling Services	8.29	7.85	8.23	8.18	8.17
Volume of Enabling Services	270.25	208.95	254.30	239.16	245.83
Enabling FTEs per capita	0.68	0.61	0.66	0.63	0.64
Uncompensated Care Ratio	0.93	1.09	1.11	1.12	1.08
% of Costs from Enabling Services	7.36	7.43	7.50	7.29	7.39
Average Medical Cost per Medical Encounter	106.82	119.22	117.95	122.40	117.70
Operating Margin (%)	-3.96	-4.93	-4.43	-4.58	-4.47
Financial Self-Sufficiency (%)	53.55	51.98	53.79	54.59	53.78
Delivery Sites per FQHC	5.89	4.79	5.77	5.98	5.73
Unique Patients	16,707	12,590	16,258	16,214	15,837
Unique Encounters	65,234	49,150	63,472	63,487	61,894
Total FTEs	106.42	80.27	103.88	105.74	101.85
Total FQHC Grantees in County	6.72	6.85	8.25	8.81	7.99
Board Size	12.60	12.40	12.57	12.36	12.48
% Descriptive Consumers on Board	27.77	27.46	26.66	25.42	26.53
% Non-Descriptive Consumers on Board	40.80	40.98	42.73	43.94	42.58
% of Boards with at least one Physician	33.50	30.30	32.59	30.48	31.71
Descriptive Consumers on Executive. Committee	0.74	0.75	0.74	0.74	0.74
Non-Descriptive Consumers on Executive Committee	1.73	1.75	1.80	1.86	1.80
% of Patients \leq 100% FPL	49.10	49.24	49.02	47.67	48.59
% of Patients 101 – 150% FPL	12.22	11.16	11.54	11.87	11.73
% of Patients 151 – 200% FPL	5.34	5.59	5.53	5.54	5.51
% of Patients \geq 201% FPL	9.21	8.03	7.24	6.61	7.47
% of Patients FPL Unknown	24.13	25.98	26.66	28.31	26.70
% of Patients, Male	40.72	40.20	40.64	40.40	40.51
% of Patients, Non-White	54.58	55.06	56.00	55.40	55.42
% of Patients, Uninsured	37.84	38.21	39.16	39.09	38.77
% of Patients, Medicaid	31.64	33.71	31.85	31.31	31.87
% of Patients, Medicare	8.81	8.83	9.03	9.17	9.01
% of Patients, Other Public Insurance	2.20	1.69	1.80	1.75	1.84
% of Patients, Private Insurance	19.52	17.57	18.17	18.68	18.51
% of Patients, Chronic Illness	45.32	48.05	48.92	48.55	48.04
Observations (N)	397	297	767	784	2245

The descriptive statistics for the Aim 3 sample are shown in Table 22. It is worth noting that despite the legal requirement that FQHC boards have between 9 and 25 members, not all boards are compliant with the law. While the typical board has 13 members, some boards, it turns out, have as few as 5 members (barely enough to form an executive committee), while others have as many as 29 members. The same is true of the proportion of consumers on the board. While the law stipulates that at least 51% of the board must be consumers, approximately 6.5% of FQHCs in the sample were not in compliance with the requirement.

Table 22. Descriptive Statistics of FQHC Board Members in Aim 3

Mean Board Size (# members)	13.2
Median Board Size (# members)	13
Range Board Size (# members)	5 – 29
Hold Board Office	29.2%
Hold Board Chair	8.0%
Mean Board Tenure (months)	60.3
Median Board Tenure (months)	36
Boards with ≥ 1 Physician	33.7%
Board with ≥ 1 Descriptive Consumer on Exec. Cmte.	51.6%
Board with ≥ 1 Non-Descriptive Consumer on Exec. Cmte.	81.1%
Expertise	
Business / Management	24.8%
Consumer	17.4%
Other White Collar	11.2%
Other Blue Collar	9.8%
Education	9.7%
Other Health Care	9.3%
Government	5.6%
Social Work	4.3%
Law	4.3%
Physician	3.3%

N = 31,168 board members
(963 Unique FQHCs)
(2,517 FQHC-Years)

The average tenure for a board member is just over 5 years, however this average is pulled upward by a small number of board members who have served for more than 20 or even 30 years. Most board members have not served such lengthy terms, as the median board tenure of 3 years indicates.

Board members are drawn from a variety of backgrounds, but the majority of board members have experience in business and/or management, which likely serves them well in overseeing the governance of an organization. Board members also come from other professional backgrounds, including education, law, and health care. In fact, one-in-three FQHC governing boards have at least one physician member. Finally, while more than 17% of board members identified their expertise as “consumer,” it is important to note that this response is ambiguous and not necessarily synonymous with that board member being a consumer at the FQHC. While the latter may be true, in the board data many individuals self-identified as non-consumers, but listed “consumer”—rather than their own occupation—as their area of expertise, possibly to signify that their knowledge of the community’s needs is the basis for their service on the board.

The Magnitude of Descriptive Representation

The first research question sought to identify the level of descriptive representation present on FQHC governing boards with regards to socioeconomic status. The average health center board had between 12 and 13 members. Using the four years of board composition data to classify respondents into one of three categories revealed that 30.9% of board members were non-consumers, while 69.1% were consumers. However, slightly more than 60% of self-reported consumers also self-identified occupations or areas of expertise that

placed them in a socioeconomic class that is considerably higher than that of the typical health center patient. As a result, 42.6% of board members are classified as non-descriptive consumers, while only 26.5% of board members are classified as descriptive consumers. Together, non-consumers, non-descriptive consumers, and descriptive consumers represent the total population of health center board members. The distribution of health centers by the proportion of descriptive consumers on the board is shown in Figure 10, while the distribution of health centers by the proportion of non-descriptive consumers is shown in Figure 11.

Figure 10. Distribution of Health Center Boards by Proportion of Descriptive Consumer Members

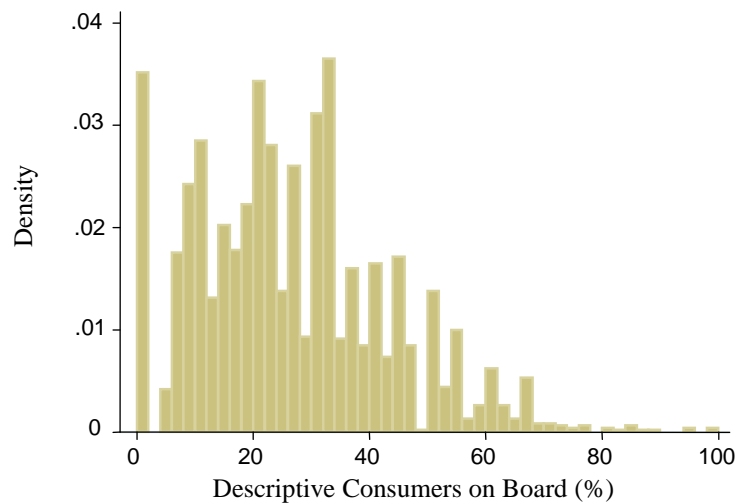
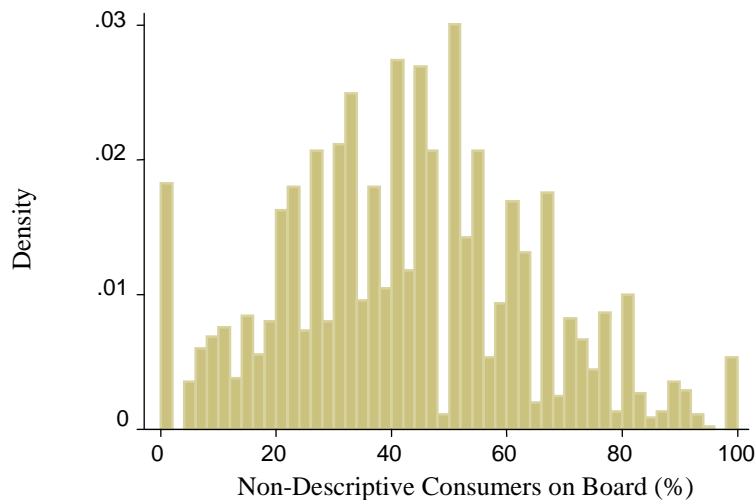
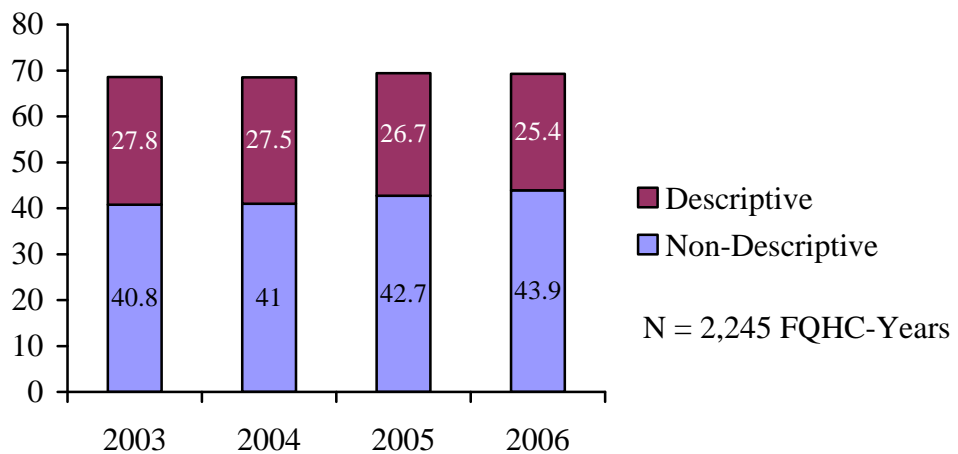


Figure 11. Distribution of Health Center Boards by Proportion of Non-Descriptive Consumer Members



A look at the data shows not only that descriptive consumers are in the minority on most FQHC boards, but also suggests that the consumer board member population is slowly becoming less descriptive over time, as seen in Figure 12.

Figure 12. Consumer Board Members Becoming Less Descriptively Representative Over Time



The Relationship between Consumer Governance and Mission-Oriented Outcomes

The second research question sought to understand if a greater proportion of descriptive consumers on the board was positively associated with a health center providing more mission-oriented services. Hypothesis 1.1 predicted that the percentage of board members who are descriptive consumers would be positively associated with the scope and volume of enabling services provided by FQHCs, the per capita number of full-time equivalent enabling staff (FTEs), and the ratio of uncompensated health care spending to federal grant funding.

Hypothesis 1.2 predicted that there would be no relationship between any of the mission-oriented outcomes and the proportion of non-descriptive consumers on the board. While the proportion of descriptive and non-descriptive consumers on the board were not significant predictors of the amount of mission-oriented services provided, some aspects of board composition, as well as certain other county and FQHC factors were significant.

Scope of Enabling Services

The results of the model to predict the scope of enabling services appear in Table 23. While the coefficient on the proportion of descriptive consumers on the board is not statistically significant, the results of a Wald test ($\text{Chi}^2(3) = 8.17, p = 0.0426$) indicate that the construct of descriptive consumer board composition, which also includes interactions with executive committee composition, is significantly associated with the scope of enabling services provided. However, at the mean, the magnitude of the marginal effect (-0.00068) is trivial. Similarly, while the proportion of non-descriptive consumers on the board is not statistically significant, the results of a Wald test ($\text{Chi}^2(3) = 9.27, p = 0.0259$) indicate that

the construct of non-descriptive consumer board composition is also significantly associated with the scope of enabling services provided. Again, at the mean, the magnitude of the marginal effect (-0.00059) is trivial.

Table 23. Results of a Fixed Effect Poisson Model to Predict Scope of Enabling Services

	Coefficient
FQHC-Level Design Factors	
<i>Board Composition (Lagged One Year)</i>	
% Descriptive Consumers	-0.000980 (0.000890)
% Non-Descriptive Consumers	-0.000167 (0.000756)
Board Size	0.000722 (0.00138)
Physician on Board	-0.0104 (0.0135)
# Descript. Consumers on Exec. Cmte.	0.0522* (0.0225)
# Non-Descript. Consumers on Exec. Cmte.	-0.00400 (0.0192)
(% Descript. Consumers) x (# Descript. Consumers on Exec. Cmte.)	-0.000459 (0.000403)
(% Descript. Consumers) x (# Non-Descript. Consumers on Exec. Cmte.)	0.000353 (0.000343)
(% Non-Descript. Consumers) x (# Descript. Consumers on Exec. Cmte.)	-0.000726* (0.000330)
(% Non-Descript. Consumers) x (# Non-Descript. Consumers on Exec. Cmte.)	5.88e-05 (0.000269)
<i>FQHC Staffing</i>	
Total FTEs	0.000495 (0.000276)
Physicians as % of Staff	-0.00181 (0.00298)
<i>Funding Source</i>	
Migrant Grantee	0.0881* (0.0393)
Homeless Grantee	0.0371 (0.0271)
Public Housing Grantee	0.0200 (0.0332)
School-Based Grantee	0.250

	(0.239)
# Delivery Sites	-0.00321
	(0.00215)
FQHC-Level Context Factors	
# Annual Patient Encounters	-4.72e-07
	(4.27e-07)
Metro Area	0.311
	(0.254)
<i>Geographic Region (Northeast Omitted)</i>	
South	-1.928
	(1.269)
Midwest	0.228
	(0.302)
West	-0.397
	(0.267)
<i>Patients by Age (19 – 64 Omitted)</i>	
% Age < 5	-0.000626
	(0.00205)
% Age 5 – 18	0.00164
	(0.00156)
% Age ≥ 65	-0.000782
	(0.00375)
<i>Patients by Other Characteristics</i>	
% Male	0.00108
	(0.00222)
% Non-White	0.000888
	(0.000520)
% with Chronic Illness	-0.000479
	(0.000369)
<i>Patients by Poverty Status (% Unknown Omitted)</i>	
% with Income ≤ 100% FPL	-8.75e-05
	(0.000354)
% with Income 101 – 150% FPL	-0.00111
	(0.000646)
% with Income 151 – 200% FPL	-0.000294
	(0.000911)
% with Income ≥ 201% FPL	0.000646
	(0.000618)
<i>Patients by Insurance Status (% Private Omitted)</i>	
% Uninsured	0.00111
	(0.00105)
% Medicaid	0.000265
	(0.00113)
% Medicare	0.000391
	(0.00298)
% Other Public Insurance	-0.000418
	(0.00276)
County-Level Context Factors	
<i>Health Care Supply</i>	
# Hospitals	-0.00816
	(0.00813)

Physicians per capita	-0.00301 (0.0272)
# FQHCs	-0.00187 (0.00128)
<i>Population Characteristics</i>	
% Male	0.000484 (0.0122)
% Non-White	-0.00135 (0.00644)
% Hispanic	-0.00816 (0.00889)
Per Capita Income	-2.11e-06 (1.32e-06)
% Uninsured	0.0730 (0.0636)
% Unemployed	0.0127** (0.00430)
<i>Time Trends (Year 2004 Omitted)</i>	
Year 2005	0.0173 (0.0101)
Year 2006	0.0306* (0.0120)
Year 2007	0.0446** (0.0151)
Constant	0.924 (1.249)
<hr/>	
Fixed-Effects	N = 819
Pseudo-R ²	0.1218
Observations	2230

Clustered standard errors in parentheses

*** p<0.001, ** p<0.01, * p<0.05

The significance of the constructs seems driven by the number of descriptive consumers on the board's executive committee, which is positively associated with the scope of enabling services. Because this is a non-linear model, the marginal effect depends on both the variable and the cross-derivative of its interaction with the proportions of descriptive and non-descriptive consumers on the board.

Calculating such interaction effects in non-linear models can be challenging and difficult to interpret (Ai & Norton, 2003). Therefore, I opted to generate differences in

average predicted values to obtain incremental effects for changes in the descriptive consumer composition of the executive committee. I first conducted a Wald test to determine if the coefficients on these three terms were different from zero. Consistent with hypotheses 3.1a and 3.1b, the results ($\text{Chi}^2(3) = 9.85, p = 0.0199$) confirmed that the three terms were jointly significant. Conversely, and contrary to hypotheses 3.2a and 3.2b, the Wald test for the number of non-descriptive consumers on the executive committee indicates that they are not jointly significant ($\text{Chi}^2(3) = 3.35, p = 0.3405$).

A change from no descriptive consumers on the executive committee to one descriptive consumer on the executive committee increased the predicted scope of enabling services by 0.42 additional types of services offered. As more descriptive consumers sat on the executive committee, this incremental effect increased slightly, such that a change from three descriptive consumers on the executive committee to the maximum of four descriptive consumers on the executive committee was associated with an increase of 0.49 in the predicted number of enabling services a center offers. In the extreme case, a health center with an executive committee composed entirely of descriptive consumers provides 1.4 additional types of enabling services compared to a health center with no descriptive consumers on its executive committee.

Using the average of the probabilities method, the incremental and marginal effects of other significant variables in the model on the scope of enabling services are calculated. Compared to health centers that receive solely community health center (CHC) grant funding, health centers that receive funding through the migrant health center program (whether or not they receive additional funding from other sources) provide an average of 0.77 additional types of enabling services. The unemployment rate in the county where the health center is

located is also associated with the scope of enabling services. Specifically, each one percentage point increase in the unemployment rate is associated with a health center providing 0.1 additional types of enabling services. Therefore, a ten percentage point increase in county unemployment translates into a health center offering one additional type of enabling service.

General time trends indicate that FQHCs are providing an increasing scope of enabling services over time, although the effect is slight. From 2004 to 2007, for example, the scope of enabling services increased by 0.39 additional services. At this rate, the average FQHC would add an additional enabling service every 8 years.

In the sensitivity analysis that omits the executive committee leadership variables and their interactions, no significant changes in the coefficients were detected. In the sensitivity analysis run on the limited sample of fully compliant FQHCs, the coefficient on Year 2006 was no longer significant although the magnitude of the effect decreased only slightly from 0.031 to 0.022. Meanwhile, the proportion of non-white patients changed sign and became significant, going from -0.0014 to 0.0013. No other changes in significance were detected.

Volume of Enabling Services

The results of the model to predict the volume of enabling services appear in Table 24. Contrary to hypothesis 1.1, but consistent with hypothesis 1.2, the results of two F-tests indicate that neither the proportion of descriptive consumers ($F(3, 818) = 1.57, p = 0.196$) nor the proportion of non-descriptive consumers ($F(3, 818) = 2.09, p = 0.101$) on the board is significantly associated with the volume of enabling services provided. The t-tests on the individual coefficients are also insignificant.

Furthermore, while the coefficient for the number of descriptive consumers on the board's executive committee is statistically significant ($t = 2.36$, $p = 0.019$), the full construct, which includes interaction terms, is not jointly significant ($F(3, 818) = 2.03$, $p = 0.108$). Because the marginal effect of the number of descriptive consumers partially depends on both the proportion of descriptive and non-descriptive consumers on the board, and because the proportion of descriptive consumers cannot equal zero if there is at least one descriptive consumer on the executive committee, it does not make sense to interpret the lone significant coefficient independently.

Table 24. Results of a Fixed Effect OLS Model to Predict Volume of Enabling Services

	Coefficient
FQHC-Level Design Factors	
<i>Board Composition (Lagged One Year)</i>	
% Descriptive Consumers	1.791 (1.265)
% Non-Descriptive Consumers	1.410 (1.123)
Board Size	0.282 (2.034)
Physician on Board	-2.373 (11.87)
# Descript. Consumers on Exec. Cmte.	98.27* (41.64)
# Non-Descript. Consumers on Exec. Cmte.	25.97 (20.98)
(% Descript. Consumers) x (# Descript. Consumers on Exec. Cmte.)	-1.366 (0.719)
(% Descript. Consumers) x (# Non-Descript. Consumers on Exec. Cmte.)	-0.721 (0.463)
(% Non-Descript. Consumers) x (# Descript. Consumers on Exec. Cmte.)	-1.525* (0.669)
(% Non-Descript. Consumers) x (# Non-Descript. Consumers on Exec. Cmte.)	-0.347 (0.334)
<i>FQHC Staffing</i>	
Total FTEs	-2.204***

	(0.476)
Physicians as % of Staff	-13.77**
	(4.186)
<i>Funding Source</i>	
Migrant Grantee	-20.27
	(29.97)
Homeless Grantee	23.68
	(33.35)
Public Housing Grantee	-245.6
	(170.9)
# Delivery Sites	6.000
	(6.811)
# Delivery Sites ²	-0.247
	(0.160)
FQHC-Level Context Factors	
# Annual Patient Encounters	0.00569***
	(0.00133)
Metro Area	104.3
	(147.6)
<i>Patients by Age (19 – 64 Omitted)</i>	
% Age < 5	0.291
	(2.711)
% Age 5 – 18	-5.532*
	(2.602)
% Age ≥ 65	-0.302
	(5.273)
<i>Patients by Other Characteristics</i>	
% Male	1.098
	(2.746)
% Non-White	0.197
	(0.543)
% with Chronic Illness	0.586
	(0.466)
<i>Patients by Poverty Status (% Unknown Omitted)</i>	
% with Income ≤ 100% FPL	0.470
	(0.417)
% with Income 101 – 150% FPL	1.293
	(1.512)
% with Income 151 – 200% FPL	0.370
	(1.046)
% with Income ≥ 201% FPL	-0.403
	(0.486)
<i>Patients by Insurance Status (% Private Omitted)</i>	
% Uninsured	2.080
	(1.293)
% Medicaid	1.226
	(1.388)
% Medicare	3.100
	(3.721)
% Other Public Insurance	-0.944
	(2.257)

County-Level Context Factors*Health Care Supply*

# Hospitals	49.16** (16.63)
Physicians per capita	-64.20 (47.08)
# FQHCs	-4.912 (2.787)

Population Characteristics

% Male	2.539 (12.22)
% Non-White	6.093 (7.610)
% Hispanic	-16.99 (14.55)
Per Capita Income	0.00567 (0.00619)
% Uninsured	4.513 (34.96)
% Unemployed	8.558 (6.285)

Time Trends (Year 2004 Omitted)

Year 2005	-34.62 (19.39)
Year 2006	-30.63 (24.30)
Year 2007	-28.03 (27.47)

Constant	-608.7 (755.3)
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Fixed-Effects	N = 819
R ²	0.129
Observations	2230

Clustered standard errors in parentheses

*** p<0.001, ** p<0.01, * p<0.05

Several of the control variables in the model are significant. The total number of encounters, the proportion of patients ages 5 to 18, the size of the FQHC staff, the proportion of the staff who are physicians, and the number of short term general hospitals in the area were all significant predictors of the volume of enabling services per 1,000 patient encounters. Specifically, each 1,000 additional encounters an FQHC has in a given year is

associated with an increase of 5.7 additional enabling service encounters provided.

Conversely, each 1 percentage point increase in the proportion of patients ages 5 to 18 is associated with a decrease of 5.5 enabling service encounters provided.

Health centers with a larger staff and health centers where more of the staff are physicians tend to provide a lower volume of enabling services per 1,000 encounters. Each additional FTE staff person is associated with a decrease of 2.2 enabling service encounters, while each percentage point increase in the proportion of staff who are physicians is associated with a decrease of 13.8 enabling service encounters. Finally, each additional short-term general hospital operating in the county where the FQHC is located is associated with the FQHC providing 49.2 more enabling services per 1,000 encounters per year. No other variables in the model were statistically significant.

Enabling FTEs per Capita

The results of the model to predict per capita enabling staff appear in Table 25. Contrary to hypothesis 1.1, but consistent with hypothesis 1.2, the results of two F-tests indicate that neither the proportion of descriptive ($F(3, 818) = 0.73, p = 0.535$) nor the proportion of non-descriptive consumers ($F(3, 818) = 1.62, p = 0.184$) on the board is significantly associated with the number of full-time equivalent enabling service staff per capita. In addition, the composition of the executive committee does not have a significant direct effect on per capita enabling FTEs. The composition of descriptive consumers on the executive committee does appear, however, to significantly diminish the effect that the proportion of non-descriptive consumers has on per capita enabling staff ($t = -1.98, p =$

0.048), but again, the construct of the proportion of non-descriptive consumers is not jointly significant as described above.

Table 25. Results of a Fixed Effect OLS Model to Predict Enabling FTEs per Capita

	Coefficient
FQHC-Level Design Factors	
<i>Board Composition (Lagged One Year)</i>	
% Descriptive Consumers	0.00176 (0.00195)
% Non-Descriptive Consumers	0.00168 (0.00145)
Board Size	0.00255 (0.00327)
Physician on Board	-0.0331 (0.0222)
# Descript. Consumers on Exec. Cmte.	0.0873 (0.0690)
# Non-Descript. Consumers on Exec. Cmte.	0.0325 (0.0365)
(% Descript. Consumers) x (# Descript. Consumers on Exec. Cmte.)	-0.000660 (0.00124)
(% Descript. Consumers) x (# Non-Descript. Consumers on Exec. Cmte.)	-0.00119 (0.000871)
(% Non-Descript. Consumers) x (# Descript. Consumers on Exec. Cmte.)	-0.00198* (0.00100)
(% Non-Descript. Consumers) x (# Non-Descript. Consumers on Exec. Cmte.)	-0.000689 (0.000510)
<i>FQHC Staffing</i>	
Total FTEs	0.00353*** (0.000752)
Physicians as % of Staff	-0.0128* (0.00635)
<i>Funding Source</i>	
Migrant Grantee	0.0573 (0.0718)
Homeless Grantee	0.163 (0.137)
Public Housing Grantee	-1.422 (1.130)
# Delivery Sites	-0.000455 (0.00594)

FQHC-Level Context Factors

# Annual Patient Encounters	-5.32e-06*** (1.42e-06)
Metro Area	0.583 (0.332)
<i>Patients by Age (19 – 64 Omitted)</i>	
% Age < 5	-0.00541 (0.00588)
% Age 5 – 18	-0.00795 (0.00490)
% Age ≥ 65	-0.0101 (0.00820)
<i>Patients by Other Characteristics</i>	
% Male	-0.00411 (0.00386)
% Non-White	-0.000990 (0.000893)
% with Chronic Illness	0.00214* (0.000835)
<i>Patients by Poverty Status (% Unknown Omitted)</i>	
% with Income ≤ 100% FPL	0.000713 (0.000750)
% with Income 101 – 150% FPL	-0.000380 (0.00301)
% with Income 151 – 200% FPL	0.00641 (0.00938)
% with Income ≥ 201% FPL	-0.000686 (0.00265)
<i>Patients by Insurance Status (% Private Omitted)</i>	
% Uninsured	0.000625 (0.00195)
% Medicaid	0.00121 (0.00204)
% Medicare	0.0105* (0.00511)
% Other Public Insurance	0.00419 (0.00361)

County-Level Context Factors

<i>Health Care Supply</i>	
# Hospitals	-0.0322 (0.0291)
Physicians per capita	-0.0826 (0.0582)
# FQHCs	-0.0196* (0.00881)
<i>Population Characteristics</i>	
% Male	-0.0969** (0.0326)
% Non-White	0.00432 (0.0141)
% Hispanic	-0.00301

		(0.0216)
Per Capita Income		2.85e-07
		(6.55e-06)
% Uninsured		0.0309
		(0.0557)
% Unemployed		0.0106
		(0.00905)
<i>Time Trends (Year 2004 Omitted)</i>		
Year 2005		0.00598
		(0.0256)
Year 2006		-0.0124
		(0.0285)
Year 2007		-0.00300
		(0.0314)
Constant		5.196**
		(1.625)
<hr/>		
Fixed-Effects	819	
R ²	0.158	
Observations	2230	
<hr/>		

Clustered standard errors in parentheses

*** p<0.001, ** p<0.01, * p<0.05

Several other variables were statistically significant, but practically small. For example, an increase in annual patient encounters of 100,000 translates into only an 0.53 increase in the number of enabling FTEs per 1,000 patients, which is likely to be relevant for only the largest of health centers with extremely high patient volume. Similarly, for each 100 additional FTE staff persons an FQHC hires, there is, on average, an increase of 0.35 additional enabling service FTEs.

Additional small effects are seen for the proportion of patients with chronic illness and the proportion of patients with Medicare as well as the proportion of the staff comprised of physicians. A health center where all of the patients have a chronic illness is likely to employ only 0.2 additional enabling FTEs compared to a health center where none of the patients have a chronic illness. A ten percentage point increase in the proportion of patients

with Medicare is associated with an increase of only 0.1 additional enabling staff per capita, although this effect got slightly smaller (0.09) and became insignificant in the sample of fully-compliant health centers.

A ten percentage point increase in the proportion of the staff comprised of physicians is associated with a decrease of 0.13 enabling staff per capita, although this effect decreased and became insignificant in the sample of fully-compliant health centers. Each additional FQHC operating in the county is also associated with a slight decrease of 0.02 full-time equivalent enabling staff persons. A more substantial effect is observed for FQHCs with a greater proportion of male patients. A ten percentage point increase in the proportion of male patients is associated with 1 fewer full-time enabling service employee.

Uncompensated Care Ratio

The results of the model to predict the uncompensated care ratio appear in Table 26. An uncompensated care ratio of 1 indicates that an FQHC provides an amount of uncompensated care exactly equal to the amount of its federal grant award. It follows that a ratio below 1 is indicative of an FQHC using some portion of its federal grant for purposes other than providing uncompensated care, while a ratio greater than 1 indicates that an FQHC provides more uncompensated care than its federal grant can cover. With respect to the notion of mission and margin, an FQHC with an uncompensated care ratio of 1 can be considered “balanced” while a ratio below 1 can be considered margin oriented and a ratio above 1 can be considered mission oriented.

Table 26. Results of a Fixed Effect OLS Model to Predict Uncompensated Care Ratio

	Coefficient
FQHC-Level Design Factors	
<i>Board Composition (Lagged One Year)</i>	
% Descriptive Consumers	0.00228 (0.00346)
% Non-Descriptive Consumers	-0.00358 (0.00360)
Board Size	-0.00324 (0.0100)
Physician on Board	0.0394 (0.0483)
# Descript. Consumers on Exec. Cmte.	-0.172 (0.124)
# Non-Descript. Consumers on Exec. Cmte.	-0.0177 (0.0811)
(% Descript. Consumers) x (# Descript. Consumers on Exec. Cmte.)	0.00167 (0.00166)
(% Descript. Consumers) x (# Non-Descript. Consumers on Exec. Cmte.)	-0.000995 (0.00146)
(% Non-Descript. Consumers) x (# Descript. Consumers on Exec. Cmte.)	0.00234 (0.00173)
(% Non-Descript. Consumers) x (# Non-Descript. Consumers on Exec. Cmte.)	0.00151 (0.00125)
<i>FQHC Staffing</i>	
Total FTEs	-0.00180 (0.00139)
Physicians as % of Staff	0.00149 (0.0109)
<i>Funding Source</i>	
Migrant Grantee	-0.135 (0.101)
Homeless Grantee	-0.0599 (0.0790)
Public Housing Grantee	-0.744** (0.245)
# Delivery Sites	-0.0117 (0.00769)
FQHC-Level Context Factors	
# Annual Patient Encounters	7.71e-06** (2.47e-06)
Metro Area	0.153 (0.292)
<i>Patients by Age (19 – 64 Omitted)</i>	
% Age < 5	-0.00434 (0.00766)

% Age 5 – 18	0.00518 (0.00595)
% Age ≥ 65	-0.0241* (0.0117)
<i>Patients by Other Characteristics</i>	
% Male	-0.00875 (0.00902)
% Non-White	-0.000521 (0.00197)
% with Chronic Illness	-0.00163 (0.00135)
<i>Patients by Poverty Status (% Unknown Omitted)</i>	
% with Income ≤ 100% FPL	0.000547 (0.00108)
% with Income 101 – 150% FPL	0.000503 (0.00235)
% with Income 151 – 200% FPL	-0.00280 (0.00253)
% with Income ≥ 201% FPL	0.000180 (0.00141)
<i>Patients by Insurance Status (% Private Omitted)</i>	
% Uninsured	0.0125*** (0.00357)
% Medicaid	0.000736 (0.00359)
% Medicare	0.00561 (0.00876)
% Other Public Insurance	-0.0143 (0.00910)
County-Level Context Factors	
<i>Health Care Supply</i>	
# Hospitals	-0.00243 (0.0360)
Physicians per capita	0.0223 (0.0860)
# FQHCs	-0.0129 (0.0112)
<i>Population Characteristics</i>	
% Male	0.00402 (0.0330)
% Non-White	0.0188 (0.0150)
% Hispanic	0.0267 (0.0269)
Per Capita Income	-6.33e-06 (5.28e-06)
% Uninsured	-0.0523 (0.0610)
% Unemployed	0.00719 (0.0180)
<i>Time Trends (Year 2004 Omitted)</i>	

Year 2005	-0.00178 (0.0395)
Year 2006	0.0528 (0.0317)
Year 2007	0.0997* (0.0395)
Constant	0.996 (1.855)
<hr/>	
Fixed-Effects	819
R ²	0.074
Observations	2230
<hr/>	

Clustered standard errors in parentheses

*** p<0.001, ** p<0.01, * p<0.05

Contrary to hypothesis 1.1, but consistent with hypothesis 1.2, the results of two F-tests indicate that neither the proportion of descriptive ($F(3, 818) = 0.85, p = 0.466$) nor the proportion of non-descriptive consumers ($F(3, 818) = 0.74, p = 0.527$) on the board is significantly associated with the amount of uncompensated care a health center provides. However, the construct for the number of non-descriptive consumers on the executive committee is jointly significant ($F(3, 818) = 2.90, p = 0.0343$).

Contrary to hypotheses 3.2a and 3.2b, at mean values of descriptive and non-descriptive representation, each additional non-descriptive consumer on the executive committee is associated with an 0.02 unit increase in the uncompensated care ratio. For the average health center, this represents a 1.9% increase.

In addition, a few significant control variables were identified, which suggest that the growth in the amount of uncompensated care FQHCs are providing is outpacing the growth in the amount of their federal grants, that FQHCs with higher volume provide relatively more uncompensated care, and of course, that FQHCs that see a greater proportion of uninsured patients are providing more uncompensated care. Conversely, health centers with a greater

proportion of patients age 65 or older and health centers that receive a public housing health center grant tend to provide relatively less uncompensated care.

Specifically, from 2004 to 2007, the average health center's uncompensated care ratio increased by 0.1 units. For a health center that provided an amount of uncompensated care equal to the amount of its federal grant in 2004, this is the equivalent of a health center providing 10% more uncompensated care in 2007 than in 2004, holding its grant funding constant. For health centers that were already providing more uncompensated care relative to their grant funds in 2004, the effect in percentage terms is smaller, while for health centers that provided less uncompensated care relative to their grant funds in 2004, the effect in percentage terms is greater.

FQHCs that receive a grant from the health care for residents of public housing program have an uncompensated care ratio 0.74 units lower than that of CHC-only grantees. Relative to a break-even point of 1, this is a large effect. The total number of annual encounters is positively associated with the uncompensated care ratio. Each additional 100,000 annual encounters is associated with an 0.77 unit increase in the uncompensated care ratio. While such an increase in patient encounters is likely only relevant for the largest health centers, again, relative to a break-even point of 1, this is a large effect.

The proportion of FQHC patients who are age 65 or older is negatively associated with the uncompensated care ratio. Each 10 percentage point increase in this age group is associated with an 0.24 unit decrease in the uncompensated care ratio. While the coefficient on Medicare was not statistically significant, the coefficient on the proportion of patients age 65 and above most likely reflects the universal coverage provided to all U.S. citizens through the Medicare program, especially considering that the proportion of patients uninsured is

positively associated with the uncompensated care ratio. Each 10 percentage point increase in the proportion of patients without insurance is associated with an 0.13 unit increase in the uncompensated care ratio. However, in both sensitivity analyses, the coefficient on the proportion of patients age 65 and above was no longer significant.

The Relationship between Consumer Governance and Margin-Oriented Outcomes

The third research question sought to understand if a greater proportion of descriptive consumers on the board was negatively associated with a health center's financial performance. Hypothesis 2.1 predicted that the percentage of board members who are descriptive consumers would be positively associated with the percentage of costs attributable to enabling services and the average cost per medical encounter, but negatively associated with operating margin and self-sufficiency.

Hypothesis 2.2 predicted that there would be no relationship between any of the margin-oriented outcomes and the proportion of non-descriptive consumers on the board. A number of board composition variables, including in one case the proportion of descriptive consumers on the board, were significant predictors of health center financial performance. Other factors at both the county and FQHC level were also significant.

Percentage of Costs Attributable to Enabling Services

The results of the model to predict the percentage of costs attributable to enabling services appear in Table 27. The percentage of costs attributable to enabling services is a reflection of how many relative financial resources an FQHC devotes to providing enabling services. While a higher percentage of costs may be indicative of an FQHC providing more

enabling services, it may also be the result of an FQHC having lower costs in other areas. Likewise, an FQHC with a low percentage of costs attributable to enabling services may provide a significant volume of enabling services, while providing an even greater amount of clinical care, which lowers the percentage without any change in the absolute amount provided.

Table 27. Results of a Fixed Effect OLS Model to Predict the Percent of Costs Attributable to Enabling Services

	Coefficient
FQHC-Level Design Factors	
<i>Board Composition (Lagged One Year)</i>	
% Descriptive Consumers	0.0107 (0.0217)
% Non-Descriptive Consumers	0.0272 (0.0204)
Board Size	0.0232 (0.0388)
Physician on Board	-0.677* (0.281)
# Descript. Consumers on Exec. Cmte.	-0.216 (0.831)
# Non-Descript. Consumers on Exec. Cmte.	0.307 (0.428)
(% Descript. Consumers) x (# Descript. Consumers on Exec. Cmte.)	0.0129 (0.0176)
(% Descript. Consumers) x (# Non-Descript. Consumers on Exec. Cmte.)	-0.0157 (0.00909)
(% Non-Descript. Consumers) x (# Descript. Consumers on Exec. Cmte.)	-0.0101 (0.0101)
(% Non-Descript. Consumers) x (# Non-Descript. Consumers on Exec. Cmte.)	-0.00519 (0.00649)
<i>FQHC Staffing</i>	
Total FTEs	0.00250 (0.00577)
Physicians as % of Staff	-0.122* (0.0486)
<i>Funding Source</i>	
Migrant Grantee	-0.386 (0.684)

Homeless Grantee	0.794 (0.707)
Public Housing Grantee	-0.938 (1.065)
# Delivery Sites	0.0232 (0.0508)
FQHC-Level Context Factors	
# Annual Patient Encounters	-1.93e-05* (9.61e-06)
Metro Area	-4.544 (2.798)
<i>Patients by Age (19 – 64 Omitted)</i>	
% Age < 5	0.0484 (0.0405)
% Age 5 – 18	0.0374 (0.0603)
% Age ≥ 65	0.0578 (0.0657)
<i>Patients by Other Characteristics</i>	
% Male	0.00466 (0.0371)
% Non-White	0.00115 (0.00723)
% with Chronic Illness	0.00541 (0.00847)
<i>Patients by Poverty Status (% Unknown Omitted)</i>	
% with Income ≤ 100% FPL	-0.00588 (0.00646)
% with Income 101 – 150% FPL	0.00717 (0.0180)
% with Income 151 – 200% FPL	0.0138 (0.0264)
% with Income ≥ 201% FPL	0.00206 (0.00865)
<i>Patients by Insurance Status (% Private Omitted)</i>	
% Uninsured	0.0259 (0.0233)
% Medicaid	0.0215 (0.0194)
% Medicare	0.00484 (0.0509)
% Other Public Insurance	0.0333 (0.0273)
County-Level Context Factors	
<i>Health Care Supply</i>	
# Hospitals	0.0192 (0.221)
Physicians per capita	0.242 (0.577)
# FQHCs	-0.00973

	(0.0370)
<i>Population Characteristics</i>	
% Male	-0.325 (0.275)
% Non-White	0.143 (0.0878)
% Hispanic	0.295 (0.262)
Per Capita Income	7.36e-05 (4.42e-05)
% Uninsured	-0.120 (0.612)
% Unemployed	0.0445 (0.0820)
<i>Time Trends (Year 2004 Omitted)</i>	
Year 2005	-0.0529 (0.252)
Year 2006	-0.467 (0.247)
Year 2007	-0.684* (0.296)
Constant	15.34 (17.22)
Fixed-Effects	819
R ²	0.072
Observations	2230

Clustered standard errors in parentheses

*** p<0.001, ** p<0.01, * p<0.05

Contrary to hypothesis 2.1, but consistent with hypothesis 2.2, the results of two F-tests indicate that neither the proportion of descriptive consumers ($F(3, 818) = 1.20$, $p = 0.309$) nor the proportion of non-descriptive consumers ($F(3, 818) = 0.77$, $p = 0.509$) on the board is significantly associated with the percentage of a health center's total costs attributable to enabling services. In fact, only one of the board composition variables, an indicator of whether a physician served on the board, was significantly associated with the percentage of costs attributable to enabling services. An FQHC with at least one physician on the board spends 0.68 percentage points less of their total costs on enabling services compared to FQHCs without a physician on the board. At the mean, this is the equivalent of

spending \$58,584 less on enabling services, although the range in the data was quite broad, going from a low of \$3,956 to a high of approximately \$1 million.

A similar effect was seen regarding the proportion of FQHC staff who are physicians. Each additional percentage point increase in this variable is associated with an 0.12 percentage point decrease in the percentage of costs attributable to enabling services. Together, having relatively more physicians on the staff and at least one physician on the board has a cumulative effect of reducing the percentage of costs attributable to enabling services. It is unclear whether this is the result of physicians emphasizing clinical care, de-emphasizing enabling services, or both.

While not statistically significant in the main regression, the coefficient on the variable indicating whether a health center was located in a metro area became significant in the sensitivity analysis limited to the sample of fully-compliant FQHCs. Specifically, in that analysis, the percentage of costs attributable to enabling services is 4.7 percentage points lower for FQHCs in metro areas than in non-metro areas, which may reflect that certain enabling services, like transportation, are provided less often in densely populated urban areas with available means of public transportation or where walking to the health center is a viable option.

Some of the costs associated with providing enabling services appear to be somewhat fixed costs, which can be spread over a larger number of patients as caseload increases. This might explain why each additional 10,000 annual patient encounters is associated with an 0.2 percentage point decrease in the percent of costs attributable to enabling services. The practical impact of this effect in large health centers is considerable, as 100,000 additional patient encounters translates into a 2 percentage point decrease in the amount of total costs

spent on enabling services. Given that the mean of this variable is just under 7.5%, a 2-percentage point drop would represent a 26.7% decrease. However, in both of the sensitivity analysis conducted, the coefficient on total encounters was no longer significant.

The general time trend suggests that enabling services are occupying a smaller part of the budget over time, decreasing by nearly 0.7 percentage points from 2004 to 2007. While this reflects a relative decline in the amount of financial resources being allocated to the provision of enabling services, it is unclear from these data alone, whether that reflects a relative decline in the amount of enabling services provided, an absolute decline in the cost of providing enabling services, a relative increase in the amount of other services provided, or an absolute increase in the cost of other services a health center provides. Of course, it may also be a combination of some or all of those things. In the sensitivity analysis limited to the fully-compliant sample, the coefficient on this variable decreased to 0.52 and was no longer statistically significant. No other variables were statistically significant.

Average Medical Cost per Medical Encounter

The results of the model to predict the average medical cost per medical encounter appear in Table 28. The average medical cost per medical encounter is a measure of health center efficiency. First, it should be noted that the general time trend indicates a significant increase in this variable over time. The \$8.98 increase from 2004 to 2007 most likely represents general inflation and the rising cost of health care, though it may also indicate that some FQHCs have grown less efficient over time.

Table 28. Results of a Fixed Effect OLS Model to Predict Average Medical Cost per Medical Encounter

	Coefficient
FQHC-Level Design Factors	
<i>Board Composition (Lagged One Year)</i>	
% Descriptive Consumers	0.0589 (0.113)
% Non-Descriptive Consumers	0.00968 (0.0873)
Board Size	1.694 (0.962)
Board Size2	-0.0445 (0.0325)
Physician on Board	2.655* (1.219)
# Descript. Consumers on Exec. Cmte.	8.794 (4.527)
# Non-Descript. Consumers on Exec. Cmte.	-1.774 (2.362)
(% Descript. Consumers) x (# Descript. Consumers on Exec. Cmte.)	-0.194* (0.0943)
(% Descript. Consumers) x (# Non-Descript. Consumers on Exec. Cmte.)	0.0432 (0.0507)
(% Non-Descript. Consumers) x (# Descript. Consumers on Exec. Cmte.)	-0.0845 (0.0514)
(% Non-Descript. Consumers) x (# Non-Descript. Consumers on Exec. Cmte.)	0.0169 (0.0316)
<i>FQHC Staffing</i>	
Total FTEs	0.435*** (0.0477)
Physicians as % of Staff	0.231 (0.393)
<i>Funding Source</i>	
Migrant Grantee	-1.027 (4.624)
Homeless Grantee	-8.408* (3.673)
Public Housing Grantee	14.53 (12.20)
# Delivery Sites	0.0909 (0.300)
FQHC-Level Context Factors	
# Annual Patient Encounters	-0.000716*** (7.62e-05)
Metro Area	16.69

	(16.20)
<i>Patients by Age (19 – 64 Omitted)</i>	
% Age < 5	-0.0668 (0.284)
% Age 5 – 18	-0.461 (0.241)
% Age ≥ 65	-0.943 (0.540)
<i>Patients by Other Characteristics</i>	
% Male	0.202 (0.248)
% Non-White	-0.116 (0.0733)
% with Chronic Illness	-0.0601 (0.0599)
<i>Patients by Poverty Status (% Unknown Omitted)</i>	
% with Income ≤ 100% FPL	-0.00146 (0.0440)
% with Income 101 – 150% FPL	-0.0699 (0.125)
% with Income 151 – 200% FPL	-0.0394 (0.157)
% with Income ≥ 201% FPL	0.0501 (0.0730)
<i>Patients by Insurance Status (% Private Omitted)</i>	
% Uninsured	-0.125 (0.146)
% Medicaid	0.208 (0.141)
% Medicare	1.038* (0.512)
% Other Public Insurance	0.0544 (0.192)
County-Level Context Factors	
<i>Health Care Supply</i>	
# Hospitals	4.217** (1.494)
Physicians per capita	-1.933 (3.060)
# FQHCs	-0.473** (0.173)
<i>Population Characteristics</i>	
% Male	-2.578 (1.844)
% Non-White	-0.769 (0.682)
% Hispanic	0.275 (1.271)
Per Capita Income	0.000903*** (0.000226)
% Uninsured	-0.201

	(2.881)
% Unemployed	0.0409
	(0.581)
<i>Time Trends (Year 2004 Omitted)</i>	
Year 2005	0.951
	(1.412)
Year 2006	4.083**
	(1.264)
Year 2007	8.979***
	(1.716)
Constant	188.1
	(97.45)
<hr/>	
Fixed-Effects	819
R ²	0.291
Observations	2230
<hr/>	

Clustered standard errors in parentheses

*** p<0.001, ** p<0.01, * p<0.05

Contrary to hypothesis 2.1, but consistent with hypothesis 2.2., the results of two F-tests indicate that neither the proportion of descriptive consumers ($F(3, 818) = 1.44$, $p = 0.231$) nor the proportion of non-descriptive consumers ($F(3, 818) = 1.15$, $p = 0.327$) on the board is significantly associated with a health center's average medical cost per medical encounter. Furthermore, while the interaction between the proportion of descriptive consumers on the board and the number of descriptive consumers on the executive committee is statistically significant, the full construct of executive committee composition is not significant for either descriptive ($F(3, 818) = 1.43$, $p = 0.233$) or non-descriptive consumers ($F(3, 818) = 0.25$, $p = 0.862$).

Larger FQHCs face a tradeoff with regards to efficiency, although bigger tends, overall, to be better. On the one hand, hiring more staff drives costs up as each additional FTE is associated with a \$0.44 increase in the average cost of medical care per medical encounter. On the other hand, having more annual encounters appears to invite economies of

scale, which make the FQHC more efficient. Each additional 10,000 annual encounters is associated with a \$7.16 decrease in the average cost of a medical encounter.

FQHCs also appear to compete with each other, or perhaps to share resources, resulting in lower costs. Each additional FQHC operating in the community is associated with a \$0.47 decrease in the average cost of a medical encounter. The same is not true of hospitals. Each additional hospital operating in the community is associated with a \$4.22 increase in the cost of a medical encounter. In the fully-compliant sample, the health center effect declined to \$0.32 and was no longer significant.

Other factors that increase the average cost of care include the per capita income level in the community and whether or not a physician sits on the FQHC board. The former is associated with an \$0.90 increase for every \$1,000 increase in per capita income, while the latter is associated with a \$2.66 increase. In the sensitivity analysis excluding executive committee variables and interactions, the coefficient on the physician dummy variable was no longer significant, but the coefficient on board size became significant and suggested that each additional board member was associated with a \$2.01 increase in the average medical cost per medical encounter.

Older and/or disabled patients also appear to be more expensive, as each percentage point increase in the population of patients with Medicare is associated with an increase of \$1.04 in the average medical cost per medical encounter. In the sensitivity analysis excluding executive committee composition variables, this Medicare effect decreased by one cent to \$1.03 and was no longer significant, indicating that it was only marginally significant to begin with.

Operating Margin

The results of the model to predict operating margin appear in Table 29. Operating margin is a measure of organizational profitability, where a value of zero indicates that the health center's costs equal its revenues, while positive values indicate that revenues exceed costs and negative values indicate that costs exceed revenues.

As hypothesized, the proportion of descriptive consumers on the board is negatively associated with health center operating margin, while there is no significant relationship between the proportion of non-descriptive consumers and operating margin. Specifically, for a health center with no consumers—either descriptive or non-descriptive—on the executive committee, each ten percentage point increase in the proportion of descriptive consumers on the board is associated with a 1.7 percentage point decrease in operating margin.

Table 29. Results of a Fixed Effect OLS Model to Predict Operating Margin

	Coefficient
FQHC-Level Design Factors	
<i>Board Composition (Lagged One Year)</i>	
% Descriptive Consumers	-0.169* (0.0765)
% Non-Descriptive Consumers	-0.0253 (0.0662)
Board Size	-0.0353 (0.158)
Physician on Board	2.151 (1.272)
# Descript. Consumers on Exec. Cmte.	-1.780 (2.190)
# Non-Descript. Consumers on Exec. Cmte.	-2.023 (1.776)
(% Descript. Consumers) x (# Descript. Consumers on Exec. Cmte.)	0.0637 (0.0366)
(% Descript. Consumers) x (# Non-Descript. Consumers on Exec. Cmte.)	0.0725* (0.0322)
(% Non-Descript. Consumers) x	0.00958

(# Descript. Consumers on Exec. Cmte.)	(0.0319)
(% Non-Descript. Consumers) x	0.0184
(# Non-Descript. Consumers on Exec. Cmte.)	(0.0248)
<i>FQHC Staffing</i>	
Total FTEs	-0.0884***
	(0.0240)
Physicians as % of Staff	0.0772
	(0.295)
<i>Funding Source</i>	
Migrant Grantee	0.928
	(4.688)
Homeless Grantee	0.628
	(1.626)
Public Housing Grantee	8.373**
	(3.010)
# Delivery Sites	0.0822
	(0.182)
FQHC-Level Context Factors	
# Annual Patient Encounters	5.72e-05
	(4.71e-05)
Metro Area	4.952
	(12.18)
<i>Patients by Age (19 – 64 Omitted)</i>	
% Age < 5	-0.188
	(0.228)
% Age 5 – 18	0.0270
	(0.172)
% Age ≥ 65	0.504
	(0.392)
<i>Patients by Other Characteristics</i>	
% Male	-0.108
	(0.250)
% Non-White	0.0946*
	(0.0482)
% with Chronic Illness	-0.0798
	(0.0407)
<i>Patients by Poverty Status (% Unknown Omitted)</i>	
% with Income ≤ 100% FPL	-0.0505
	(0.0329)
% with Income 101 – 150% FPL	0.0411
	(0.0753)
% with Income 151 – 200% FPL	-0.0126
	(0.118)
% with Income ≥ 201% FPL	0.0969
	(0.0684)
<i>Patients by Insurance Status (% Private Omitted)</i>	
% Uninsured	-0.0260
	(0.120)
% Medicaid	0.142

	(0.154)
% Medicare	0.173
	(0.307)
% Other Public Insurance	0.220
	(0.283)
County-Level Context Factors	
<i>Health Care Supply</i>	
# Hospitals	1.140
	(0.928)
Physicians per capita	-1.488
	(2.143)
# FQHCs	0.0829
	(0.148)
<i>Population Characteristics</i>	
% Male	-2.193
	(1.188)
% Non-White	0.507
	(0.545)
% Hispanic	1.746
	(0.900)
Per Capita Income	-3.53e-05
	(0.000247)
% Uninsured	2.457
	(2.641)
% Unemployed	0.415
	(0.403)
<i>Time Trends (Year 2004 Omitted)</i>	
Year 2005	-1.672
	(1.208)
Year 2006	-0.905
	(1.266)
Year 2007	-0.151
	(1.456)
Constant	25.91
	(67.69)
<hr/>	
Fixed-Effects	819
R ²	0.052
Observations	2230
<hr/>	

Clustered standard errors in parentheses

*** p<0.001, ** p<0.01, * p<0.05

Given an average operating margin of approximately -4%, this is a very sizable effect, which could possibly make the difference between a health center earning a small profit, breaking even, or operating a deficit. What is more, in the sample limited to fully-compliant

centers, the magnitude of this effect increased, such that a ten percentage point increase in the proportion of descriptive consumers is associated with a 2.6 percentage point decrease in operating margin. When executive committee composition was omitted from the model, however, the coefficient no longer remained significant.

The effect of the proportion of descriptive consumers on the board is not so straightforward, however, if there are also consumers on the executive committee. Specifically, the effect of the proportion of descriptive consumers on the board on operating margin depends on the number of descriptive and non-descriptive consumers on the executive committee. However, the results of an F-test indicate that for boards with at least one consumer—either descriptive or non-descriptive—on the executive committee, the effect of the proportion of descriptive consumers on operating margin is no longer significant ($F(3, 818) = 1.90, p = 0.128$).

In addition to these board composition variables, three other variables were significant predictors of operating margin. These were the size of health center staff, whether a health center received public housing grant funds, and the proportion of non-white patients. In particular, each 10 additional FTE staff persons hired was associated with an 0.88 percentage point decrease in operating margin. This likely reflects the increased cost of hiring additional staff. Operating margin was 8.4 percentage points higher among health centers that received public housing grant funds as compared to health centers that received only CHC grant funds. It is not clear from these data whether this reflects an increase in revenue or a decrease in costs.

Lastly, each 10 percentage point increase in the proportion of non-white patients was associated with a 0.95 percentage point increase in operating margin. In a sensitivity analysis

excluding executive committee variables, the coefficient on the proportion of non-white patients decreased slightly to 0.089 and was no longer significant, while the coefficient on the proportion of the county population that is Hispanic became significant. This coefficient had a value of 1.89, indicating that for each 10 percentage point increase in the proportion of the county's Hispanic population, the health center's operating margin increases by nearly 19 percentage points.

Financial Self-Sufficiency

The results of the model to predict financial self-sufficiency appear in Table 30. Before presenting the results, it is important to keep in mind that financial self-sufficiency was modeled in logged form, so the interpretation of these results is slightly different. Unit changes in the explanatory variables are interpreted as percentage changes in the dependent variable. While the relationship is linear, the percentage interpretation results in different absolute values at different points in the distribution of the variable.

Table 30. Results of a Fixed Effect OLS Model to Predict Financial Self-Sufficiency

	Coefficient
FQHC-Level Design Factors	
<i>Board Composition</i>	
% Descriptive Consumers	-0.00228 (0.00121)
% Non-Descriptive Consumers	-0.000117 (0.00100)
Board Size	-0.00319 (0.00231)
Physician on Board	0.00722 (0.0169)
# Descript. Consumers on Exec. Cmte.	0.0208 (0.0291)
# Non-Descript. Consumers on Exec. Cmte.	-0.0364 (0.0241)
(% Descript. Consumers) x	0.000653

(# Descript. Consumers on Exec. Cmte.)	(0.000519)
(% Descript. Consumers) x (# Non-Descript. Consumers on Exec. Cmte.)	0.00118* (0.000470)
(% Non-Descript. Consumers) x (# Descript. Consumers on Exec. Cmte.)	-0.000587 (0.000417)
(% Non-Descript. Consumers) x (# Non-Descript. Consumers on Exec. Cmte.)	0.000261 (0.000346)
<i>FQHC Staffing</i>	
Total FTEs	-0.00168*** (0.000394)
Physicians as % of Staff	0.00215 (0.00382)
<i>Funding Source</i>	
Migrant Grantee	0.0771 (0.0504)
Homeless Grantee	-0.000516 (0.0277)
Public Housing Grantee	0.117* (0.0502)
# Delivery Sites	0.000531 (0.00263)
FQHC-Level Context Factors	
# Annual Patient Encounters	3.15e-06*** (7.31e-07)
Metro Area	0.313* (0.126)
<i>Patients by Age (19 – 64 Omitted)</i>	
% Age < 5	0.00259 (0.00305)
% Age 5 – 18	0.00225 (0.00323)
% Age ≥ 65	0.0117* (0.00510)
<i>Patients by Other Characteristics</i>	
% Male	0.00163 (0.00295)
% Non-White	0.00109 (0.000652)
% with Chronic Illness	-0.000414 (0.000512)
<i>Patients by Poverty Status (% Unknown Omitted)</i>	
% with Income ≤ 100% FPL	4.51e-05 (0.000478)
% with Income 101 – 150% FPL	0.000186 (0.00116)
% with Income 151 – 200% FPL	0.00159 (0.00149)

% with Income \geq 201% FPL	0.00128 (0.000669)
<i>Patients by Insurance Status (% Private Omitted)</i>	
% Uninsured	-0.00238 (0.00158)
% Medicaid	0.00426* (0.00199)
% Medicare	-6.06e-05 (0.00351)
% Other Public Insurance	0.00478 (0.00303)
County-Level Context Factors	
<i>Health Care Supply</i>	
# Hospitals	0.0108 (0.0129)
Physicians per capita	0.0418 (0.0439)
# FQHCs	0.00172 (0.00216)
<i>Population Characteristics</i>	
% Male	-0.00326 (0.0158)
% Non-White	0.000245 (0.00637)
% Hispanic	0.0301* (0.0132)
Per Capita Income	1.12e-06 (3.96e-06)
% Uninsured	0.117*** (0.0293)
% Unemployed	-0.00126 (0.00602)
<i>Time Trends (Year 2004 Omitted)</i>	
Year 2005	-0.0453** (0.0164)
Year 2006	-0.00526 (0.0191)
Year 2007	-0.00721 (0.0216)
Constant	1.170 (0.960)
<hr/>	
Fixed-Effects	819
R ²	0.124
Observations	2230

Clustered standard errors in parentheses

*** p<0.001, ** p<0.01, * p<0.05

Contrary to hypothesis 2.1, but consistent with hypothesis 2.2, the results of two F-tests indicate that neither the proportion of descriptive consumers ($F(3, 818) = 2.22, p = 0.084$) nor the proportion of non-descriptive consumers ($F(3, 818) = 1.70, p = 0.165$) on the board is significantly associated with health center financial self-sufficiency. The interaction between the proportion of descriptive consumers on the board and the number of non-descriptive consumers on the executive committee is significant ($t = 2.51, p = 0.012$), but the full construct including this interaction was not jointly significant ($F(3, 818) = 2.51, p = 0.058$). However, the results of an F-test on the construct of descriptive consumers on the executive committee ($F(3, 818) = 5.77, p = 0.0007$) indicates that for an average board with 26.5% descriptive and 42.6% non-descriptive consumers, each additional descriptive consumer on the executive committee is associated with a 1.3% increase in self-sufficiency.

The strongest explanatory factors are related to community and FQHC-level context factors. Specifically, FQHCs in a metro area have 31.3% greater self-sufficiency than those in non-metro areas. Each percentage point increase in the proportion of the county's Hispanic population is associated with a 3% increase in self-sufficiency. Each percentage point increase in the proportion of uninsured in the population is associated with an 11.7% increase in self-sufficiency. Each additional 10,000 patient encounters is associated with a 3.2% increase in self-sufficiency. FQHCs that receive a health care for residents of public housing grant are 11.7% more self-sufficient than CHC-only grantees.

The proportion of patients age 65 and up and the proportion of patients with Medicaid coverage are both positively associated with financial self-sufficiency. Each additional percentage point increase in the patient population age 65 and up is associated with a 1.2% increase in self-sufficiency. Each additional percentage point increase in the patient

population with Medicaid coverage is associated with an 0.4% increase in self-sufficiency. More staff also meant less self-sufficiency. Each 10 additional full-time staff hired was associated with a 1.7% decrease in self-sufficiency.

Compared to 2004, health center self-sufficiency decreased by 4.5% in 2005. This trend did not continue into 2006 and 2007, indicating a one-year shock, which might be related to the small sample size of 2004 board data, which—because of the one-year lag—are modeled with the 2005 data.

The Moderating Role of Executive Committee Leadership

The fourth research question sought to understand whether the composition of the board's executive committee moderated the relationship between board composition and health center outcomes. This potential moderating effect was assessed by including a series of interaction terms in the regressions for models 1.1 through 1.4 and 2.1 through 2.4.

The interaction terms have the effect of estimating four different slopes that can be interpreted as the difference, by executive committee consumer composition, in the effect of the proportion of descriptive and non-descriptive consumers on health center outcomes. Individual t-tests on the coefficients of these interaction terms find that 6 out of 32 of them are statistically significant as shown in the results tables from all eight primary regressions.

Notably consistent with hypothesis 3.1b, for 3 of the 4 mission-oriented variables, the interaction between the proportion of non-descriptive consumers on the board and the number of descriptive consumers on the executive committee was significant and negative, suggesting a conflicting dynamic wherein descriptive consumers on the executive committee

are able, through agenda setting, to moderate the effect of non-descriptive consumers on the board and increase the provision of mission-oriented services.

Similarly, consistent with hypothesis 3.2a, for 2 of the 4 margin-oriented variables, the interaction between the proportion of descriptive consumers on the board and the number of non-descriptive consumers on the executive committee was significant and positive, suggesting that while descriptive consumers may otherwise negatively affect health center operating margin and financial self-sufficiency, non-descriptive consumers on the executive committee are able to provide the necessary financial competence to help the board make more appropriate decisions, from which the health center is able to benefit.

Finally, consistent with hypothesis 3.1a, for the model on average medical cost per medical encounter, the interaction term between the proportion of descriptive consumers and the number of descriptive consumers on the executive committee is significant and negative. This suggests that descriptive consumers strive to keep the cost of a visit to the health center low, and are able to achieve this when they have the backing of the executive committee. While the interaction terms included in the model were mostly insignificant, they were still helpful in explaining variation in the dependent variables, as shown in Table 31.

Table 31. Explanatory Power Contributed by Board Leadership Variables

Model	R-Squared Without Board Leadership Variables	R-Squared With Board Leadership Variables
2.1	Not calculated for Poisson Model	
2.2	0.118	0.129
2.3	0.147	0.158
2.4	0.064	0.074
3.1	0.040	0.072
3.2	0.273	0.291
3.3	0.047	0.052
3.4	0.112	0.124

The Relationship between Consumer Governance and Executive Committee Leadership

The fifth research question sought to predict the likelihood of an individual board member holding an office on the executive committee (chair, vice-chair, secretary, or treasurer) and the likelihood of an individual board member holding the specific office of board chair based on their consumer status. Hypothesis 4.1 predicted that descriptive consumer board members would be less likely than other board members to hold any executive committee office, while Hypothesis 4.2 predicted that descriptive consumer board members would be less likely than other board members to hold the board chair position. The results from two fixed effects logistic regressions are shown in Tables 32 and 33. Significant Wald tests are indicated by asterisks on the corresponding odds ratios.

Table 32. Results of Chamberlain's Conditional Logit Model to Predict Holding Executive Committee Office

	Odds Ratios Pr(Executive Committee Officer = 1 X)
Non-Descriptive Consumer	1.097** (0.0371)
Descriptive Consumer	0.580*** (0.0223)
Tenure 1 (1 – 12 months)	1.196*** (0.0186)
Tenure 2 (12 – 24 months)	1.078*** (0.00559)
Tenure 3 (24 – 48 months)	1.036*** (0.00232)
Tenure 4 (48 – 96 months)	1.007*** (0.00110)
Tenure 5 (96 – 420 months)	1.002*** (0.000398)
Pseudo-R ²	0.1284
Observations	31081

Clustered standard errors in parentheses

*** p<0.001, ** p<0.01, * p<0.05

Table 33. Results of Chamberlain's Conditional Logit Model to Predict Serving as Board Chair

	Odds Ratios Pr(Chair = 1 X)
Non-Descriptive Consumer	1.187** (0.0646)
Descriptive Consumer	0.552*** (0.0370)
Tenure 1 (1 – 12 months)	1.216*** (0.0515)
Tenure 2 (12 – 24 months)	1.094*** (0.0133)
Tenure 3 (24 – 48 months)	1.054*** (0.00435)
Tenure 4 (48 – 96 months)	1.010*** (0.00171)
Tenure 5 (96 – 420 months)	1.003*** (0.000543)
Pseudo-R ²	0.1422
Observations	30853

Clustered standard errors in parentheses

*** p<0.001, ** p<0.01, * p<0.05

As hypothesized, descriptive consumer board members are less likely than non-consumer board members both to hold a position on the executive committee (OR = 0.58) and even less likely to hold the position of board chair (OR = 0.55). Based on the results of a Wald test, they are even less likely to hold either position when compared to non-descriptive consumers (Chair: Chi2(1) = 147.99, p < 0.0001; Any Executive Committee Position: Chi2(1) = 299.48, p < 0.0001). Conversely, while no directional hypothesis was made, non-descriptive consumer board members are more likely than non-consumer board members to hold a position on the executive committee (OR = 1.1) and even more likely to hold the position of board chair (OR = 1.19).

In terms of predicted probabilities, using the average of the probabilities method, non-consumers have an 8.9% chance of being chair, non-descriptive consumers have a 10.3% chance of being chair, and descriptive consumers have a 5.2% chance of being chair, which is roughly one-half the probability of their non-descriptive counterparts. For context, on the average 13-member board a given individual's probability of being chair by chance alone is 7.7% (1 out of 13).

For all board members, tenure was positively associated with the likelihood of holding office. However, the marginal effect of tenure decreased at successively higher levels of tenure. For instance, for board members who have served on the board for less than one year, each additional month of tenure is associated with nearly a 22% increase in the odds of being chair. For board members who have served at least one year, but less than two years, each additional month of tenure is associated with a 9.4% increase in the odds of being board chair. Between two and four years of board service, each additional month of tenure is associated with a 5.4% increase in the odds of being board chair. Then, between four and eight years of board service, the marginal effect of each additional month of tenure has diminished to a 1% increase in the odds of being board chair. After a board member has served for more than eight years, each additional month spent on the board increases the odds of serving as board chair by just 0.3%. The effects of tenure were similar, but not quite as large, in the model predicting holding any executive committee office.

The sixth and final research question was more general. It sought to understand how health center governing boards function, and how their function might explain the relationship between board composition and health center outcomes. This research question was addressed using qualitative interviews, the results of which are presented in Chapter 6.

CHAPTER 6

QUALITATIVE RESULTS

The qualitative portion of this study was conducted to explore the themes of mission, margin, and consumer governance from the perspective of the federally qualified health center (FQHC) board member, gain an understanding of board function in practice, and provide meaningful context for understanding the results of the quantitative portion of the study. While the quantitative results in Chapter 5 are able to partially explain board composition and its association with organizational outcomes, interviews with health center board members revealed much about board function that explains the relationship between board composition and organizational outcomes.

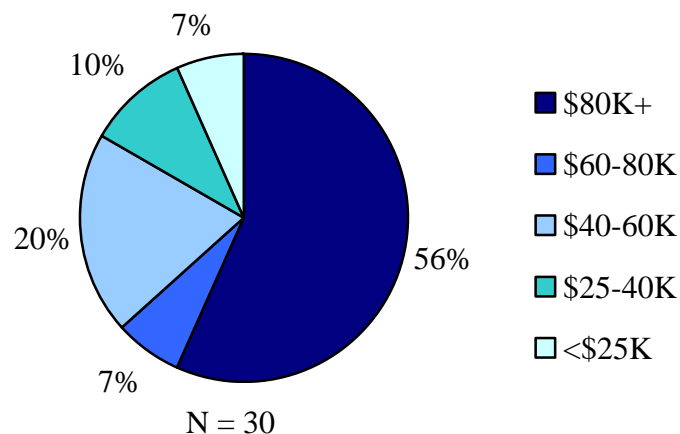
Description of Interview Participants

Telephone interviews were conducted with a total of 30 FQHC board members from 14 different states representing each of the four geographic U.S. Census regions. Board members from health centers in Alaska, California, Florida, Illinois, Kentucky, Maine, Maryland, Massachusetts, Michigan, New York, Oklahoma, South Carolina, Virginia, and Wisconsin participated in the interviews.

The sample consisted of 12 men and 18 women ranging in age from 28 to 75, with a mean age of 56 years. The majority of respondents were white (N = 16) or black (N = 12), although 1 Asian and 1 Hispanic individual also participated. The participants were highly

educated, with 29 of the 30 having at least some college education. In particular, 12 respondents had college degrees, 5 possessed a master's degree, and 6 had earned a doctorate (either a Ph.D. or J.D.). Of the 7 remaining respondents, 6 had attended some college without earning a degree, and 1 was a high school graduate.

Figure 13. Interview Respondents by Household Income Level



The respondents possessed a range of FQHC board experience, with tenures ranging from 3 months to 21 years, with a mean of 6.5 years. Six of the respondents were board chair, three were vice chair, seven were secretary, one was treasurer, and the remaining thirteen did not hold office.

The respondents were predominantly (80%) patients of the health center (N = 24). However, two of these patients also indicated that they did not consider the health center to be their usual source of care, and three additional patients identified themselves solely as users of dental services. In essence, 19 board members (63%) were consumers who considered the health center to be their usual source of primary care, while 11 board members (37%) were either not consumers or consumers who used the health center infrequently or for ancillary services only. Of the 24 respondents who indicated that they

were consumers, the length of time for which they had been a consumer ranged from 1 to 30 years, with a mean of 9.7 years. Comparing individual respondents' consumer tenure to their board tenure revealed that 6 of the 24 (25%) joined the board prior to becoming consumers.

Using information on respondents' income, education, occupation, and consumer status, interview participants were labeled as descriptive consumers, non-descriptive consumers, and non-consumers in order to parallel the quantitative analysis. Interview participants commented extensively about themselves, the boards on which they serve, and the FQHCs they govern. Several important themes emerged and are described here along with excerpts from the interviews that allow the data to speak for themselves. All excerpts are provided as block quotes, with the interviewer's remarks shown in bold.

Navigating the Mission-Margin Tension

Nearly all respondents spoke about how their health center responds to a variety of circumstances and navigates the tension between mission and margin. They described a process that involves the actions of the governing board, staff, and even patients.

An exclusive focus on the mission, while ignoring the finances, would quickly run the health center into the ground. On the other hand, a health center that focuses on finances to the exclusion of its mission is likely to come under scrutiny from the Health Resources and Services Administration (HRSA) for failure to provide care without regard for ability to pay and may lose its funding. While a more balanced approach is likely to avoid such extreme outcomes, there were a few examples given of both "mission-dominant" and "margin-dominant" approaches. For example, several board members reported that there are services that their health center provides even though they lose money on them, because providing the

service is consistent with their mission. According to two non-descriptive consumers from two different health centers:

“Has the board ever judged an effort to be successful even if it lost money?”

Yes, we have done several things; we’ve done the mammogram, which is one thing that comes to mind, that’s what we’ve been discussing recently. There’s a lot of cancer in this particular area. We have been successful in getting a new digital mammography machine, and so we’ve been doing outreach and letting people know that we are going to do mammograms for a minimal fee. They were \$25, which is a loss, but it’s worth it to get these patients in to take it. The very first one we did had cancer, so we felt like that was worthwhile....Flu shots are another thing. This year we had to take a loss in flu shots, but its better in the long run to do these things as a service to the public.”

“Have they ever done something in order to be successful but they lost money? I think I probably would say yes but put a caveat with that. Yes, but to ensure that the mission of the center was carried out....”

In these examples, the health center’s mission was prioritized above the organization’s finances, but that does not necessarily mean that the organization as a whole favors mission over margin. It may be that these costly efforts can be offset with revenues from other areas. Still, some respondents indicated that their board considered the financial aspect to be integral in making decisions. Said one non-descriptive consumer from a health center in rural Florida:

“I don’t think we have ever approved anything knowing it was going to lose money to start with. I don’t recall any incidents like that, that we would ever approve anything that was going to put us in the red from the beginning.”

A similar view was expressed by a descriptive consumer from the same health center:

“Has there ever been anything that’s been done and you know you’re losing money on it, but you think “Hey, it’s a successful thing anyway?”

Not yet.

Usually the bottom line has to kind of be there?

Yes.”

The majority of the time, however, board members indicated a more balanced approach to navigating the mission-margin tension and discussed how this principle was at work in a number of areas including revenue collection strategies, decisions about if and when to expand the health center, and responses to adverse conditions. According to two non-descriptive consumers, one from a Chicago health center and another from a health center in rural Maine:

“[W]e’re serving a population of people that don’t have a lot of money. We have to be very, very frugal and we have to pay a lot of attention to our bottom line because we don’t have huge profit margins. We’re not going to have a million dollars in reserve or something. We know that this is a proposition where you’re not making any money...We’re not in the business to make money. We’re in the business to provide services and provide ministry...We’re not necessarily going to cut a program because it isn’t making any money...I think what we try to do is we try to look at the bottom line and we try to look at the mission.”

“Oh yeah, I mean we aren’t in the business to make money so-to-speak, we’re in the business to provide the best patient care that we can, but we have to remain financially stable or we would be unable to accomplish our mission. We don’t look to make money on each and every segment of the services that we provide.”

While FQHCs do receive federal and other grant funding to offset some of the costs of providing uncompensated care, they also depend heavily on third-party payments from Medicaid, Medicare, and private insurers. Amounts from self-paying patients also contribute a small, but non-negligible, amount to most health centers’ bottom lines. As the respondents described, while health centers are non-profit entities, they must remain financially viable to continue pursuing their service mission. Consequently, it is important that health centers make an effort to collect as much of their billed charges as possible.

Various attempts to maximize revenue collection through billing and collections practices are permitted under the Bureau of Primary Health Care’s (BPHC) program

expectations for FQHCs, so long as they do not conflict with the health center's mission to serve all without regard for their ability to pay. However, the point at which attempts to collect payment from individuals who are unable to pay actually *does* conflict with the mission is not made explicit (Bureau of Primary Health Care, 1998a).

When asked about the strategies employed by their health center to maximize revenue collection, board members described a range of practices including: making requests for payment “up front” before services are delivered, operating an in-house billing department to monitor outstanding balances and negotiate payments with patients, referring patients with overdue balances to an outside collection agency, analyzing “no-shows” to make more efficient use of the physicians' time, and focusing on maximizing Medicaid reimbursement. In more extreme cases, board members reported that their health center will actually “fire” patients by refusing to provide care to individuals who have the ability to pay but simply choose not to do so.

Although payment is often requested at the time of service, and in some cases, patients are offered discounts to encourage up-front payment, most board members indicated that their FQHC maintained a billing department that sends out invoices to patients. When patients fail to pay their bills, despite the best efforts of the health center's billing department, their debts may or may not be sent to an external agency for collections. As one non-consumer from a health center in Chicago reported:

“We put them on the sliding scale depending on their income and then obviously send those bills out, but if they're not paid we don't send them out to an outside collection agency. We send them [a] bill out [every] 30, 60, 90 days and then at that point we typically...have an account for bad debts and we'll just write those off once it gets so old.”

A non-descriptive consumer from another health center in suburban California explained:

“We typically bill patients. Some of the bills are sent to collections every month. We review the total amount that bills every month that need to be sent to collections.”

While several board members did mention the use of collection agencies to pursue payment from patients, it certainly did not get portrayed as a primary strategy. In fact, many board members, including this non-descriptive consumer from a health center in rural Alaska, reported the use of a collection agency to be highly undesirable and counter to their health center’s mission—something to be avoided at all costs:

“I don’t believe, although we have told people that we would send them to collections, but I don’t believe anything has ever been sent to collections, ever. That’s not who we are.”

Board members also stressed the importance of the enhanced Medicaid revenues they receive to sustaining their organization’s finances. They talked about the importance of identifying Medicaid-eligible patients and having staff devoted to screening and enrolling patients in Medicaid. They also discussed going after reimbursements from Medicaid more doggedly than seeking payment from a typical uninsured patient with an outstanding balance. That is, they indicated a propensity for pursuing Medicaid reimbursement—making sure that they received their payments—while being more likely to take a “bad debt” write-off in the case of individual patients who fail to pay their bills.

In all cases, there appear to be two tradeoffs in attempts to collect billed charges. The first is that each health center must decide how to navigate the tension between collecting revenue and abiding by the mission to serve all patients regardless of their ability to pay. At some point, which each health center defines, aggressive collection efforts run counter to the basic health center mission. On the other hand, minimal collection efforts may harm the

organization's finances and consequently threaten the health center's ability to carry out the mission. This becomes a problem where the tension cannot be eliminated, but must be navigated.

The second tradeoff is that attempts at collection are associated with their own financial costs. For example, maintaining a billing department requires salary support for administrative staff, and outside collection agencies do not work free of charge. As one board member put it, "We haven't employed any outside collection agency because that's just another layer of expense. We try to do that all in-house." Therefore, each health center must weigh the costs of pursuing payment against the amount of revenue such activities actually manage to collect. It is possible, in fact, for a health center to worsen its financial position if it spends more pursuing payment than it manages to bring in. In such cases, it would be better for the health center if it had simply elected to claim a bad debt write-off for all outstanding balances.

Another area where the mission-margin tension arises is in the area of health center expansion. Expanding to serve more patients may be consistent with the organization's mission, but may also put a strain on the organization's finances. This view was expressed by a non-descriptive consumer from a health center in urban Maryland:

"I think the biggest decision in the two years that I've been there has been whether or not to expand...And my understanding is that it's the board who makes the final decisions. The [executive] director...is the one who sort of initiates and negotiates it. And with their legal folks he does, if you will, the behind-the-scenes work and then brings it to us to say yea or nay. And there have been times when we have said no because we didn't think that the particular idea was going to either fly, be cost effective, or the best management of resources. That really doesn't happen too often."

A very similar view was reported by a non-consumer from an urban health center in Virginia:

“The challenge that I see [us] having is the need versus capacity. The problem is the clinic is really constrained by size, by square footage. Number one, it hampers the number of beneficiaries that can access it. It hampers the efficiency once the beneficiaries are inside the program because you can’t get them through the system because there’s no place for people to go. If the footprint of the building could be larger, you could enhance efficiencies to see more patients. Because there is such a low patient mix of covered/insured, we can’t get enough money to expand and have capital expansion. It’s kind of like which comes first, the chicken or the egg. The need is so great out there, yet the challenge is finding the monies to expand...The biggest challenge I see as a board member, between missions and the reality of it, is we can’t serve enough people.”

While the mission-margin tension is an everyday reality for most health centers, occasionally certain adverse conditions such as budget cutbacks, provider problems, or inadequate utilization rates for certain services will be encountered that increase the tension even further. Again, the organization’s response to these adverse conditions, be they financial or otherwise, is extremely important. However, this response is not solely the work of the board, but often involves the health center chief executive officer (CEO) and other senior administrative staff. Looking at some of the events health centers have experienced, as well as the board’s response to them, can shed some light on the board’s mission-margin orientation and how it attempts to navigate the mission-margin tension.

Board members reported both eliminating services and reducing staff. Sometimes staff cuts were across the board, while at other times retaining clinicians was prioritized and only administrative staff were let go. In some cases, no staff members were actually let go, but their hours were reduced. In most cases when services were eliminated, it was because those services were not financially sustainable—because they cost too much to operate, were underutilized, and generated very little revenue. According to one non-descriptive consumer from a health center in rural Massachusetts:

“I know that there are some funds that were available in the past that are not going to be available in the upcoming fiscal year. As a result of that they have not so much as gotten rid of staff, but cut back on what was called full time, such that salaries may be lowered somewhat because of the hours.”

A slightly more aggressive response to adversity was reported by a non-descriptive consumer from a health center in New York City:

“Having multiple sites as we do one of the benefits is that you can carry an underperforming location if you’re in the black or doing well at your other sites. It’s almost like an investment portfolio where you balance it out and you have time to invest the resources to try to turn a situation around. Now I can remember...at one point, three things I think we have shut down were pharmacy, dental, and podiatry...Again, this was years ago, but we, at different points, closed clinics when we faced severe budget cuts or staff was replaced, but who those people would be is not the board’s decision.”

The strongest response came from a non-consumer at a health center in rural Michigan:

“Well, again, the board responds to initiatives from management. There was a period a few years ago when things were tight and some people were said goodbye to and some programs were either deferred or cutback.

Was there an effort to maintain clinical care or were they let go off office administrative staff more so?

It was across the board as I remember.

The reason I’m looking at enabling services so much is that those services tend to not be reimbursed well or at all. When there are concerns about revenue, breaking even, and that kind of thing it can be one of the first things to be looked at.

Yeah, that stuff tends to go first.

You would say that is one of the areas.

Yeah.”

It becomes apparent from these scenarios that FQHC boards and senior administrators frequently face a variety of difficult decisions regarding the continued provision of services and the maintenance of the organization’s finances. Accordingly, respondents were asked to discuss the role of the board and the executive director in organizational decisionmaking

related to issues of both mission and margin. Their responses were suggestive of a process wherein the executive director—and to some extent the executive committee of the board—sets the agenda, although some boards appear to be more influential in certain areas than others.

CEO, Staff and Board Influence on Service Provision and Finances

Respondents indicated that the board's work was to provide CEO oversight, to represent the community, to set the budget and create policies, to ensure compliance with state and federal law, and to fulfill their fiduciary duty to the community, steering the organization generally, while leaving the day-to-day operations to the CEO. In fact, the BPHC specifies the governing board's role as follows:

“The governing board of a health center provides leadership and guidance in support of the health center's mission. The board is legally responsible for ensuring that the health center is operating in accordance with applicable federal, state, and local laws and regulations and is financially viable. Day-to-day leadership and management responsibility rests with staff under the direction of the chief executive or program director...A governing board is responsible for assuring that the health center survives in its marketplace while it pursues its mission (Bureau of Primary Health Care, 1998a, pp. 23-24).”

In addition to directing and overseeing the CEO, board members also understand that they are legally responsible for the organization and obligated to act in the best interests of those who entrust it with its responsibilities. Thus, the board has a fiduciary duty to the federal government and others who contribute financially to the organization, to use those monies appropriately. The board also has a fiduciary duty to the community to ensure that the health center remains operational and able to provide health care services to people who depend on it. Several respondents indicated that the board existed to represent the best

interests of the community. According to two non-descriptive consumers, one from a health center in rural Kentucky, the other from a health center in rural Alaska:

“[W]e’re the liaison to the public...Each of us represents an area that [the health center] serves. The purpose of that is to get a good cross section of people on the board so that we can get the right opinions and keep in touch with the public...”

“Our number one responsibility is fiduciary; to make sure that the clinic is able to keep its doors open at all times to serve the needs of the community, and that is to make sure that we’re always financially stable to make that happen.”

The importance of the boards’ budget and policymaking activities is indicated by the fact that more respondents spoke of this aspect than any other when questioned about their view of the board’s working role. While respondents clearly delineated the functions of the board and the CEO when asked explicitly about roles and responsibilities, a different scenario emerged when the line of questioning turned to the specifics of the decisionmaking process, revealing that FQHC CEOs actually wield a significant amount of power.

As discussed earlier, power consists of two component parts: authority and influence (Altshuler, 1970). By law, the board is ultimately responsible for approving the health center’s budget, monitoring the organization’s finances, and setting policies regarding the health center’s provision of services. While the board also has legal authority over the executive director, it is often the executive director and other health center staff who are most influential in guiding the health center according to respondents.

In the case of service provision, ideas for expansion and the provision of new services to address the unmet needs of patients tend to arise not from the board, but from the health center staff. Specifically, providers, through their numerous contacts with patients, are often in a unique position to observe individual patient needs, identify population trends, and raise

concerns to the chief medical officer and/or CEO. Either or both of these individuals then raise the issue before the board, and the board may take a vote or ask the administration to conduct further inquiry into the issue (e.g., identifying funding sources, creating projections of how many patients would use the service, etc.) Very rarely does the idea for a new service originate from within the board itself. In this way, the CEO is exercising Bachrach and Baratz's (1962) "second face of power" by controlling what action items actually make it on to the board's agenda. When asked whether the board or the executive director was more influential in determining which optional services the health center would provide, a non-descriptive consumer from a health center in Chicago said:

"We have a very effective CEO. He is pretty forward looking and he's out there seeing what needs to be done and all and he's a very efficient guy and a very hardworking guy, he's pretty dominant, he's a guy that's out there...I see him as a pretty proactive guy.

Would you say when he sees a new service that needs to be offered, that he brings that to the board meeting and presents it, and then when the board hears that, how much deliberation is there? Is it like, this guy has his act together and we trust him and if he says we need it then we need it, or does the board very often disagree with him?

In the majority of cases, I would say yes, to how you just described it... Sometimes I think we should have a little more discussion...I just think sometimes we're kind of bowled over by the amount of information. As women and sometimes lower income young women are not...it's a tough spot to be sitting there with four lawyers or whatever it is; two doctors and a CEO.

Would you say that when it comes to which enabling services are going to be provided that it works kind of the same way?

Yeah, I think so."

Similarly, a non-descriptive consumer from a health center in New York City reported:

"I think the senior team and the individual clinics director are more involved in those decisions because they're in a much better position to understand the needs of the different communities...The clinic directors really know, you know, do we need Saturday hours, do we need a late night, do we need childcare at this location... Obviously, it has significant financial

implications that go through our financial committee and ends up being considered at that level, but overall I would say that's more of an operation decision for the senior management team...We aren't necessarily the initiators.

It doesn't originate from the board.

Right.”

The same view was also expressed by two non-descriptive consumers in rural settings, one from a health center in Kentucky, and the other from a health center in Maine:

“Actually, the staff initiates that. As the doctors providing the services here, when they see patients they realize what we need here to better serve the patients that they're seeing....With that in mind, they began to target this, then that brought discussion with the CEO. The CEO then brings that discussion to the board. Then the board, we talk about it and then we assign committees to get a report if that is necessary. Then that committee will come back to us...with their report. Then we make a conclusion of what we should do...and then we make that recommendation to the CEO who then makes the final decision.”

“I would say the executive director would clearly be more influential. He or she would bring those things to the board as a suggestion as unmet needs of our patient base and we would discuss them and try to find a way to make our health center as relevant and valuable to our patient base as we can.”

Similar processes to those just described were commonly reported by respondents. In fact, only 4 of 30 respondents indicated that the board was more influential in determining which optional services the health center would provide. However, as comments from 2 of the 4 indicate, they may actually be attempting to explain that the board has the ultimate legal authority—not influence—over the final decision. Said one non-descriptive consumer from a health center in Baltimore:

“I think the board is because our executive director...generally runs any kind of auxiliary services through us before she implements them.”

And a non-consumer from a Chicago health center saw things in much the same way:

“The executive director obviously has a vision for the organization and scoping new treatment options that are available to the community and new business potential that enhances a type of service that we will provide to the

community that we serve. The board is the decision maker, so the executive director presents the opportunities that exist, but the board has final word on making the decisions and putting the vision of the executive director into action.”

Others, like this non-descriptive consumer from a suburban California health center, indicated that the board and the CEO worked together as a team and that the influence was shared:

“I think it’s actually a partnership. The board and the executive director have to work hand-in-hand because if they don’t you’re going to have a rubber stamp board and that’s going to be a recipe for disaster and that’s where health centers actually get into some trouble.”

As with service provision, most board members indicated that the CEO and other staff were more influential than the board in maintaining the health center’s finances. However, in the area of finances, there appeared to be a greater sense of shared influence between the board and the administrative staff than was generally portrayed regarding service provision decisions. This seemed to stem largely from the fact that most boards have a finance committee that reviews the budget carefully and resolves most of the concerns before the information is brought before the full board for a vote.

As several board members described, the finance committee is where the real work happens, and by the time the budget or spending request comes before the full board, there is very little that has not already been addressed. Furthermore, the CEO and chief financial officer (CFO) (where applicable) are often participants in the finance committee meetings. Thus, quite literally, key members of the board and the executive staff are coming together at the table to work on the health center’s finances. While other board committees exist, none seem specifically geared to evaluating service provision, and none seem to explicitly involve

both key members of the board and executive staff in the way that the finance committee does. According to one non-consumer from a health center in Chicago:

“Definitely the CEO would be a bigger influence on the finances.

Any particular reason why you would answer that way?

Obviously, the board members are all volunteer members and we meet once a month. We have a full-time CEO and he hired a CFO. Actually, I’m on the finance committee so what we’ll do is we also meet once a month, typically the day before our full board meeting. After the finance meeting the members of the finance committee will hear reports as to what the previous month’s revenues and expense were. If there are any big items we need to talk about or if management has a suggestion that we move money from one CD to another or getting through the issues of us doing some expansion...(pause) The question may be, all right, the board has already approved us doing this expansion and now the CFO has put together a couple of options, we can borrow all the money, we can put up some of our money here, we can do this and that, so that’s pretty much how that’s presented to us. As far as actually maintaining the finances, that’s certainly something that management does and really kind of reports back to the board, this is the current state of things and obviously answer questions if we raised them or something doesn’t sound right. That’s pretty much how we’ve operated.”

Three non-descriptive consumer board members from Baltimore, Chicago, and rural Alaska elaborated on the partnership between the board and the executive staff in maintaining the finances:

“That’s probably split a little bit better since [the CEO] obviously does the day-to-day stuff....But we’ve got a pretty good handle I think through the finance committee and through the treasurer....So it’s not 50/50 but it may be 60/40, 60 to the executive director, 40 to the board, I’d say.”

“I think it’s pretty equal. I think our finance committee people are real dedicated and real on top of it. One of the members of the finance committee is a doctor who has been on the board from the very beginning and he’s very conscientious...We’re exceptionally financially healthy now and have been for a few years. I would say that the major credit for that is due to the CEO, but I do think our finance committee is very active and attentive and on top of it.”

“There is a CFO and there is obviously a finance committee within the board itself. Which involves the big players in it; the CFO, the CEO and the president of the board and other members of the board are invited to take part

in the actual committee itself. They're usually the ones that make the recommendations to the entire board about what changes, investment changes, or any other changes as far as what we do with our finances."

It is clear from respondents' comments that the CEO and other senior staff can be quite influential in the decisionmaking process vis-à-vis the board, but what about influence differentials within the board itself? While the by-laws of most organizations, including health centers, allow the executive committee to act on behalf of the full board whenever necessary, the board members I spoke with stressed that this was a very rare event for their boards. Most estimated the percentage of board decisions made by the executive committee alone to be fewer than 5%. Others were less willing to quantify things, but felt comfortable describing how rare it was for their executive committee to make decisions on behalf of the full board. They discussed why such decisions might have to be made, and what efforts were made to avoid such scenarios. Said one non-descriptive consumer from rural Oklahoma:

"[I]f there is some bill that's come up or something like that that was unexpected that needs to be paid or something or we need to sign this. On some of these grants and some of these applications that we apply for grants, sometimes we'll get them and find there's only two weeks to get things back in. As far as any policy, I think it's probably zilch."

A similar view was expressed by a non-consumer from a Chicago health center:

"Very few. Actually, I can count on my hand during the time that I've been chair that I've used the executive committee. I would probably be overstating it to say that the executive committee makes a decision once a year. Typically I'll wait. The kind of rule of thumb I use is if it's something that can wait then we'll wait until we can present it to the entire board. Sometimes, obviously, you can't wait. There may be some decision that needs to be made before the next monthly meeting. Then I'll call around, get a quick consensus of the executive board members, and then report that to the board at our next meeting, but very rarely do I use that body as making decisions for the board."

For some boards, however, the executive committee makes a larger proportion of the decisions on its own. According to one non-consumer from a health center in rural Michigan,

“I can guess and I can imagine that it would be about a third.” Said another non-consumer from a health center in an urban part of Virginia:

“In recent memory, the executive board has been very active in two areas....Within that, the executive committee was very active. If you take that, we’re like 90% in two small areas. If I had to quantify that, I would say maybe 25%.”

While it does not appear, based on board member responses, that the executive committee is usurping power by directly determining the outcomes of decisions, this does not preclude the possibility that the executive committee is exercising a disproportionate share of influence by setting the agenda in a way that limits the influence of consumer board members, the latter case being one of “non-decisions” which are incredibly difficult to observe.

FQHC Boards Lack Descriptive Representation

Continuing to focus more specifically within the board, a defining characteristic of the FQHC program is its consumer-majority requirement, which requires that at least 51% of the governing board must consist of consumers of the health center. However, no formal process is mandated for the identification of consumer board members, which can lead to a low level of descriptive representation among not only the board as a whole, but also the consumer board members themselves. In other words, even board members who are consumers of the center may not be descriptively representative of the patient population the health center serves.

The lack of descriptive representation can be traced back, at least in part, to the process by which consumer board members are identified and selected to join the board. Board members spoke both to how they themselves were asked to join the board and how their boards select board members generally. Often, physicians identify patients whom they

think might serve the board well. According to one non-descriptive consumer from a health center in rural Florida:

“The provider actually put my name in the hat. Then what happens is they call you and ask if you’re interested in serving and then you go through an interview process. You submit a resume and then you go to an actual board meeting as a guest and then the board asks you questions about yourself and everything like that. Then the board makes a decision whether or not to vote you in, it’s not up to the CEO, it’s not up to anybody but the board.”

In most cases, when asked specifically how their board identified new consumer board members to serve on the board, board members indicated that they looked at consumer status as a prerequisite. In some cases, however, there were indications that non-consumers with particular expertise were asked about their willingness—and strongly encouraged—to become consumers if they were invited to join the board. Said a non-consumer from a health center in Chicago:

“If you’re trying to get a user on the board, you could look at current users, but you could also say, “We really need someone with some accounting expertise” and go find that person and then say “Come to the clinic.” Is that something that you ever do or think about?”

Yeah, in fact, we had someone recently who expressed some interest in joining the board and that was one of the things I said to her, I said, “You know, that’s great, but we do have this requirement that we have that a majority of the board members are users. If the board were to vote you on the board, would you consider becoming a user? I don’t know who your current doctor is, but would you mind switching and we’ll give you a list of all of our clinics.” That is one of the strategies that I use if I have someone that I am really interested in bringing on is to kind of coax them to actually be a user and that way it just solves both issues.”

A similar strategy was described by a non-descriptive consumer from a suburban California health center:

“We encourage, we don’t require, we let them know that 51% is the benchmark and we need to meet that to be in compliance, however, it is up to you guys. So when our personnel chair is recruiting an individual, that’s one of the questions on our application: “Are you a patient of the health center?” We try to keep a fair balance that way; however, if we do select an individual

who is not a clinic user we do try to encourage them to become a clinic user in one of the services.”

However, some boards do cast a wide net when looking for new consumer board members, resorting to announcements in the lobby, advertisements in the newspaper, and the like. Two non-descriptive consumers, one from a health center in rural Wisconsin and the other from a health center in rural Kentucky, put it this way:

“When we need board members we’ll put up a thing in the lobby...if you’re interested in becoming a board member to improve care and blah, blah, blah, then call this number or contact this person. Then we interview them and go from there....They’re interviewed by the board members and the executive committee.”

“It’s regional; we try to go to the area where a board member is from. Actually, we advertise in the paper. It’s printed in the paper. We put it in the local paper and everybody likes to be a part of [our health center] because of its success... it’s a prestigious thing in the community.”

Not all consumer board members were patients before joining the board. In fact, 25% of the respondents I interviewed who self-identified as consumers joined the board prior to becoming a patient. One non-descriptive consumer board member from a health center in New York City explained how she happened to become a consumer after having been on the board for quite some time:

“I’m kind of curious about that, just in terms of was it just a coincidence for whatever reason you made the appointment?”

No. A center opened up only ten blocks from my house.

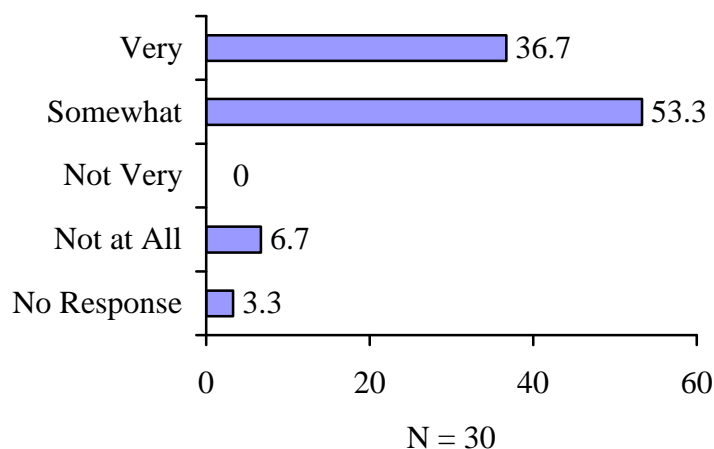
So it became convenient.

It was a convenient location for me and I was the board chair at the time and we were building that center and dedicating that center, but then it also-I guess, we were not, at that point, a federally qualified community health center. We had not been a federally qualified community health center during the 22 years that I’ve been on the board, and so at some point it became a requirement for a certain number of board members to visit the health centers as patients, so that’s when I began doing that as well.”

Among those I interviewed, most respondents were much better educated and earned much higher incomes than the typical health center patient. Furthermore, consumer status is not well defined. Some board members indicated that they were consumers, but then went on to explain that the health center is not their usual source of care or that they only use an ancillary service like dental care. Other board members spoke of their consumer/board member timing and indicated that they were serving on the board before they became consumers, which clearly indicates that they were not selected to serve on the board because of their patient status. On the other hand, many board members did indicate that they were consumers prior to becoming board members, and that the health center was their usual source of primary health care. This latter group seems, at least on the surface, to be closer to the intent of having consumer board members on the board to serve as representatives of the patients and as a link between the community and the health center.

While at least 51% of the board must be consumers of the center, this in no way guarantees that those consumer board members will be descriptively representative of the patient population as a whole, though this is often implied by proponents of the requirement. First, respondents were asked a multiple choice question to assess the degree to which the consumers on their board were representative of the patients as a whole who are served by their health center. Their answers appear in Figure 14.

Figure 14. Thinking about the consumers on your board as a whole and the patients served at your health center, how representative would you say that the consumer board members are of the patients served?



Then, respondents were asked to explain their choice in more detail. I was interested in understanding what characteristics they had in mind when they were assessing the degree of representativeness. I relayed a scenario to participants in which a middle-aged, Caucasian female with a doctoral degree was characterized as a consumer board member of a local community health center that serves a predominantly Latino population that is characteristically low-income, poorly educated, and uninsured. I used this scenario to help the respondents better understand what I meant by representativeness. A few respondents, like this non-descriptive consumer from a health center in rural Alaska, described their boards as being at least somewhat representative of the patients served:

“I think we’re relatively representative. The one thing that perhaps we may not be is that...most of those of us on the board are in an upper income bracket for the area...Many of the people on the other end of our sliding scale are up here in subsistence lifestyles and/or seasonal workers, sometimes unemployed...We’re not exactly representative of the lower end of the scale.”

More common, however, were responses like this one from a non-descriptive consumer at a New York City health center, expressing that the board members are not representative of the patients served:

“Basically, most of our board is full time working professionals who have private health insurance and who use various private sources of care. Our patients for the most part are low income people of color who live in inner-city neighborhoods, and what’s the right balance of that?....On our board, I don’t believe that the nature of the “patients” is representative, but I do believe they are understanding of the needs of the community by virtue of their own life experience, professional work, or whatever...There’s a huge, at least on our board, there’s a big class, race, socioeconomic, educational gulf between people like myself and most of the patients. I happen to have to have lived for 35 years in a low-income neighborhood in New York with a lot of public housing. My kids went to public school. My daughter is a New York City public school teacher in a low-income neighborhood, and so...I don’t feel I’m out of touch, I feel like I’m better informed than most of my peers, if you want to talk about my colleagues in the legal department where I use to work. But I’m not really a patient the way the community health center governance requirements were set up. Now, not everybody has to be a patient, you want to have some people like me, but there should be more patient-patients, patients with a capital P as opposed to patients in quotation marks...”

Similar responses came from a non-descriptive consumer at a Baltimore health center, a non-consumer at a health center in rural Michigan, and a non-descriptive consumer from a health center in rural Maine:

“I think that we’re probably not quite as representative because our board is pretty well educated even though we’re lower to middle income. We’re probably on a little better heel than most of the clients that we see...There is a level of articulation that exists on the board that we would probably not see in our general client base. I think our client base is generally high school educated or less, so that’s a little different then the board because the board has all got some degree of academic background behind them...I suspect that most of our client base is from the lower economic strata and I think our trustee-based clients is probably middle-income, moderate-income. Maybe we have a couple folks on there who are lower to middle-income, but I think there is a little bit of a different situation there...I guess the answer would be something like the regular clients, but not quite the same.”

“Do you think that the trustees that are patients resemble the patients that the health center serves?”

No, I think the new breed in particular tends to be a social economic cut or cuts above the typical patient. That's true of many governing bodies.

Do you think that's because of the demands of what it means to be a trustee?

Yeah. You have to understand a financial statement or a legal document. You need to have a little education."

"I guess my question has something to do with thinking, do the patients on the board really look like typical health center patients. Then you're talking about a situation where the person is probably uninsured or low income, poorly educated and they may not even speak English depending on what health center you're at in the country. If you had someone like that on your board, I guess that's where I would see where they would be...much more deficient in terms of the skills needed to be on the board. Is your sense that those types of folks aren't really the patients that are on your board?

That's correct. That part of our patient population hasn't been on the board since I have been there...I don't know that they would want to be and if you were looking at financial statements and making decisions on employee handbooks and policies and things, it would be difficult for them or some of that group to understand, but I like to think we're doing our best to represent their needs, certainly, to provide for their needs...It could be difficult for someone with that background to act in a capacity as a board member based on what is expected of a board member..."

Putting aside for a moment the lack of descriptive representation among consumer board members, respondents were able to identify both advantages and disadvantages of requiring 51% of the board to be consumers of the health center. The reported advantages far outweighed the disadvantages in most cases. In fact, many respondents said that they could not conceive of any disadvantages to the requirement at all. The advantages most often discussed involved the role of consumer board members on the board in ensuring that the health center is responsive to the needs of the community. Consumer board members are there to represent the patients and the community being served.

There are two aspects to this. One is the representation of the patient experience of the clinical encounter. The label of "consumer governance" fits well here. The other is the

representation of the community. While this is often referred to as consumer governance, it might be more accurate to label it “community governance” to describe a distinct phenomenon. Any health center patient on the board can contribute to consumer governance. Conversely, only local residents on the board can contribute to community governance. To the extent that health centers want to represent both the community and the patients served, they should seek health center patients from the local community.

A few respondents also mentioned that having consumer board members was important because it conveyed symbolic confidence in the organization. By going to the health center for care, board members are indicating that they believe in the organization and the quality of care it provides. It is essentially an endorsement from the highest levels of the organization. The disadvantages most frequently discussed were a loss of objectivity in decisionmaking when, for example, a consumer board member did not want to acknowledge complaints about their particular physician at the center, and a professional expertise deficit that descriptive consumers might exhibit.

Consumer Board Members Display Symbolic Confidence

A few respondents spoke of consumer board members as signaling a sort of symbolic confidence in the quality of services the health center provides. However, while only a few respondents mentioned this, the theme crossed all consumer categories. The following quotes are from a non-descriptive consumer and a non-consumer at a health center in rural Michigan, as well as a descriptive consumer from a health center in rural Florida.

“If I’m on [our] board and go down to [another clinic], it certainly displays a lack of confidence in the operation. It’s like the guy working for Ford driving a Volkswagen, it shouldn’t happen. If I’m not satisfied with the services

provided there well enough to use it then I certainly should not be on a governance board.”

“The majority of governance should be from the community and should be people who use the facility. If that’s not the case then what are people from the community doing on that board if they don’t have some skin in the game for those facilities themselves.”

“I don’t think you should be on the board and want other people to attend a facility that you won’t attend.”

These comments point, at least indirectly through the idea of patient satisfaction, to the quality of the services the health center provides, and suggest that health centers do not wish to operate a second-class facility. In other words, the care provided to every patient should be of sufficiently high quality so as to satisfy the expectations of a board member who most likely comes from a higher socioeconomic background. How the quality of that care is assessed is revealed by the next advantage of consumer governance discussed by respondents.

Consumer Board Members as Secret Shoppers

Respondents frequently discussed how consumer governance was advantageous because it provides the board with important feedback about the quality of the service provided during the clinical encounter. In essence, the consumer board members are able to get periodic snapshots of the health center’s operations at the most basic level and this, according to many respondents, provides a mechanism for ensuring that the health center is providing patients with high quality care—or at least addressing problems. Based on one respondent’s remarks below, I applied the *in vivo* code “secret shoppers” to describe this important dynamic of consumer governance in FQHCs, which other respondents referred to as being “mystery shoppers” or “mystery consumers.” This view was expressed by both

consumers and non-consumers. Non-descriptive consumers in urban areas like Baltimore and Chicago said:

“[W]e can, in fact be secret shoppers, if you will. We’ve employed that technique where we’ve had board members go to particular sites that have had some type of issue and we ask them to test it.”

“As a user, you’re just watching the sausage being made. I think that you are the person that is just-you can give perfect feedback...You are calling up and using the phone system, you are getting the treatment, and you are meeting the staff, giving your urine sample or whatever personal things you’re doing. So I think the fact that I, as a non-professional, you know, I’m not a lawyer, I’m not a doctor, I think it’s just to be instant feedback to them. I feel like I’m the voice for the clinic users who...I wouldn’t say have no voice, but who wouldn’t have the opportunity, or perhaps the courage, or maybe even the words to ever give that kind of feedback...I think having users on the board keeps everybody’s feet to the fire and it certainly would keep the board from ever becoming an elitist group of doctors, lawyers and accountants who, “this is what’s good for this clinic.”...I mean, you’re sitting at the table with users of this clinic and that keeps that mission right in front of you all the time, and respect.”

While non-descriptive consumers in rural parts of Alaska, Kentucky, South Carolina, and

Wisconsin said:

“On the plus side, I think it very much helps because you see what the internal workings actually are for someone who is coming in for care. While you may not catch some of the things...you still get an idea of whether or not you’ve had to wait or what the providers are like and just what the general care is...If there is a problem, you can direct the executive director to do something to change it. That kind of thing, that’s where I think being a patient is a plus because you can see perhaps where some of those issues lie where if you weren’t you might not.”

“It helps having patients on the board in that, they come to the clinic regularly and they can see for themselves how things are operating, not that that’s why they come. But I know myself I have come and when I am sitting in the waiting room I listen to other patients comments and most of them don’t know that I’m a board member. But I listen to their comments about the clinic and about how things are working, about their doctor, about the nurses and what have you. You’d be surprised that there are many good comments. There are also comments about why do we have to wait so long and things like that.”

“Oh, I think it's very...beneficial, because it lets you know what is happening. Usually when I come in, I don't announce who I am. Or when I call to make an appointment, I just say my name. And we've had...new personnel...at the...in the front office, so they don't know who I am...and so...I'm just treated like a regular patient.”

“I think it's based on their actual clinical encounter. That's why I think it's a good idea. I mean, our patient board members are not shy people. You know? If...if they were having a problem getting in to see a doctor, or the phone system wasn't working properly or this or that happened, these people speak up. And it's based upon their experience at the clinic.”

“[Y]ou would be surprised how much you can learn just sitting in their waiting room. You hear people discuss different things. Some people, when they get mad, they just get real verbal, especially when they've been waiting a while, so you pick up on all of this while you're sitting there, so I think that's good. Then you bring it back to the board and they try to reduce the wait time for the people. I think there was an issue one time where some of the doctors were being double booked and probably triple booked and so the patients were being-the wait time was a little longer. That has been cut down quite drastically. This is the point of me sitting in the waiting room...”

Non-consumers expressed a very similar view. One non-consumer from a health center in rural South Carolina said:

“If you don't have people there that are patients they don't really understand what's going on. They don't understand, nor can they provide for the other board members insight on the needs and how things are being handled. You know, I've walked in there and the staff doesn't know...that I'm a board member. They don't have a clue. Therefore, I get to see things. Now, I don't get involved with it, but if there's something, I need to tell the CEO, I'll tell her. Or if there is something that I learned from it that will help me at the meeting, then I notice it. If I notice...that they have people standing outside because there's no room in the lobby, I know I have to go get a bigger facility now.”

While a non-consumer from a health center in Chicago felt the same way:

“It's beneficial to have someone on the board who actually uses the health center. Typically, what they do is they bring up problems that the management didn't present to us...That puts pressure on the CEO and other management who may be at the meetings. That gets action right away versus the committee studying it and then coming back with recommendations like you need to do something about this now. That, to me, is the biggest benefit to having users on the board. Obviously, when it comes to making decisions about the type of

services that we offer, it's helpful to have someone who is actually going to be taking advantages of those services to say, "Hey, I think this is great, this really applies to my situation." Or the opposite, for them to say, "Listen that sounds great in theory, but here's why I don't think that's going to work." They can give their own personal testimony as to why that's not the greatest idea. It certainly helps."

While the phenomenon of secret shoppers focuses on the consumer board members' ability to inform the board of the operations within the health center, this is not the aspect of consumer governance that is touted by health center advocates, who focus instead on the consumer board members' role in identifying community needs, which requires the health center to interact with its external environment. It was clear from the interviews that I conducted, that consumer board members do occasionally play a role in identifying the community's needs, but the process often involves the health center staff and patients as well.

How FQHCs Identify the Needs of the Community

Respondents described a number of ways in which health centers become aware of the needs of the community. Several of the processes they described involved the board, while others involved the staff or even the patients themselves. Each of these pathways for the identification of community needs is described here.

First, because many consumer board members are not descriptively representative of the patient population, some respondents indicated that working and living in the community trumps patient status when it comes to a board member's ability to identify community needs—although patient status was still described as being of some added value. Essentially, identification of the community's needs may originate with the board because of common knowledge about the community or knowledge the board member acquires specifically through his or her work and life interactions in the community, rather than his or her patient

status. Of course, the more descriptively representative a consumer board member is of the patient community, the more likely that the board member will interact with other patients regularly in the community.

When the board members bring the needs of the community up at a meeting, it is usually the result of something they have managed to observe or overhear, or they are approached directly by patients out in the community. Examples of the importance of living and working in the community were plentiful, but occurred almost exclusively among respondents from rural areas. Non-descriptive consumers from health centers in Alaska, Maine, Massachusetts, and Michigan said:

“One lady is a pastor’s wife and she is a homemaker, not really working, but she is a highly educated woman and she and her husband have just chosen that she would be home with their children and she is expecting again. They have several children. I think the role that she has is a very good one and that’s because their congregation is within the community that is being served by the health center. So she gets to see and meet and know the population and can give feedback from that perspective.”

“[P]eople know in the community that I’m on the board and I get told a lot of things which I take back to the board. Patients that are on the board are going to bring real, every day issues as well as community perceptions to the board.”

“I think people talk about their health care and their health insurance; it’s a major topic of conversation in the coffee shop or wherever these days. If they have had a negative experience, I think you would still hear about that if you weren’t a patient and still would bring it to the board. What you probably wouldn’t be able to do as well is, perhaps, give some response to this outside contact in the same fashion. In other words, if you were to say something to me about an experience at the [health center] that you weren’t totally satisfied with to the degree that I could answer without breeching my need to maintain confidentiality...I feel being a patient I would perhaps be in a better position to explain to the person why they might have had that experience.”

“That has its pros and cons. What I can tell you is, people in the community, if they’re unhappy with something, feel like they can come directly to the board, which is not what we do. Although, if somebody comes to me directly and has a complaint I give them [the CEO’s] number and tell them they should call her directly...and discuss their issues with her.”

“But I do, if you’re out playing cards or out to dinner, at St. Vincent’s or whatever, you do hear things about the clinic because not everybody knows that I’m on the board...You do hear some things and I think those are important considerations, not that they all need to be acted on, but they all do need to be considered.”

Similarly, a descriptive consumer from a health center in rural Florida had this to say:

“When people in the community people know that you’re on the board they will come to you and make complaints too. We can’t do anything about it. The only thing we can do is inform the CEO. We can’t talk to the people at that clinic, that’s his [the CEO’s] responsibility. That’s something that he has his medical officer or clinic manager handle. By people in the community knowing that you are on the board, you do get feedback and they’re more likely to come to you if they know that you’re a patient too. You’ll know exactly what they’re talking about.”

The majority of respondents indicated that community needs are identified not by the board, but by the health center staff. Community needs identification that originates with staff is typically the result of health center clinicians encountering a number of patients with a common need, observing these patterns, and reporting them either directly or through the chief medical officer to the CEO, who then brings that information to the board for consideration. Most of the respondents’ comments about this process are discussed in the earlier section that focused on influence over service provision, because the end result of identifying the specific needs of the community is the implementation of new services provided by the FQHC in an attempt to meet those needs. However, a couple of additional comments from two non-descriptive consumers at a rural Kentucky health center describe the role of the staff in identifying community needs:

“When you take two or three hundred employees, they’re going to hear a lot going on out there on the street. It’s their responsibility to bring that to the CEO or one of the directors and we’ll bring it up in the board meeting, that’s another source that we use for that kind of service.”

“However, one of the big things that we do is outreach. We have an outreach group that goes to daycare centers, senior citizen centers and to different

organizations, to talk about the clinic and ask if there are needs and things that we need to look into. This brings a lot of attention to the things that are going on in the community when she comes back and says, I learned this, this, this and this. The outreach has helped more than anything has.”

Finally, respondents discussed how the patients and community members themselves also played a variety of roles—some more proactive than others—in making their needs known. For example, the patients themselves may identify their needs by complaining to board members, complaining to staff at the health center, completing surveys, attending community advisory board meetings, and voting with their feet (i.e., they stop coming to the health center until their needs are addressed). Again, according to one of the board members from Kentucky:

“I think the most important person there to make us aware is always the public, number one. They will from time to time. You don’t have to be a board member to walk up to the front desk and say, why don’t you do this for me, or why aren’t you doing anything about this? That happens all the time. We take those issues that are brought in by the public, that’s the number one source is the public.”

Patients can also make their needs known by voting with their feet. A non-descriptive consumer from a health center in rural Florida said:

“On the previous experience with the health care provider that was let go and it created a lot of really outrage in the community. Many people wrote articles to the newspaper concerning this. They quit going to the center.”

Other health centers actively seek patient feedback through surveys and suggestion boxes. Three individuals—two non-consumers and one non-descriptive consumer all from rural areas in Wisconsin and South Carolina—discussed this aspect of directly identifying community needs:

“We actually do...patient surveys on a regular basis...and asking patients as well about additional things that they...think that we need. And as we're monitoring what's going on at the clinic, if it's information we're gathering, we can most certainly see a pattern.”

“You know, we do offer questionnaires for the clinic. They have questionnaires every now and then to fill out and I think in these questionnaires they do ask about services that they need. It’s sought out because once a year they have a fair and people do come around and they have a questionnaire that they really encourage they return to the clinic-to fill it out and return it.”

“Well, we’ve had a suggestion box. We do patient surveys and they get to, not only grade the facilities on how we’re doing, but they can make recommendations on needs and we look at those. We recently did one and the statistics of how they ranked everything was there, but then all the comments, we didn’t see who made the comments, but we saw every comment made.”

Clearly, there are advantages to consumer governance, although they appear to have less to do with identifying community needs and more to do with providing the board with feedback on the quality of services provided at the center. However, consumer governance is not without its drawbacks, as several respondents discussed.

Disadvantages of Consumer Governance

Although a handful of board members claimed that they were unable to identify any disadvantages of having consumers on the board, several others expressed some concerns about the potential downsides of consumer governance. One of the most discussed disadvantages was the potential for consumer board members to occupy seats on the board that could otherwise be filled by individuals with more professional backgrounds and skills. This disadvantage was cited by six non-descriptive consumers from health centers in Baltimore, New York City, urban Virginia, suburban California, and rural Massachusetts:

“Now the cons, I guess the corporate side would say they could make their decisions much easier if they didn’t have us making a whole bunch of noise about the decisions that they’d want to make that would be strictly a financial benefit or procedure or benefit to the actual corporate side of the medical

center. That's the only cons that I can think of that might be interfering or might put road blocks up to what might be a policy of limitation or something like that."

"Personally, I don't know how they concluded that they should have 51% whether federally directed or not I have no idea...I would rather like to see a little more than 51% or 60% or 70% of professionally qualified people to be on the board rather than the other way around as it is now. That's my preference for the simple reason, people who are technically capable should be on the board, the demands of the consumers will not be distorted, and we don't go into unrealistic areas of unnecessary expenditures of the center. One has to be very careful about this kind of board representation.

I want to make sure I understood that correctly. You're saying you think that there should be some consumer representation on the board but it should not necessarily be 51%, it should probably be lower so that you make sure that you have expertise that is more professional on the board?

Exactly."

"The only challenge that I think that requirement presents to you is that, you know, these health clinics are not simple operations. These health clinics, you need diligent members on the board, and not to say that low-income people and patients cannot be diligent - Lord knows they can be. They can be some of the smartest people in the world, but they...they just happen...not to have a lot of money...[N]ow you're really lucky if you can have a patient base where you can pull from that patient base some other additional professional and other kind of expertise that the board needs. You're fortunate if you can do that....[T]he only challenge with it is that sometimes, you know, if your patient base doesn't have the additional skills and expertise that you need on your board, it presents a challenge and, we struggle with that..."

"I see where sometimes I just feel like people who aren't professional and who are sitting at a table with professionals are oftentimes inhibited in saying, 'I think this...' or ask a question. They think 'These people are all professionals and they know this and I'm not going to show my ignorance'...The other thing is in a clinic like ours, finding user members whose lives are organized enough to be able to come to meetings regularly and serve on the committee, that's an issue."

"I don't think that [whether or not someone is a consumer] should be the key factor in placing a person on the board. I mean, just to meet the 51% I don't think someone should be brought on just because they are a patient. I think they should have other qualities that would contribute to the well-being of the company.

Right, so there would be a need for certain types of expertise.

Right.”

“While the perspective they have as patients and consumers is extremely important and valuable for us to hear in terms of the overall corporate governance requirements of a board, we would be really lacking if 51% of our board were basically the type of patient who relies on our centers for their primary health care...On the other hand, I don’t think having high quality, knowledgeable, engaged patients on the board is an impossibility even given the nature of the communities which so many health centers are serving...I think you’ve got to have, whether it should be 51% or some other number, it’s kind of arbitrary. I think it’s important because I don’t think it will happen without some sort of requirement. Is it the best way to do it? No...There are problems with the one-size-fits-all, but you end up with compliance with the letter of the law but not really the spirit of it. What you want is something that promotes. Maybe it doesn’t have to be 51%. If we had 25% of real patients whom the center was their and their families’ principle source of health care, I would rather have that than 51% of people who are just token patients.”

Another disadvantage that was discussed is the lack of objectivity in decisionmaking that can present itself because the consumer board members are sometimes put in a position of having to decide what is best for the FQHC, which may not be best for them, personally, as patients. This was discussed most often in the context of decisions being made about specific health care providers at the center or specific services that the center was considering eliminating. This disadvantage was discussed by both a non-descriptive consumer from a Baltimore health center and a non-consumer from a Chicago health center:

“[T]he fact of the matter is we’re looking at this as though it’s the level of care that I or my family members and people that I care about, so we can’t be as objective that we might need to be in order to make a dispassionate decision. If it’s a decision where something has to be unfunded or a decision where something has to be exchanged for something else, we cut some program to do something else; it’s probably going to be a little difficult for the board to make an impartial decision for those cases.”

“[W]e had a situation where there was a dispute between one of the doctors who had been with us since forever, since the center was open. It was a feud between that doctor and the current CEO and...most of the sentiment was that the doctor was the one that needs to go. Well, one of the board members was a

patient of that doctor and she loved her doctor so her stance was less about what we thought was in the best interest of the center and more about, 'I don't want you guys to push out my doctor.'...That was an example of having a user on the board that was, in my mind, a detriment."

The advantages and disadvantages of consumer governance were widely reported across respondents, but there were some exceptions. One of the most notable was the difference between consumer governance in small communities and larger communities.

The Dynamics of Consumer Governance Differ in Small Communities

The smaller the community, the more likely people are to know each other, to know each other's business, and to interact with each other. As one non-descriptive consumer from a health center in rural Oklahoma put it:

"In this small community, you can hear everything but the bacon frying up here where we live."

The results of this are that people in small communities tend to enjoy less anonymity than people in larger communities, which can have some limiting effect on the ability of consumer board members to be "secret shoppers" as one respondent indicated:

"It's pretty hard for me to be a mystery shopper if you know what I mean."

Board members in small communities may also have a more difficult time being objective decision-makers:

"The negative, and particularly in a community like this one, I think, is that we're so small that we know these people as neighbors as well as providers and so forth. This just adds another layer to that. So you're going to add some personal viewpoints in there that perhaps should not be when you're dealing on a management issue."

In these ways, consumer governance is at a disadvantage in small communities, but there are other ways in which it is advantageous to be in a small community. For example, the smaller the community, the easier it is to achieve descriptive representation. It seems

much easier for the consumer board members on the board to be representative of the patient population of the health center when the health center is located in a small community or rural area, most likely because such communities are a bit more homogeneous, so there is less variation for the board to attempt to represent. Here is what some non-descriptive consumer board members from health centers in rural Alaska and Kentucky had to say:

“Do you think it’s easier to get that very high degree of representation or representativeness because you’re in a small community?

Yes.”

“[W]e’re all representative of what we serve. We’re in the mountains and we don’t have a black population, we don’t have a Latino population. We’re just all poor-folk. That’s our commonality amongst all of us. Here, even the rich people, even the haves are very familiar with the have-nots and we don’t separate. Fortunately, as a whole we don’t separate ourselves from each other. We’re all pretty well mixed together...We’re all so mixed in here, there’s no identity that we can claim. We can’t say that we’re black; we can’t say that we’re white; we can’t say that we’re Latino. We can’t say anything of these things because we’re just mountain-folk. We don’t divide ourselves that way. We’re fortunate in that manner...”

Comparing and Contrasting the Views of Consumers and Non-Consumers

At the heart of this study is the question of whether or not consumer governance has a tangible effect on health center outcomes. The interviews, whose results are presented in this chapter, were conducted to provide context for the quantitative portion of the study by collecting data on board function and board members’ perceptions of consumer governance in practice. In analyzing these data, it is worth considering how consumers’ responses compare to the responses of non-consumers. For this reason, the quotations included in this chapter are identified by the consumer status of the individual who made the remarks.

Reviewing this data reveals certain patterns of similarity and dissimilarity between consumers and non-consumers. For instance, both consumers and non-consumers reported

similar information about billing practices at their health center, the mission-margin tension that arises in decisions about expanding the size of the health center, and their health center's decisionmaking processes. Both groups also tended to agree that the executive committee rarely acted independently of the board as a whole.

Consumers and non-consumers also shared common views about the role of consumer governance. They described similar processes for recruiting new board members and identified the consumer board members as less than representative of the patient population. Both groups identified consumer board members as conveying symbolic confidence in the organization and described the principle role of consumers on the board as "secret shoppers." They also identified similar disadvantages to consumer governance.

The two groups did not see eye-to-eye on everything, however. For example, consumers and non-consumers painted a different picture about organizational responses to adversity, with non-consumers more likely to describe approaches including across the board cuts, while consumers focused more on efforts to make reductions without affecting service delivery. They also mentioned slightly different mechanisms for identifying the community's needs, with non-consumers more focused on direct surveys of patients, and consumers more likely to mention interactions they have with patients out in the community.

While there seems to be more agreement than disagreement in views between the two groups, it is important to note that only 2 of 30 participants were descriptive consumers. To the extent that non-descriptive consumers are similar to non-consumers, this may explain the high degree of concordance among responses. In the next chapter, I integrate these qualitative results with the quantitative results presented earlier and discuss how each informs the other.

CHAPTER 7

DISCUSSION

The background presented in Chapters 1 and 2 makes it clear that despite their conflict-laden origins and the political threats to their continued existence, federally qualified health centers (FQHCs) have managed to provide primary care and enabling services to some of the most vulnerable populations in the most underserved areas of the United States. For the last five decades, they have successfully exemplified what it means to be core safety net providers, rising to the challenge of maintaining an open-door policy while relying on extremely limited resources.

A quick visit to the website of the National Association of Community Health Centers provides a summary of the literature demonstrating that health centers increase access to care, provide high quality health care, and provide care that is less expensive than other comparable provider types.⁶ While there are many possible explanations, all of which eventually deserve to be studied, the requirement that a majority of the health center's board be comprised of patients of the center is frequently cited by advocates as a factor in health centers' success. At the same time, other safety net providers contend that they are able to serve vulnerable populations just as effectively as health centers without being governed by consumers.

⁶ The National Association of Community Health Centers maintains a summary of the peer-reviewed literature on health centers' cost-effectiveness, quality of care, ability to increase access to care, and ability to reduce health disparities. The summaries are available here: <http://www.nachc.com/literature-summaries.cfm> Accessed June 19, 2009.

To be sure, consumer governance is a fairly unique defining aspect of FQHCs, not often observed in other health care organizations, and the logic behind it is intuitive. After all, who better to represent a group than a member of that group? The idea of consumer governance as it is portrayed certainly does not lack validity on its face.

Indeed, the representation theory outlined in Chapter 3 suggests that consumer governance is a plausible mechanism for generating certain aspects of health center success. That is, given the theoretical link between descriptive and substantive representation, requiring consumer participation on the health center governing board should translate into the board acting on behalf of patient interests and, as such, it would be one way for health centers to respond to the community's needs.

However, theory also suggests that there are varying degrees of descriptive representation, different contexts in which substantive representation is less reliant upon descriptive representation, and effective agenda setting mechanisms by which non-descriptive consumers and non-consumers can limit the potential of descriptive consumers to affect outcomes. Therefore, while theory is informative, it is impossible to conclude from theory alone exactly what role consumer governance plays in FQHCs, necessitating the empirical study that was outlined in Chapter 4.

The results of the current study presented in Chapters 5 and 6 provide new insight into the role of consumer governance in FQHCs and contribute to the body of knowledge on representation theory and agenda setting. This chapter discusses these results, elaborates on the implications of the findings for both theory and policy, addresses study limitations, and proposes appropriate next steps for future research.

Overview of Significant Findings

At first glance, the results of this study seem to suggest that consumer governance has very little effect on health center outcomes. Of a series of eight F-tests on the construct of descriptive consumer representation, only one result—that for scope of enabling services—indicated joint significance. In addition, of a series of eight t-tests on the direct effects of the proportion of descriptive consumers, only one result—that for operating margin—was statistically significant. Additionally, only two F-tests—for scope of enabling services and financial self-sufficiency—indicated that executive committee composition had any direct effect.

While many of the coefficients on the board composition variables were not statistically significant, this means that I was not able to reject the null hypothesis of no effect, which is not necessarily synonymous with there *being* no effect. And, as the qualitative interviews revealed, the pathway between board composition and health center outcomes is not necessarily direct, but rather depends on board function, for which quantitative data were not available. Still, the results are instructive.

The Lack of Descriptive Representation

First, both the quantitative and qualitative results confirm that, despite the requirement that a majority of board members must be consumers, descriptive representation is lacking on most FQHC governing boards. While nearly two-thirds of board members are consumers, only about one-fourth are descriptively representative of typical FQHC patients. What is more, the method used to categorize consumer board members is likely to have at least slightly overestimated the degree of descriptive representation. It is reasonable to

assume that the true proportion of descriptive consumer board members may be closer to one-in-five. By contrast, the majority of consumer board members are *not* descriptively representative. While the board members in this group do report being health center patients, they can also be described as belonging to a high socioeconomic class, with physicians, lawyers, and other professionals frequently represented among their ranks.

The interviews suggest that the lack of descriptive representation is driven more by socioeconomic gaps than by differences in race, gender, or geographic residence. They also indicate that self-reported consumer status may be less than ideal in other important ways, as some self-reported consumers did not consider the FQHC their usual source of care, did not utilize the FQHC for primary care, or did not become a consumer until after first joining the board. All of these characteristics suggest a lack of shared experiences between consumer board members and the typical FQHC patient that stands to make them less descriptively representative (Dovi, 2003; Mansbridge, 1999).

Given the well documented struggles to achieve descriptive representation in the early days of the health center program, this is not surprising (Hochbaum, 1969; Hollister, 1974; Hollister, Kramer, & Bellin, 1974; Paap, 1978; Paap & Hanson, 1982; Peterson, 1970; Thompson, 1980). However, more recent empirical studies did not identify deficiencies in descriptive representation (Bracken, 2007; Latting, 1983; Samuels & Xirasagar, 2005). This can be explained by the fact that these latter studies considered consumers to be a homogenous or nearly homogenous group.

The results of this study clearly demonstrate that this is not a reasonable assumption as there are actually considerable differences between consumer board members, especially with regards to socioeconomic status. The reality is that some consumer board members are

more descriptively representative of the typical health center patient than others. As such, future studies of consumer governance should make an effort to identify relevant differences between consumer board members.

In the case of consumer governance in a health care context, health status might be just as important as—if not more important than—socioeconomic status. After all, even if patients themselves are the most knowledgeable about how well the health center is meeting their needs, not all patients are created equal. As Schlesinger, Mitchell, and Elbel (2002) report, patients who more frequently utilize services (e.g., those with a chronic illness) tend to be more knowledgeable about the health care they receive and are therefore more comfortable voicing their concerns to decision-makers. Conversely, patients who rarely use services may not feel well-informed or equipped to raise their concerns (Schlesinger, Mitchell, & Elbel, 2002).

Board composition is ultimately the result of board member selection. Prior qualitative research finds that potential consumer board members may be identified by health center staff or current board members, and that patient status may or may not be the primary consideration in their selection, because it is often hard to find the expertise needed for governance among the health center's patient population (Bracken, 2007). The current study reinforces these findings, but also uncovers some cases where health centers advertise consumer board positions directly to the public. Of course, there is the possibility that the latter is done as a matter of course, while the only candidates actually given careful consideration are those identified by the board or staff. A longitudinal case study of a few health centers could provide valuable data on actual board member selection processes.

Yet, just because the level of descriptive representation is much lower than might be expected given the requirement of a consumer majority, it is important not to overlook the fact that FQHC boards are composed, on average, of 20 to 25% descriptively representative consumer board members. In many ways, given the obstacles to participation members of this group tend to face, this level of descriptive representation is a notable achievement in and of itself. One can imagine, for example, how different the United States Congress would look if it were to achieve this level of descriptive representation with regards to the electorate.

Before turning to the ultimate question of whether this level of descriptive representation has any effect on health center outcomes, it should be noted that it may well be important in other ways. For example, there is evidence that descriptive representation can yield community benefits whether or not substantive representation is improved. Higher levels of descriptive representation have been associated with increased legitimacy of representatives as assessed by the constituency as well as increased participation on the part of constituents (Banducci, Donovan, & Karp, 2004).

For FQHCs, this level of descriptive representation may increase patients' faith in the organization and motivate them to support it in any number of ways, from making it their usual source of care to becoming more likely to pay their bills. Of course, this hinges on the degree to which the typical patient is aware of who is on the board, which is doubtful, given an earlier study on the subject, which found that community residents did not know who governed their health center (Hillman & Charney, 1974).

Consumer Governance Trumps Community Governance

Beyond the level of descriptive representation lies the question of exactly who board members are representing. Is it the community, the patients, or both? While advocates of consumer governance claim that it makes the organization more responsive to community needs, the lack of descriptive representation seems to hinder consumer board members' ability to identify community needs—most likely because there is little social interaction between these groups.

As it turns out, the community's needs are most often identified by the efforts of the chief executive officer (CEO) and staff as well as the patients themselves, and because the identification of needs originates in that way, it typically motivates the CEO to push for new services, which are presented to the board for their approval. In this way, the CEO wields influence through agenda setting. When it comes to which services to provide, most boards described a reactive rather than a proactive approach to governance. Consequently, it appears that the health center (via the board) may be responsive to the needs of the community only if the CEO and staff are responsive to the needs of the community.

Overall, though, it seems that most board members have a favorable view of including consumers on the board, despite the fact that the majority of these consumer board members are not descriptively representative of the patient population and very seldom represent the needs of the community. Instead, they view consumer board members as a valuable way for the board to obtain information on the patient experience and the quality of care at the health center. In fact, this aspect of consumer governance was stressed far more often than any role of consumer board members in identifying the community's needs.

Prior qualitative research finds that consumer board members are valued more for their role in providing patient feedback than for their role as representatives of the community (Bracken, 2007). The qualitative portion of the current study strongly reinforces these findings. According to interview participants, consumer board members can play an important role as “secret shoppers”—providing feedback on the quality of the services they receive at the center.

In this role, less descriptively representative board members may provide an advantage. For example, having more professional consumer board members may prove beneficial to the extent that these individuals possess higher expectations for the quality of care they receive and a greater ability to articulate their concerns to the full board. Of course, to the extent that their socioeconomic status is readily perceived by others, there is also some concern that the clinical staff will interact differently with these board members, leading to a biased perception of the quality of care provided to other FQHC patients more generally. That is, the “secret shoppers” will not actually be “secret” any longer, which leads to the next point.

There is potential for conflict between consumer board members as secret shoppers and consumer board members as conveyors of symbolic confidence in the organization, because the former requires a certain degree of anonymity that would explicitly prohibit the latter function. That is, to be a secret shopper, consumer board members must not be known to others as a board member, while to convey symbolic confidence in the organization, they must be known to others as both a board member and a consumer. This does not mean that a given consumer board member cannot fulfill both roles, but it makes it highly unlikely that they can fulfill both roles simultaneously.

For example, if the consumer board member's physician does not know that they are on the board, the consumer board member is equipped to act as a secret shopper but will not display symbolic confidence in the organization to the physician. On the other hand, if the physician knows that the consumer board member is on the board, symbolic confidence may be conveyed, but the board member will no longer be a "secret shopper" but merely a "shopper." That is, they can still provide feedback on the quality of the care they receive, but there is now the chance that they received preferential treatment as a known board member.

Finally, the extent of these findings is likely to vary depending on the size of the community in which the FQHC is located. Smaller communities confer both certain advantages, such as the increased ability to achieve descriptive representation and having the needs of the community more widely known, and certain disadvantages, such as the decreased ability for consumer board members to operate as "secret shoppers" and an increased likelihood that the community may lack a sufficient pool of potential board members to draw from, causing the board to be deficient in certain areas of expertise.

Navigating the Mission-Margin Tension

While several studies of health centers have found support for a negative relationship between mission and margin (Hoag et al., 2000; Martin et al., 2009; Ricketts et al., 1984; Roby, 2006), the quantitative and qualitative results of this study suggest that the composition of the board only partially explains these findings. It may well be the case that successfully navigating the mission-margin tension depends more heavily on the day-to-day operations of the health center, in which case the responsibility falls to the CEO and staff rather than the board, which, while ultimately responsible for the organization, is intended as

a policy-setting body with the authority to hire and fire the CEO. According to the quantitative results, other factors, such as payer-mix and economies of scale enjoyed by larger centers, appear to play a large role in making health centers more profitable, efficient, and financially self-sufficient.

The current study also provides qualitative evidence in support of prior findings that health centers may occasionally respond to financial pressures and capacity constraints in ways that seem antithetical to their mission, such as aggressively pursuing payment or even turning patients away (Cunningham et al., 2008; Gusmano et al., 2002; Jacobson et al., 2005). Interview participants gave the impression that this is not a common practice, but an occasionally unavoidable one when the only alternative appears to be a long-term reduction in the capacity to fulfill the mission or even closure. The concept of “No margin, no mission” can become a harsh reality for many centers. This makes the finding that consumer governance is associated with a decrease in the health center’s operating margin especially troubling, because running a deficit is not a sustainable long-term strategy.

Given the likelihood of a tension between mission and margin, it is reasonable to believe that a health center’s financial performance might be an important determinant of its mission-oriented outcomes. For instance, a health center with less financial resources might not be as able or willing to provide as many enabling services or as much uncompensated care as a health center with available financial slack. As such, the margin-oriented outcomes could be an important factor, which ought to have been controlled for in the models predicting the various mission-oriented outcomes.

At the same time, it is possible that some health centers are highly dedicated to their mission. Such centers may choose to provide needed services even when it is not a

financially-sound decision. For these centers, providing more mission-oriented services may be associated with poorer margin-oriented outcomes. As such, the mission-oriented outcomes could be an important factor, which ought to have been controlled for in the models predicting the various margin-oriented outcomes.

The above scenarios indicate that it is possible to conceive of a situation in which the relationship between mission-oriented outcomes and margin-oriented outcomes is positive and one in which the relationship is negative. Furthermore, it is unlikely that the relationship is positive or negative for all centers. Rather, the direction of the relationship is likely to depend on the health center's primary motivation. That is, does a center tend to defer to mission or margin when making decisions? If it defers to mission, the relationship between mission and margin is likely to be negative, because the center will pursue mission at the expense of margin. If it defers to margin, the relationship between mission and margin is likely to be positive, because the center will only pursue mission when a healthy margin permits.

To the extent that this motivation is time invariant (or at least doesn't change during the study period), such an unobserved characteristic—which might be called the center's mission or margin orientation—is controlled for in the models by the use of FQHC-level fixed effects. In addition, the descriptive statistics indicated that both the mission and margin-oriented outcome variables were very stable over the study period. Therefore, a significant portion of these variables is already controlled for using fixed effects. While this approach does not allow me to estimate the effect of the margin-oriented outcomes on the mission-oriented outcomes, or vice versa, it does control for their effect, minimizing any potential omitted variable bias.

From the qualitative interviews, it appears that most health centers are navigating the tension between mission and margin with some success, although it is not clear that the boards are a significant determinant of that success. On the contrary, it appears that the CEO and other senior staff—including physicians—tend to be more influential than the board, especially with regards to identifying community needs and making decisions about the services that the health center will provide. Because the board receives most of its information via the CEO, it is possible for the CEO to set the agenda and effectively circumvent the board's authority. This type of scenario was less commonly described with regards to financial decisions, where key staff and members of the board's finance committee tended to work together more closely, which may explain how descriptive consumers are able to have the most significant effect on operating margin, while their role in other areas is less noticeable.

Agenda Setting in FQHCs

One of the most important findings from this study is the role of agenda setting in determining health center outcomes. Merely including consumers on the governing board is not sufficient to ensure that they have a voice in the decisionmaking process. This begins with descriptive representation and its relationship to holding a leadership position on the board, as it was hypothesized that the composition of the board's executive committee leadership, with respect to the number of descriptive and non-descriptive consumers, could have a moderating effect on the link between board composition and health center outcomes. The interviews confirmed that such a mechanism is plausible, but also pointed to the CEO and other senior administrative staff as playing an even larger role in FQHC decisionmaking.

Previous studies have concluded that consumers are actively involved in health center governance. They have found that consumers and non-consumers are equally likely to serve as board chair (Latting, 1983) and even that consumers are *more* likely than non-consumers to serve as board chair (Samuels & Xirasagar, 2005). What these studies have failed to take into account is the complexity of the self-identified consumer variable. The current study acknowledges that not all consumers are alike, and was able to use data on board member occupation to dichotomize consumers into a descriptive and a non-descriptive group, which reflects how descriptively similar they are to the typical health center patient in terms of socioeconomic status.

The distinction is an important one, because it reveals that there are at least two classes of consumer board members that serve in different capacities. After accounting for this difference, consumer board members are no longer equally as likely as non-consumers to hold an executive committee office or serve as board chair. Instead, the higher class—the non-descriptive consumers—were more likely than non-consumers to hold these positions, while the lower class—the descriptive consumers—were less likely than non-consumers (and therefore even less likely than non-descriptive consumers) to hold these positions. This is a notable finding, because members of the board’s executive committee have more authority and influence than other board members.

While there was no consistent moderating effect per se, the composition of descriptively representative consumers on the executive committee was a significant factor in making the organization more mission-oriented. Thus, without descriptive consumers on the executive committee, descriptive consumer board members are likely to find their influence

on decisionmaking to be limited by two rounds of agenda setting: one conducted by the CEO, and the other conducted by the board's executive committee.

These results suggest a hierarchical model of organizational agenda setting. At the top of this hierarchy is the CEO, who has the ability to selectively filter information to the board. Next is the board chair, followed by two equally important committees: the finance committee and the executive committee. Beneath this are other board members, who are unlikely to set the agenda, although they may possess differing levels of influence depending on factors that convey status.

There is also evidence from prior research that demonstrates how the CEO may control the identification and recruitment of board members, in which case even the second level of agenda setting may ultimately be under the CEO's control (Bracken, 2007). This raises an important consideration regarding the link between formal representation and descriptive representation in health centers.

How and why individuals are selected to join the board is likely to have an effect on what types of individuals serve on health center boards as well as what type of influence they are able to exert during decisionmaking that might affect health center outcomes. In other words, the relationship between descriptive and substantive representation may be affected upstream by formal representation (i.e., the board member selection process). Unfortunately, no quantitative data on board member selection were available. However, I did ask several interview participants about how they, specifically, were asked to join the board and how their board identifies potential members, more generally.

From these interviews, it is clear that board members are not democratically elected by their communities. While certain processes were described that allowed individuals to

nominate themselves for consideration, the ultimate selection of board members appears to be a highly subjective, informal, and self-perpetuating process.

Just as status generalization theory predicts that high-status individuals from among the board will be elected by the board members to serve in powerful board leadership positions, it is likely that “like will beget like” when it comes to selecting new board members. As a result, non-consumers may be more likely to advocate for the addition of non-consumers, non-descriptive consumers may be more likely to advocate for the addition of non-descriptive consumers, and so on.

The issue is not that the selection of board members moderates the relationship between board composition and health center outcomes, it is that board member selection determines board composition, which in turn, has the potential to affect outcomes. In a sense, then, board member selection represents an important level of agenda setting, because the individuals who select the board members can include or exclude individuals or groups of individuals as they see fit. This board member selection might be a function of the current board, the medical staff, or the executive director.

In the latter case, the relationship between board composition and health center outcomes might be biased by the “behind-the-scenes” workings of a powerful and effective executive director. Such a person might be an important determinant of the health center’s performance, and might make it a point to proactively advocate for board members with certain professional and technical expertise. Such board members would likely not be descriptive consumers. In this case, it would appear that the proportion of descriptive consumers on the board was negatively associated with margin measures, for example, while the causal factor may indeed be the executive director.

It can be tempting to think that the typical low-socioeconomic status FQHC patient does not participate in the governance of the center out of a feeling of being powerless, but Gaventa challenges this notion, citing the power of agenda setting to exclude not only *choices* for decisionmaking, but also *participants* to the decisionmaking process, going so far as to change the way the lower classes view the problem as a non-problem, by the presentation of carefully selected—and even intentionally false—information (Gaventa, 1982).

The idea that the non-consumer minority might wield a disproportionate share of power over the consumer majority is not a new one (Paap, 1978). Therefore, it is worth considering if what is most needed at this stage is not more inclusion of the frequently under-represented descriptive consumers, but more exclusion of overrepresented non-descriptive consumers. Privileged groups may need to be excluded from representation to varying degrees so that the voices of the disadvantaged might actually be heard and acted upon. As political scientist Suzanne Dovi (2009) puts it, “Not only do some voices need to be brought in, some voices need to be muted (p. 1172).”

Why Board Composition May Appear Not to Affect Organizational Outcomes

Senator Edward Kennedy, a longtime supporter of health reform and a champion of the health center movement in Congress, once said:

“What impresses me the most is the ability of health centers to deliver comprehensive primary and preventive care in a cost effective manner to populations in the hard-to-reach communities. Centers are able to do this, *in part*, because they are community organizations governed by consumer boards and operated on a local level. This puts them in touch with the needs of the local population (Reynolds, 1999).”

From this, it is important to note two things. First, consumer governance is given some credit for health centers' success at providing cost-effective care to underserved populations. Second, and just as importantly, it is not given *all* of the credit in Senator Kennedy's quote. In other words, consumer governance is not necessarily the sole factor in health centers' success. This is an important point, which should not be overlooked in interpreting the findings from this study. There are four reasons why the consumer component of board composition may have—or appear to have—no effect on the outcomes studied here and each of these possible scenarios warrants further study.

First, the law requires a consumer majority and 51% is a relatively high threshold. Because most centers are in compliance with the law, there are few cases available to examine the effect of lower levels of consumer governance. Perhaps the presence of a single descriptive consumer is sufficient to make the board aware of the community's needs. This should not be confused with tokenism, for in this case, the single individual on the board would be wielding both authority and influence. If so, the variation in consumer governance between 51 and 100% will be of no added explanatory value.

A study similar to this one, but which compares FQHCs with other types of safety net providers that lack consumer governance (e.g., free clinics, hospital outpatient departments, etc.) would have the potential to build on the current study by explicitly comparing organizations with and without consumer governance, and answering the question of whether consumer governance matters at all.

Second, it may be that consumer governance is not associated with the outcomes of interest in this study. This could occur for two reasons. First, it may simply be the case that the needs of the community are widely known and understood (Dovi, 2003; Mansbridge,

1999). In such cases, there is indeed evidence that substantive representation can exist in the absence of descriptive representation (Conway, Hu, & Harrington, 1997). If everyone in the community knows that the patients need transportation, for example, including consumers on the board would not add anything to the identification of the community's needs.

The second reason, closely related to the first, is that consumer governance matters for different health center outcomes than those examined by this study. For example, consumer board members could still function as an important source of information about the quality of services provided in the center. This could be investigated by conducting a study similar to this one, and replacing the mission and margin outcomes with measures focused on the quality of care FQHCs provide to see if more consumer governance is associated with improvements in those areas.

Third, it may be the case that while consumer governance is readily abundant, true descriptive representation is sufficiently lacking. The current study strongly suggests that, whether or not the lack of descriptive representation is to blame for the insignificant effect of consumer governance observed here, there is nonetheless a lack of descriptive representation. While the Bureau of Primary Health Care (BPHC) requires consumer board members, as a whole, to “represent the individuals served by the health center in terms of race, ethnicity, and gender (Bureau of Primary Health Care, 1998a, p. 22),” other factors like insurance status, income, and education level that would seem to be at least as important, if not more so, than race, ethnicity and gender are not addressed at all. If data on these aspects of board composition were available, it would be possible to model health center outcomes more accurately, and get a more detailed picture of the relationship between board composition and health center outcomes.

Fourth and finally, it is possible that there is ample consumer governance, which is also sufficiently descriptive in its representation, but which is rendered ineffectual through a decisionmaking process heavily shaped by the decisions, non-decisions, and agenda setting of a CEO and/or board chair with the most power, authority, and influence. In this case, two lines of inquiry arise. The first approach seeks to understand how to level the playing field between the descriptive consumer board members and their more powerful counterparts. The second approach concerns itself not with rebalancing power, which presents a daunting challenge, but rather focuses on understanding the characteristics of the primary decision-maker(s). For example, if the CEO typically wields the most influence over the health center's decisionmaking process, it may be easier—and perhaps most amenable to change—to understand the characteristics of good versus bad CEOs, rather than attempting to find ways to lessen the CEO's power relative to that of the board.

Policy Implications

Given the findings from this study that descriptive consumer board members are less likely to hold leadership positions on the board, in conjunction with the finding that when descriptive consumers do hold board leadership positions, it can have a positive effect on mission-oriented outcomes and can provide a protective effect for operating margin, policies to strengthen the consumer governance provision and its implementation—perhaps mandating a certain level of descriptive representation or requiring at least one consumer board member on the executive committee—should be considered.

Unfortunately, such a policy seems infeasible both technically and politically, as any number of groups could claim that they ought to be represented. Still, future studies might

focus on understanding the barriers to descriptive representation and designing ways to enhance levels of descriptive representation in practice. At the very least, further inquiry into the role and contributions of descriptively representative consumer board members is warranted.

However, before advocating too strongly for a stronger system of consumer governance, it is important to keep in mind that the results of this study also suggest that consumer governance may reduce health center operating margins. Just as the weakly positive effects of consumer governance are not sufficient grounds for expanding the requirement, this result should not necessarily be taken as evidence that policymakers should abolish the requirement.

The financial struggles faced by many health centers would be exacerbated if the consumer governance provision were eliminated and limited grant funds were spread over a greater number of organizations. Rather than reallocating current funds, serious consideration should be given to increasing the total amount of funding provided to all safety net institutions.

Fortunately, recently enacted health reform legislation will expand the Medicaid program up to 133% of the federal poverty level (FPL), which would provide coverage (and reimbursement) for roughly 2 million currently uninsured health center patients (D. R. Hawkins, 2009). Perhaps what is needed is greater education and training of board members to improve their financial competency.

Furthermore, the consumer governance provision is not the sole distinction between health centers and other safety net providers. Indeed, there are many substantial differences between health centers and other safety net facilities in the actualization of mission. For

example, while health centers have a legally mandated option to treat all regardless of ability to pay, hospitals with ambulatory clinics face no such mandate, in many cases shielding them from the brunt of uncompensated care, even as they enjoy the advantage of tax-exempt non-profit status. It is for this reason that Congress is currently proposing to set a mandatory minimum level of charity care provision, which hospitals must provide to retain their non-profit status (Pear, 2009).

Likewise, because of the exceedingly high number of uninsured patients they serve, health centers have far less of an ability to cost-shift than providers that enjoy a more diverse payer mix. In the wake of comprehensive health reform, health centers will continue to play a vital and expanded role. Many newly insured individuals will face non-financial barriers to access and will depend on the unique services that health centers provide. Given the number of individuals who rely on the health care safety net and the disproportionate financial burden safety net providers shoulder, the decision of how to allocate limited financial resources should be based on sound empirical research rather than untested assumptions.

Numerous stakeholder groups may look to this research in an attempt to justify their policy position, and in so doing, they may be selective in their interpretation of the results. Health center advocates, including the National Association of Community Health Centers, the various state primary care associations, and the U.S. Health Resources and Services Administration (HRSA) which operates the health center program, will be quick to note that consumer governance is positively associated with both the scope of enabling services provided by—and the financial self-sufficiency of—health centers. These groups are not likely to admit that consumer governance has some real limitations, some of which may actually threaten the continued existence of certain health centers.

Other safety-net providers and their advocates, like the National Association of Public Hospitals and the Catholic Health Association of the United States will point out that consumer governance can harm operating margin, and therefore has the potential to undermine—or at least limit—the pursuit of a charitable mission to care for the underserved. They are likely to argue that federal funds should be awarded to those safety net providers that best serve the underserved, not restricted to consumer-governed organizations. In their view, a high-performing (i.e., high quality, high volume of uncompensated care) hospital outpatient department should qualify for federal funds before a low-performing health center. These groups are not likely to admit that consumer governance may actually be beneficial in some instances, that it may be the difference between a low-performing health center and what would otherwise be an even lower-performing health center.

While the various stakeholders will react differently to the findings presented in this dissertation, the study results strongly suggest that the consumer governance requirement, in its current form, should be strengthened. There is evidence that consumer governance can be beneficial to some elements of both mission and margin, but there is also evidence that consumer governance can be harmful to margin, and the deciding factor appears to be whether or not a board has descriptively representative consumers on its executive committee.

However, the results of this study indicate that most boards do not have descriptive consumers on the executive committee. If efforts are made to strengthen the provision, such that descriptive consumers are given leadership roles on the board, then it seems that consumer governance is beneficial enough to justify its being required as a condition of federal health center funding. Without such strengthening of the provision, it is doubtful that consumer governance will have much of an effect on the outcomes studied here.

Limitations and Directions for Future Research

There are several important limitations of this study, which must be acknowledged. First, the Uniform Data System (UDS) data used in the study is self-reported and unaudited. A report from the Government Accountability Office (GAO) details several limitations of HRSA's UDS data on health centers, including unclear reporting instructions, inconsistent data cleaning by HRSA, and reporting failures by certain centers (U.S. Government Accountability Office, 2000b). There is no way to accurately assess or account for the extent to which the accuracy of the current UDS data may suffer from these limitations. However, it is worth thinking through the consequences of measurement error in the data.

Measurement error falls into two broad categories, depending on whether the dependent or independent variables are measured with error. In this study, the dependent variables are all drawn from the UDS and may, therefore, be measured with error. Based on anecdotal evidence, this is more likely the case with the financial variables, where poorly performing health centers may be more likely to report inaccurate data. However, measurement error in the dependent variable does not bias the coefficient estimates unless that error is correlated with the explanatory variables. There is no reason to suspect this with these data.

Significant measurement error in the explanatory variables drawn from the UDS is unlikely, but possible. For example, health centers are likely to provide rough counts of the proportion of their caseload by income level, insurance status, age and gender. They may also purposefully inflate these counts if they feel that any of them are too low. If this measurement error is correlated with the observed value of the variable, it will result in biased coefficient estimates, provided that the dependent variable is a function of the

unobserved value of the variable and not the observed value of the variable. If this is not true, or if the dependent variable is correlated with the unobserved value of the variable, the coefficient estimates will not be biased.

The former case is more likely, because measurement error would be induced in cases where the true measurement might not reflect well on the health center. Still, there is little reason to believe—and no empiric evidence to confirm—that any such errors in reporting of the information used in this study would be systematic across health centers. What is more, while the UDS data may be less than ideal, it remains the only comprehensive data available on FQHCs.

Second, the HRSA report also notes that “the financial data in UDS cannot provide an accurate indication of an individual center’s financial status because costs are reported on an accrual basis, while revenues are reported on a cash basis...[making] it difficult to estimate the extent to which centers’ revenues cover costs (U.S. Government Accountability Office, 2000b).” This is likely to bias operating margins downward, as costs will tend to be accurate, but cash-on-hand will not reflect pending charges not yet collected.

Third, the data captured in the UDS can also be somewhat misleading with regards to the extent of service provision. For example, while a health center grantee must legally provide a comprehensive range of primary care services, an FQHC with multiple delivery sites must only meet this requirement collectively, meaning that not all delivery sites provide the full range of services. The GAO has recommended that HRSA could improve the health center program by monitoring information on the specific types of services an FQHC provides at its respective delivery sites (U.S. Government Accountability Office, 2008). This limitation is partially addressed by modeling not only the scope of enabling services, but also

the volume of enabling services and the number of full-time equivalent enabling staff (FTEs), and controlling for the number of delivery sites an FQHC grantee operates.

Fourth, the time-ordering of the relationship between board membership and health center patient status cannot be ascertained from the available data. To put it simply, an individual may first be asked to join the board, or hold a board leadership position in advance of their becoming a health center consumer. The interview results suggest that this may occur in approximately 25% of cases.

Subsequently, this individual might begin periodically using the health center's services to demonstrate his or her support of the organization. However, while technically a consumer, the individual is unlikely to be representative of the general patient population. This limitation was addressed by using data on board member occupation, linked to occupational wage data, to distinguish descriptive consumers from non-descriptive consumers. However, this process also has potential limitations.

While I coded individual board members into standard occupational classification (SOC) groups as conservatively as possible, I was forced to make certain assumptions regarding the coding and categorization of board members. For instance, I assumed a cutoff of 200% FPL for a family of four as the indicator of a high status occupation. For single individuals or those in a smaller family, this will lead to a conservative estimate. However, for individuals from a larger family, this will tend to overstate their income relative to poverty.

Furthermore, I relied on mean annual income for each occupation, and some occupations may have more variation in wages than others. For an individual at the lower end of the range, a higher mean income for the group may lead a descriptive consumer to be

categorized as a non-descriptive consumer, while for individuals at the higher end of the range, a lower mean income for the group may lead a non-descriptive consumer to be categorized as a descriptive consumer.

Finally, the use of average annual occupational income is only directly accounting for one dimension of descriptiveness (i.e., income). To some extent this measure is likely to be correlated with other dimensions like education, but it is not a perfect indicator. In short, the transformation of a binary consumer variable into a categorical variable is at best a proxy measure for a more finely nuanced reality. That is, consumer board members are likely to be descriptively representative of the patient population in a variety of ways, and in reality, some consumer board members will be highly descriptively representative, others will not be at all descriptively representative, and others will fall somewhere in the middle. Thus, a continuous—rather than categorical—measure of descriptive representation would be the ideal solution. Unfortunately, data were not available to attempt such an approach. The method I used was conservative enough, however, to be confident in the results obtained. In fact, if anything, I believe that the results may understate the true effects.

Fifth, the fact that FQHC grant application data was not received for all health centers, and that there were some systematic differences between missing and non-missing data, places limits on the ability to generalize the results of this study to settings other than those described by the sample.

Sixth, while a number of factors are controlled for at the county level using Area Resource File (ARF) data, it is important to note that the county and the community are not necessarily synonymous. For smaller FQHCs with perhaps a single delivery site, the community service area may actually be only a portion of the county. For large, multi-site

FQHCs, however, the service area may span multiple counties, and even cross state lines. Consequently, some relevant county-level factors affecting delivery sites lying outside the central county may not be controlled for in the study. However, to the extent that those factors are time-invariant, the fixed effects models will control for them. Still, time-varying factors may persist and future studies should consider alternative ways to account for the diversity of settings in which large FQHCs with multiple delivery sites operate.

Seventh, while the use of a fixed effects model seemed appropriate and was confirmed by a series of Hausman tests, that approach comes at the cost of a loss of efficiency. Although a consistent but inefficient model is preferable to an inconsistent model, the loss of efficiency can still be a problem. In the current study, I have a very short panel of four years. Furthermore, data was not available for all FQHCs in each of the years. For instance, in some cases, I had only a single year of data for a given FQHC. In other cases, I had two or three years of data for a given FQHC. This has the effect of shortening the panel for these cases.

While the estimated coefficients are consistent, the loss of efficiency resulting from the use of a fixed effects model may in part explain the paucity of statistically significant results observed. While the use of a random effects model would boost model efficiency, it would require assumptions about the data that seem implausible. Instead, to the extent possible, future studies should strive to construct a longer and more complete panel dataset to overcome this issue. While this is not currently feasible, this may change in the future with the full implementation of an electronic grant application record system at HRSA.

The interviews also have some potential limitations. First, there is the possibility of selection bias, as non-participants may have answered my questions differently than

participants did. By using a purposive stratified random sample, I hope to have minimized the consequences of any response bias. However, the qualitative interviews may still have suffered from two levels of selection bias.

Specifically, there could have been selection bias at the health center level, and selection bias at the board member level. The first instance would occur if FQHCs where the executive director agreed to participate were significantly different from FQHCs that did not participate. The second instance would occur if the board members identified for participation by the executive director differed significantly from the board members not identified for participation.

To assess the extent to which selection bias is present at the level of the health center, I compared participants to all non-participants (i.e., all other health centers) to identify any meaningful differences in values of variables for the models. With one exception, no meaningful differences were observed between the participating and non-participating centers. The exception was that urban centers were disproportionately represented among interview participants, relative to the distribution of FQHCs nationally. However, this is the result of intentional oversampling of urban centers to ensure adequate representation of different views in the qualitative study. Thus, selection bias at the health center level does not appear to be a major concern.

To assess the extent to which selection bias is present at the board member level, I compared the proportions of descriptive consumers, non-descriptive consumers, and non-consumers between the interview participants and the quantitative data sample. Among interview participants, only 6.7% were descriptive consumers, 73.3% were non-descriptive consumers, and 20% were non-consumers. By contrast, in the quantitative data sample,

26.5% were descriptive consumers, 42.6% were non-descriptive consumers, and 30.9% were non-consumers. From this comparison, it appears that selection bias led to oversampling of non-descriptive consumers and undersampling of both descriptive consumers and non-consumers. This may have limited my ability to uncover important information from the perspective of both non-consumers and descriptive consumers. Future research should consider using in-depth case studies to ensure that the views of all board members are proportionately represented.

Second, to the extent that participants told me that consumer governance was beneficial because they thought that that was the “right” answer or was what I wanted to hear, there is also the possibility that the interview data suffer from acceptability bias. In this case, interview participants may have underreported the disadvantages of consumer governance. This seems especially likely in cases where participants were unable (or unwilling) to mention any disadvantages of consumer governance. Fortunately, enough participants shared what they perceived to be the disadvantages of the requirement to enable me to make some inferences in this regard.

The third and final limitation of the interviews relates to the manner in which they were conducted. Because interviews were conducted over the telephone, this limited my ability and that of the participants to respond to non-verbal cues and draw non-verbal inferences. However, telephone interviews were inexpensive, which made it feasible to collect data from all over the country. Such broad coverage would not have been possible with in-person interviews.

Lastly, there are limitations to the conclusions this study is able to reach. In the truest sense, measuring the relationship between descriptive and substantive representation requires

having information on what the members of the community want and how the individual members of the board voted on an issue. This data is not available in the current study. Instead, aggregate data on board composition is used to predict health center outcomes that seem to be reasonable proxies for the interests of a majority of—but not necessarily all—patients. Nor can this study conclude whether consumer governance matters in an absolute sense, because it does not compare FQHCs with other providers governed completely by non-consumers. Despite these limitations, the current study is able to determine the association between varying levels of consumer governance and tangible FQHC outcomes.

Going forward, there are many questions that remain to be answered about community health centers in the wake of the *Affordable Care Act*. Chief among these is how to integrate health centers into the broader health care system to most effectively maximize access, reduce costs, and improve the quality of care for underserved populations. More work is also needed to better understand which factors, other than consumer governance, might be associated with the outcomes examined in this study. For instance, what is the true relationship between enabling service provision and access to care or the quality of health outcomes? What factors are associated with an FQHC's efficiency and sustainability?

Answering these questions well will require HRSA to collect better health center data, including governance data on board member age, gender, race, education level and income. It would also be helpful to collect data on how long consumer board members have been receiving care at the center, and even how many visits for care they make each year, although collecting the latter may be unfeasible. It would also be beneficial for HRSA to begin auditing at least a portion of the UDS data to help ensure its accuracy. Finally, HRSA should make all health center data publicly available for research purposes.

Conclusion

The idea of consumer governance is certainly powerful and inspiring. Giving a voice to the under-represented somehow seems like the right thing to do on a number of levels. When health centers were first established in 1965, the rationale was that a confluence of poverty and racism had kept many Americans from accessing basic primary care. By meeting the self-identified health care and public health needs of the community, health centers aimed to intervene and break the cycle of disadvantage (Schorr & Schorr, 1989). Ten years later, it became apparent that communities wanted ownership of their centers, and the consumer governance requirement was implemented.

Today, the problems of poverty and the lack of access to health care that motivated the creation of the first health centers remain, but the health care system has become increasingly complex, creating arguably greater barriers to health care access. Racial disparities in health persist, and the country is now faced with sizable numbers of Latino immigrants whose unique health care needs may go unrealized without their input.

The concept of community has also changed. People are more mobile than they were in the past. Inner city areas, once home to the majority of the urban underserved, have become gentrified, and the underserved have moved into suburban communities. As a result, health centers specifically located to serve a given community, may now find that that community has moved a considerable distance away from the center.

Giving people from underserved communities a seat at the table will remain important as the country moves toward new models of care in an attempt to control costs, improve quality, and confront the social determinants of health. The issue is how such

democratic notions are to be effectively implemented. Community-based participatory research is one such mechanism. Consumer governance is another.

Under the right conditions, there is no doubt that consumer board members can have a positive impact on the organizations they govern. However, it is not clear from this study that those conditions exist very often, if at all. There is evidence that including descriptive consumers on the board may harm health centers' operating margins, without affecting their financial self-sufficiency or operational efficiency. However, a negative operating margin is not a sound strategy for the long-term sustainability of the organization.

At the same time, when descriptive consumers serve on the executive committee, it appears that they may steer the health center towards providing a greater scope of enabling services. However, these study results clearly indicate that descriptive consumers are less likely than others on the board to hold positions of influence. As such, including descriptive consumers on the board, while excluding them from the executive committee, may mean enduring the financial disadvantages of consumer governance, without enjoying any of the advantages it brings to service provision.

As Dr. H. Jack Geiger (1996), co-founder of the U.S. health center movement, once wrote: "The communities of the poor—places the public are taught to regard as sinkholes of pathology—are full of untapped human resources, people with drive and intelligence and the commitment to achieve if given half a chance (p. 17)." The results of this study do not suggest that descriptively representative consumers lack the potential to govern. They suggest that they are not being given half a chance.

APPENDIX A:

Implied Consent Letter



Dear [FQHC Executive Director]:

Consumer participation in health care has been used in the United States both as a way to ensure that services are tailored to the needs of patients and to empower disenfranchised residents of disadvantaged communities since the 1960s. However, the contribution of consumer participation to board decisionmaking has not been well-established. We are conducting a study to examine decisionmaking in federally-qualified health center (FQHCs) governing boards. You were randomly selected from the database of FQHCs maintained by HRSA as a possible participant in this study. Your participation will help us to understand the value of consumer governance in the context of the health care safety net. A total of 16 FQHCs have been chosen from across the country to participate in this study. Your participation in this study is voluntary.

To participate in the study you would agree to identify one consumer board member and one non-consumer board member (if available) on your board who consent to be interviewed (via telephone) about their current position on the board and how the board makes decisions, as well as some demographic questions used to describe the respondents in this study. **Interviews should last between 40 and 50 minutes.** Board members are free to answer or not answer any particular question and may choose to end the interview at any time. The interview will be audio-recorded to allow for accurate transcription of participants' comments. Board members' responses are confidential. The only persons who will have access to these data are the investigator named on this letter, and the transcription service which has signed a non-disclosure agreement.

There are no direct risks anticipated with participation in this study, however **participants will receive a \$10 gift card from Amazon.com** for their participation. There will also be indirect professional benefit from this study, as the information obtained will be communicated to the profession through publication in the literature, presentation at professional meetings and direct dissemination to professional associations. You may contact me with any questions at (202) 465-4815 or by email (bradwright@unc.edu). All research on human volunteers is reviewed by a committee that works to protect your rights and welfare. If you have questions or concerns about your rights as a research subject you may contact, anonymously if you wish, the University of North Carolina Institutional Review Board at 919-966-3113 or by email (IRB_subjects@unc.edu).

Thank you for considering participation in this study. I hope that I can use your board members' responses to help shape recommendations for improving the community health center program and share their views with the greater professional community. I will need to be in touch with board members to schedule and conduct the interviews. You may either provide them with my contact information and have them get in touch with me at their convenience, or provide me with their contact information and I will get in touch with them. **I do ask that you please respond as soon as possible to indicate whether or not you agree to have your center participate, as interviews are being conducted on a rolling basis.**

Sincerely,

D. Brad Wright, PhD (Cand.)
Principal Investigator
Dept of Health Policy and Management
Gillings School of Global Public Health
University of North Carolina at Chapel Hill

Daniel R. Hawkins, Jr.
Senior Vice President, Public Policy and Research
National Association of Community Health Centers
Washington, DC

APPENDIX B:

Interview Guide

Date of Interview: _____

Time of Interview: _____

Name of Person Interviewed: _____

Contact Info of Person Interviewed: _____

Name of FQHC Site: _____

UDS Number of FQHC Site: _____

Special Conditions Potentially Affecting Interview: _____

Interview Script

Introduction and Consent: Hi! Thank you so much for taking the time to speak with me today. My name is Brad Wright and I am conducting this interview as part of my doctoral dissertation research at the University of North Carolina at Chapel Hill. You have been randomly selected to take part in this study, which is designed to gather information about decisionmaking by FQHC boards. Your participation is voluntary. The interview should last between 40 and 50 minutes. To ensure that I am able to accurately capture all of your comments, I would like to audio record the interview and have it professionally transcribed. Do I have your permission to do so? All information will remain confidential and any identifying information will be removed when the final results are developed. Do you have any questions about this? Do you consent to participate in this interview? Great, let's get started. Please be sure to speak up so that I don't miss any of your comments.

Background Information on the Board Member

I'd like to begin by asking you a few questions about your health center and your service on the board.

1. How long have you been on the board of the health center?
2. How would you describe your primary job as a board member?

3. In what areas of the board's work do you feel the most knowledgeable?
 - 3.1. In what areas do you feel the least knowledgeable?
4. Are you an officer of your board?
 - 4.1. If NO: Skip to question 5
 - 4.2. If YES: Which office do you hold?
 - 4.2.1. How long have you held this office?
5. Are you currently a patient at the health center?
 - 5.1. If NO: Skip to question 6
 - 5.2. If YES: I'd like to ask you some questions about your use of the health center.
 - 5.2.1. Do you consider the health center your usual source of care?
 - 5.2.2. How long have you been coming to the health center for care?
 - 5.2.3. Were you a patient of this health center before you became a member of the board?
 - 5.2.3.1. If NO: Skip to question 6
 - 5.2.3.2. If YES: How long were you a patient before you joined the board?

Health Center Mission

Now I'd like to ask you some questions about the services your health center provides.

6. Thinking about the services your health center provides, would you say that the board or the executive director was more influential in determining which services would be provided?
7. How involved would you say your board is in determining which services the health center will provide? Would you say:
 - 7.1. Very involved
 - 7.2. Somewhat involved
 - 7.3. Not very involved, or
 - 7.4. Not at all involved
8. At your center, who is primarily responsible for deciding which enabling services will be offered?
 - 8.1. Who else is involved in making this decision?
 - 8.2. How is the decision made (i.e., what things does it depend upon)?
9. How much of a role would you say that the health center's mission plays in the decisions the board makes regarding which services to provide?
 - 9.1. Can you give me an example of an instance when the board relied on the mission to guide a decision?
 - 9.2. How about a time when the board made a decision that seemed to conflict with the mission?

Health Center Margin

Now I'd like to talk with you some about the finances of your health center.

10. Thinking about the financial health of your center, would you say that the board or the executive director was more influential in maintaining the finances of the health center?
11. How involved would you say your board is in determining the health center's budget?
Would you say:
 - 11.1. Very involved
 - 11.2. Somewhat involved
 - 11.3. Not very involved, or
 - 11.4. Not at all involved
12. How would you say that the board views the health center's financial health?
 - 12.1. What role does the board play?
 - 12.2. What is the board's responsibility for finances versus the health center staff's responsibility for finances?
13. Has your board ever judged an effort as successful even if it lost money?
 - 13.1. If NO: skip to question 14
 - 13.2. If YES: Can you give me an example of a time when this happened?
14. What is the "nominal fee" your center charges individuals who are below the poverty line?
15. Some health centers use collection agencies, others have billing departments that set up payment plans or negotiate lower fees with patients, and still others refer patients to other providers to maximize revenues.
 - 15.1. What measures, if any, does your health center take to ensure payment from all patients?
 - 15.2. Does your center currently—or has it ever considered—collecting payment up front before services are provided?
16. Many health centers face financial pressures because of a combination of reductions in funding and increasing demand for services.
 - 16.1. Has your FQHC been faced with budget cutbacks during your time on the board?
 - 16.2. If so, what specific actions did the board take in response to this pressure?
 - 16.3. Has your center ever reduced the amount or types of enabling services offered because of budgetary concerns?

The Consumer-majority Requirement

As you know, all federally-qualified health centers—with the exception of certain programs eligible for governance waivers—are required to have a governing board the majority of whose members must be patients at the center and who must be representative of the community served. I'd like to talk to you some about this aspect of your health center.

17. What, if any, do you think are the advantages and disadvantages to the health center of having consumers on the board?

18. How does your board identify potential patients to serve on the board?
19. Thinking about its impact on the board's decisions, would you say that the consumer-majority requirement matters:
- 19.1. Very much
 - 19.2. Some, but not much
 - 19.3. Very little, or
 - 19.4. Not at all

Board Member Participation and Influence

Now, I'd like for us to talk a bit about how the board operates during a typical meeting.

20. What proportion of board decisions would you say are made primarily by the board's executive committee, with little or no input from the rest of the board?
21. Thinking about the role of consumer board members on the board, would you say that patient board members have:
- 21.1. More influence
 - 21.2. Less influence, or
 - 21.3. About the same amount of influence as non-patient board members when it comes to making decisions on the board?

Wrap-Up Question

Just to make sure I've covered everything and to give you the opportunity to address anything I may have neglected to mention during this interview, I'd like to ask you:

22. What do you think makes health centers different from other safety net providers?

Demographic Information on Interviewee

Okay, we're almost done. Finally, I'd like to ask you a few questions about yourself that will help me in analyzing my results.

[Interviewer: Note respondent's gender]

23. If you don't mind my asking, what is your current age?
24. How would you describe your race and/or ethnicity?
25. What is the highest level of education you have completed?
26. What is your primary occupation?
27. Which of the following categories best reflects your total household income before taxes last year? Would you say:
- 27.1. Under \$25,000
 - 27.2. \$25,000 - \$40,000

- 27.3. \$40,001 - \$60,000
- 27.4. \$60,001 - \$80,000
- 27.5. More than \$80,000

Concluding Remarks:

Well, those are all of the questions that I have for you at this time. Before we finish up is there anything else you'd like to add? I really appreciate your taking the time to participate in this interview. To make sure that I've accurately captured your statements, I'd like to send you a copy of the written transcript of this interview by email once it is available. You are eligible to receive a \$10 gift card to Amazon.com for your participation, which I can also send to you by email. Would you mind providing me with your email address solely for these two purposes? Then you can read through the transcript, and if you need to change anything or make any corrections, you can send me an email to let me know. Okay, well, thanks again for your participation! I'll be in touch!

APPENDIX C:

Coding Manual

Background

Coding is the process of breaking a larger text into discrete units and interpreting the meaning of these units, through the use of a number of theoretical constructs, which are then labeled by the applying of a code. The discrete units may be a word, a sentence, or a paragraph—there is no set size—but longer chunks of text tend to provide a richer context for analyzing and understanding the content.

This manual, which will be modified as appropriate, begins with a list of start codes that have been derived from the theoretical model for the study as well as the particular interview questions asked. Each code is defined and decision rules are provided to help ensure that the code is applied appropriately with consistency. Where ambiguity may exist, examples of appropriate and inappropriate use of each code are also provided. During the coding process, it may become necessary to combine two or more codes into a single code or to create new codes if no pre-existing code adequately describes a given textual unit. Through an iterative process, codes, their definitions, and the decision rules regarding their use will be refined.

Instructions

You are being given 6 interviews to code. You may use any qualitative software you like to code the documents, or you may simply use Microsoft Word. In either case, please label the text units using the code abbreviation in the table below. If you choose to code the documents in Microsoft Word, please use different colors to highlight sections of the text, and then use the “comment” feature both to assign the code, to suggest new codes (please indicate new codes by name in all caps), and to record your thoughts (where necessary) to justify your application of a code. This will be important when we meet to discuss and resolve any discrepancies.

CODE SUMMARY TABLE

CODE	CODE SHORT DESCRIPTION
A	Board Tenure
B	Description of Board Work
B1	CEO Oversight
B2	Represent Community
B3	Set Budget and Policies
B4	Ensure Compliance
B5	Fiduciary Duty
C	Knowledge Areas
C1	Most Knowledgeable
C2	Least Knowledgeable
D	Board Officer
E	FQHC Patient Status (Yes / No)
E1	Usual Source of Care (Yes / No)
E2	Patient/Board Member Timing
E3	Use Peripheral Service Only (e.g., Dental)
F	Influence in Service Provision
F1	Board More Influential
F2	CEO / Staff More Influential
F3	Shared Influence of Board and CEO
G	Influence in Finances
G1	Board More Influential
G2	CEO / Staff More Influential
G3	Shared Influence of Board and CEO
H	Mission-Margin Tension
H1	Mission Dominant
H2	Margin Dominant
H3	Balanced Approach
I	Nominal Fee (\$ FIGURE)
J	Revenue Collection Strategies
J1	Collect Up Front
J2	In-House Billing
J3	Refer to Collections
J4	Fire Patients
K	Response to Adverse Conditions
K1	Response to Financial Cutbacks
K2	Response to Other Circumstances
L	Pros and Cons of Consumer (51%) Majority Requirement
L1	Pros of Consumer Majority
L	Secret Shoppers
1a	
L2	Cons of Consumer Majority

L 2a	No Cons to Consumer Majority
L3	Community Work/Residency Trumps Patient Status
M	Identification of Consumer Board Members
M1	Identify Person First
M2	Identify Consumer First
N	Consumer Board Member Representativeness (1 – 4 scale)
N1	Explanation of Representativeness
O	Identifying Community Needs
O1	Originates with Board
O2	Originates with Staff
O3	Complaining to Board Members
P	The Consumer Majority in Practice
P1	Consumer Majority Decisions (1 – 4 scale)
P2	Consumer Participation (1 – 3 scale)
P3	Consumer Influence (1 – 3 scale)
P4	Who Talks at Meetings?
Q	Executive Committee Dominance
R	Demographics

EXPLANATION OF CODES

Code: *BOARD TENURE*

Definition: How long (in years) the board member has served on the board.

Position in Framework: This is used to gauge the respondent’s familiarity with the board, the health center, and the health center program. For example, a board member with a long tenure will be more likely to have many experiences to draw on during the interview, but may also be more committed to the doctrine and rhetoric of the health center program. On the other hand, a new board member may have less specific experience to draw from, but may be more open-minded in their assessment of the health center program.

Decision Rules: This question is asked—and generally responded to—directly. It refers to total time on the board, and not to any particular aspect of board service (e.g., length of time a certain office has been held.)

Sub-Codes: None

Examples of Correct Use: “16 years.”; “About 10 years.”

Examples of Incorrect Use: “I was probably chair six or eight years ago.”

Code: *DESCRIPTION OF BOARD WORK*

Definition: This code describes what the respondent thinks the board’s purpose is. Why is there a board? What does it do? What role does it play in the organization?

Position in Framework: Governance theory suggests that boards exist to provide policy direction and organizational oversight, including oversight of the executive director, and are ultimately responsible for the organization, but are not to be involved in its day-to-day operation.

Decision Rules: This code will typically be applied in response to the question “How would you describe your primary job as a board member?” The code should generally be applied to descriptions of the board as a whole and its role in overseeing the organization. While it may sometimes be applied in instances that are specific to the individual, it should in such cases still focus on the individual’s role in the organization as a whole, and not to the individual’s role within the board. The latter case would most appropriately be coded as “knowledge areas” or “board officer.”

Sub-Codes: *CEO Oversight, Representing Community, Set Budget/Policy, Ensure Compliance, Fiduciary Duty*

Examples of Correct Use: “It’s to provide direction to the CEO and other management officials on the board, to set policies, to approve procedures....”

Examples of Incorrect Use: “Well, first, I was just a new board member without an office or anything and the past two to three years now, I’ve been president.”

Code: KNOWLEDGE AREAS

Definition: Board members bring different skills to their participation on the board. Knowledge areas capture both a board member’s strengths and their weaknesses.

Position in Framework: The study framework assumes that individuals who are representative of the typical FQHC patient population (i.e., low-income, uninsured, etc.) will be knowledgeable in areas related to their consumer status and community membership, but less knowledgeable about those areas of the board’s work that rely on certain professional competencies (e.g., finances, law, etc.). Furthermore, a respondent’s knowledge areas provide a lens through which to view their responses in other areas. For example, an individual who identifies finances as a strength is likely to answer financial questions differently than an individual who identifies finances as a weakness.

Decision Rules: This code should be applied in instances where the respondent refers explicitly to their own strengths and weaknesses as a board member, to the level of knowledge they possess in a given area of the board’s work. It should not be applied in cases where the respondent is speaking about the board as a whole.

Sub-Codes: *Most Knowledgeable, Least Knowledgeable*

Examples of Correct Use: “I didn’t bring to the board any particular knowledge of health care trends...”; “For me, personally, I would say financial, as far as making sure that everything has stayed within the budget.”

Examples of Incorrect Use: “When we run into a situation where we don’t feel we have sufficient expertise on the board then we have said alright, on the next board meeting we want to bring in someone who can present to the board on a particular issue.”

Code: BOARD OFFICER

Definition: Board officer captures whether the board member is merely a board member or holds one of the following elected offices within the board: chair, vice chair, secretary, or treasurer.

Position in Framework: Board officers (as defined) make up the executive committee, which is a powerful subset of the board. Not only may the executive committee take binding action on behalf of the full board, but members of the executive committee are likely to be more influential members of the board, given that the positions are elected offices voted upon by all board members.

Decision Rules: The default is that a respondent is a non-officer board member. This code only applies in cases where a respondent identifies that they are chair, vice chair, secretary or treasurer of the board proper. It should not be applied if the respondent refers to any other position or office (e.g., “chair” of personnel committee). President and vice president are synonymous with chair and vice chair.

Sub-Codes: None

Examples of Correct Use: “No.” (when asked if they are an officer of the board); “Right now I’m the...we have a president...I guess I’m the vice president of the board.”

Examples of Incorrect Use: “So basically my committee job as the chair of the personnel committee is to make decisions to help make sure we have the best personnel possible...”

Code: *FQHC PATIENT STATUS*

Definition: This code applies to the board member’s personal use of the health center as a patient and includes sub-codes relating to the nature and timing of that use.

Position in Framework: Identifying whether or not a respondent is a patient at the health center is likely to shed some light on their responses about the consumer-majority requirement. In addition, consumer board members are asked two questions that attempt to distinguish the idea of non-descriptive and descriptive consumers: “Is the health center your usual source of care?” and “Were you a patient before you joined the board?” A respondent who indicates that they were a patient long before joining the board and who identifies the center as their usual source of care is more likely to be a descriptive consumer in many respects, even if their demographic profile suggests otherwise.

Decision Rules: This code will be applied in response to a direct line of questioning. Both patient status and usual source of care will likely be “yes/no” answers. The timing question may be wordier, but still apparent. If a person does not indicate use of primary care services, but says that they are a patient at the dental clinic or another similar service, they should be coded as using a peripheral service only.

Sub-Codes: *Usual Source of Care (Y/N), Patient/Board member Timing, Use Peripheral Service Only*

Examples of Correct Use: “That’s the only place I go for my primary care...”; “I visit the health center. It’s not my primary provider, but I do visit the health center as a consumer.”

Examples of Incorrect Use: N/A

Code: *INFLUENCE IN SERVICE PROVISION*

Definition: Influence in service provision refers to which group or groups have the most influence in deciding which services the health center chooses to provide.

Position in Framework: The link between the board’s structure and the health center’s provision of mission-oriented services passes through an important decisionmaking process identified by this code, which identifies the most influential group in the decisionmaking process. It may be the board, the executive director, other staff, or a combination. However, to the extent that the board is considered less influential, the relationship between board structure and organizational outcomes is likely to be moderated by external forces (e.g., CEO).

Decision Rules: This code is to be applied only to those portions of the text that directly address the decisionmaking process surrounding the health center’s provision of services. It should not be applied in cases where the respondent is simply describing services that their

particular health center provides. That is, the focus is not on the specific services provided, but on the decisionmaking process in which the services to be provided are selected.

Sub-Codes: *Board More Influential, CEO/Staff More Influential, Shared Influence of Board and CEO*

Examples of Correct Use: “I would say the executive director would clearly be more influential. He or she would bring those things to the board as a suggestion as unmet needs of our patient base and we would discuss them and try to find a way to make our health center as relevant and valuable to our patient base as we can.”

Examples of Incorrect Use: “We did have pharmacy deliveries for a while, but it didn’t seem to be cost effective and that program didn’t really serve us well....but there are several other alternative services that [we] offer other than, like you said, the core services that all medical centers and health care centers do offer their patients. We do have some other options.”

Code: *INFLUENCE IN FINANCES*

Definition: Influence in finances refers to which group or groups have the most influence in maintaining the health center’s finances.

Position in Framework: The link between the board’s structure and the health center’s financial outcomes passes through an important decisionmaking process identified by this code, which identifies the most influential group in the decisionmaking process. It may be the board, the executive director, other staff, or a combination. However, to the extent that the board is considered less influential, the relationship between board structure and organizational outcomes is likely to be moderated by external forces (e.g., CEO). It is important to note that the board should be monitoring finances and approving the budget, but not involved in the day-to-day finances.

Decision Rules: This code is to be applied only to those portions of the text that directly address the decisionmaking process and responsibility surrounding the maintenance of the health center’s finances. It should not be applied in cases where the respondent is simply describing the health center’s financial health—unless such a description is needed context for the proper understanding of influence surrounding the maintenance of finances.

Sub-Codes: *Board More Influential, CEO/Staff More Influential, Shared Influence of Board and CEO*

Examples of Correct Use: “Oh, no, we have the financial committee that is kind of managed by, we have a CPA on the board...and we have our financial director, our CFO, and he basically runs the budget and keeps everything in line so we just go over it every month.”; “Definitely the CEO would be a bigger influence on the finances.”

Examples of Incorrect Use: “We control a fair amount of real estate, so we’re in the black.”

Code: *MISSION-MARGIN TENSION*

Definition: Any discussion of the conflict between the health center’s mission and the health center’s need to maintain its finances, including how decisions are made to resolve that conflict.

Position in Framework: FQHCs are safety net organizations with a strong mission to provide primary care (and other health care services) to all, without regard for ability to pay. While they receive some federal grant funds to help offset the cost of uncompensated care, fulfilling their mission can present a very real threat to their finances. Although health

centers are not in the business to make money, their financial health is important, because if they become insolvent, they can no longer fulfill their mission. Thus, there can be a tension between mission and margin for health centers, especially in the case of services that are vital to the mission, but poorly if at all reimbursed and thus harmful to the margin. How health center boards navigate this tension and make decisions is of interest here.

Decision Rules: This code should be applied in instances where the respondent discusses decisions involving and/or actions taken regarding the health center's mission and/or margin. It especially applies to any simultaneous mention of mission and margin that discusses the tension or trade-offs between the two, and how the board attempts to tend to both. The "mission dominant" sub-code should be used in cases where the respondent indicates that the mission takes priority over the finances. The "margin dominant" sub-code should be used in the opposite case where finances take priority over the mission. Where both the mission and finances are discussed as equally important, the "balanced approach" sub-code should be used.

Sub-Codes: *Mission Dominant, Margin Dominant, Balanced Approach*

Examples of Correct Use: "Again, this was years ago, but we, at different points, closed clinics when we faced severe budget cuts or staff was replaced, but who those people would be is not the board's decision."

Examples of Incorrect Use: N/A

Code: *NOMINAL FEE*

Definition: The sliding-fee scale amount that a health center charges a patient with an income below 100% of the federal poverty level for a basic office visit.

Position in Framework: The amount of the nominal fee may reflect, to some extent, the FQHC's focus on mission or margin. Of greater interest, however, is that the amount of the nominal fee is one of the few items mentioned in the FQHC legislation upon which the health center board is required to set by a vote. A board member's ability to recall this information may be indicative of the level of board involvement around this issue.

Decision Rules: This will appear as a fixed response to a single question.

Sub-Codes: None

Examples of Correct Use: "I think it may have just changed. It was around \$5 or \$6."

Examples of Incorrect Use: N/A

Code: *REVENUE COLLECTION STRATEGIES*

Definition: Methods that the health center employs to ensure that it collects as much of the charges it bills out as possible.

Position in Framework: Health centers need to collect as much revenue as possible to remain solvent, but aggressively seeking payment from the low-income and uninsured can begin to run counter to the health center's mission. More aggressive practices, like using a collection agency or denying care to people who abuse the system (i.e., have the ability to pay, but refuse to do so) are indicative of a margin-dominant orientation. No attempt to maximize collections would represent the extreme of mission-dominance. Areas in between these two extremes represent a balance.

Decision Rules: Possibly a future sub-code of mission-margin tension. This code will typically be used in a respondent's answer to a very direct line of questioning on the subject. The "collect up front" sub-code should be used anytime the respondent indicates that patients

are asked to pay when they come to the clinic for services. “In-house billing” applies in cases where the health center sends out a bill, makes payment arrangements with patients, etc. Any use of an outside collection agency should receive the “refer to collections” sub-code. Lastly, the “fire patients” sub-code applies whenever a respondent indicates that the health center tries to identify individuals who abuse the system by non-payment and may deny care to those patients.

Sub-Codes: *Collect Up Front, In-House Billing, Refer to Collections, Fire Patients*

Examples of Correct Use: “I believe we do try to collect up front what we can....I don’t think we’ve used very much of outside collection service.”

Examples of Incorrect Use: N/A

Code: *RESPONSE TO ADVERSE CONDITIONS*

Definition: What actions or other responses a health center took in response to one or more adverse conditions it faced.

Position in Framework: When a health center faces adverse conditions (financial or otherwise) that threaten its mission and/or margin, the board must choose a response strategy. How the board decides to respond is indicative of the health center’s mission/margin orientation.

Decision Rules: This code should only be applied when the respondent includes a description of both the adverse condition and the response taken in its wake. If the respondent mentions an adverse condition, but does not discuss the response, a new code may need to be created. If the respondent mentions a response, but not an adverse condition, the assumption will be made that the board was responding to the general adversity faced by a health center and will code the response as appropriate (e.g., mission-margin tension). If the adverse condition is financial, obviously the “financial cutbacks” sub-code should be used. All other adverse conditions should use the “other circumstances” sub-code. Of course, both sub-codes can be used and may overlap.

Sub-Codes: *Response to Financial Cutbacks, Response to Other Circumstances*

Examples of Correct Use: “Again, this was years ago, but we, at different points, closed clinics when we faced severe budget cuts or staff was replaced, but who those people would be is not the board’s decision.”

Examples of Incorrect Use: N/A

Code: *PROS AND CONS OF CONSUMER-MAJORITY (51%) REQUIREMENT*

Definition: The respondent’s opinion of the advantages and disadvantages of being required to have at least 51% of board members be patients at the health center.

Position in Framework: The requirement for at least 51% of board members to be consumers of the health center is central to the current study. Board function is proposed as the linkage between board structure and organizational outcomes and how board members view the consumer-majority requirement offers some context for this function (i.e., how do they think it works/should work/doesn’t work?). This might be considered the input side of the board function variable.

Decision Rules: This code should be applied any time the respondent discusses their perception of the pros and cons of the consumer governance requirement. This may include a detailed explanation of the pros and/or the cons. This code should not be applied to the evaluation of consumer participation, influence, and effect on board decisions. Sub-codes are

highly descriptive and their application should be intuitive. Questionable instances should be flagged for evaluation.

Sub-Codes: *Pros of Consumer Majority, Secret Shoppers, Cons of Consumer Majority, No Cons to Consumer Majority, Community Work/Residency Trumps Consumer Status*

Examples of Correct Use: “My first thinking is that I think it’s more beneficial than not...There’s nothing like being a patient to get a sense of the atmosphere and the treatment a patient gets the moment they come through the door...”; “Downside, I guess I can’t think of too much other than if a board member who was a consumer developed some sort of negative relationship with a provider...”; “I wouldn’t think it would be detrimental to the health center.”

Examples of Incorrect Use: “We have patient focus group meetings also that people can attend and that is basically a time for feedback for what we like to see going on at the health center and what we don’t like to see or anything like that.”

Code: *IDENTIFICATION OF CONSUMER BOARD MEMBERS*

Definition: How the board identifies and selects consumers to serve as board members.

Position in Framework: By identifying the process by which the board selects new consumer board members, it may be possible to gain some insight into the non-descriptive versus descriptive consumer board member characterization. For instance, are people asked to become consumers because the board wants them for other reasons (e.g., particular skills) or are people selected from the pool of current patients?

Decision Rules: This code should be applied to any discussion of the identification of board members to serve on the board. In most instances, this will probably be consumer board members, because of the question posed to respondents. However, any reference to board member identification and recruitment should be coded using this code. If enough non-consumer board member references are identified, a new code should be created.

Sub-Codes: *Identify Person First, Identify Consumer First*

Examples of Correct Use: “Typically, what we do is know people who have an interest in serving the community and just ask them to serve.”; “We ask people. We say ‘Hey, do you have anybody that you might think is a good candidate or a good fit?’”

Examples of Incorrect Use: N/A

Code: *CONSUMER BOARD MEMBER REPRESENTATIVENESS*

Definition: How representative the consumer board members are of the patient population as a whole.

Position in Framework: This code attempts to further distinguish between non-descriptive and descriptive consumers, but at the board level as a whole.

Decision Rules: This code applies to any discussion of the extent to which the consumers on the board represent or look like the patient population. This code should be limited to discussions of the level of demographic characteristic concordance between the consumer board members and patient population, and should not be used to describe how the board members interact with the community (even as a result of their demographic characteristics).

Sub-Codes: *Explanation of Representativeness*

Examples of Correct Use: “I think we represent the patients that are served.”; “We have extreme difficulty getting the low income people on the board. That is one group that is not well represented.”

Examples of Incorrect Use: “I know of some board members who aren’t using the clinic, but they bring a different perspective because they hear related stuff. They’re all community members, we all live in the community and so we hear about what’s going on.”

Code: *IDENTIFYING COMMUNITY NEEDS*

Definition: How the board identifies health care related needs in the community.

Position in Framework: The assumption is that consumers are included on the board to help the organization identify and respond to the specific needs of the community. How community needs are identified has the potential to define the role of consumers on the board and address the veracity of this assumption.

Decision Rules: This code should be applied any time a reference is made to identifying the community’s needs—whether that is done by consumer or non-consumer board members. This code should also be applied any time interactions between the community or patients (the “community”) and health center staff or board members (the “FQHC”) are mentioned. This code should not be applied to discussions of community needs or problems mentioned in other contexts, but should be limited to discussions surrounding the action of how the health center becomes aware of those needs.

Sub-Codes: *Originates with Board, Originates with Staff, Complaining to Board Members*

Examples of Correct Use: “I know of some board members who aren’t using the clinic, but they bring a different perspective because they hear related stuff. They’re all community members, we all live in the community and so we hear about what’s going on.”; “So yeah, we hear about things that are needed in the community. We bring them to the ED and she’ll either say ‘Oh, that’s a great idea. Let’s pursue that.’ Or ‘Gosh, we’re already doing that.’ And we just didn’t realize it.”

Examples of Incorrect Use: “If your clinic is on the same block as a neighborhood pharmacy that has been there for many years, or even a chain drug store, it probably doesn’t make much sense for that clinic to open a pharmacy operation.”

Code: *THE CONSUMER MAJORITY IN PRACTICE*

Definition: The participation and influence of consumer board members during board meetings and their effect on board decisions.

Position in Framework: This code captures not how the consumer-majority requirement is proposed to work (captured by the “pros and cons” code), but categorizes the process and outcomes of having consumers on the board. A board member might say many positive things about why it is important to have consumers on the board, but then conclude that they don’t actually participate much, have as much influence, or alter the outcome of board decisions in any meaningful way, or vice versa.

Decision Rules: This code should be applied to discussions of how a board meeting operates, including who talks the most and the least, how much consumer board members participate compared to non-consumer board members, how much influence consumer board members have compared to non-consumer board members, and how much of an effect the consumer-majority requirement has on the decisions the board makes. This code should not be applied when respondents are discussing their perceptions of the pros and cons of the consumer-majority requirement. The focus of this code is on the consumer majority in the context of the actual conduct and outcome of meetings.

Sub-Codes: *Consumer-majority Decisions, Consumer Participation, Consumer Influence, Who Talks at Meetings?*

Examples of Correct Use: “I would say it’s [i.e., participation] less often here because we have had experience with capital P patient board members. They had very poor attendance records and seldom spoke up. If they did, they were very focused on a single issue.”; “There’s no one person that dominates, but between the chair and the CEO, they lead the meeting through.”

Examples of Incorrect Use: “They’re going to hear from those patients, you’re going to hear things like; this was one that when I first started on the board was ‘Why is that answering system so terrible?’”; “Patients that are on the board are going to bring real, every day issues as well as community perceptions to the board.”

Code: *EXECUTIVE COMMITTEE DOMINANCE*

Definition: The extent to which the executive committee makes decisions on behalf of the full board.

Position in Framework: This is a way of measuring the potential of the non-executive committee board members. If a respondent indicates that their executive committee frequently makes decisions on behalf of the full board, this would indicate that board members not on the executive committee have less authority and influence on board decisions and a lesser effect on organizational outcomes.

Decision Rules: This comes from a single question.

Sub-Codes: None

Examples of Correct Use: N/A

Examples of Incorrect Use: N/A

Code: *DEMOGRAPHICS*

Definition: Respondent’s age, gender, race, education, occupation, and income level.

Position in Framework: Respondent’s demographic characteristics can be used to classify their responses in looking for possible associations, and may also contribute to the understanding of non-descriptive versus descriptive consumers.

Decision Rules: This comes from a uniform series of questions appearing at the end of each interview.

Sub-Codes: None

Examples of Correct Use: N/A

Examples of Incorrect Use: N/A

Appendix D:

Coding Board Member Occupation / Expertise

Variable Label	Standard Occupational Code (SOC)	Includes the Following Occupation / Expertise Values from Exhibit D of FQHC Grant Applications
Management	11-0000*	Administration, Administrative Director, Asset Manager, Banker, Business Management, Chief Financial Officer, Contractor, Corporate, Employment, Facility Management, Finance Manager, Funeral Homes Owner, Governance, Health Care Foundation, Health Care Management/Operations, Hospitality, Hospital Administration, Human Relations, Human Resources, Industrial Safety and Environment Officer, Labor Relations, Leadership Training, Loan Officer, Medicaid Manager, Manage/r/ment (not otherwise specified), Multicultural Coordinator, Nonprofit Boards, Operations Manager, Personnel, Physician Recruiter, Producer, Program Coordinator, Public Administration, Public Health Administration, Senior Staff Associate, Workers Compensation
Government and Legislators	11-1031*	Borough Treasurer, City Clerk, City Councilman, City Employee, City Government, Civil Service, Community-Elected Official, Coroner, County Auditor, County Government, County Treasurer, DSHS, Dept. of Defense, Department of Environmental Conservation, Department of Human Service, Diplomatic Corps, Elected Official, Extension Agent, FBI, FDA, FEMA Employee, Govt. Worker, Health Policy, Housing Authority, Labor Department, Legislative Aide, Local Government, Mayor, Military, Natural Resources, Office of Public Assistance, Park Ranger, Policymaker, Postmaster, Public Housing Authority, Public Official, Public Policy, Public Sector, Public Servant, Recreation Dept., Regional Extension Service, Soc. Sec. Admin., State Government, State Medical Examiner, TDH (Texas Dept of Health), Town Administrator, Town Management, USDA, US Forestry, Veteran, Voter Registration
Education Administration	11-9039*	Administration/Education, Board of Education, Education / Administration, Principal, School Administrator/Administration, School Development, School District Outreach, School Health and Safety Officer, School Official, School Superintendent, School Transition Coordinator, University Relations
Business	13-0000*	Arbitrator, Auditor, Bail Bond Agent, Bondsman, Book Store Owner, Business Administration/ Finance, Business Consultant, Business Development, Business/Finance, Business / Information Technology, Business Owner, Business Relations, Businessman, Businesswoman, Business/Planning, Chamber of Commerce, Civic Association, Claims Specialist, Community Development, Compliance Officer, County Assessor, Development, Development Consultant, Economic Development, Field Development Consultant, Finance, Financial, Financial Analyst, Financial Consultant, Financial Services, Grant Writer/ing, Health Care Consultant, Housing Developer, Industry, Innkeeper, Insurance, International Business, KY PCA, Labor Union, Land Developer, Lobbying, Lodge Owner, Managed Care, Marketing, Marketing Consultant, Marketing/Finance, Mortgage Broker, Nonprofit Consultant, Nursing Home Consultant, Pharmaceutical PR, Philanthropy, Planning and Development, Private Sector, Procurement, Professional, Restaurant Owner, Revenue Agent, Revenue Office, Small Business, Small Business Owner, Stockbroker, Strategic Planning, Tax Assessor, Trade Union Organizer, United Way
Events	13-1121	Marketing/Event Planning
Accountant	13-2011*	Accountant, Accounting, Accounting Clerk, Controller, Accounting Partner, CPA, Tax Preparation
Information	15-0000*	Computers(IT), Computer Analyst, Data Analyst, IBM, Information

Technology		Technology, MIS, School Media Specialist, Systems Analyst, Systems Manager, Technology
Architect / Engineer	17-0000*	Architect, Architecture, Biomedical Engineer, Chemical Engineer, Civil Engineer, Engineer, Engineering, Surveyor
Scientist	19-0000*	Biologist, Chemist, Clinical Research, Epidemiologist, Environment/alist, Environmental Scientist, Geologist, Health Research, Herbologist, Medical Researcher, Microbiologist, Researcher
Psychology	19-3031*	Behavioral Health (plus a PhD), Clinical Psychology, Early Childhood Development, Mental (plus a PhD), Mental Health Counselor (plus a PhD), Psychology, Social Service (plus a PhD), Social Work (plus a PhD)
Social Work	21-1000*	Addiction Specialist, Caseworker, Children and Youth Services, Community Counseling, Community Social Services, Counseling, CSW, DFACS, Domestic Violence, Employment/Job Training, End Hunger, Family Services, Head Start, Housing, Human Services, Job Programs, Job Training, Migrant Head Start, MSW, LCSW, Service Organization, Social Services, Social Work/ers, Substance Abuse Services, Supportive Living Caseworker, TANF Work Study Job Counselor, Therapist, Vocational Instructor, Youth Services
Clergy	21-2011*	Bishop, Chaplain, Church Minister, Clergy, Faith Based, Hospital Chaplain, Islamic Center, Migrant Ministry Coordinator, Minister, Priest, Religion, Religious Leader, Senior Pastor, Spanish American Baptist Church, Spiritual Counselor
Lawyer	23-1011*	AAL, Attorney, Circuit/Trial Court Judge, County Judge, Deputy City Attorney, District Attorney, Health Care Law, Insurance Law, Judge, Juvenile Courts, Law, Lawyer, Law & Legislation, Legal, Legal Advice, Legal Affairs, Legal Aid, Legal Services, Prosecuting Attorney's Office, Superior Court Judge
Paralegal	23-2011	Legal Assistant, Paralegal
Professor	25-1199*	Academic Professor, Alaska Bible College Educator, Business (plus a PhD), Chancellor (plus a PhD), College Instructor, College Professor, Community College Teacher, Dental Instructor, Education (plus a PhD), Educator/Law, Executive (plus a PhD), Higher Ed, Law Educator, Marketing (plus a PhD), Medical School Administration (plus a PhD), PhD (unspecified occupation), Religion and Ethics (plus a PhD), Researcher, ScD, Small College Instructor, University (plus a PhD), University Lecturer
Teacher	25-3099*	Education, Educator, Migrant Education, Migrant Teacher, School System, School Teacher, Substitute Teacher, Teacher, Teaching
Librarian	25-4021*	Education / Library Science, Librarian
Media	27-0000	APRN, Artist, Author, Broadcasting, Communications, Design, Editorial Coordinator, Entertainer/ment, Freelance Writer, Graphic Designer, Interpreter & Translator, Journalist, Magazine Publisher, Media Specialist, Medical Illustrator, Newspaper Editor, Photography, Printing & Photography, Public Relations, Public Relations and Marketing, Radio Broadcasting, Sculptor, Telecommunications Marketing, Writer, Writer – Advertising
Dentist	29-1021*	Dental, Dentist, Dentiistry, DDS, DMD
Pharmacist	29-1051*	Doctor of Pharmacy, Pharmacist, Pharmacy
Physician	29-1069*	Alternative Medicine, D.O., M.D., Medical (not otherwise specified), Medical Care (plus an MD), Medical Education, Medical Evaluation, Medicine, Physician, Provider, Specific Types (e.g., Geriatric Specialist, Psychiatrist, OBGYN, Internist)
Nurse	29-1111*	ANP, Community Health Nurse, District Nurse, FNP, Nurse, Nursing, Nurse Practitioner, Parish Nurse, Public Health Nurse, RN, School Nurse
Veterinarian	29-1131*	Veterinarian, Veterinary
Medical Records	29-2071	Medical Records, Medical Transcriptionist
Health	29-9099*	Acupuncture, Alternative Therapy, Ambulatory Health Care Operations,

		Behavioral Health, Chiropractor, Clinical, Clinician, Community Health, County Health Department, Healthcare, Health Education, Environmental Services, Health, Health Services, Hospice Care, Hospital, Hospital Employee, Managed Care, Medical Lab Technologist, Mental Health, MH/MR, MPH, Nutrition, Occupational Therapy, Optometry, Oral Health Care, Physical Therapy/ist, Physician's Assistant, Primary Care Organization, Public Health, Radiology Technician, Rehabilitation Services, Rural Health, Ryan White, School Health, Speech-Language Therapist, WIC
Health Care Support	31-0000	Allied Health Services, Assistant to Handicapped, Care Giver, Caretaker, Chiropractic Assistant, CNA, Community Health Worker, Dental Assistant, Home Care, Home Health Aide, Massage Therapist, Medical Assistant, Medicare, Nurse's Aide, Nursing Assistant, Outreach Coordinator, Refugee Health Mentor, Resident Caretaker, Spiritualist Healer
Protective Service	33-0000	Animal Control, Border Patrol Agent, City of Richmond Fire Department, Constable, Corrections, Criminal Justice, Emergency Mgmt., Emergency Responder, EMS, EMT, Fire Department, Juvenile Justice, Juvenile Officer, Juvenile Probation, LA County Probation, Law Enforcement, Marshall/Supreme Court, Parole Officer, Police Officer, Prison Guard, Security, State Probation Agent, State Trooper, Tribal Police Officer
Protective Service Managers	33-1021*	Assistant Fire Chief, Customs Officer, Deputy Sheriff, EMS Director, Fire Battalion Chief, Fire Chief, Police Captain, Police Chief, Sheriff, U.S. Marshal
Food Service	35-0000	Food Service, High School Cafeteria, Restaurant, School Cook, Supervisor Food Services, Waitress
Cleaning	37-0000	Domestic Services, Facilities, Housekeeper/ing, Janitorial Services, Landscaper, Office Cleaner
Service	39-0000	Barber, Cosmetologist, Fitness, Florist, Hair Dresser, Hair Stylist, Hostess, Interior Designer, Mortuary Assistant, Physical Fitness Trainer, Service Sector, UPS
Child Care	39-9011	Childcare, Foster Care
Retail	41-0000	Auto Parts Merchant, Car Salesman, Commerce, Good Year Tire, Retail Entrepreneur, Retail Sales, Sales, Sales Representative, Salvation Army, Store Manager
Real Estate	41-9021*	Real Estate, Realtor, Realty, Home Specialist
Administrative Support	43-0000	Administrative Assistant, Administrative Tech, Bank Teller, Bookkeeping, Business Support, Clerical, Clerk, Clinic Manager, Customer Service, Dispatcher, Expediter, Hotel Worker, Institutional Aide, Legal Secretary, Medicaid Eligibility Worker, Office Manager, Para Professional, Parliamentarian, Payroll, Receptionist, School Aide, School Assistant, School Registrar, Secretary, Service Coordinator
Farmer	45-0000	Agriculture, Agricultural Worker, Crew Leader Fruit Ranch, Dairy Farmer, Farmer, Farm Worker, Farmworking Family, Forester, Grower, Horticultural Worker, Logging, Lumber, Migrant Farmworker, MSFW (Migrant and Seasonal Farm Worker), Orchardist, Organic Farmer, Pear Orchard Manager, Rancher, Ranching, Rural Farmer, Seasonal Worker, Timber Worker, Tree Farmer
Construction	47-0000	Carpenter, Coal worker, Electrician, Infrastructure, Labor, Laborer, Materials Management, Molder, Painter, Plumber, Steel Worker
Production	51-0000	APS Utilities, Embroiderer, Factory Worker, Manufacturing, Mill Worker, Plant Worker, Plateau Electric Cooperative, Poultry Plant, Power Company, Public Utilities, Refinery, Seamstress, Telephone Company, The Gas Co., Water Department, Water District Manager
Transportation	53-0000	Longshoreman, Public Transportation, Railroad, Railroad Worker, School bus driver, Trucker
Consumer	N/A	Advocacy, African-American Community, Aging, American Legion, Bosnian

		Representative, Church Volunteer, City Representative, Civic, Community, Community Activist, Community Advocate/Advocacy, Community Affairs, Community Liaison, Community Member, Community Needs, Community Organizer / Organization, Community Rep, Community Resident, Community Service, Community Volunteer, Consumer Issues, Cultural Competence, Former Homeless, Haitian Community, Disability Advocate, Disabled, Formerly Homeless, General, General Community, Health & Tribal, HCH, HIV Advocacy, Hispanic Representative, Home Economist, Homeless, Homeless Representative, Homemaker, Housewife, Immigrant Issues, Latino Health, Local Issues, Local Resident, Low-Income Sector, Low income user of center, Migrant, Minority Representative, Misc., Mother, Native Alaskan Homemaker, Native American Culture, Native Corporation, Outreach, Pastor's Wife, Patient, Patient Relations, Patient User, Performance Improvement, Performance Measurement, Prison Population, Public Housing Resident, Public Housing Tenant Assoc., Public Welfare, Quality, Rural Health Needs, Ryan White, School Based Parent, Self Employed, Shelter Resident, Sliding Fee, Somali Culture, Special Population, Senior Citizen, Stay at home mother, Tenants Association, Traditional Knowledge, Unemployed, User Population Representative, Village Liaison, Volunteer, Young Families, Youth Health
Retired	N/A	Retired (no other expertise specified)
Other	N/A	Cable Services Staff, Compliance, Cosmetologist, Foster Care, Hospitality, Swim Instructor, Theatre, Tourism, Trailer Park Manager, Travel Agent, Youth, Student

* Indicates a high-status occupational group based on average annual income greater than 200% of the federal poverty level for a family of four in 2009 (\$44,100).

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