

Community Benefit Practices and Their Relationships to Organizational Survival

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Community and corporatization are institutionalized values within the hospital field. Taking as its starting point research on community engagement, this study explores how practices associated with institutionalized values affect organizational viability. Examining data from the American Hospital Association's Annual Survey for the 2004-2010 period, this study assesses the relationship between hospital closure and organizational practices, with a focus on community benefit planning, community benefit activities, and business-like practices. Findings indicate that a high level of participation in community benefit planning practices may lead to greater organizational survival.

INTRODUCTION

Many scholars have argued that the value of *community* is long-standing and shared within the health care industry. An important hypothesis is that embracing the value of community provides hospitals with greater legitimacy and social fit (Ginn, Shen & Moseley, 2009; Grande, Shea, and Armstrong, 2013; Proenca, Rosko, & Zinn, 2000). By visibly providing community-based services, or community benefit, hospitals may introduce themselves to their neighborhoods and markets as community-minded organizations. By embracing the value of community, hospitals create goodwill for themselves within the community and increase their own name recognition, thereby creating potential for improved organizational performance (Schlesinger et al., 1998; Grande et al. 2013).

In recent decades, however, hospitals have faced increasing pressures to adopt the value of corporatization into their organizational cultures (McLafferty, 1986). Though once considered an industry exempt from commercial tactics, a pervasive corporate culture emphasizing consumer choice and conventional market mechanisms has spilled over into the health care sector (Scott, 2004).

This study examines how a hospital's identification with the values of community and corporatization shape organizational viability, as measured by hospital closures, within the context of environmental pressures. This article provides a greater understanding of ways in which choices hospitals make regarding their community engagement and business practices influence organizational survival through analysis of national survey data collected by the American Hospital Association.

BACKGROUND

Hospitals and Communities

Community benefit, defined as activities undertaken by hospitals intended for the good of the public (Catholic Health Association, 2012; The Hilltop Institute, 2013), is one way in which hospitals can interact with their communities and fulfill social and regulative obligations (Schlesinger et al., 1998). Though tax provisions encourage nonprofit hospitals to participate in community benefit activities, hospital community benefit expenditures are loosely regulated and vary widely (Heese, Krishnan, and Moers 2016; Young, Chou, Alexander, Lee & Raver, 2013). This indicates that the value of community is more fully embraced by some organizations than others. Further development of community policy nationwide and clearer specifications within states would point to a strengthening of this value (The Hilltop Institute, 2013).

Organizational Effects

There is evidence that hospital-community engagement can improve the viability of a hospital. Particularly within changing markets, hospitals that acknowledge and respond to issues within their communities have been shown to have a greater likelihood of surviving (Trinh & O'Connor, 2000). Though community benefit participation does consume resources and may therefore have a negative effect on short-term financial performance, research has shown that an organization's willingness to be flexible in how it responds to changing community needs is associated with positive long-term hospital performance (Ginn & Lee, 2006) and has the potential to improve reputations and important relationships (Grande et al., 2013; Gray 1991; Ko, Derose, Needleman, and Ponce 2014; Reich 2014). This finding raises the question as to whether resources expended on community benefit participation can be seen as an investment.

Organizational Characteristics and Practices

Another approach to achieving fiscal health and organizational viability has been an increased focus in recent decades on business-like practices. The trend toward corporatization within organizational culture has led hospitals to pursue practices such as entering multi-hospital system arrangements, diversifying services and products, and emphasizing managerial approaches within their organization (Lee & Alexander, 1999).

Hospitals and Their Markets

Organizational viability can also be influenced by a hospital's environment. Market forces can play a role in a hospital's ability to remain in the market (D'Aunno, Succi & Alexander, 2000; Ciliberto and Lindrooth, 2007; Harrison, 2007). Physician availability, the nature of the competition, low demand, and setting (rural or urban; neighborhood socioeconomic status) have all been tied to organizational vulnerability (McLafferty 1986; Trinh and O'Connor 2000; D'Aunno, Succi, and Alexander 2000; Longo and Chase 1984; Mullner and Whiteis 1988; Moscovice and Stensland 2002).

Research Question

This paper seeks to understand how community and business practices interact with other environmental factors to influence organizational survival. Specifically, this study goes beyond previous work on community orientation by asking the question, how does participation in different types of community benefit practices affect the organization?

DATA AND METHODS

This study employs a multilevel design. Hospitals are the primary unit of analysis (Level 1), nested within health care markets and in states (Level 2). Multilevel design accounts for the possibility of hospitals within markets performing more similarly to each other than hospitals across markets.

Hospital-Level Data

Organization-level data were obtained from the American Hospital Association (AHA) Annual Survey, for the years 2004, 2006, 2008, and 2010. (AHA does not make the community benefit data at the center of this study available past 2010.) These data are collected annually through a survey mailed to over 6,500 hospitals throughout the United States and U.S. territories, with an average response rate of approximately 83 percent (American Hospital Association 2016). These data have been widely used in studying health care organizations (D'Aunno, Succi, and Alexander 2000; Scott, Ruef & Caronna, 2000).

The study population consists of all hospital organizations who responded to the AHA Annual Survey in the years 2004, 2006, 2008, and 2010. The primary unit of analysis for this study is the *hospital*, defined as an acute care facility, either general or specialty, with in-patient beds that provide continuous care to admitted patients, whose stays average greater than 24 hours (Scott, Ruef & Caronna, 2000). This study excludes hospitals focused on long-term or institutional care, such as rehabilitative hospitals, psychiatric hospitals, and medical facilities housed within other institutions (e.g., prisons or universities), with the expectation that such hospitals respond differently to environmental pressures (American Hospital Association 2016).

The total population of hospitals meeting the study criteria was 5,068 in 2004; 5,076 in 2006; 5,089 in 2008; and 5,029 in 2010, for a total of 20,262 possible responses over four waves of data. There were 3,608 instances of no response, resulting in a total of 16,654 responses over four waves. The analytic sample is made up of the 2004 hospital population, which numbers 3,522 hospitals after adjusting for missing data.

AHA data are used to study most organizational characteristics and the community benefit planning, business-like practice, community benefit activity, and closure variables. Designations for critical access hospitals were sourced from the Health Resources and Services Administration.

Market-Level Data

The second level of analysis is the health care market, defined as a geographic area or region within which patients are likely to seek care, either through self-selection or physician referral. This study employs the Dartmouth Atlas of Health Care's Hospital Referral Regions (HRRs) to establish market boundaries. The Dartmouth Atlas of Health Care establishes 306 HRRs throughout the country, each with at least one city where highly specialized procedures (such as major cardiovascular procedures) occur (Center for the Evaluative Clinical Sciences, 1996). Market influences allow for careful consideration of how hospitals within the same region may compete or interact with each other. The Dartmouth Atlas of Health Care also supplies data on the number of physicians within the market.

Population health information and demographic characteristics were obtained from the County Health Rankings & Roadmaps, which gathers and compiles health-related data from a range of sources (University of Wisconsin Population Health Institute, 2012). The unemployment measure was obtained through the U.S. Bureau of Labor Statistics for the month of January for each represented year.

State-Level Data

Information on state policies was obtained from The Hilltop Institute, a research center performing ongoing tracking and analysis of policies concerning community health needs assessments (CHNAs), hospital regulation, community benefit reporting, and community benefit accountability.

Merging of Data Sets Across Levels

Zip codes allowed for the identification of county name, Federal Information Processing Standard (FIPS) county codes, and HRRs for each hospital within each year of data. All appropriate data sets were merged based on one of these identifiers. Counties were matched to markets based on the Dartmouth Atlas's designation of which market hospitals within the county fell into. Data were collected at the county level for all identified counties. Data were weighted based upon county population and aggregated to the market level for the corresponding HRR, in order to establish market-level characteristics and allow for market-level analysis.

Hospital-Level Measures

The dependent variable of this study is hospital **closure**, defined as an organization no longer existing as an acute care facility, either because it has exited the market entirely or because it has changed organizational forms (Longo & Chase, 1984). The identification of closure was made using both the AHA Annual Survey for the years 2004, 2006, 2008, and 2010 and the AHA Summary of Registered Hospitals from 2005 through 2010. Closed hospitals were first identified by the hospital identification number being absent from the next wave of survey data and then confirmed through the Summary of Registered Hospitals lists of closures and organizational change. The closure measure is dichotomous (0=no, 1=yes) and indicates whether the hospital closed at any point between 2004 and 2010.

In this analysis, the independent variables of high community benefit planning participation and high community benefit activity participation (see Table 1) are measured as dichotomous variables, representing the value of community. We first created an index to represent each type of practice from AHA Annual Survey questions that were consistent over the four waves of data. For each of these types of practices, hospitals are categorized as either performing all practices within the grouping (yes=1) or not (no=0). This approach is taken to determine which hospitals have the highest degrees of orientation toward each type of practice, which allows for assessment of the effect of this highest orientation on closure. For each of these categories, the level of participation tends to be concentrated. Therefore, a dichotomous variable allows for more variance than a count variable.

TABLE 1
ORGANIZATIONAL PRACTICES ITEMS

| Community Benefit Activities | Community Benefit Planning Activities |
|------------------------------|---|
| Community Outreach | Long-term Planning for Community Health Improvement |
| Enrollment Services | Dedicated Budget for Community Benefit |
| Community Health Fair | Community Health Needs Assessment |
| Community Education | Tracking and Dissemination of Health Information |
| Health Screenings | |

Two practices considered to represent corporatization values of a hospital are also included in the analysis. The analysis includes the measures of the hospital joint venture and hospital joint venture with physicians. A joint venture is considered to be an affiliation that allows for investment opportunity (Marlow & Sagraves, 2016). Each measure is dichotomous (0=no, 1=yes), indicating whether or not a hospital participates in this practice.

Hospital characteristics include three types of variables: identity, structure, service. For identity, hospitals are classified as nonprofit, nonprofit religious, government, or for-profit controlled (White,

2003). The structure variables convey whether a hospital is a teaching hospital and/or part of a multihospital system. For service, hospitals are identified as general medical/surgical or specialty. The designation of critical access hospital is applied where appropriate. Each of these characteristics are measured dichotomously (each coded 0=no, 1=yes) (Romero, Kwan, Swearingen, Nestler & Cohen, 2012).

Additional hospital variables include size as measured by number of staffed beds; occupancy rate, a calculation of the capacity a hospital operates at on an average day (inpatient days divided by the number of beds and multiplied by 365 days per year); and the hospital's market share of inpatient admissions (hospital inpatient volume divided by market inpatient volume).

Market-Level Measures

Market factors are included as the second level of analysis to control for economic and health needs and market competition. These factors include percent of population unemployed; percent of the population reporting poor or fair health; rate of physicians in the market; and the Herfindahl Hirschman index for inpatient days (providing a calculation of the market concentration with scores approaching 1 indicating higher levels of concentration of the market inpatient days in fewer hospitals) (Alexander, Ye, Lee & Weiner, 2006).

State and Federal Measures

The presence of a relevant community benefit policy at the state or federal level becomes a characteristic of the organization, based on the year and state it resides in (0=no, 1=yes). The types of policies considered include a requirement for community benefit participation, a requirement for a minimum contribution of community benefit, a requirement to report community benefit expenditures, and a requirement to participate in community health needs assessments.

Analysis

Descriptive statistics were calculated for each measure. To examine the effects of community and business practices on hospital closure, this study examines pooled data that include variables operating at both hospital-level (level 1) and market level (level 2). Multilevel models are used to account for the potential of organizations within the same market to behave more similarly to each other than those across markets (Lee & Lounsbury, 2015). Multilevel models assess both fixed effects and random effects. This mixed-effect model allows for consideration of both market context and individual hospitals, as well as an understanding of what amount of variation can be attributed to the different levels within the data (Lee & Lounsbury, 2015; Snijders & Bosker, 2012).

We use multilevel logistic regression because the outcome (closure, non-closure) is dichotomous, representing whether a hospital closed at any point between 2004 and 2010, in reference to the 2004 independent variables. Using the predictor variables from 2004, this approach allows for lagged time between the measurement of hospital characteristics and a closure event.

Model 1 assesses the main associations of interest, between highest orientation toward each type of practice and the closure measure, with consideration of organizational characteristics. Model 2 builds by incorporating market characteristics and state policy measures. This series of modeling allows for the ability to partition the variation in outcomes by hospital-level and market-level factors.

FINDINGS

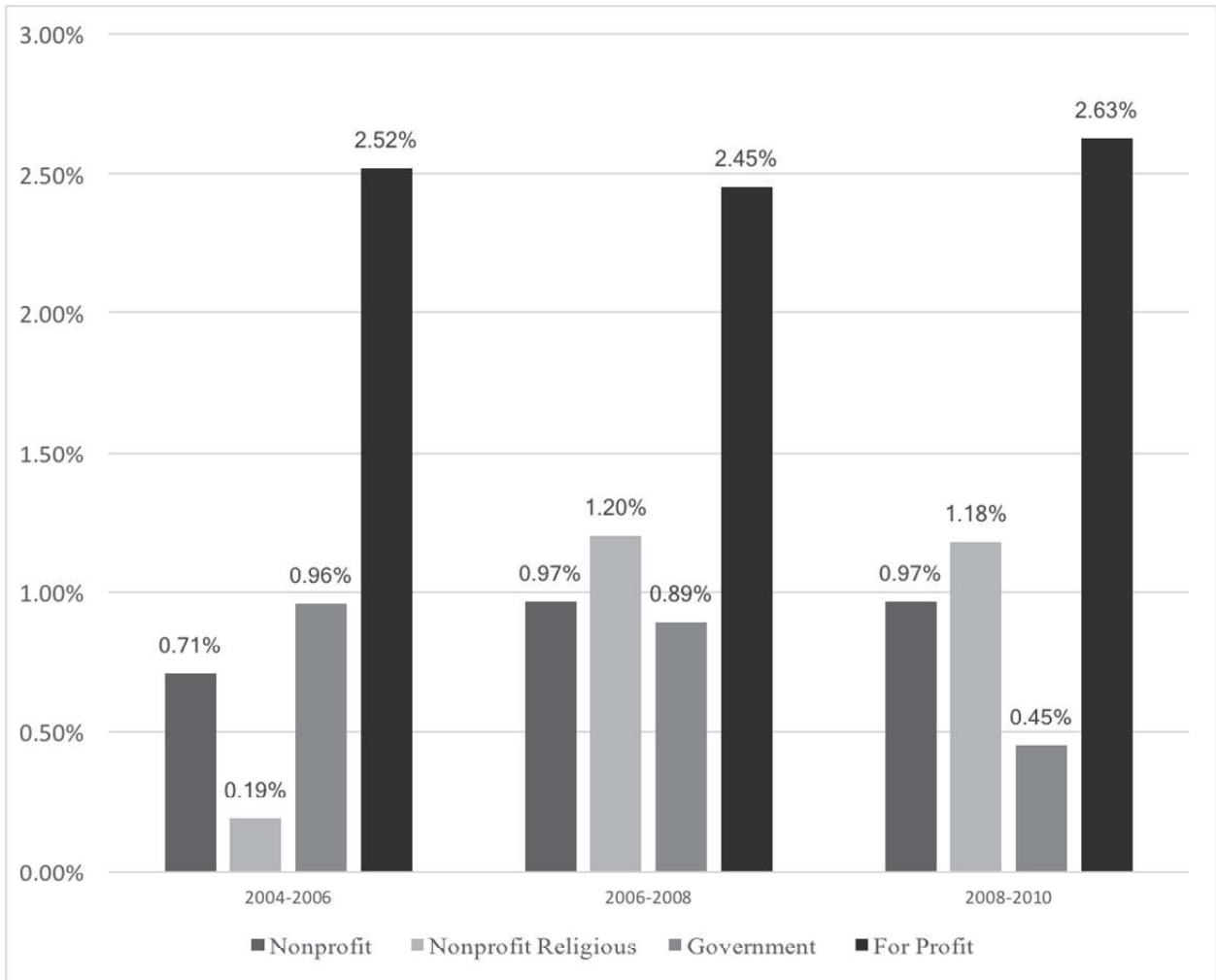
The descriptive statistics for the closure measure and key independent variables are available in Table 2, with mean, standard deviation and range for each measure.

TABLE 2
DATA SOURCE, CODING, AND DESCRIPTIVE STATISTICS FOR KEY MEASURES

| Level 1: Organizations | | | | Means and (SD)s for: | | | |
|---|--------------------|-------------------------|--------------------------|-----------------------------|------------------|----------------|----------------|
| Measure | Data Source | Data Years | Coding/ Range | 2004 | 2006 | 2008 | 2010 |
| Hospital Performance Outcomes: | | | | | | | |
| Hospital Closure | AHA Annual Survey | 2006, 2008 & 2010 | 0=No, 1=Yes | - | 0.003 (0.056) | 0.01 (0.09) | 0.01 (0.07) |
| Closure: Hospital Closure Between 2004 and 2010 | AHA Annual Survey | 2004 | 0=No, 1=Yes | 0.02 (0.14) | - | - | - |
| Independent Variables: | | | | | | | |
| Value Practices | | | | | | | |
| Highest Orientation Community Benefit Activities | AHA Annual Survey | 2006, 2008, & 2010 | 0=No, 1=Yes | 0.29 (0.45) | 0.30 (0.46) | 0.39 (0.49) | 0.43 (0.49) |
| Highest Orientation Community Benefit Planning Activities | AHA Annual Survey | 2006, 2008, & 2010 | 0=No, 1=Yes | 0.69 (0.46) | 0.69 (0.46) | 0.55 (0.50) | 0.57 (0.49) |
| Business Practice: Joint Venture | AHA Annual Survey | 2004, 2006, 2008 & 2010 | 0=No, 1=Yes | 0.20 | 0.25 | 0.28 | 0.30 |
| Business Practice: Joint Venture MD | AHA Annual Survey | 2004, 2006, 2008 & 2010 | 0=No, 1=Yes | 0.20 | 0.24 | 0.25 | 0.30 |
| *No SD Reported for Dichotomous Measures | | | | | | | |

A total of 171 hospitals of the 5,068 in the 2004 population experienced a closure over the 2004-2010 study period. The closures were stable across years but with hospitals of varying types experiencing closure at different rates (Figure 1).

**FIGURE 1
HOSPITAL CLOSURES BY OWNERSHIP AND YEAR**



Regarding the practice measures, 32 percent of hospitals have a high level of orientation toward community benefit activities, with highest orientations toward planning at 62 percent.

The regression models provide insight into how participation in community and corporatization practices relate to hospital closure, with consideration of organizational and environmental factors. The first model assesses how participation in community benefit activities and planning practices may shape hospital closure, with consideration of organizational variables as well. Of the community benefit variables, only high participation in planning practices (OR=0.49, $p < .01$) has a statistically significant relationship with hospital closure, indicating that hospitals with high levels of planning practices see lower odds of closure compared to their counterparts. With the organization variables, we see that for-profit hospitals (2.07) experience greater odds of closure, in reference to nonprofits, while the critical access designation (.03) gives a hospital lower odds of closure. Hospitals who see a greater share of the market's inpatients (.81) also have lower closure odds.

Environmental factors with significant relationships to the dependent variable, as shown in the second model, include the percent of the population market living in a rural county (.97) and the presence of a community benefit policy within the state (.42), both indicating lower odds of closure. (See Table 3.)

TABLE 3
MULTILEVEL LOGISTIC REGRESSION ESTIMATES OF 2004 HOSPITALS
EXPERIENCING CLOSURE BETWEEN 2004 AND 2010

| | Model 1 | Model 2 |
|---|------------------------------------|------------------------------------|
| Number of Markets | 305 | 305 |
| Observations | 3522 | 3522 |
| | <i>Odds Ratio</i> (<i>SE</i>) | <i>Odds Ratio</i> (<i>SE</i>) |
| Fixed Effects | | |
| Organization Logic Practices | | |
| Highest Orientation Community Benefit Activities | 1.08 (0.38) | 1.02 (0.36) |
| Highest Orientation Community Benefit Planning Activities | 0.53* (0.15) | 0.53* (0.14) |
| Business-like Practices | | |
| Joint Venture | 0.70 (0.31) | 0.69 (0.30) |
| Joint Venture with Physician Practice | 0.51 (0.24) | 0.54 (0.25) |
| Organizational Characteristics | | |
| Nonprofit Religious Hospital (Reference Nonprofit) | 1.30 (0.63) | 1.18 (0.56) |
| Government Hospital (Reference Nonprofit) | 0.75 (0.29) | 0.75 (0.29) |
| For-profit Hospital (Reference Nonprofit) | 2.07* (0.75) | 1.92 (0.70) |
| Specialty Hospitals | 0.53 (0.32) | 0.48 (0.29) |
| System Member Hospital | 0.90 (0.26) | 0.89 (0.26) |
| Teaching Hospital | 1.48 (0.52) | 1.26 (0.44) |
| Critical Access Hospital | 0.03*** (0.03) | 0.03** (0.03) |
| Hospital Size (Beds) | 0.99 (0.00) | 0.99 (0.00) |
| Occupancy Rate | 2.08 (1.28) | 1.81 (1.19) |
| Market Share (Inpatient Volume) | 0.81** (0.06) | 0.82* (0.07) |
| Market Factors | | |
| Competition (Herfindahl Inpatient) | - | 5.67 (10.64) |
| Percent of Population Unemployed | - | 0.88 (0.14) |
| Percent of Market Population Rural County | - | 0.97* (0.01) |

| | | |
|--|-------------------|------------------|
| Percent of Population Reporting Poor/Fair Health | - | 1.07 (0.05) |
| Prevalence of Physicians in the Market | - | 1.01 (0.01) |
| Regulative Influence | | |
| State Community Benefit Policy in Place | | 0.42** (0.13) |
| Constant | 0.05*** (0.03) | 0.03 (0.06) |
| Random Effects | | |
| Level-1 Residuals (Hospital) | 0.07 (0.10) | 0.03 (0.16) |
| Level-2 Intercept (Market) | 1.14 (0.28) | 0.62 (0.27) |
| Model Fit | | |
| Log Likelihood | -290.52 | -282.67 |
| Log Likelihood Difference | -32.12 | -3.34 |
| BIC | 711.71 | 745.01 |
| Likelihood Ratio Test Chi2 | 84.25*** | 6.68** |
| * p < .05; **p < .01; ***p < .001 | | |

DISCUSSION

This study offers evidence that the practices hospitals adopt based upon institutional values may have an effect on organizational outcomes, and it links closure to certain organizational practices. This study newly identifies participation in community benefit planning practices as indicative of organizational viability. This finding is consistent with the idea that engagement in community activities helps organizations to maintain legitimacy in the market (Ginn, Shen & Moseley, 2009), potentially affecting consumer behavior. In this analysis, the tested business practice measures were not found to be associated with organizational viability.

Though a hospital closure is likely to have serious ramifications for its surrounding communities, closures were relatively rare occurrences nationwide during the studied time. Of the 5,068 hospitals in the initial 2004 population, 3.3% closed by the year 2010. These closures occurred in a reasonably consistent pattern across the waves of data, with about 1% of the hospital population closing between each wave. These numbers equate to an average number of closures of 29 per year, which is substantially lower than in previous decades. The documented average rate of hospital closure in the 1990s was 42 per year, with the late 1980s seeing approximately twice that (Poley & Ricketts, 2001).

Hospitals in states with policies regulating community benefit participation or reporting tend to experience lower odds of closure. The significance of a policy presence could reflect the nature of the hospital field climate in the state or may further support the idea that engagement with community (whether voluntary or regulated) increases organizational viability.

Given the objectives of this project, a key finding from the analysis is the potentially protective nature of a hospital's highest orientation toward community benefit planning practices. This finding suggests that hospitals that are engaged with their communities and aware of community needs may experience safeguards from closure. The relationship of a high level of involvement in these planning practices to lower odds of closure echoes other findings that community engagement and responsiveness relate to better chances of survival (Trinh & O'Connor, 2000; Ginn & Lee, 2006). The nature of these practices is such that hospitals participating in the full scale are both very aware of their community needs and

purposeful about planning ways to address these needs. Participation in community CHNAs and the tracking and dissemination of health information may provide hospitals with knowledge of their communities. The recent policy changes regarding CHNAs within the Affordable Care Act may ultimately be advantageous to hospitals and their ability to plan appropriately to engage with their communities. Overall, embracing community engagement within organizational culture may be beneficial to hospital performance.

CONCLUSION

Taking steps to integrate community benefit into the hospital organization through long-term planning and budgeting can indicate a commitment to using this information. It is possible that participation in these practices protects hospitals from closure because of their ability to recognize and respond to a changing market and environment, meeting or even exceeding the expectations of multiple stakeholders (Proenca, Rosko & Zinn, 2000). However, it may also be worth exploring in future research whether recognition of a hospital's community responsiveness affects community members' choice of hospitals. Overall, these findings indicate that health care leaders seeking to establish their organizations more firmly within both the community and the hospital field should increase involvement in community benefit.

REFERENCES

- Alexander, J.A., Ye, Y., Lee, S.D., & Weiner, B.J. (2006). The effects of governing board configuration on profound organizational change in hospitals. *Journal of Health and Social Behavior* 47(3):291-308
- American Hospital Association. (2015). Critical Access Hospitals. Retrieved from <http://www.aha.org/advocacy-issues/cah/index.shtml>.
- Catholic Health Association of the United States. (2012). A Guide for Planning & Reporting Community Benefit: Categories and Definitions. Retrieved Nov. 5, 2014 (<http://www.chausa.org/guideresources>).
- Center for the Evaluative Clinical Sciences. (1996). *The Dartmouth Atlas of Health Care*. Chicago: American Hospital Publishing.
- Ciliberto, F. & Lindrooth, R.C. (2007). Exit from the hospital industry. *Economic Inquiry*, 45: 71–81. doi:10.1093/ei-cbl010
- D'anno, T., Succi, M. & Alexander, J.A. (2000). The role of institutional and market forces in divergent organizational change. *Administrative Science Quarterly* 45 (4), 679-703.
- Fennell, M.L. (1982). Context in organizational groups: The case of hospital clusters. *Journal of Health and Social Behavior* 23(1):65.
- Ginn, G.O. & Lee, R.P.. (2006). Community orientation, strategic flexibility, and financial performance in hospitals. *Journal of Healthcare Management* 51(2):111-122.
- Ginn, G.O., Shen, J.J. & Moseley, C.B. (2009). Community benefit laws, hospital ownership, community orientation activities, and health promotion services. *Health Care Management Review* 34 (2), 109-118.
- Gray, B.H. (1991). *The profit motive and patient care: The changing accountability of doctors and hospitals*. Harvard University Press.
- Grande, D., Shea, J. & Armstrong, K. (2013). Perceived community commitment of hospitals: An exploratory analysis of its potential influence on hospital choice and health care system distrust. *Inquiry*, 50(4), 312-321.
- Harrison, Teresa D. (2007). Consolidations and closures: an empirical analysis of exits from the hospital industry. *Health Economics*, 16, 457–474. doi:10.1002/hec.1174
- Heese, J., Krishnan, R. & Moers, F. (2016). Selective regulator decoupling and organizations' strategic responses. *Academy of Management Journal*, 59(6): 2178-2204.

- The Hilltop Institute. (2013). What are hospital community benefits? Retrieved from: <http://www.hilltopinstitute.org/publications/WhatAreHCBsTwoPager-February2013.pdf>
- Ko, M., Derose, K.P., Needleman, J. & Ponce, N.A. (2014). Whose social capital matters? The case of U.S. urban public hospital closures and conversions to private ownership. *Social Science & Medicine*. 114:188-196.
- Lee, S.Y. & Alexander, J.A. (1999). Managing hospitals in turbulent times: Do organizational changes improve hospital survival? *Health Services Research*, 34(4):923.
- Lee, M.P. & Lounsbury, M. (2015). Filtering institutional logics: Community logic variation and differential responses to the institutional complexity of toxic waste. *Organization Science* 26 (3), 847-866.
- Longo, D.R. & Chase, G.A. (1984). Structural determinants of hospital closure. *Medical Care* (1984): 388-402.
- McLafferty, S. 1986. The geographical restructuring of urban hospitals: spatial dimensions of corporate strategy. *Social Science & Medicine* 23(10), 1079-1086.
- Moscovice, I. & Stensland, J. (2002). Rural hospitals: Trends, challenges, and a future research and policy analysis agenda." *The Journal of Rural Health* 18(5):197-210.
- Mullner, R.M. & Whiteis, D.G. (1988). Rural community hospital closure and health policy. *Health Policy* 10 (2), 123-135.
- Poley, S.T. & Ricketts, T.C. (2001). Fewer hospitals close in the 1990s: Rural hospitals mirror this trend. *Findings Brief*. Chapel Hill, NC: Sheps Center for Health Services Research, University of North Carolina at Chapel Hill.
- Proenca, E.J, Rosko, M.D. & Zinn, J.S. (2000). Community orientation in hospitals: an institutional and resource dependence perspective. *Health Services Research*, 35 (5) (Pt 1): 1011.
- Reich, A.D. (2014). *Selling our souls: The commodification of hospital care in the United States*. Princeton University Press.
- Romero, D, Kwan, A., Swearingen, J., Nestler, S. & Cohen, N. (2012). Impact of the closure of a large urban medical center: A qualitative assessment (Part I). *Journal of Community Health*, 37(5), 982-994.
- Schlesinger, M., Gray, B., Carrino, G., Duncan, M., Gusmano, M., Antonelli, V. & Stuber, J. (1998). A broader vision for managed care, part 2: A typology of community benefits. *Health Affairs*, 17(5), 26-49.
- Snijders, T. A., & Bosker, R. J. (2011). *Multilevel analysis: An introduction to basic and advanced multilevel modeling*. Sage.
- Scott, W.R., Ruef, M., Mendel, P.J. & Caronna, C.A. (2000). *Institutional change and healthcare organizations: From professional dominance to managed care*. University of Chicago Press.
- Scott, W. R. (2004). Competing logics in health care: Professional, state, and managerial. *The Sociology of the Economy*, 295-315. *Russell Sage Foundation, New York*
- Trinh, H.Q. & O'Connor, S.J. (2000). The strategic behavior of US rural hospitals: A longitudinal and path model examination. *Health Care Management Review* 25 (4), 48-64.
- University of Wisconsin Population Health Institute. (2012).
- White, K. R. (2003). When institutions collide: Hospitals sponsored by the Roman Catholic Church. *Advances in Health Care Organization Theory*, 79-98.
- Yarbrough, A.K. & Powers, T.L. (2006). A resource-based view of partnership strategies in health care organizations. *Journal of Hospital Marketing & Public Relations* 17 (1), 45-65.
- Young, G.J., Chou, C., Alexander, J., Lee, S.D. & Raver, E. (2013). Provision of community benefits by tax-exempt U.S. hospitals. *New England Journal of Medicine* 368(16), 1519-1527.