

An Empirical Taxonomy of Hospital Governing Board Roles

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Objective. To develop a taxonomy of governing board roles in U.S. hospitals.

Data Sources. 2005 AHA Hospital Governance Survey, 2004 AHA Annual Survey of Hospitals, and Area Resource File.

Study Design. A governing board taxonomy was developed using cluster analysis. Results were validated and reviewed by industry experts. Differences in hospital and environmental characteristics across clusters were examined.

Data Extraction Methods. One-thousand three-hundred thirty-four hospitals with complete information on the study variables were included in the analysis.

Principal Findings. Five distinct clusters of hospital governing boards were identified. Statistical tests showed that the five clusters had high internal reliability and high internal validity. Statistically significant differences in hospital and environmental conditions were found among clusters.

Conclusions. The developed taxonomy provides policy makers, health care executives, and researchers a useful way to describe and understand hospital governing board roles. The taxonomy may also facilitate valid and systematic assessment of governance performance. Further, the taxonomy could be used as a framework for governing boards themselves to identify areas for improvement and direction for change.

Key Words. U.S. hospitals, governing boards, taxonomy

Developments, such as Sarbanes–Oxley legislation, scrutiny by the Internal Revenue Service, concern for medical errors and patient safety, demand for performance by third-party payers, and competition from physician-owned health care facilities, have placed governing boards of hospitals in a more critical position responsible and accountable for hospital affairs (Orlikoff 2005). Observers and students of governance generally agree that effective governing boards are the sine qua non of effective hospitals and that governing boards need to assume a more active role in order to successfully guide their organizations through the turbulent waters of today's health care environment (Alexander and Lee 2006; Prybil 2006).

While it is recognized that governing boards all have a clear goal—to build and sustain an effective organization—what they actually do to accomplish that goal differs greatly. In part because of the flexibility afforded them by state laws of incorporation and relatively weak oversight, hospital governing boards have interpreted and discharged their roles with an unsettling degree of variation (Weil 2003; Orlikoff 2005). Some boards act mainly as policy makers, focusing on establishing mission and a strategic direction for the hospital; others assume the role of boundary spanners, focusing on building and maintaining relations with key external constituencies and fundraising; while still others devote much of their time and attention to overseeing the performance of the hospital and its management team (Widmer 1993). In the past, the variability with which hospital boards discharged their roles could be tolerated, given the common perception that governance contributed little value to the organization or the community (Starkweather 1988). Because of the aforementioned political and economic changes in the hospital field and because of the multilayered governance structures in many hospital systems and networks, role ambiguity among hospital boards is no longer an option (Alexander, Lee, and Bazzoli 2003). In sum, while the critical position of the hospital board in ensuring the viability of the hospital and its function in the community has become clearer, the picture of how boards actually discharge their roles continues to puzzle both researchers and the practice community.

This incongruity raises three questions. First, how do hospital governing boards discharge their roles in light of emerging pressures? Second, are there any discernable patterns in the ways hospital governing boards juggle different, and potentially competing, roles? Third, if such patterns exist, are they associated with particular organizational and market characteristics and governance practices?

To address these questions, this study adopted a configurational perspective and used cluster analysis to develop a taxonomy of hospital governing boards based on three key areas of board responsibility: mission and strategy

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setting, performance evaluation and oversight, and external relations. Our premise is that the board is a collectivity with interrelated roles. It is, therefore, best described as a configuration of roles rather than an entity with discrete structural attributes (e.g., size, composition). Given the range of governance forms in hospitals and the increased quest for high-performing governing boards, the resultant taxonomy may help bring an evidence base to the largely normative understanding of hospital governing board roles and facilitate valid and systematic assessments of governance performance in future research.

BACKGROUND

Inconsistencies exist in how governing board roles are identified in the literature. One early study found that board members perceived their roles as fundraising, establishing operating procedures, enlisting the support of others, budgeting and fiscal control, and balancing the organization with differing viewpoints (Fenn 1971). Green and Griesinger (1996) found that governing boards had 10 major areas of responsibilities: mission and policy, strategic planning, program evaluation, board selection and tenure, board development, selection and evaluation of executive director, resource mobilization, financial management, community interaction, and the resolution of disputes. Hevesi and Millstein (2001) found that the most important responsibilities identified by board members were strategic planning, financial oversight, fundraising, operational oversight, and community relations.

Studies also demonstrated that board members did not fulfill their expected roles as described in the prescriptive literature (Iecovich 2004, Inglis, Alexander, and Weaver 1999; Murray, Bradshaw, and Wolpin 1992). For example, although writers such as Carver (1990) and others argued that the main responsibility of the board to the organization was strategic planning, only 59 percent of the organizations studied perceived this responsibility as highly important. Similar patterns were found in the value given by boards to maintaining community relations and fundraising, despite the fact that most writers agreed that these were important board roles (Iecovich 2004).

Just as there is no agreement about the roles of hospital governing boards and how those roles are exercised, there is a lack of consistency in the literature regarding how hospital governing boards are described and classified. The most common approach is to classify hospital governing boards according to their structural attributes such as board size, composition (e.g., professional background, insiders versus outsiders), and board–management relationship

(Kaufman et al. 1979; Goodstein and Boeker 1991; Young, Beekun, and Ginn 1992; Goodstein, Gautam, and Boeker 1994; Gautam and Goodstein 1996; Golden and Zajac 2001; Saleh, Vaughn, and Rohrer 2002; Prybil 2006). The emphasis of this approach is on testing the independent effect of an individual attribute of board structure (e.g., proportion of insiders). It assumes that governing boards are an assemblage of distinct elements that can be examined independently of each other and that the observed relationship between a board attribute and an organizational outcome (e.g., financial performance) can be held across all hospitals. By ignoring the possibility that the board is an integral entity with coherent internal structures, these assumptions have limited our understanding of hospital governing boards to discrete and disjointed observations. As a result, empirical evidence regarding the effectiveness of hospital governing boards has been inconsistent and inconclusive (Alexander and Lee 2006). Furthermore, focusing on a single structural element of the board may lead practitioners to overemphasize the importance of the element at the expense of other interdependent board attributes and result in an ineffective design of the board.

Configurational Perspective

Increasingly, researchers have adopted a wholistic, configurational perspective on complex organizational systems and viewed hospital governing boards as an assembly of interconnected components that perform together in a mutually reinforcing and systemic manner (Weiner and Alexander 1993; Alexander and Lee 2006; Alexander et al. 2006). The perspective purports that any particular perspective of a board takes its meaning from the whole and cannot be understood in isolation (Miller 1987; Meyer, Tsui, and Hinings 1993).

Configurations, according to this perspective, mean commonly occurring clusters of organizational strategies, structures, and processes (Miller and Mintzberg 1983; Miller and Friesen 1984; Miller 1987; Ketchen, Thomas, and Snow 1993). The clusters are multidimensional and display internally coherent patterns that arise because the attributes forming the clusters are interdependent and can change only discretely and intermittently. In other words, what makes a governing board work is not any of its individual attributes but how the attributes fit together and support each other in a systems-like manner. The multidimensional nature of hospital governing boards suggests that the configurational perspective is appropriate in guiding the development of a taxonomy of hospital governing board roles.

Hospital Governing Board Roles

The approach we took to develop a taxonomy of hospital governing board roles was inductive, without any *a priori* hypothesis regarding the number and profile of clusters to be identified in the analysis. As such, the question—what determines the number of clusters?—became critical. From the configurational perspective, there is a limited number of clusters because of the tendency of board roles to fall into coherent patterns, if the role dimensions used in the taxonomy are chosen on a sound theoretical or empirical basis to create a set of “configurations that collectively exhaust a large fraction of the target population of organizations under consideration” (Miller and Friesen 1984).

Our selection of board roles was guided by normative expectations of governing board responsibility as well as empirical evidence regarding the roles assumed by governing boards in hospitals. Despite the diversity in how the roles of hospital governing boards are defined and exercised, all boards are normatively expected to fulfill three main roles: mission and strategy setting, performance evaluation and oversight, and external relations (Carver 1990; Chait, Holland, and Taylor 1991). These three roles also encompass the variety of responsibilities identified in past research (Green and Griesinger 1996; Hevesi and Millstein 2001; Inglis, Alexander, and Weaver 1999). Although all boards are aimed to build and sustain an effective hospital and are responsible for determining the allocation of resources in the community interest, we anticipated that their emphasis on the three different and possibly conflicting roles would vary and display a discernible pattern across hospitals.

Mission and strategy setting includes definition and maintenance of hospital mission, and the board's role in the approval of strategic plans for fulfilling mission. Performance evaluation and oversight role comprises the assessment of hospital and CEO performance in areas such as financials, care quality, patient safety, community health outcomes, and physician and staff relationships. External relations role includes such activities as community and government relations, public accountability, and fundraising.

METHODS

Data

The primary data source was the American Hospital Association's (AHA) 2005 Hospital Governance Survey. The survey was sent to 4,919 community hospitals to collect information about how they were governed, including board structure and composition, relationship with management,

responsibilities, activities, and accountability. Survey instructions requested that non-opinion items be completed by the CEO or the chair of the board, or both, based on who had greater expertise or experience with particular sections of the survey. Despite potential response bias, the bias should be limited and posed no threat to the validity of the study because the items utilized in the study were largely objective (e.g., counts, presence or absence of policies, behaviors, use of criteria/benchmarks) rather than subjective or evaluative assessment about governance performance.

A total of 1,592 hospitals responded to the survey. Of these, 1,334 contained complete information for our analysis, resulting in a valid response rate of 27.1 percent. With some exceptions,¹ the sample resembled the population of community hospitals in 2004 and displayed all major organizational, board, and environmental attributes seen in the hospital population. Although the low response rate and the differences in organizational attributes between the sample and the population may raise concern about representation, it is important to note that the purpose of the study was to develop a taxonomy that grouped hospital governing boards into empirically homogeneous and conceptually coherent categories, rather than testing and generalizing a hypothesized relationship between two (or more) variables that put a premium on statistical representation or generation. Judging from the diversity of the sample, we felt the threat of a low response rate is not detrimental.

Selection of Indicators for Governing Board Taxonomy

From the governance survey, 23 variables were selected or constructed as candidate indicators of three governing board roles: mission and strategy setting, performance evaluation and oversight, and external relations. Selection of candidate indicators was based on their face validity (i.e., wording of the question corresponding to the definition of a role) and input from experts who were familiar with the hospital industry and the design of the survey. Supplementary Material Appendix SA1 lists those indicators and the role they represent.

Exploratory factor analysis with orthogonal rotation was performed on candidate indicators for each role to verify unidimensionality—meaning a common factor underlies the indicators for each role. Results confirmed unidimensionality. Based on the factor analysis results, indicators were also selected for each of the roles and were shown to have satisfactory internal reliability (Table 1). (Factor analysis results and correlations between the factor

Table 1: Board Roles and Indicators

<i>Board Roles</i>	<i>Indicators</i>	<i>Cronbach's α</i>
Mission/strategy setting	Emphasis on "mission fulfillment" as a criterion for CEO evaluation	0.79
	Emphasis on "strategic plan fulfillment" as a criterion for CEO evaluation	
	Emphasis on "vision/leadership qualities" as a criterion for CEO evaluation	
Performance evaluation and oversight	Evaluate hospital performance based on benchmarks or standards	0.98
	Benchmark data are regularly shared with the board	
	Number of performance benchmarks used	
External relations	Emphasis on "community leadership or representation" as a criterion for board nomination	0.74
	Emphasis on "fundraising ability" as a criterion for board nomination	
	Emphasis on "political influence" as a criterion for board nomination	
	Emphasis on "public relations skills" as a criterion for board nomination	

scores of the three dimensions are available in Supplementary Material Appendix SA2.)

Next, we constructed a composite scale to represent each role. This procedure prevented using highly correlated indicators for a role, which would be an implicit weighting of those indicators in the cluster analysis—e.g., if three highly correlated indicators were used, the effect would be the same as considering one role with a weight three times greater than any other role.

Development and Validation of Governing Board Taxonomy

In constructing and validating the taxonomy, we used the same approach used in the health care literature (Lewis and Alexander 1986; Alexander et al. 1996; Bazzoli et al. 1999) and enhanced it with recent recommendations by organizational and social science researchers (Ketchen and Shook 1996; Breckenridge 2000; Mandara 2003). The major steps included cluster analysis, validation of clusters using ANOVA and discriminant analysis, and review of resulting clusters by industry experts.

Cluster analysis was performed to classify hospital governing boards on the basis of the three roles, each measured as the average of rescaled indicators.² The analysis included:

- Random division of the sample into two halves.
- Implementation of cluster analysis on the first subsample using Euclidean distance as the measure of dissimilarity/similarity and based on an approach that combined hierarchical and k -means analysis to classify hospital governing boards into clusters (Mandara 2003). Interpretation of the cluster solution was based on the cubic clustering criteria, pseudo F and pseudo T^2 statistics, and inspection of the dendrogram (a graphic representation of a hierarchical arrangement of subgroups produced by the cluster procedure).
- Performance of cluster analysis on the second subsample to assess reliability. To test reliability, we performed the k -means analysis to classify the second subsample into clusters according to the centroids derived from the first subsample. Agreement was then computed between the two solutions for the second subsample using Cohen's κ measure of rater agreement. A greater degree of agreement between the two solutions indicates a higher reliability of the cluster solution (Breckenridge 1989, 2000; Mandara 2003).
- Classification of the entire sample using the hierarchical and k -means analyses.

Validation of Cluster Solution: Two analyses were performed to validate the resulting clusters: one, ANOVA tests to examine whether the intercluster variance was statistically significant on the three board roles, and the other, discriminant analysis to validate the cluster solution based on the rates of correct classification derived from discriminant functions (May 1982; Alexander et al. 1996; Bazzoli et al. 1999).

Review of Cluster Solution by Industry Experts: The review was conducted by representatives of the AHA Center on Health Care Governance and Health Research and Educational Trust. Their operational knowledge of hospitals and governance provided an external validity check of whether the cluster solution made "practical" sense based on the different configurations of governance roles found in the clusters.

Organizational and Environmental Conditions Associated with Governing Board Taxonomy

In the final analysis, characteristics of the hospital and its environment were used to examine systematic differences between the clusters. The analysis focused on three aspects: board features (size, composition, accountability),

hospital attributes (size, ownership, system/network membership, teaching status), and environmental conditions (rural/urban, per capita income, HMO penetration, physician supply, and hospital competition). Information on hospital attributes was from the 2004 Annual Hospital Survey; environment variables were from the 2004 Area Resource File measured at the county level. Definitions of those variables are provided in Supplementary Material Appendix SA3.

The analysis was akin to a test of predictive validity, although we had no *a priori* hypothesis to guide the interpretation of results. A key premise was that hospitals and governing boards face different operational and environmental conditions that may influence their emphasis on particular governance roles. If the taxonomy developed was useful, the governance roles that predominate in a given cluster should reflect common variations in the operational and environmental characteristics of hospitals in that cluster.

RESULTS

Results of the cluster analysis in both split-half subsamples indicated that a five-cluster solution provided the best fit with the data. Assessment of the agreement between the subsamples using the κ statistic suggested that the cluster solution had high internal reliability ($\kappa = 0.87$; $p < .0001$). ANOVA tests using the entire study sample showed that the intercluster variance was statistically significant on the three board roles (Table 2). Based on the discriminate function analysis, 97.5 percent of the hospital governing boards were determined to be correctly classified through the cluster analysis, suggesting that the five-cluster solution was internally valid. Taken together, these favorable reliability and validity results provided substantial support for the resulting taxonomy of hospital governing boards.

Table 2: ANOVA Tests of Intercluster Variance ($N = 1,334$)

<i>Board Roles</i>	<i>Mean Square (Cluster)</i>	<i>Mean Square (Residual)</i>	<i>Variance Ratio (F)</i>	<i>p-value</i>
Mission/strategy setting	26.384	0.002	11,855.44	> .0001
Performance evaluation and oversight	4.896	0.012	409.29	> .0001
External relations	4.006	0.015	268.66	> .0001

Figure 1 shows the summary profile of the five clusters. They were labeled as follows: Cluster 1, Strategic Active Boards; Cluster 2, Evaluative and Strategic Active Boards; Cluster 3, Balanced Active Boards; Cluster 4, Strategic and External Active Boards; and Cluster 5, *Inactive Boards*. The clusters were labeled based on the relative emphasis of the three board roles. Other governance characteristics as well as organizational and environmental attributes that were significantly associated with each cluster (at $p < .05$) are presented in Table 3 and are described below.

Cluster 1: Strategic Active Boards

This cluster consisted of 143 governing boards. Compared with the other boards, Strategic Active Boards scored the lowest on the external relations dimension and they shared a low score on the performance evaluation and oversight dimension with two other clusters. By contrast, they displayed a relatively high score on the mission and strategy orientation of governance.

In terms of board attributes, Strategic Active Boards were characterized by a relatively small number of board members and a low percentage of physician members. They were least likely among all boards to have a

Figure 1: Profile of Governing Board Clusters

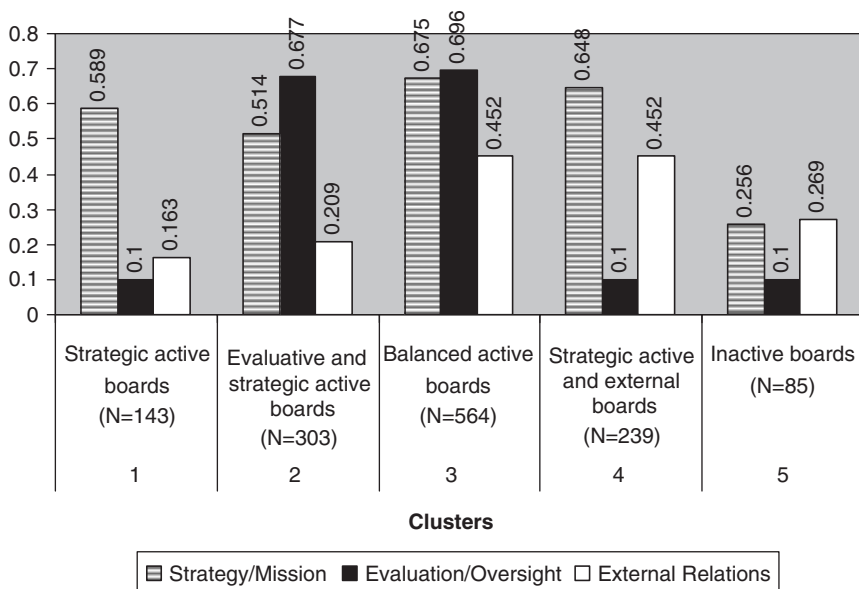


Table 3: Selected Board, Hospital, and Environmental Attributes Associated with Governing Board Clusters

	Cluster 1: Strategic ACTIVE Boards (N = 143)	Cluster 2: Evaluative & Strategic Active Boards (N = 303)	Cluster 3: Balanced Active Boards (N = 564)	Cluster 4: Strategic & External Active Boards (N = 239)	Cluster 5: Inactive Boards (N = 85)	Statistical Significance
Governing board attributes						
Board size (mean)	11.0	11.9	14.5	14.1	10.5	$p < .05$
% Physician members	16.3	17.7	20.5	18.0	11.8	$p < .05$
% Insider members	17.1	17.3	19.4	17.5	12.5	$p < .05$
Formal process for evaluating board's performance based on predetermined objectives/ standards (%)	57.8	54.5	79.1	72.4	37.7	$p < .05$
Separate community-based advisory group to provide input to the board and hospital management (%)	11.0	20.8	24.7	23.6	11.3	$p < .05$
Hospital attributes						
Hospital size*						
Small (%)	63.4	57.6	41.3	49.8	74.1	$p < .05$
Medium (%)	24.7	29.5	38.4	35.6	21.2	
Large (%)	12.0	12.9	20.3	14.6	4.7	
Ownership*						
Public (%)	35.9	31.1	18.5	17.6	43.5	$p < .05$
Private NFP (%)	52.8	57.0	71.9	74.1	48.2	
FP (%)	11.3	11.9	9.6	8.4	8.2	
System membership (%)	35.9	44.0	49.3	41.8	29.4	$p < .05$
Network membership (%)	31.7	29.8	36.5	39.8	24.7	$p < .05$

continued

Table 3. Continued

	Cluster 1: Strategic ACTIVE Boards (N = 143)	Cluster 2: Evaluative & Strategic Active Boards (N = 303)	Cluster 3: Balanced Active Boards (N = 564)	Cluster 4: Strategic & External Active Boards (N = 239)	Cluster 5: Inactive Boards (N = 85)	Statistical Significance
Teaching status (%)	2.1	4.3	8.9	7.5	1.2	$p < .05$
Environmental attributes						
Per capita income (\$)	25,154	25,696	26,770	26,405	23,330	$p < .05$
Urban location (%)	38.7	48.0	54.3	46.9	28.2	$p < .05$
% HMO enrollees	15.8	16.1	19.9	19.9	12.2	$p < .05$
Hospital beds per 1,000 population	4.8	4.5	4.5	5.2	6.0	$p < .05$
# MDs per 1,000 population	1.8	1.8	2.2	2.1	1.2	$p < .05$
Concentration of hospital market (Herfindahl index)	0.67	0.65	0.58	0.60	0.75	$p < .05$

*May not add up to 100 because of rounding errors.

separate community-based advisory group to provide input to the board and hospital management.

Strategic Active Boards operated in hospitals characterized by relatively small size and a relatively high representation of public ownership. Relatively few of the hospitals were system members or teaching facilities. Similar to those in Inactive Boards, Strategic Active Boards tended to be in areas that were relatively poor, were more likely to be rural, and had a relatively low degree of HMO penetration. The areas were also relatively bereft of other health care resources such as physicians and hospital beds.

Cluster 2: Evaluative and Strategic Active Boards

Evaluative and Strategic Active Boards constituted the second largest cluster in the taxonomy, with 303 hospitals represented. They ranked among the highest on the performance evaluation and oversight role and in the middle of the distribution on the mission and strategy setting role. By contrast, they ranked the second lowest on the external relations role.

In general, Evaluative and Strategic Active Boards ranked in the middle of the distribution on all the governing board, hospital, and environmental characteristics, with two exceptions. First, similar to Balanced Active Boards and Strategic and External Active Boards, Evaluative and Strategic Active Boards had a higher likelihood of hospitals being located in urban areas. Second, they ranked last among the five clusters on hospital beds per thousand population.

Cluster 3: Balanced Active Boards

The hospital boards in cluster 3, the largest of the five clusters with 564 hospitals represented, were denoted by a high level of activities on all three governance roles. With regard to other governing board features, Balanced Active Boards tended to have the largest size, the highest representation of physician members and members from inside the hospital (e.g., CEO and other top managers). They also tended to rank the highest among all five clusters on having a formal process for evaluating the board's own performance and establishing a community-based advisory group to provide input to the board and hospital management.

In comparison to hospitals in other clusters, hospitals in this cluster tended to be larger and were more likely to be a system/network member and a teaching institution. They were significantly more likely to be located in urban areas and in markets with the highest per capita income, the highest

HMO penetration rate, the greatest MD to population ratio, and the lowest hospital concentration (thus the highest level of hospital competition). They also tended to operate in markets with a low level of hospital resources.

Cluster 4: Strategic and External Active Boards

Strategic and External Active Boards constituted the third largest cluster, with 239 hospitals represented. They were noted by having an active mission and strategy focus, a high focus on external relations, and a relative lack of activity in performance evaluation and oversight. On the majority of the board, hospital, and environmental attributes examined, boards and hospitals in this cluster ranked the second highest among the five clusters and shared many similarities with boards and hospitals in clusters 2 or 3. For example, Strategic and External Active Boards ranked second only to Balanced Active Boards in terms of board size, percentage of physician membership, and percentage of insider membership on the board. Furthermore, cluster 4 hospitals ranked second only to cluster 3 hospitals with respect to having a formal process for evaluating board performance and the presence of a separate community advisory group.

Several organizational and environmental attributes associated with Strategic and External Active Boards are noteworthy. First, hospitals in this cluster were of relatively large size. Second, they were the most likely to be under private not-for-profit ownership and the least likely to be public. Third, they had the highest likelihood of being network members. Fourth, there was a relatively strong presence of teaching institutions in the cluster. Fifth, they tended to operate in markets with relatively high per capita income, high HMO penetration rates, and high levels of medical/hospital resources. Finally, they ranked second only to cluster 3 measures of hospital competition in their market.

Cluster 5: Inactive Boards

Inactive Boards were the smallest cluster, with 85 hospitals represented. They were characterized by either the lowest or a low level of activity on all three board roles. The low level of activity in board roles corresponds to other board features and the organizational and environmental characteristics of hospitals in this cluster, which tended to be ranked on the lowest end of the distribution. Specifically, Inactive Boards were the smallest, had the lowest representation of physicians and insider members, and were least likely to have a process for evaluating the board's own performance. Hospitals in this cluster had the

second lowest likelihood of having a community advisory board to provide input to the board and management team. They also tended to be the smallest, most likely to have public ownership, and least likely to be a system/network member or a teaching institution. The areas where cluster 5 hospitals were located were most likely to be rural and poor and had the lowest levels of HMO penetration, hospital competition, and physician supply. Interestingly, those areas tended to have the greatest level of hospital bed resources.

DISCUSSION

Environmental competition, coupled with the increased demand for accountability and transparency to the communities they serve, has placed hospital governing boards in a critical position of balancing the competing needs of their primary stakeholders. A key question is how boards develop and oversee organizational policies that reflect multiple pressures emanating from competitive and cost pressures, on the one hand, and social imperatives, public expectations and community need, on the other. In addressing this question with a taxonomic approach, we found five clusters that reliably described the roles of hospital governing boards. The clusters also displayed systematic correlations with other board attributes and organizational and environmental conditions of hospitals.

The main contribution of this study is to provide a new description of hospital governing boards and to move discussion about governance roles beyond normative arguments to a more analytic assessment of the actual practice of governing boards and the conditions under which differences in governance roles occur. Similar to previous studies (e.g., Inglis, Alexander, and Weaver 1999; Murray, Bradshaw, and Wolpin 1992), our taxonomic results demonstrated that many hospital governing boards do not fulfill their expected roles as described in the prescriptive literature. For example, boards are expected to set the strategic direction for hospitals (e.g., Carver 1990), but this role was not uniformly emphasized in the five clusters. Similar patterns were found in the practice by boards to maintain and improve external relations and to oversee hospital and CEO performance, despite the fact that many writers agree that these are important board responsibilities (Pointer 1995; Taylor 2000; Goldschmid 1998).

One may be tempted to interpret this variation as an indication of governing boards operating on a developmental continuum, ranging from less to

more functional, and to equate their level of activity in the three roles to the performance of the board and the hospital. Boards in the Balanced Active cluster may be construed to be most developed and best performing because they are active in all three board roles. Our analysis may seem to support this expectation as governing boards in this cluster were shown to have the largest size and ranked the highest on many other (recommended) board activities including the use of a formal process to evaluate the board's own performance and having a community-based advisory committee to assist the board and the hospital in decision making. However, high levels of activity in multiple governance roles may not be synonymous with effectiveness. It may be a result of historical practices, formed in response to the cumulative pressures of competition and community demands in the markets where the hospitals operated. The observed patterns of board activities in other clusters may similarly be a product of the unique social, economic, and political environments of the hospitals or of how the board sets its priorities in meeting the needs of stakeholders. If so, the effectiveness of the board and its impact on hospital performance may, as contingency theorists would suggest (Donaldson 2001), be determined by the match between governing board roles and the organizational and environmental conditions of the hospitals.

These alternative explanations require further examination because external regulation and oversight, stakeholder demands for accountability, and market pressures are likely to place greater onus on hospital governing boards to produce results. In this regard, the taxonomy developed in this study would constitute a significant contribution if it leads to an understanding of whether a board's relative emphasis on its major roles meets the expectation of its stakeholders. For example, the survey questions that form the basis of the taxonomy could be given to the CEO and the board as an assessment tool and the composite results could be used to identify into which of the five clusters the board fits. The board could use this information to judge its current functions against its desired functions and develop plans to move it toward a cluster that would be more appropriate, given the external stresses facing the hospital.

Moreover, the taxonomy would facilitate systematic assessment of governance performance and serve as a framework for governing boards to identify areas for improvement and direction for change. The analysis would be more powerful if each cluster is related to areas of organizational performance. For instance, if better performance in financial and clinical outcomes was related to one of five clusters, boards could shift the emphasis of their governing roles to model the cluster that achieves the best results. Thus, the utility of the taxonomy is not only in describing the existing functions of a

board but also in providing a guide to governance practices that facilitate improved outcomes.

Future Research and Study Limitations

If the roles of hospital governing boards evolve in reaction to institutional and environmental conditions, a question could be raised as to whether the developed taxonomy is a stable representation or a temporary snapshot of groupings among hospital governing boards. The question is important because it would determine the utility of the taxonomy in describing the functional differences, and evaluating the effectiveness, of governing boards.

Our analysis showed that hospitals with boards active in evaluative, strategic, or all three roles were more likely than others to have system and network affiliations. The finding is interesting because one would expect that, once hospitals became part of a health system or network, many of the roles traditionally being carried out by hospital governing boards would be assumed by boards at the corporate level. Is the result a reflection of the tendency of health systems and networks to select members from among hospitals with more active governing boards? Is it because governance structures in many systems and networks are decentralized rather than centralized? Or is it because boards of member hospitals have a heightened sense of stewardship and obligation to be active in order to prevent “their” hospitals from being consumed by the parent system or network? Given the high levels of local board activity, how should the governance in systems and networks be structured in order to coordinate and reconcile the market and operational differences among member hospitals? These questions would need further investigations.

Several research limitations are worth noting. First, there may be bias due to “normatively acceptable” responses—i.e., the response of CEOs and board chairs may be influenced by how they wanted their board to function, rather than the actual roles of the board. However, such biases are somewhat mitigated by the objective nature of the survey items employed in the current study. Second, reliability and validity of the survey instrument are uncertain; to the best of our knowledge, no formal assessment exists. Third, representation of the sample may be limited because of a low response rate (27.1 percent) in the governance survey. However, the sample was diverse, displaying all the major environmental, organizational, and board attributes seen in the hospital population. This assures us that the resultant taxonomy developed should be exhaustive and applicable to the hospital population.

The literature suggests that hospital boards influence hospital performance through the exercise of three critical roles. In the strategic role, boards identify the organization's values, formulate policies, and shape strategic choices made by executives. In the control role, boards evaluate organizational and CEO performance. In the external relations role, boards enhance the organization's reputation, establish external contacts, and advise and counsel the CEO. Our study has demonstrated that these roles receive very different emphases in practice. How the departure from the normative ideal actually impacts hospital performance is the logical next step in this line of research.

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NOTES

1. The exceptions were for-profit ownership and system and network affiliation. For-profit and system-affiliated hospitals were underrepresented in the sample, while those with network membership were overrepresented.
2. The rescaling was done by dividing the indicator by the range of its value to eliminate the effect of differences in measurement unit. An alternative to rescaling is standardizing, which is problematic, because it reduces the possibility of uncovering the "true" cluster structure of observations (Milligan 1996).

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SUPPLEMENTARY MATERIAL

The following supplementary material for this article is available online:

Appendix SA1. Items Selected to Represent Board Roles.

Appendix SA2. Summary of Factor Analysis on Board Role Indicators and Correlations between Factor Scores of the Three Dimensions.

Appendix SA3. Sources and Definitions of Environmental and Hospital Variables.

Appendix SA4. Author Matrix.

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