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Faith-based Assumptions about Performance:

Does Church-Affiliation Matter for Service Quality and Access?

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Abstract

To date, the common rhetoric and the assumptions on the performance of faith-based organizations, ironically, appear to be faith-based, rather than empirically-supported: there is still a paucity of research evaluating the effectiveness of FBOs that uses sufficiently rigorous research methods and multiple measures of organizational performance. This study seeks to inform the debate on the relative effectiveness of FBOs by comparing religiously-affiliated and secular nonprofit nursing homes using two distinct but complementary measures of organizational performance: service quality and access for impoverished clients. Using nationally representative panel data on 11, 877 church-affiliated and secular nonprofit nursing home facilities, this study examines the effect of ownership with several regression models. Overall, our findings fail to confirm the assumption that FBOs perform better than secular nonprofit organizations in the context of nursing home industry. Isomorphic pressures and commercialization trends within the nursing home industry are discussed to help explain these findings.

Introduction

"When we have Federal monies, people should be allowed to access that money without having to lose their mission or change their mission. We need to know that in our society, faith can move people in ways that Government can't.[...]Government can write checks, but it can't put hope in people's hearts or a sense of purpose in people's lives. That is done by people who have heard a call and who act on faith and are willing to share that faith."

George W. Bush, April 11, 2002

Reflected in George W. Bush's remarks on the Charity, Aid, and Recovery Act of 2002, there has been growing interest in expanding the role that faith-based organizations (FBOs) play in the social welfare system. Involvement of faith-based organizations in the delivery of social services in the United States has a long history. Since the approval of the 1967 amendment of the Social Security Act, FBOs providing health and human services along with other nonprofit and forprofit social service organizations have become increasingly reliant on public funds.

More recently, public funding of FBOs gained national prominence with the passage of several congressional and presidential initiatives designed to encourage divestment and delegation of social services to faith-based providers through contracts. Some of the most noteworthy efforts include the Charitable Choice provision of the Personal Responsibility and Work Opportunity Act of 1996 and the establishment of the Offices of Faith-Based Initiatives. Premised on the assumption that FBOs deliver services more effectively than their secular counterparts (Kennedy & Bielefeld, 2002), Charitable Choice prohibits states from discriminating against "pervasively sectarian" organizations when contracting for public services. In addition, it allows FBOs to maintain hiring practices based on their religious beliefs and have religious symbols in sites where services are being delivered. Building on the

Charitable Choice provision, Offices of Faith-Based Initiatives were established in 2001 in five federal government agencies in order to promote the involvement of faith-based organizations.

A key question for policymakers debating an expanded role of FBOs in the social welfare delivery system is whether they actually provide better services than their secular counterparts. To date, the common rhetoric and assumptions on the performance of faith-based organizations, ironically, appear to be faith-based, rather than empirically-supported: there is still a paucity of research evaluating the effectiveness of FBOs that uses sufficiently rigorous research methods and multiple measures of organizational performance (Johnson, 2006).

This study seeks to inform the debate on the relative effectiveness of FBOs by comparing religiously-affiliated and secular nonprofit nursing homes using two distinct but complementary measures of organizational performance: service quality and access to services for impoverished clients. This research will help test the proposition that the increased reliance on FBOs, encouraged by Charitable Choice and other national initiatives, will improve or, at the very least, not undermine the performance of the social welfare system. This study has important methodological advantages over much of the limited research that compares the performance of FBOs and secular organizations. The existing body of research typically focuses on specific states or communities as well as often uses cross-sectional data only and sometimes conducts just bivariate analysis. Based on panel data from a large national sample of nonprofit providers, our analysis allows us to observe the change in two theoretically distinct outcomes and control for the time, location and provider-related fixed effects. Furthermore, we utilize five different regression methods for estimating the proposed theoretical model to address the potential problems associated with either the panel data or the system of equations comprising the theoretical model.

Comparing the Performance of FBOs and Secular Nonprofits

While recently there has been considerable scholarly interest in FBOs, few studies compare the performance of FBOs and secular organizations (Kennedy & Bielefeld, 2006; McCarthy & Castelli, 1998; Wuthnow, Hackett, & Hsu, 2004).[i] This reflects the dearth of research on the effectiveness of social welfare services in general and may be attributable to the difficulty associated with measuring these services (Fischer, 2004). Organizational theorists have examined the issue of performance from a variety of perspectives, particularly by focusing on goal attainment (Etzioni, 1964; Price, 1972; Miles, 1981), internal organizational characteristics (Likert, 1967; Bennis, 1966), the ability to satisfy internal and external constituencies (Miles, 1981), and the ability to acquire scarce environmental resources (Seashore and Yuchtman, 1967). Despite the diversity of perspectives, one area of growing consensus is that organizational performance is a complex, multi-dimensional concept (Boyne, Meier, O'Toole, & Walker, 2005; Brewer & Coleman, 2001; Boschken, 1992, 1994; Cameron, 1978, 1981, 1982; Quinn & Rohrbaugh, 1981, 1983; Rojas, 2000; Selden & Sowa, 2004).

Reflecting this complexity, this study focuses on two performance measures reflecting two core goals of many nonprofit organizations: the provision of high *quality* services that are *accessible* regardless of an individual's ability to pay (Robbins, 1987). The latter aspect of organizational performance has received relatively little attention as an outcome measure. However, it is particularly intriguing in the context of FBOs in light of the assumptions voiced by President Bush about their "purpose-driven" activities that "put hope in people's hearts."

Empirical studies offering evidence on the relative service quality of FBOs show mixed results. A few studies specifically focus on differences in service quality within the nursing home sector. In Ragan (2004), church-affiliated nursing homes have approximately 6% fewer

inspection deficiencies and 23% fewer complaint deficiencies compared to other nonprofit nursing homes. Results from Weisbrod and Schlesinger (1986) also suggest FBOs provide higher quality services than secular nonprofit organizations. They report that while there is no significant difference between the number of violations in church-owned and forprofit nursing homes, secular nonprofit nursing homes have significantly more violations than forprofit homes. On the other hand, Knox, Blankmeyer, and Stutzman (2006) find there is no difference in the quality of care provided by private secular nonprofit nursing homes, religiously affiliated nursing homes, and public nursing homes.

Research that examines differences in service quality in sectors other than the nursing home industry also has conflicting results. Kennedy and Bielefeld (2006) present empirical evidence suggesting that secular providers may outperform faith-based providers. According to their study, secular job training providers are more likely to place their clients in full-time positions and in positions that offer health benefits compared to faith-based providers. In contrast, Reingold, Pirog, and Brady (2007) fail to find any significant difference between faith-based and non-religious social service organizations in agency self-ratings of organizational performance.

Other studies report mixed findings. Desmond and Maddux (1981) find that the abstinence rates for heroin addicts in programs classified as "religious" are much higher than the rates for conventional treatments or correctional interventions. However, the abstinence rate for a methadone treatment program which also had a religious component but was not classified as "religious" by the researchers is no higher than the abstinence rate for the methadone treatment programs without a religious component. Monsma and Soper (2003) focus on five different types of organizations delivering welfare-to-work services – public, forprofit, nonprofit secular,

faith-based segmented, and faith-based integrated – and find no evidence that one type of program is more effective than others. Each program type performs well on some measures of effectiveness and more poorly on others. Lastly, Wuthnow, Hackett, and Hsu (2004) find that there is a positive relationship between client ratings of organizational effectiveness and clients having received assistance from congregations. On the other hand, they find no relationship between client ratings and clients having received assistance from either nonsectarian organizations or faith-based organizations other than congregations.

The research comparing accessibility of faith-based and secular nonprofits is even more limited than the research on service quality. In a study of emergency food providers in Detroit, Eisinger (2002) approaches accessibility in terms of organizational ability to serve all eligible clients and compares this outcome across FBOs and secular nonprofits. He reports that, after controlling for organizational capacity and size, faith-based organizations are more likely to never turn away eligible clients compared to their secular counterparts.

Very few studies directly compare service accessibility for impoverished clients in faith-based and secular nonprofits, a measure more closely related to the analysis of this paper. Using cross-sectional data from Indiana's randomized welfare reform experiment, Reingold et al. (2007) conclude that the most disadvantaged welfare clients are more likely to receive assistance from faith-based organizations than from non-religious organizations. Clients of FBOs are more likely to report having been hungry, been homeless, and experienced another form of absolute deprivation. In contrast, Wuthnow et al. (2004) report mixed findings on access based on several regression models examining the relationship between various client characteristics and having received assistance from different types of service organizations. They find there is not a significant relationship between income and having received assistance from religious

congregations. On the other hand, they report income is negatively related to both receiving assistance from faith-based service organizations other than congregations and receiving assistance from secular service organizations. However, it is unclear whether there is a significant difference in the poor's access to FBOs and their secular counterparts in this study because there is no joint test comparing client income and access to faith-based and secular service organizations.

In addition to being quite limited, the literature on the comparative performance of FBOs and secular nonprofit organizations has a variety of methodological limitations. Many studies are based on cross-sectional data (Eisinger, 2003; Knox et al., 2006; Ragan, 2004; Reingold et al., 2007; Weisbrod & Schlesinger, 1986; Wuthnow et al., 2004). Most focus on specific states or communities (for the sole exception see Ragan, 2004) and hence may have limited generalizability. Finally, some of the empirical evidence relating to service quality is based on bivariate analysis only (Desmond & Maddux, 1981; Monsma & Soper, 2003; Ragan, 2004; Reingold et al, 2007).

Using panel data from a large national sample of nonprofit nursing homes, our research attempts to address many of the methodological limitations of past studies. A substantial and growing proportion of nursing homes are nonprofit (Gabrel, 2000; Schlesinger and Gray, 2006). Moreover, there is a general consensus within the nursing home literature that nonprofit ownership is positively associated with service quality (Amirkhanyan, Kim, & Lambright, 2008; Davis, 1993; Harrington, Zimmerman, Karon, Robinson, & Beutel, 2000; Lemke & Moos, 1989; O'Neill, Harrington, Kitchner, & Saliba, 2003; Riportella-Muller & Slesinger, 1982; Schlesinger & Gray. 2006; Steffen & Nystrom, 1997). The nursing home industry provides an interesting

setting for investigating whether strong performance in this sector in terms of service quality is uniform or varies across religiously-affiliated and secular nonprofit providers.

To date, no single comprehensive theoretical framework has been proposed to explain the differences between faith-based and secular nonprofit organizations. However, several propositions and rival hypotheses may help guide this inquiry. Graddy & Ye (2006) argue that FBOs may be more effective because their reliance on faith results in FBOs using different service delivery methods or the same service delivery method but with a different intensity compared to their secular counterparts. Etindi (as cited in Graddy & Ye, 2006) asserts that FBOs may be more likely to make a long-term commitment to clients, rely on one-to-one relationships, and provide individualized care.[ii] Specific to the long-term care industry, managers, employees and residents in religiously affiliated nursing homes may be more likely to have similar religious beliefs and have shared values about quality of life issues and end-of-life decisions. The closer fit between client needs and organizational offerings may enhance service quality in these facilities. On the other hand, the practice of some FBOs requiring employees to have specific religious beliefs may limit their opportunity to hire a qualified workforce (Ebaugh et al., 2003). In addition, FBOs' heavy reliance on volunteers (Alexander, 1999; Ebaugh et al., 2003; Printz, 1998; Twombly, 2002) may result in higher staff turnover and a lack of professionalism and expertise. Both of these human resource practices have the potential to negatively impact service quality.

Similarly, conflicting propositions can be made about the effect of faith-based status on service accessibility for impoverished clients. Organized religion often stresses compassion, and hence FBOs may be more likely to admit nursing home clients, albeit clients of a particular religion, irrespective of a client's ability to pay. Also compared to other nonprofit organizations,

religious organizations receive a higher share of private donations from individuals, foundations and corporate donors (The New Nonprofit Almanac & Desk Reference 2002). As a result, faith-based nursing homes are more likely to be supported by private donations, and thus have the financial capacity to admit low-income clients. On the other hand, FBOs may be more likely to create personalized environments that attract wealthier clients who are willing to pay for services in such institutions, and hence they will provide less access to the poor. There is also some evidence that in the nursing home industry secular nonprofit facilities are more efficient than religiously-affiliated ones (Knox et al, 2006).[iii] As a result, religiously-affiliated nursing homes may have to place more emphasis on finding wealthier clients in order to generate greater revenues to compensate for the lack of operational efficiency. The subsequent analysis explores these conflicting propositions about the relative performance of FBOs and their secular counterparts.

Methods

Data. In this study, we use the Online Survey, Certification and Reporting ("SNF OSCAR 044") data set, and the sixteen Nursing Home Compare (NHC) quarterly files pertaining to the period between March 2000 and December 2003.[iv] Both OSCAR and NHS are nursing home level panel data described in Appendix A. They contain information on a facility's federal provider number, name, and address as well as detailed information on ownership status, occupancy, capacity, residents by source of payment, chain affiliation, staffing, and regulatory quality violations identified by the inspectors in the review process. Three criteria are used to narrow down the sample: (a) remaining within the same *nonprofit* ownership category (nonprofit church, nonprofit corporation, or nonprofit other) across all waves; and (b) continuous operation between the earliest (3/1/2000) and the latest (12/2/2003) waves of NHC data. Our sample, consequently, is an unbalanced panel data set which includes 3,167 nonprofit nursing facilities and 11,877 inspection records (i.e., three or four survey records) pertaining to these facilities.

Dependent Variables. OSCAR includes unique information on regulatory violations with respect to 188 performance guidelines within seventeen broad regulatory areas.[v] Due to an extensive review and appeal process, deficiencies data are regarded as an accurate and reliable data source on nursing home performance (Harrington et al., 2000). The 188 indicators of regulatory violations in the OSCAR data are nominal variables assigned the value of 1 when a violation pertaining to a specific regulation is identified and the value of 0 when inspectors find no violation. Several measures of quality have been identified and used in the nursing home care literature, including the primary measure used in this study: the sum of all 188 indicators reflecting the total number of violations identified by state inspectors during one specific visit

(Harrington et al., 2000). Higher values of this variable reflect more violations, while lower values indicate better quality.[vi]

By using a measure of quality reflecting regulatory violations, we are focusing on a tangible and relatively more objective performance measure which is identified by independent observers. Our measure may or may not be correlated with self-reported measures of client satisfaction or client quality of life. Some religious institutions may be successful at creating a positive perception among their clients particularly due to congruent organizational and individual religious values, but may be ineffective at addressing issues like bed sores and infection, safety, adequacy of medications and nutrition. The nursing care field has long been viewed as a complex service area where clients cannot adequately judge services quality (Hansmann, 1996). While the impact of church-affiliation on client perceptions is interesting to consider, in this paper we explore whether faith-based status is associated with more measurable and objectively verifiable structures, processes and outcomes, rather than perceptions reported by the clients.

The second outcome of interest is a facility's propensity to admit and provide care to the recipients of the Medicaid program which finances the chronic care of low-income individuals. For nursing homes, such clients are generally less desirable compared to those whose care is covered by Medicare,[vii] private long term care insurance or out of pocket payments. Hence, nursing homes commonly try to avoid admitting Medicaid recipients in fear of becoming "resource poor" due to the low reimbursement-to-cost ratio for Medicaid residents (Castle 2006, 64; The Lewin Group, 2002). Our first measure of access – the proportion of Medicaid recipients in a facility – is obtained by dividing the number of Medicaid-funded residents by the total number of residents in a facility. Our second measure reflects a facility's share of the

county-wide Medicaid population residing in local nursing homes, obtained by dividing the number of Medicaid-funded residents in a facility by the total number of Medicaid-funded nursing home residents in the county.

Independent Variables. As the central independent variable in our analysis, we created a dummy variable to indicate whether a facility is church-related or not.[viii] Nursing home staff is responsible for classifying their facility's ownership status. In our correspondence with the Director of the CMS division of Nursing Homes, he indicated that "church-related" status in the NHC data is usually interpreted to mean "under the management of a church organization."[ix] However, it is left up to the nursing homes to define what that means. Similar to our research, other studies on faith-based nonprofits (Kearns, Park, & Yankoski, 2005; Reingold, Pirog, & Brady, 2007) have used measures of church-based ownership that rely on agency self-identification[x].

While the primary independent variable of interest is ownership status, we controlled for several other factors that may also influence organizational performance. Internal organizational factors include size (Boyne, 2003; Moynihan & Pandey 2005), network participation (Boyne 2003; Harrington, Woolhandler, Mullan, Carrillo, & Himmelstein, 2001; O'Neill et al., 2003; Rainey & Steinbauer 1999), human and monetary resources (Boyne, 2003; Brewer & Selden, 2000), and the presence of organized resident groups. In addition, we control for a variety of environmental factors based on past research including competition (Buchanan & Tullock, 1962; Milward & Provan, 2000; Ostrom, 1973; Ostrom, 1990,Romzek & Johnston, 2005; Shea, 1998; Tiebout, 1954), population religiosity (Perry 1997, 2000), social capital (Putnam, 1993), community demographics, political culture, voting patterns, and regulation (Arrow, 1984;

Boyne, 2003; Eisenhardt, 1989; Jensen & Meckling, 1976). Control variables included in the regressions are described in Table 1.

[table 1 here]

Regression Models. Due to the fact that two separate organizational outcomes are examined in this study, a system of two regression equations was used. Equation 1 ("Quality" model) and equation 2 ("Access" model) employ dependent variables measuring quality and access, respectively. Each regression includes an ownership dummy, and other control variables. A measure of access is controlled for in equation 1, and a measure of quality is controlled for in the equation 2. Fixed time effects are addressed by including year dummies.

"Quality" Model:

$$Q = \beta_0 + \beta_1 FB + \beta_2 A + \beta_3 X_1 + \beta_4 Y2000 + \beta_5 Y2001 + \beta_6 Y2002 + \beta_7 Y2003 + \varepsilon_1$$

"Access" Model:

$$A = \delta_0 + \delta_1 FB + \delta_2 Q + \delta_3 X_2 + \delta_4 Y2000 + \delta_5 Y2001 + \delta_6 Y2002 + \delta_7 Y2003 + \varepsilon_2$$

where Q = quality measure, A = access for Medicaid clients, FB = faith-based ownership dummy, N = nonprofit ownership dummy, X_1 = set of control variables, X_2 = set of control variables, y2000~y2003 =year dummies.

In addition to running an OLS with fixed time effects, we tried to improve the efficiency of the estimator by addressing some of the problems associated with the data. Since we use the same data and largely overlapping sets of independent variables for estimating quality and access models, the errors of two equations may be correlated. The latter violates the homoskedastisity assumption of the OLS model. To correct this problem, we used the Seemingly Unrelated Regression (SUR) in order to estimate the two equations jointly (Griffiths, Hill, & Judge, 1993).

Our analysis is based on a system of equations in which the dependent variable in the "Quality" model is used as an independent variable in the "Access" model, and vice versa. As a result, measures of quality and access are endogenous, rather than exogenous, and become

correlated with the error terms producing biased and inconsistent estimates (Gujarati, 1995). To control the reciprocal relationships between quality and access, we used Two Stage Least Squares (2SLS) estimation (Griffiths, Hill, & Judge, 1993).[xi]

Since we are using panel data and have multiple observations on each facility, the OLS assumption of independent observations is violated, and using OLS will produce inefficient estimates (Gujarati, 1995). In order to control for facility level fixed effects, we used regressor variable method. This method is often used for making causal inferences with non-experimental data and with dependent variables measured at two points (Allison, 1990). As dependent variables, we used quality and access measures pertaining to the latest inspection record, and controlled for the "pretest" quality and access measures, as well as independent variables pertaining to the earliest survey record for each facility.

Due to the fact that the total deficiency score has a skewed distribution with positive-only values, we also obtained Poisson and Negative Binomial regressions. In the Poisson regression, which was obtained first, the Pearson chi-square and deviance were greater than one and, hence, indicated overdispersion (Gardner, Mulvey and Shaw 1995). Consequently, we opted for the Negative Binomial model, which addressed over-dispersion by including a random term for unexplained between-subject differences and, as a result, significantly improved the goodness of fit statistics. Hence, we report results for the Negative Binomial regressions, rather than Poisson. OLS was used to analyze access in the access model using the regressor variable method.

Findings

Table 2 shows descriptive statistics for panel data with 11,877 inspection records for nonprofit facilities analyzed in this study. An average facility in the data set has 4.5 regulatory violations identified during an inspection.[xii] Most of these violations pertain to quality of care rather than quality of life and other aspects of performance. Around 50% of residents in nonprofit facilities in our sample are covered by Medicaid, and the average facility's market share of all Medicaid recipients in their county is 15%. Twenty percent of all records pertain to church-affiliated nursing homes. The average number of residents in a facility is 86, with almost 5 hours of nursing staff hours per resident per day and an 86% occupancy rate. The vast majority of all facilities have organized family-led or resident-led groups. Only a small minority of homes are affiliated with hospitals or are part of a chain. Facilities in our sample operate in very competitive markets (the Herfindahl index is close to 0). An average of 14% of the population in the local counties where the facilities in our sample operate are older than 65. Slightly more than half of facilities operate in counties where a majority voted for Bush during the 2000 presidential elections. Facilities also tend to operate in counties with over half of the population reporting some attendance of religious services and participation in the census (our measure of community social capital). Most nursing homes are in the states with enacted Certificate of Need laws, and facilities in our sample are roughly evenly divided into each of Elazar's (1966) three political culture categories.[xiii]

[table 2 here]

We used six different types of regression methods to ascertain the robustness of our findings. Since the estimation results are largely consistent across methods, we report the findings from the OLS estimation (shown in Table 3). All the other estimation results are

reported as Appendices D, E, and F. In terms of quality, our findings indicate no difference between faith-based and secular organizations. The ownership coefficient for the overall quality score (total quality violations) is insignificant[xiv]. In addition, there is not a significant interaction effect for between faith-based ownership status and the following variables: size, market concentration, and community religiosity. Hence, faith-based organizations do not appear to be any different from their secular nonprofit counterparts in terms of service quality. Similar to previous empirical studies of nursing home quality, our analysis indicates that multiple organizational and external environmental factors may influence quality. Among such factors are the proportion of Medicaid recipients, facility size, the presence of organized groups in the nursing home, chain affiliation, the proportion of the elderly population in the community, and census participation, all of which positively affect the number of violations. On the other hand, factors negatively associated with the number of violations include location in a county where the majority voted for George W. Bush in the 2000 election, community religiosity, Certificate of Need laws, location in a state with a Individualistic political culture, and total HCBS waiver spending.

[table 3 here]

Findings pertaining to access to care for Medicaid recipients are more intriguing. When examining our first measure of access – the proportion of facility Medicaid recipients– faith-based status does not appear to matter. Coefficients for the ownership dummy and all interactions are insignificant. On the other hand, faith-based ownership status is significant using our second measure of access. Faith-based homes' share of the county-wide Medicaid population is lower than the share served by secular homes by 2.4 percentage points (sig. < 0.01). We also find that faith-based ownership is positively moderated by size and community

religiosity and negatively moderated by market concentration. In other words, the proportion of Medicaid residents being served by faith-based facilities increases relative to the proportion being served by secular non-profits as both facility size and county religiosity increase. In contrast, the proportion of Medicaid residents being served by faith-based facilities decreases relative to the proportion being served by secular nonprofit facilities as market concentration increases. The control variables negatively associated with access in both OLS models include facility staffing, hospital affiliation, census participation, and year dummy variables. Quality of care, facility size, the presence of organized groups in the nursing home, market concentration, community religiosity, and facility location in a state with a Moralist or Individualistic political culture are, on the other hand, positively associated with having a high Medicaid-recipient market share as well as the proportion of facility Medicaid recipients.

Discussion

Our study investigated the effect of faith-based ownership on organizational performance in nursing homes. Our findings are not congruent with the proposition that faith-based organizations deliver services more effectively than their secular counterparts. We find that certain organizational and environmental factors, rather than faith based status, significantly influence the quality of nursing home services. The findings of this study are consistent with Knox, Blankmeyer, and Stutzman (2006) which indicates that faith-based status does not impact service quality in nursing homes. On the other hand, our findings diverge from Ragan (2004) and Weisbrod and Schlesinger (1986) which also focus on nursing homes and suggest a positive link between faith-based status and quality. Differences between this study's findings and Ragan (2004) and Weisbrod and Schelesinger (1986) may be the result of methodological flaws pertaining to these earlier studies, including using cross-sectional data, as well as bivariate analysis (Ragan 2004) and data from only one state (Weisbrod and Schlesinger 1986). We also fail to find consistent evidence of faith-based status affecting the level of access for impoverished, Medicaid-funded residents. Accessibility of faith-based nursing homes is indeed significantly lower in our OLS model examining the effect of faith-based status on the share of county-wide Medicaid recipients. Overall, however, our findings fail to confirm the assumption that FBOs perform relatively better than secular nonprofit organizations, at least in the case of nursing home industry.

Taking into account the domain of nursing home service, we propose some plausible explanations for these findings. On the one hand, church-affiliated nursing homes are different from secular nursing homes in terms of their reliance on religious leaders for management, consideration of religion when hiring employees, and a relatively lower dependence on

government funding (Ebaugh et al., 2003). On the other hand, the impact of religion may be dampened in some service areas because of environmental factors. In the field of nursing home care, faith-based service providers face strong isomorphic pressures from government regulators as well as from other service providers. Pressure from federal and state agencies to comply with various regulatory requirements promotes standardization of nursing home service delivery mechanisms. In terms of management and administration, faith-based nursing homes may have significantly higher costs than other faith-based nonprofits, due to the need for sophisticated billing, accounting, and oversight systems to meet federal standards.

Further reinforcing these isomorphic pressures, the trend of commercialization appears to be more advanced in the nursing home sector than in other areas where faith-based nonprofits are key service providers because faith-based nursing homes compete for business with secular nonprofit and for-profit nursing homes (James, 2004).[xv] Commercial pressure increases the need for FBOs to adopt competitors' management practices, funding mechanisms, and staff skills (Alexander, 1999; Salamon, 1997). Faith-based nursing homes may reconcile the tension between the mimetic isomorphic pressure and their faith-based mission by shifting resources from service delivery to advancing management and administrative practices (Alexander, 1999). As a result, these isomorphic pressures specific to the long term care sector may end up being more important than faith-based traits in determining the organizational performance. Hence, the difference between FBOs and secular organizations becomes trivial.

Researchers should generalize this study's findings with caution. They may be specific to the nursing home care domain where intensive government regulations and strong peer influences over management practices and service delivery mechanisms are present. Future studies should test our findings in other fields using advanced statistical techniques, such as

panel data analysis and a system of equations incorporating reciprocal relationships between different performance measures. Simple t-tests have serious limitations in describing the full picture, unless we control for organizational and market characteristics. The motivation for further research in other fields may, nonetheless, be tempered by a vexing conundrum. The service areas in which data on organizational outcomes is reliable and readily available, such as the nursing home industry, are likely to be heavily regulated and may face strong isomorphic pressures. Other, less regulated, areas, such as mental health, alcohol abuse, or homeless services, may suffer from the lack of reliable data. Such areas, we believe, may also be inherently more likely to benefit from the unique qualities of FBOs. Thus, more high-quality performance data is needed in sectors with less regulation where the distinctive characteristics of FBOs may have a more pronounced impact on service delivery.

Appendix A. Data

The Nursing Home Compare data were provided by Mr. Edward Mortimore, Technical Director, Division of Nursing Homes, Center for Medicaid and State Operations. Sixteen quarterly NHC files, distributed by private vendors under the name of "OSCAR", were merged together in order to obtain a panel data on all facilities in the United States. Each quarterly file represents the most recent survey results on all operating Medicaid or Medicare certified nursing home care providers in the country. The survey is conducted by a team of nurses, dietitians, pharmacists, social workers, physicians, physical therapists, or other professionals which surveys each facility roughly once a year. Each NHC quarterly file includes survey results related to the most recent state inspection conducted within 9-15 months prior to the release of that quarterly file. Each consecutive file includes new information on facilities that were surveyed during the past quarter; at the same time facilities that were not inspected during that period will have identical information as in the previous NHC file. Our data pertains to the period between March 2000 and December 2003, and we have about 4 survey records for each facility. The obtained panel data set is unbalanced, since the number of inspections varies from facility to facility.

In this analysis, we restricted the sample to facilities that operated continuously and remained in the same category of nonprofit ownership status between 03/2000 and 12/2003 (i.e., nonprofit-church, nonprofit-corporation, and nonprofit-other). With the facility provider number being the main identifier in the data set, it is difficult to link facilities over time in cases when they change provider numbers. We tried to identify the instances of provider number changes in order retain a larger sample. We compared the earliest (N=17103) and the latest (N=16341) quarterly files, and identified the zip codes in which a provider number was terminated and at least one other number was initiated during our time frame. Using SAS, we compared the

facility names and phone numbers across the terminated and new groups and, in cases of a match, concluded that we are dealing with the same facility that changed its federal provider number. As additional data cleaning steps, we have eliminated facilities with more residents than beds, as well as facilities with no beds and residents. We also deleted all records with missing cases on any variable in the regression model. Finally, we have restricted our file to three ownership categories: (a) nonprofit church, (b) nonprofit corporation, and (c) nonprofit other. Our final sample consistent of 3167 facilities and our final data set included 11877 inspection records (i.e., about 4 records pertaining to each facility).

Appendix B. Alternative Measures of Quality

Harrington and colleagues (2000) proposed and evaluated the use of three categories of deficiencies which are argued to be conceptually separate and easier to analyze than the 17 original categories: (A) *Quality of Care* deficiencies are represented by the sum of deficiencies in the following nine regulatory categories: resident assessment, quality of care, nursing services, dietary services, physician services, specialized rehabilitative services, dental services, pharmacy services, and infection control; (B) *Quality of Life* deficiencies are represented by the sum of deficiencies in the areas of resident rights, admission, transfer and discharge rights, resident behavior and facility practices, resident quality of life, and physical environment; (C) *Other* regulatory violations are the sum of deficiencies in the categories of administration, laboratory, and other. These categories are also able to reduce some variability resulting from individual discretion that surveyors employ in detecting quality problems: "Because surveyors have some discretion in the specific individual deficiencies that they apply to quality problems that they detect, grouping deficiencies into few broad categories has the advantage of reducing some variability inherent in the survey process" (Harrington at al., 2000, p. 279). Using a confirmatory factor analysis, Mullan and Harrington (2001) propose a second alternative measure of quality – the sum of 40 OSCAR quality indicators – which is argued to represent a "core" set of items that reliably reflects service quality. The scale represents just 20 percent of all items and correlates well with the total deficiencies score. Finally, Cowles (2002) discusses the use of a measure that focuses specifically on deficiencies associated with nursing care. The measure is the sum of 45 out of the188 deficiency indicators pertaining to the activities of the nursing staff which always play a central role in any nursing facility. In sum, three alternative measures of quality are used in addition to the total deficiencies score: (1) quality of life, quality

of care and other deficiencies, proposed by Harrington and colleagues (2000), (2) a 40-item scale proposed by Mullan and Harrington (2001), and (3) a nursing care deficiency score discussed by Cowles (2002). The alternative measures were closely correlated with our main measure of quality – total number of deficiencies. The coefficients of correlation were 0.9 (with Cowles's measure, 40-item scale and Harrington's Quality of Care), 0.8 (with Harrington's Quality of Life), and 0.6 (with Harrington's Other). We estimated the quality model, using these five different quality measures and the results show that the association between ownership and quality are consistently congruent with the association found in the model using the total deficiency score as the primary measure of quality. Hence, findings reported in the table pertain to the primary measure of quality.

Appendix C. Estimation Results of Using Alternative Quality Measures

Dependent Variables	Quality of Care		Quality of Life		Others	
Regression Models	**OLS**	**Clustering errors by facility**	**OLS**	**Clustering errors by facility**	**OLS**	**Clustering errors by facility**
Access						
% of Medicaid Recipients in a facility	0.015***	0.015***	0.010***	0.010***	0.002***	0.002***
Faith Based Organization						
Yes	0.260	0.261	0.197	1.197	0.050	0.051
Facility Level						
Size(Number of residents)	0.005***	0.005***	0.001***	0.001***	0.0002*	0.0002
Organized resident group	0.418***	0.418***	0.082	0.082	-0.007	-0.007
Staffing per resident	-0.002	-0.003	0.005	0.005	0.002	0.002
Inside a Hospital	0.2159**	0.2159*	0.067	0.067	-0.011	-0.011
Chain affiliation	0.201***	0.201**	0.080**	0.080*	0.006	0.006
County Level						
Market Concentration (Herfindahl Index)	0.129	0.130	-0.139	-0.139	-0.091**	-0.091*
% of elderly in the population	0.024**	0.024*	0.005	0.005	-0.002	-0.003
Bush County	-0.259***	-0.259**	-0.205***	-0.205***	-0.099***	-0.099***
Number of Home Health Agencies	0.103	0.104	-0.038	-0.039	0.020	0.021
Religiosity	-0.003***	-0.003***	-0.001***	-0.001***	-0.0001*	-0.0001*
Social capital (Census return rate)	0.018***	0.018**	0.0003	0.0004	-0.003***	-0.003**
State Level						
Certificate of Need	-0.504***	-0.504***	-0.381***	-0.381***	-0.237***	-0.237***
Moralist	0.043	0.044	0.005	0.006	-0.096***	-0.096***
Individualist	-0.849***	-0.849***	-0.476***	-0.476***	-0.142***	-0.142***
Total Waiver Expenditure	-0.00001***	-0.00001**	-0.000008***	-0.000008**	-0.000003***	-0.000003**
Year Dummies						
y2000	0.293*	0.293*	0.107	0.107	0.002	0.003
y2001	0.194	0.194	0.075	0.075	-0.008	-0.008
y2002	0.114	0.114	0.063	0.063	-0.010	-0.010
y2003	0.157	0.157	0.022	0.022	-0.002	-0.002
Interactions						
FaithBased*Size	-0.0008	-0.0008	-0.0007	-0.0008	-0.0003	-0.0003
FaithBased*Concentration	-0.394	-0.394	0.110	0.111	0.150*	0.150
FaithBased*Religiosity	-0.0003	-0.0003	-0.0004	-0.0005	-0.0002	-0.0003
Intercept	2.068***	2.068***	1.839***	1.839***	0.880***	0.880***
R^2	0.080	0.080	0.077	0.077	0.0427	0.0427

*Note: *** P<0.001; ** P<0.01; * P<0.05; N= 11,877 The reported effects of the slopes are not standardized.*

Appendix D. Quality Model

(Dependent variable=Total Number of Violations)

Regression Models	Clustering errors by facility	SUR	2SLS	Negative Binomial
Access				
% of Medicaid Recipients in a Facility	0.027***	0.053***	0.052***	0.005***
Quality				
Total Number of Violation	–	–	–	0.053***
Faith Based Organization				
Yes	0.505	0.459	0.459	-0.059
Facility Level				
Size(Number of residents)	0.007***	0.005***	0.005***	-0.0003
Organized resident group	0.495**	-0.082	-0.055	0.089
Staffing per resident	0.004	0.028*	0.027	-0.003
Inside a Hospital	0.274	0.606***	0.592**	-0.045
Chain affiliation	0.288*	0.277***	0.286***	0.062
County Level				
Market Concentration (Herfindahl Index)	0.904	-0.649**	-0.624	0.114
% of elderly in the population	0.026	0.033**	0.033*	0.016**
Bush County	-0.564***	-0.589***	-0.588***	-0.086*
Number of Home Health Agencies	0.088	0.079	0.079	-0.015
Religiosity	-0.004***	-0.004***	-0.004***	-0.0002
Social capital (Census return rate)	0.015	0.033***	0.032**	-0.0003
State Level				
Certificate of Need	-1.121***	-1.317***	-1.308***	-0.048
Moralist	-0.055	-0.120	-0.117	-0.008
Individualist	-1.470***	-1.480***	-1.478***	-0.309***
Total Waiver Expenditure	-0.00002**	-0.00003***	-0.00003***	0
Year Dummies				
y2000	0.402	0.612**	0.602**	–
y2001	0.262	0.488*	0.477*	–
y2002	0.169	0.391	0.380	–
y2003	0.178	0.398	0.388	–
Interactions				
FaithBased*Size	-0.002	-0.0015	-0.002	0.0007
FaithBased*Concentration	-0.142	0.004	-0.004	-0.046
FaithBased*Religiosity	-0.0008	-0.0007	-0.0007	-0.0001
Time Difference				
Latest year - Earliest year	–	–	–	0.046
Intercept	4.790***	3.107***	3.180**	0.867***

*Note: *** P<0.001; ** P<0.01; * P<0.05; N= 11,877 (3167 for the negative binomial method). The reported effects of the slopes are not standardized*

Appendix E. Access Model I

(Dependent Variable = % of Medicaid Recipients in a Facility)

Regression Models	Clustering errors by facility	SUR	2SLS	Regressor Variable Method
Access				
% of Medicaid Recipients in a Facility	–	–	–	0.800***
Quality				
Total Number of Violation	0.703***	1.390***	0.121	0.138**
Faith Based Organization				
Yes	1.716	0.311	1.054	-0.658
Facility Level				
Size(Number of residents)	0.077***	0.071***	0.083***	0.009*
Organized resident group	21.776***	21.014***	22.437***	3.103
Staffing per resident	-0.913***	-0.898***	-0.928***	-0.066
Inside a Hospital	-13.063***	-12.986***	-13.134***	-3.164***
Occupancy Rate	0.0004	0.0004	-0.001	0.080***
County Level				
Market Concentration (Herfindahl Index)	19.156***	18.898***	19.381***	3.030*
% of elderly in the population	-0.186**	-0.201**	-0.173*	-0.118
Bush County	2.564***	2.884***	2.290**	0.262
Number of Home Health Agencies	-0.266	-0.319	-0.220	0.848
Poverty Rate	0.892***	0.858***	0.919***	0.302***
Religiosity	0.007***	0.010***	0.005	-0.002
Social Capital (Census Return Rate)	-0.349***	-0.360***	-0.340***	0.001
State Level				
Certificate of Need	9.144***	9.747***	8.633***	0.740
Moralist	4.120***	4.046***	4.177***	0.734
Individualist	2.997***	3.959***	2.173	1.500*
Total Waiver Expenditure	0.0004***	0.0004***	0.0004***	-0.000002
Year Dummies				
y2000	-7.469***	-7.622***	-7.351***	–
y2001	-7.981***	-8.028***	-7.953***	–
y2002	-7.710***	-7.694***	-7.725***	–
y2003	-7.698***	-7.687***	-7.71048	–
Interactions				
FaithBased*Size	-0.006	-0.004	-0.007	0.001
FaithBased*Concentration	-4.548	-4.404	-4.672	-5.993*
FaithBased*Religiosity	-0.004	-0.003	-0.004	0.003
Time Difference				
Latest year - Earliest year	–	–	–	-0.349
Intercept	24.996***	21.741***	27.907**	-1.851
R^2	0.424	0.340	0.414	0.823

*Note: *** P<0.001; ** P<0.01; * P<0.05; N= 11,877 (3167 for the negative binomial method). The reported effects of the slopes are not standardized.*

Appendix F. Access Model II

(Dependent Variable = Share of County-wide Medicaid Recipients)

Regression Models	Clustering errors by facility	SUR	2SLS	Regressor Variable Method
Access				
Share of county-wide Medicaid Recipients	–	–	–	0.895***
Quality				
Total Number of Violation	0.146***	0.289***	4.758**	-0.031
Faith Based Organization				
Yes	-1.434	-2.520**	-5.120*	-0.985
Facility Level				
Size(Number of residents)	0.045***	0.044***	0.0004	0.002
Organized resident group	2.188**	2.031***	-3.042	0.361
Staffing per resident	-0.165***	-0.162***	-0.045	-0.020
Inside a Hospital	-4.399***	-4.385***	-3.836***	-0.979***
Occupancy Rate	-0.004	-0.002	0.009	0.010
County Level				
Market Concentration (Herfindahl Index)	93.278***	93.207***	91.491***	8.629
% of elderly in the population	-0.016	-0.017	-0.118	0.005
Bush County	0.061	0.138	20.230**	0.433
Number of Home Health Agencies	1.012*	0.997	0.655	0.561**
Poverty Rate	-0.070	-0.070**	-0.289**	0.043
Religiosity	0.004*	0.005***	0.022***	-0.00002
Social Capital (Census Return Rate)	-0.063	-0.063***	-0.133**	-0.019
State Level				
Certificate of Need	-0.705**	-0.572*	3.347*	-0.191
Moralist	1.983***	1.981***	1.525*	-0.186
Individualist	0.977***	1.191***	7.516***	-0.235
Total Waiver Expenditure	-0.0001***	-0.0001***	-0.00005	-0.00002
Year Dummies				
y2000	-1.422***	-1.447**	-2.355*	–
y2001	-1.466***	-1.469**	-1.691	–
y2002	-1.658***	-1.647***	-1.535	–
y2003	-1.267**	-1.258**	-1.169	–
Interactions				
FaithBased*Size	0.013	0.013***	0.023*	0.001
FaithBased*Concentration	-4.931	-4.894***	-3.946	-0.460
FaithBased*Religiosity	0.004	0.004*	0.008*	0.002
Time Difference				
Latest year - Earliest year	–	–	–	0.051
Intercept	-1.768	-2.753	-24.845**	0.405
R^2	0.838	0.727	0.482	0.944

*Note: *** P<0.001; ** P<0.01; * P<0.05; N= 11,877 (3167 for the regressor variable method). The reported effects of the slopes are not standardized.*

Notes

[i] Many scholars have focused on determining what makes an organization "faith-based" (Jeavons, 1997) and classifying the different types of faith-based nonprofits (Cnaan et al., 1999; Sider & Unruh, 2004; Smith & Sosin, 2001). Other research has examined the characteristics of FBOs including their client base (McCarthy & Castelli, 1998; Pipes & Ebaugh, 2002), service delivery systems (Campbell, 2002; Graddy & Ye, 2006; Gronbjerg & Clerkin, 2007, Kearns, Park, & Yankoski, 2005; McCarthy & Castelli, 1998; Pipes & Ebaugh, 2002), human resources (Ebaugh, Saltzman, Chafetz, & Daniels, 2003; Netting, O'Connor, Thomas, & Yancey, 2005, Kearns et al., 2005), management capacity (Gronbjerg & Clerkin, 2007; Kearns et al., 2005), leadership (Ebaugh at al, 2003) and fiscal environment (Burke, Fossett, & Gais, 2004; Ebaugh et al., 2003; Kearns, et al, 2005; Pipes & Ebaugh, 2002; Twombly, 2002). Some of this genre has focused just on the characteristics of FBOs while others have compared the characteristics of FBOs and secular nonprofits. Another area of research has explored the impact of government funding on FBOs (Chambre, 2001; Chaves & Tsitsos, 2001; Heimstra, 2002; Monsma, 1996; Smith & Lipsky, 1993; Smith & Sosin, 2001; Vanderwoerd, 2004).

[ii] There is mixed empirical evidence as to whether these types of service delivery differences actually exist (Campbell, 2002; Chaves & Tsitsos, 2001).

[iii] Knox et al. (2006) find differences in both the cost and allocational efficiency of secular nonprofit and religiously-affiliated nursing homes.

[iv] The data are collected by state inspectors as a part of the quality assessment and state certification process of residential chronic care facilities that receive reimbursement from the Medicare and Medicaid programs.

[v] These areas include: (1) resident rights; (2) admission, transfer, and discharge rights; (3) resident behavior and facility practices; (4) resident quality of life; (5) resident assessment; (6) quality of care; (7) nursing services; (8) dietary services; (9) physician services; (10) rehabilitation services; (11) dental services; (12) pharmacy services; (13) infection control; (14) physical environment; (15) administration; (16) laboratory; and (17) other (CMS, n.d.)

[vi] Alternative quality measures used for sensitivity analysis are described in Appendix B.

[vii] Not being intended for reimbursement of chronic care, the Medicare program only covers a short period of institutionalization (approximately 100 days) in a chronic care facility following a period of hospitalization for Medicare-eligible clients.

[viii] OSCAR and NHC data sets assign all facilities to one of the following ownership categories: (1) forprofit individual, (2) forprofit partnership, (3) forprofit corporation, (4) nonprofit church, (5) nonprofit corporation, (6) nonprofit other, (7) government state, (8) government county, (9) government city, (10), government city/county, (11) government hospital district, and (12) government federal. As mentioned above, our sample is limited to nonprofit organizations (i.e., categories 4, 5, and 6). Organizations assigned to category 4 are classified as a 1 for our FBO dummy variable, and organizations assigned to category 5 or 6 are classified as a 0 for our FBO dummy variable.

[ix] CMS does not provide their staff with any further formal regulatory definitions.

[x] There are some limitations associated with our measure of ownership. The OSCAR/NHC church-related ownership category does not capture a facility's propensity to provide access to religious services to clients. Even secular homes provide regular access to various (often, interdenominational) religious services to their residents. Hence, our control groups – facilities that are not identified as church-related – may have some degree of religiosity embedded in their activities.

[xi] Based on Wu (1973), a Hausman test was performed to determine if any of these models – OLS, 2SLS and SUR – should be preferred. The test results show that either SUR or 2SLS is not preferred to OLS. Hence, our discussion in the findings section will be primarily based on the OLS estimation results, but any discrepancies between the estimation methods will be indicated.

[xii] While theoretically the total number of violations may range between 0 and 188, the actual values range between 0 and 48, with 90% of all inspection records having fewer than 10 violations.

[xiii] According to Elazar's (1966) categorization of state political cultures, Moralistic political cultures consider government as a legitimate apparatus to promote public welfare, Individualistic political cultures prefer limited government intervention, and Traditional political cultures believe the role of government is to maintain the status quo.

[xiv] The effect of ownership on our alternative measures of quality (i.e., quality of life, quality of care, and other aspects of regulatory requirements) is also insignificant. For further detail, see Appendix C.

[xv] Examples of service areas where faith-based nonprofits are key service providers but there is less commercialization include programs targeting the homeless, prisoners, and welfare recipients.

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Table 1. Independent Variables

Variable	Operational Definition, Measurement and Source
Forprofit	Ownership (1=forprofit, 0=nonprofit and public). Source: Nursing Home Compare (NHC).
Nonprofit	Ownership (1=nonprofit, 0=forprofit and public). Source: NHC.
# residents	Total number of residents in a facility. The measure of facility size. Source: NHC.
Organized groups	Organized resident-led or family-led groups operating in the nursing home (1=yes, 0=no). A measure of internal political influences. Dummy variable (yes, no). Source: NHC.
Staffing	Total nursing staff (registered nurses, vocational nurses, and nurse aids) per resident per day. Calculated based on Harrington, et al. (2000). A measure of human resources. Source: NHC. Note: facilities with more than 12 total nurse hours were set to the maximum of 12 hours (CMS OSCAR data cleaning guidelines (HCFA, 2000)).
Hospital affiliated	Facility is hospital affiliated (1=yes, 0=no). A measure of organizational network-affiliation vs. independence. Source: NHC.
Chain affiliated	Facility is chain affiliated (1=yes, 0=no). A measure of organizational network-affiliation vs. independence. Source: NHC.
Occupancy	Occupancy (total number residents divided by the total number of beds). A proxy measure of managerial efficiency and organizational revenues (resources). Source: NHC.
Market concentration index	Market concentration (Herfindahl) index varies between zero and one; it is computed by obtaining the sum of squared market shares for all facilities in the county. The measure of market competition vs. concentration. Source: NHC.
% elderly	Proportion of county population that is 65 years or older. A control for demographics. Source: 2000 U.S. Census. http://www.census.gov
Bush county	Majority of county population voted for G.W. Bush =1 (versus A.Gore =0) during 2000 Presidential Elections. Dummy variable, proxy for political ideology. A measure of state political/regulatory culture. Source: David Leip's Online Atlas of Presidential Elections. http://www.uselectionatlas.org/
Home health agencies	Number of Home Health Agencies in the county (1999-2001). A proxy measure of competition in the long term care market. Source: Area Resource Files.
Poverty	Proportion of population in poverty (county-level). Source: Small Area Income and Poverty Estimates, Census, 1998-2000. A control for community affluence and demand. http://www.census.gov/hhes/www/saipe/index.html
Religiosity	County rate of adherents (all church members, including full members, their children and the estimated number of other participants who are not considered to be church members) to all religious denominations per 1000 population (2000). Source: Association of Religious Data Archives. http://www.thearda.com/Archive/Files/Descriptions/RCMSCY.asp
Final census response rates	Percentage of county census responses received by mail, telephone or over the Internet through September 7 2000. A measure of social capital. Source: 2000 U.S. Census. http://www.census.gov
Certificate of Need	Certificate of Need/Bed Construction Moratorium (1999, state-level) (1=yes, 0=no). A measure of regulatory influence. Source: HCIA&Arthur Andersen, The Guide to Nursing Home Industry, 2000.
Moralistic state	Moralistic state (1=yes, 0=no). Elazar's Political Culture categorization (Mead 2004).
Individualistic state	Individualistic state (1=yes, 0=no). Elazar's Political Culture categorization (Mead 2004).
Total Waiver Expenditures	1915(c) HCBS Total Waiver Expenditures per participant. A measure of government spending on elderly and disabled. Source: University of California Center for Personal Assistance Services Online: http://www.pascenter.org/state_based_stats/pick_a_state.php?url=http%3A%2F%2Fwww.pascenter.org%2Fstate_based_stats%2Fmedicaid_waiver. php&title%20=

Table 2. Descriptive Statistics

Variable	Mean	Std. Dev.
Quality		
Total Number of Violations (0~188)	4.544	4.512
Quality of Care	3.006	3.035
Quality of Life	1.268	1.673
Other	0.267	0.615
Access		
% of Medicaid recipients in a facility	49.323	28.906
% of county Medicaid recipients	15.025	23.277
Ownership		
Faith-based ownership	0.203	0.402
Facility Level		
Size (Number of residents)	86.063	71.804
Organized resident group (1:Yes; 0: No)	0.887	0.316
Staffing per resident	4.965	4.205
Inside a Hospital (1: Yes; 0: No)	0.246	0.430
Chain affiliation (1:Yes; 0: No)	0.378	0.485
Occupancy Rate	85.985	31.968
County Level		
Market Concentration (Herfindahl Index, 0-1)	0.192	0.225
% of elderly in the population	14.149	3.864
Bush County (1: Bush; 0: No)	0.554	0.497
Number of Home Health Agencies	0.377	0.520
Poverty Rate	10.889	4.469
Religiosity (per 1000 population)	549.519	149.285
Social capital (Census return rate)	68.791	7.374
State Level		
Certificate of Need (1:Yes; 0: No)	0.790	0.407
Moralist (1:Yes; 0: No)	0.347	0.476
Individualist (1:Yes; 0: No)	0.442	0.496
Total waiver expenditures per participant	20567	8474

Table 3. OLS Estimation Results of Quality and Access Models

	Quality Model	Access Model	
Dependent Variables	**Total Number of Violations**	**% of Medicaid Recipients in a facility**	**Share of county-wide Medicaid Recipients**
Access			
% of Medicaid Recipients in a facility	0.027***	–	–
Quality			
Total Number of Violation	–	0.703***	0.146***
Faith Based Organization			
Yes	0.505	0.716	-2.434**
Facility Level			
Size(Number of residents)	0.007***	0.077***	0.045***
Organized resident group	0.495**	21.776***	2.188***
Staffing per resident	0.004	-0.913***	-0.165***
Inside a Hospital	0.274	-13.063***	-4.399***
Chain affiliation	0.288***	–	–
Occupancy Rate	–	0.0003	-0.003
County Level			
Market Concentration (Herfindahl Index)	-0.096	19.156***	93.278***
% of elderly in the population	0.026*	-0.186**	-0.015
Bush County	-0.564***	2.564***	0.060
Number of Home Health Agencies	0.087	-0.265	1.012***
Poverty rate	–	0.892***	-0.070**
Religiosity	-0.004***	0.007***	0.004***
Social capital (Census return rate)	0.015*	-0.349***	-0.063***
State Level			
Certificate of Need	-1.121***	9.144***	-0.705**
Moralist	-0.054	4.120***	1.983***
Individualist	-1.470***	2.997***	0.977***
Total Waiver Expenditure	-0.00002***	0.0004***	-0.0001***
Year Dummies			
y2000	0.402	-7.469***	-1.422**
y2001	0.262	-7.981***	-1.466**
y2002	0.169	-7.710***	-1.658***
y2003	0.178	-7.698***	-1.267**
Interactions			
FaithBased*Size	-0.002	-0.005	0.013***
FaithBased*Concentration	-0.142	-4.547	-4.931***
FaithBased*Religiosity	-0.0008	-0.003	0.004*
Intercept	4.790***	24.996***	-1.768
R^2	0.096	0.424	0.838

*Note: *** P<0.001; ** P<0.01; * P<0.05; N= 11,877. The reported effects of the slopes are not standardized.*