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An exploratory study of alternative configurations of governing boards of substance abuse treatment centers

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Abstract

Boards of directors are the ultimate governing authorities for most organizations providing substance abuse treatment. A governing board may establish policies, monitor and improve operations, and represent a treatment organization to the public. This paper explores alternative configurations of governing boards in a national sample of 500 substance abuse treatment centers. The study proceeds from the premise that boards may be configured with varying levels of engagement in five aspects of internal management and external connections in treatment center operating environments. Based on interviews with treatment center administrative directors, four clusters emerge, describing boards that are: (1) active and balanced across internal and external domains; (2) active boundary spanners concentrating primarily on external relationships; (3) focused primarily on internal organizational management; and (4) relatively inactive. In post hoc analysis, we found that placement in these clusters is associated with treatment center attributes such as rate of growth and financial results, use of evidence based practices and provision of integrated care.

1.0 Introduction

The substance abuse treatment field is a relatively new sector of the health care system, but has grown in size and importance. In 2001, the most recent year for which data have been compiled, \$18 billion was spent for the delivery of treatment for substance use disorders (SUDs) (Substance Abuse and Mental Health Administration [SAMHSA], 2009). The proportion of patients in specialty treatment programs grew from 44 percent in 1991 to 50 percent in 2001, while the proportion treated by private physicians and general hospitals declined from 45 percent in 1991 to 35 percent in 2001 (SAMHSA, 2009). While still in the process of institutionalization, centers specializing in substance abuse treatment constitute an emerging economic sector in the health care field. However, much remains to be learned about the organization of SUDs treatment centers, and an important focus is organizational

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governance. Specifically, relevant attributes of governance in SUDs treatment centers may include the roles that the board of directors fulfill, the extent of management oversight exercised by the board, and the level of board involvement in such key areas as relationships with other care providers in the community, fund raising, and strategic planning (Huse, 2009; Weisner & McLellan, 2004; White, 2009).

Governance in health care organizations has been studied primarily within hospitals (Lee, Alexander, Wang, Margolin, & Combes, 2008). However, the organizations that provide services for SUDs and addiction may not be isomorphic with hospitals or other specialty care organizations. There are several distinctive features of SUDs treatment centers including:

- These centers provide services to only a small minority of those estimated to need services. While this is partially explained by a shortage of resources, it also reflects a resistance on the part of many potential clients to utilize SUDs treatment services. This feature is extremely rare across the rest of the health care system.
- Independent of health care reform, SUDs treatment delivery is supported in large part by public funding, and the role of public support has been steadily increasing. Public funding, including entitlement insurance administered through Medicare and Medicaid, accounted for 62 percent of SUDs treatment funding in 1991, rising to 76 percent in 2001. In 1991, combined private insurance, out-of-pocket payments, and other private funding accounted for 38 percent of SUDs treatment funding. This declined to 24 percent in 2001 (SAMHSA, 2009)
- While a high level of public funding might suggest a relatively uniform and stable funding environment, the vast majority of these funds are administered by state and local governments. At the state and local level, funding structures vary dramatically in their rule structures, levels of control, and stability, creating very turbulent and unpredictable environments within which treatment programs must operate.
- Although “modern medicine” is characterized by imperfect but substantial receptivity to innovations that improve the quality of treatment, the SUDs treatment system has been characterized by a resistance to innovation and to the adoption of apparent “evidence-based practices” (Lamb, Greenlick & McCarty, 1998). Although numerous evidence-based practices have been identified and promoted for use in SUDs treatment, implementation of these practices within treatment settings has been slow and uneven (D’Aunno, 2006; Weisner & McLellan, 2004). Funding agencies are increasingly adding pressure for practitioners to adopt a range of new practices that include both medications and psychosocial innovations, but with limited success.

In such a complex context, understanding organization and governance is substantially challenging. Looking only at the uniquenesses noted above, the engagement and involvement of governing boards of treatment programs may be unusually valuable. They may engage in boundary spanning activities with other service providers in a community, may enhance patient access to comprehensive services, improve funding streams, reduce environmental uncertainty, and enhance positive orientations toward innovations. Governing boards often include members representing a wide range of stakeholders, interests, and institutions within a community. Consequently, these boards may be able to provide leadership and collaborative linkages needed to integrate fragmented diagnosis and treatment into a system of care that improves the chances for client recovery. Strong leadership of health services organizations, including the roles played by boards of directors, may provide the opportunity to leverage creativity and improve behavioral health treatment delivery (Weisner & McLellan, 2004).

While all governing boards are supposed to build and sustain effective organizations, what they actually do varies because of differences in interpretations in how boards should discharge their duties (Huse, 2007 & 2009; Weil 2003; Orlikoff, 2005). A few studies have addressed alternative approaches for board involvement in governance of corporations, non-profit organizations, and hospitals (Hendry & Kiel, 2004; Huse, 2009; Lee, et al., 2008; Nadler, 2004) and these provide the starting point for our efforts to explore and analyze alternative board roles, activities, and areas of emphasis in the governance of SUDs treatment centers.

1.1 Alternative governing board roles

Governance of for-profit public corporations has been prominent in the mass media because of board members' acquiescence to deviant behaviors of management and executive leadership. There have also been high profile scandals relating to non-profit boards of directors including issues of self-serving family boards, bungled and expensive executive searches, financial malfeasance and excessive executive salaries (McDonagh, 2006). Suggested interventions for increased oversight of governance of both for-profit corporate boards and nonprofit boards have focused on structural changes, but often have ignored the processes and performance roles that lead to effective board governance (Kane, Clark & Rivenen, 2009). Unfortunately such proposals do not address board resources that are needed for transformative approaches to the social problems that are the target of organizations such as SUDs treatment centers. The boards of organizations that target such pressing community needs have the opportunity to create vital synergy in overcoming divisions of responsibilities between leadership and governance (Chait, Ryan & Taylor, 2005). Evidence suggests that boards and management staff can blend management, governance and leadership to cross the chasm to higher quality behavioral health (Kane, Clark & Rivenen, 2009).

Theoretical perspectives on organizational governance tend to characterize the relationships between boards and top management teams either as controlling (based in agency theory) or collaborative (based in stewardship theory). Either extreme creates its own problems, depending on the circumstances of the organization (Sundaramurthy & Lewis, 2003). For example, consistently collaborative relationships between boards and top managers may foster tendencies toward groupthink, limiting the extent to which the board can effectively fulfill their role and responsibilities to shareholders and other stakeholders. Such collaboration can mask controlling relationships. Alternately, a consistently overt controlling relationship between the board and top management team may foster distrust, limit the information available to the board, and reduce the effectiveness of both in making decisions critical to the wellbeing of the organization (Sundaramurthy & Lewis, 2003; Van den Berghe & Levrau, 2004). The separation of managerial decision making from oversight by a group such as a board is pertinent across all types of organizations, including even the least complex for profit, government or non-profit organizations (Fama & Jensen, 1983; Useem, 2010).

The control role of a governing board is rooted in agency theory where the primary role of the board is to curb the self-serving behaviors of agents (the top management team) that may work against the best interests of the owners (of whom the board should be representative) (Conger, Lawler & Finegold, 2001; Letza, et al., 2004; Schaffer, 2002; Sundaramurthy & Lewis, 2003). The control perspective also assumes goal conflict between the management team and owners. Following this perspective, the board is seen as the ultimate monitor, responsible for scrutiny of the actions of the highest managers in the firm, assuring that managers are directing the firm in directions that are consistent with established mission and strategic plans (Conger, Lawler, & Finegold, 2001; Schaffer, 2002; Taylor, 2000).

An alternative perspective on the board relationship is grounded in stewardship theory (Sundaramurthy & Lewis, 2003). This perspective suggests that stakeholder and management interests are consistent rather than in conflict, and that managers can be trusted to act to achieve agreed-upon organizational objectives. Since good stewardship may also enhance the reputation and professional standing of executives, this model suggests that boards should focus on advising management, enhancing organizational strategies, and building linkages that enhance the reputation and legitimacy of the organization (Forbes & Milliken, 1999). In this case, the board may work in collaboration with organizational managers who are knowledgeable about firm operations, strengths, and weaknesses.

Governing boards may be faced with an apparent paradox in that a) they are expected to exercise control over the organization protecting interests of all stakeholders while also b) needing to work closely with managers in order to provide valuable help in choosing strategy and making informed decisions, and creating external linkages required to implement strategy (Hillman and Dalziel, 2003; Sundaramurthy & Lewis, 2003). Boards are not generic across organizational forms, but have responsibility for organizational resources that impact society (Forbes & Milliken, 1999).

Health care organization governing boards can take on alternative roles including fiduciary responsibilities for effective use of assets, developing a vision and strategy for the organization's future, and/or engagement with organization staff to make sense of new information from the external environment (Kane, et al., 2009; Lee, et al., 2008; McDonagh, 2006; Orlikoff, 2005). Boards in health care organizations may also function as a policy guide in establishing and monitoring mission, linking with other health care providers or community resources, seeking additional resources for the hospital, focusing on relations with external constituencies, fundraising in the community, or overseeing internal management and performance of the organization (Lee, et al., 2008).

1.2 Studies of boards in health care organizations

Prior research most relevant to this study has focused on hospital boards. For example, McDonagh (2006) found that competencies of hospital boards in six areas (contextual, interpersonal, educational, analytical, political, and strategic) tended to be highly correlated, seeming to reinforce each other. These board competencies were positively related to hospital profitability. Kane and colleagues (2009) found that compared to lower performing hospitals, higher performing hospitals had boards that tended to take a strong role in advising and challenging hospital management and shared relevant and accurate information in a more timely fashion. In higher performing hospitals, management had engaged in formal education of board members about the hospital and its environment. This study also found that higher performing hospitals' board members felt far more comfortable with the degree of transparency, clarity, and inclusiveness within the decision-making process than did members of boards of lower performers (Kane, et al., 2009).

Lee and colleagues (2008) used cluster analysis to develop and evaluate a taxonomy of hospital governing boards, based on survey data provided by either hospital chief executives or board chairpersons about levels of board emphasis on mission and strategy, performance evaluation, and external relations. On the basis of the data about these three interrelated roles provided by these key informants, hospital boards grouped into five configurations (Lee et al., 2008):

- Strategic active boards, who are active in strategy development, but relatively inactive in performance evaluation and external relations;

- Active strategic and evaluative boards, who are involved in both strategy development and hospital performance evaluation and oversight, but relatively uninvolved in external relations;
- Active strategic and external boards, who are involved in both strategy and external relations, but relatively inactive in hospital performance evaluation and oversight;
- Balanced active boards, who are involved in strategy, external relations, and performance evaluation and oversight;
- Inactive boards, who are relatively uninvolved in all three areas.

Boards of SUDs treatment organizations may also take on a variety of roles including policy making, boundary spanning, raising funds, image management, focus on strategy, and internal management oversight. Our strategy in this study focused on applying the approach used previously by Lee and colleagues (2008) to explore alternative configurations of treatment center boards based on board involvement in activities that are important to the survival, successful operation, and growth of SUDs treatment centers. Compared to hospitals, SUDs treatment centers are still in the process of establishing legitimacy within both the institutions of health care and in the broader community, while remaining both resource-constrained relative to the level of demand for their services (McLellan, 2010) and resisted by many of their potential patients. In addition, while hospitals may meet a wide range of patient needs through internal resources, SUDs treatment centers must rely on effective linkages with other service providers in the community to meet patient needs beyond services directly specifically at SUDs (Fields & Roman, 2010; Weisner & McLellan, 2004; White, 2009). As a result, SUDs treatment center boards may focus on aspects of the environment external to the treatment organization, including elevating the status and legitimacy of the center within the community, building strong linkages with other service providers, and fund raising from community and public sources.

This study focuses on alternative configuration of roles that governance boards play in public and private SUDs treatment organizations. Specifically, we investigate three research questions: su

1. What are the discerning patterns in the roles of SUDs treatment center governing boards?
2. How are these role patterns associated with board and organizational characteristics?
3. How are the patterns of board roles associated with specific indicators of quality of treatment and sustainability of the treatment organization?

Following Lee and colleagues (2008), we adopt a configuration approach to describing and categorizing governing boards. We also used data collected from a central key informant for each organization, the administrative director. The configuration approach uses key areas of board involvement to identify groups of boards that with consistent patterns of executing their governance roles. The approach contrasts with viewing a governing board in terms of its structural attributes such as size and member demographics (Weiner & Alexander, 1993; Alexander & Lee, 2006; Alexander et al (2006). The idea is that different areas of activity fit together and support each other, with the emphasis on the complete configuration rather than on single independent elements.

Our approach, like that of Lee and colleagues (2008) is inductive. However, we were guided by the literature on the normative functions of boards (Carver, 1990; Chait, Holland & Taylor, 1991; Lee et. al, 2008) taking into account the particular context of SUDs treatment centers. We focused on particular activities needed to define and maintain the SUDs

treatment mission. These included enhancing the community image of the treatment center, external relations with other service providers, fundraising, and management of internal organizational practices.

2.0 Methods

2.1 Sample

Data for this study were collected in the National Treatment Center Study (NTCS), a family of ongoing surveys of SUDs treatment providers in the USA, conducted by the University of Georgia's Center for Research on Behavioral Health. The study was funded by the National Institute on Drug Abuse (NIDA) to measure change and innovation adoption in the American SUDs treatment system. The SUDs treatment centers used in the study were drawn from a two stage stratified random sample of geographic areas throughout the United States. Counties in the US were allocated to strata based on population, then sampled within strata. The total population of specialty addiction treatment centers within each sampled county was enumerated, using published Federal and state directories, yellow pages listings, employee assistance program referral directories, survey sampling call lists, and other available sources. The total universe of treatment programs in the US is approximately 13,000. This includes approximately 2,500 programs that limit their access to veterans, members of Indian tribes, convicted drinking drivers or prisoners, which were not included in the sampling frame used in this study. The universe also includes treatment programs with only a single employee or without a certifiable level of SUDs care, which were also excluded from the NTCS sample.

Eligible facilities were organizations offering treatment for alcohol and drug problems, providing a level of care at least equivalent to structured outpatient programming as defined by the American Society of Addiction Medicine (ASAM) patient placement criteria. Two definitional criteria differentiate the NTCS from other studies of the SUDs treatment system. First, the unit of analysis is the organization, rather than the service delivery unit. Thus, treatment centers offering multiple treatment modalities contribute data on all available treatment services. These data may be of particular importance when assessing comprehensiveness of services. Second, a treatment center's status as public or private is defined in terms of principal funding source rather than ownership. Public centers are those that receive more than 50% of their annual operating revenues from Federal, state, or local grant sources, including criminal justice system funds. Separate samples were drawn for the public and private sector components. The 403 private treatment centers in the study represent 87% of those that were sampled and eligible for the study; the 363 public centers reflect an 80% response rate. Data from both samples were pooled for this analysis and after removing cases with missing data yielded a total sample of 748 treatment centers. Using twelve organizational characteristics common to the responding and non-respondent centers, we estimated a logistic regression predicting whether or not a center responded (Goodman & Blum, 1996). In this regression none of the variables were significant predictors of the indicator, suggesting that the private centers in our sample did not differ significantly from non-respondents.

For this study, we limited analysis to those treatment centers that indicated they have their own governing board (N = 500) as opposed to being overseen by a governing board of a larger organization or not having either type of governing board. The former circumstance prevails when a SUDs treatment center is embedded in a larger organization, such as a hospital, but has its own administrative structure.

Of the 500, 67 (13.3%) were government funded and operated; 216 (43.2%) were publicly funded non-profit entities; 146 (29.3%) were non-profit entities deriving the majority of

their funds from private sources; and 71 (14.2%) were for-profit firms deriving the majority of their funds from private sources.

The data used to measure variables in this study were collected between late 2002 and early 2004 through two methods. The primary source was face-to-face interviews with the administrative director of each center. The second source of data consisted of questionnaires completed by the administrative director of each treatment center at a separate time. The response rate for the questionnaires was 66%. We compared the treatment centers for which we had both questionnaire and interviews with those providing only interviews and found difference on only two variables. We found that in our sample both questionnaires and interviews were more likely to be present from public non-profit treatment centers and less likely to be present from private non-profit centers. Thus, we used the questionnaire responses to help examine the convergent validity of the information provided in the interviews concerning levels of board involvement.

2.2 Measures

Indicators of Board Roles and Activities—During the interviews, the administrative director of each center was asked to describe the extent to which the governing board for the center engaged in five areas considered vital to SUDs treatment organizations. The five questions asked the director to describe the extent of engagement of the board in:

- fund-raising from community and corporate sources (mean=1.7, sd=1.8)
- promoting funding from public sources (mean=1.9, sd=1.7)
- creating linkages with other service provider organizations (mean=2.1, sd=1.6)
- elevating the status of the center in the eyes of the community (mean=3.4, sd=1.5)
- exercising influence in the management of the center (mean=2.8, sd=1.6)

The responses were captured using a Likert type response scale of 0 to 5 where the anchors were 0 = not at all to 5 = to a very great extent. Although these items were developed specifically for the study of board functions in SUDs treatment centers, they cover the same three areas used to describe hospital boards by Lee and colleagues (2008). The three major areas are the extent of board engagement in: 1) strategy setting, measured in our study by the items “creating linkages with other service provider organizations”; 2) performance oversight, measured in our study by the item “exercising influence in the management of the center”; and 3) external relations, measured in our study by the items “elevating the status of the center in the eyes of the community,” “promoting funding from public sources,” and “fund-raising from community and corporate sources”. These three major areas are also consistent with those found by other studies as essential components of activities of boards that build value, particularly for small and medium sized organizations (Huse, 2009). Compared to hospitals, SUDs treatment centers tend to be highly resource dependent organizations and thus our measures emphasize the board’s role in helping obtain resources.

The correlations among the 5 items ranged from .09 to .51, with a mean correlation of .32. While these measures capture critical areas of treatment board involvement, they cover only a portion of the full range of possible areas for board engagement or emphasis. However, these measures provided the basis for exploratory identification of alternative board configurations and examination of the extent to which board configurations may be related to other aspects of treatment center attributes and performance.

Indicators of board, center, and executive director attributes: We obtained information about other aspects of the boards as well as the organizational and program characteristics of

the treatment centers from data provided by the directors during the face-to-face interviews. Board attributes includes the number of board members, an indicator as to whether the board reviews the performance of the administrative director and can dismiss the director, and the extent to which the board contains a 'champion' of the center. Treatment center attributes includes indicators of center ownership (private or public) and predominate funding source (public or private); location within a hospital (yes/no) or rural (non-SMSA) area; center size (FTE staff); whether the center is accredited by JCAHO or CARF; whether the center employs a medical doctor; indicators of inpatient/residential treatment only outpatient treatment only, or a mix of outpatient and inpatient services; percent of counselors certified and having masters degrees; percent of clients with opiates as primary drug; and whether the program has recently expanded its programs or staff. Attributes of directors, center management priorities and strategic focus included the administrative director's education level, length of experience in the treatment field, and tenure with the center; extent to which the director was experiencing eight aspects of job burnout ($\alpha = .83$); extent to which the center is proactive (three item scale, $\alpha = .84$); extent to which the center is innovative (three item scale, $\alpha = .79$); extent to which the center values innovation and being achievement oriented; extent to which the center's strategy focuses on a high rate of growth; extent to which the centers strategy focuses on financial strength.

Measures of treatment center performance: The extent of comprehensive care was measured using an index developed as the average of dichotomous variables indicating whether a center provides the following core services: (1) use of the Addiction Severity Index (ASI) at intake/assessment; (2) monitoring of clients via random drug testing; (3) offering one or more 12-step groups; (4) use of any of five pharmacotherapies for alcohol, opiates, or co-occurring conditions (buprenorphine, naltrexone, methadone, disulfiram, and/or selective serotonin reuptake inhibitors [SSRIs]), (5) offering aftercare or continuing care; (6) childcare services; (7) transportation assistance, (8) offering dedicated treatment track for HIV/AIDS clients, and (9) integrated care for clients with dual diagnosis of both addiction and psychiatric conditions. In addition, the index included the mean of five additional variables describing on a range adjusted to a range of 0 to 1 the extent to which a center provides clients with linkages to primary medical care, employment, financial, family, and legal services (Fields & Roman, 2010).

The use of evidence-based treatment practices was measured with an index based on indicators of a) the use of any of three medications that had received FDA approval for the treatment of SUDs as of early 2004: disulfiram, tablet naltrexone, and buprenorphine, b) the use of SSRIs; c) use of behavioral interventions of manualized motivational enhancement therapy, contingency management (vouchers), dual-focus schema therapy, cognitive behavioral therapy, the Matrix Model, multi-systemic therapy, community reinforcement approach, and supportive-expressive psychotherapy (NIDA, 1999; Emmelkamp & Vedel, 2006; Fields & Roman, 2010).

A treatment center's financial performance was described by the net operating margin. This measure of performance is an indicator of the sustainability of quality of treatment in each center. Lower levels of net financial results over time will limit the extent to which a center has financial and management resources to devote to improving patient care. This measure was calculated as ratio of net income to revenues.

2.3 Procedures

The data that we used to measure alternative areas of board engagement were provided by the administrative director of each treatment center as key informants about their respective organization. Quantitative, large-scale, empirical investigations of organizations are often faced with a lack of archival data about constructs of interest, such as areas that the board

tends to emphasize (Kumar, Stern & Anderson, 1993). As a result, such studies often rely on data reported by key informants in the organization. In general, key informants are not selected to be representative of the members of a studied organization, but are chosen because they are knowledgeable about the areas being studied and able and willing to communicate about these areas (Kumar et al., 1993). Key informants are used to provide information at the aggregate or organizational unit of analysis by reporting on group or organizational properties rather than personal attitudes and behaviors (Seidler 1974; Phillips, 1981). For example, key informants have been used in research studies to describe innovation adoption, the impact of environmental influences on organizational decisions, marketing strategy, the quality of collaboration between headquarters and divisional subunits, the overall quality of products sold by a business, power exercised over company operations by major suppliers and customers, human recourse practices within organizations, and the use of quality management practices within SUDs treatment centers (Blum, Fields, & Goodman, 1994; Fields, Goodman, & Blum, 2005; Fields & Roman, 2010; Phillips, 1981).

In a recent study, Conway and Lance (2010) suggested that studies using single source data should provide (a) an argument for why self-reports are appropriate, (b) construct validity evidence, (c) lack of overlap in items for different constructs, and (d) evidence that authors took proactive design steps to mitigate threats of common method or single source effects. We address each of these points as follows:

- a. The treatment center administrative directors that we used as key informants were the most likely persons working in a treatment center to have knowledge of the areas of board engagement and activity. Indeed, 63% of these directors are annually reviewed by the treatment center board and 67% could be dismissed by the board. Hence these directors had sufficient reasons to be knowledgeable about board interests and areas of emphasis. A variety of scholars have explained that decisions not to use multiple informants from organizations were based on the absence of qualified alternative persons with sufficient knowledge (Kumar et al, 1993; Phillips, 1981). The treatment organizations in our sample averaged 44 employees. Thus it is likely the administrative director may have been the sole individual with these centers with adequate information, knowledge and competency to comment on board activities. The competency of key informants for organizational studies have considered such measures as the length of an informant's tenure with an organization and position to be have access to required information (Kumar, 1993; Phillips, 1981). In our sample, those administrative directors who are also board members might be expected to have better information about board activities. We compared the cluster membership patterns of centers with directors who are board members with those where the director is not a board member and found no significant differences ($\chi^2= 6.32$, d.f.= 3, n.s.) The median tenure for administrative directors in our sample was 4 years. Comparing cluster membership patterns of centers with directors with 4 or fewer years tenure to cluster membership patterns of centers with longer tenured directors also showed no significant differences ($\chi^2= 4.99$, d.f.= 3, n.s). Finally a comparison of cluster membership patterns of centers whose director is reviewed by the board with centers whose directors is not subject to board review showed no significant differences ($\chi^2= 4.79$, d.f.= 3, n.s). All this indicated that the data provided about board areas of emphasis are stable across key informants with different characteristics.
- b. In order to examine the construct validity of the variables used for clustering centers and identifying alternative board configurations, we examined the correlations of the five items obtained during the interviews with information describing board activities obtained through questionnaires. The questionnaires

were completed by the treatment center administrative directors at a separate time from the interviews and mailed to one of the authors. The questionnaires included 12 statements about board activities, which after factor analysis, grouped into three underlying correlated factors. Six items formed a scale ($\alpha = .84$) describing activities by which the board evaluates, monitors, and tries to improve the performance of the center. Three items formed a scale ($\alpha = .79$) describing the board's activities in external relations and three additional items formed a scale ($\alpha = .78$) describing board activities in strategic planning. These scales are similar to the three alternative areas of hospital board involvement used by Lee and colleagues (2008). The correlations of the five items we used for clustering treatment center boards (obtained from the interviews only) with these three scales for the subset of 330 responses (obtained from the questionnaires only) provide some evidence of convergent validity for the interview items. Specifically, the correlations indicated that:

- Board actions to raise funds in the community, to promote public funding, and to elevate status of the center were highly correlated with board emphasis on external matters ($r = .35, p < .001$; $r = .39, p < .001$ and $r = .76, p < .001$ respectively);
 - Board efforts to create linkages with other centers and to influence internal management of the center were highly correlated with board emphasis on evaluating center performance ($r = .37, p < .001$ and $r = .38, p < .001$ respectively);
 - Efforts to elevate the center's status in the community and to influence internal management were highly correlated with board emphasis on center strategy ($r = .32, p < .001$ and $r = .34, p < .001$ respectively).
- c. The items from the interview used to identify alternative board configurations were distinct from the questionnaire items described above and used to demonstrate convergent validity. The items in the interview also were distinct from the items used to measure alternative variables describing treatment center activities and performance compared across the alternative board configurations.
- d. By using both interviews and questionnaires administered at different points in time, we attempted to limit the effects of same source data collection. Unfortunately, at this time, we cannot determine the level of agreement of perceptions of board chair persons or board members about the degree of board emphasis with the perceptions of the center administrative directors. Indeed, some studies have suggested that asking persons to assume a role of a key informant may introduce measurement error because asking informants to make complex judgments about organizational characteristics may create substantial demands possibly increasing random measurement error (Kumar et al, 1993). Consequently, we believe it is most appropriate to view the board configurations we identified as alternatives that may be viable but that need additional verification using data provided by board members.

Following a process used previously by Lee and colleagues (2008) to describe the nature of governing boards of hospitals, the measures of the level of board engagement in five areas obtained from the administrative directors were used for cluster analysis of boards in order to identify classifications for types of treatment center boards and to assign each board to a classification. The procedure used involved: a) applying a two-step cluster procedure which combines hierarchical and k-means cluster analyses to develop clusters of boards; b) dividing the sample of 500 treatment centers into two randomly selected subsamples; c) replicating the cluster analysis with the k-means analysis procedure in the second sub-

sample using the cluster centroid values identified in the first sub-sample; d) assessing the agreement of the two cluster solutions in the second sub-sample using the level of Cohen's Kappa; and finally e) using the k-means procedure to classify all 500 treatment centers.

It is possible that the relative emphasis in a board's activities in a treatment center are associated with other board attributes, organizational attributes, and areas of management approach and strategic focus of a treatment center. Hence, following the approach used by Lee and colleagues (2008), we examined whether there were significant differences in these variables across the alternative types of boards. In addition, board configurations could either predict or reflect treatment service offerings and treatment center performance. In further analysis, we also examined differences in these variables across board configurations. We used delivery of comprehensive care, use of evidence based practices and net financial margin as indicators of treatment center performance (Fields & Roman, 2010). The comparisons of board attributes, organizational attributes, and areas of management approach and strategic focus of the treatment centers (table 2) and treatment service offerings and treatment center performance (table 3) were done once the board clusters were determined.

3.0 Results

The cluster analysis showed a four cluster solution fit the data best. Profiles of the four clusters are presented in Figure 1. Based on the levels of the role variables, we labeled the board types as a) active and balanced where all five board roles are larger or equal to their median levels; b) active boundary spanning, where the board's level of fund raising in the community is low, but creating linkages with other providers is relatively high; c) active internally focused, where only the board's efforts to influence internal management had a value larger than median level; and d) inactive, where all board role levels are substantially smaller than median levels.

We assessed the internal reliability of the cluster solution within a randomly selected subsample (Breckenridge, 2000) and found Kappa = .98 ($p < .001$). An ANOVA test of differences in the five board role variables across the four clusters is shown in Table 1. As this table shows there are highly significant differences in levels of board involvement in the five roles across the four clusters.

Pertinent attributes of treatment center boards, organizational characteristics, center directors, and center strategic focus, across the different board typology clusters, are shown in Table 2.

As the data in table 2 show, there were substantial differences across the clusters in board size and the types of treatment center ownership and funding. Consequently we controlled these two variables in further examining the treatment service offerings and performance of differences among centers with each type of board. The results of the ANCOVA examining program and performance differences among the board clusters, which are described below, are shown in Table 3.

The following section provides a description of each of the clusters and summarizes the results of the comparisons of organizational characteristics presented in Table 2. In these descriptions, we focus on patterns in the data describing the centers in different clusters shown in Table 2 and Table 3. As these tables show, we attempted to identify variables where statistically significant differences exist across the four clusters. We did not assess or report pair-wise comparisons between clusters because this is an exploratory study primarily focused on identifying a useful taxonomy of treatment center boards that might be further refined in the future. Hence, we focused on the extent to which the organizational

characteristics and treatment performance measures would show differences across the different clusters, as this added evidence of validity for the taxonomy of boards.

Cluster 1: Active balanced boards

In our data, this cluster contained 147 boards or 29.4% of the total sample. This cluster was named 'active balanced' because these boards tend to place emphasis on all five of the role areas. These boards tend to be larger in size than other boards, averaging more than 13 members. Active balanced boards are also more likely to contain a 'champion' for the treatment center. These boards are most often found in non-profit treatment centers relying on either public or private (fee) revenue. They are least likely to be found in private for-profit treatment centers and in centers located in rural areas. Centers with these boards tend to value being achievement oriented and to make use of evidence based treatment practices. Centers with active balanced boards also tend to place relatively high strategic importance on financial strength and growth, possibly reflecting board concerns about average operating margin levels that are lower than the median for all centers in our sample. Taking into account ownership and funding characteristics, centers with active balanced boards are more likely to offer outpatient treatment only, to have smaller percentages of clients with opiate as primary drug of abuse, and to have a somewhat larger percentage of counselors certified. Centers with active balanced boards tend to be somewhat more likely to make use of evidence-based treatment practices compared to centers with other types of boards.

Cluster 2: Active boundary spanning boards

In our data, this cluster contained 107 treatment centers or 21.4% of the sample. Boundary spanning activities include a range of externally directed actions, such as information-gathering function, and interpretation or communication of information from external contacts. Boundary spanning also involves connecting to important external actors, who may include other individuals or organizations groups with whom the treatment works interdependently or who can provide valued and needed resources (Marrone, Tesluk, & Carson, 2007). These activities may enable the organization team to set expectations, request needed resources, and coordinate service wrap-around service delivery as well as buffer outside pressures on treatment centers. These boards tend to be relatively small, averaging only 9 members but are likely to contain a 'champion' or active advocate for the center. The majority of centers with active boundary spanning boards are government operated or non-profits relying on public funding. However a large percentage of the centers with these boards are privately owned for-profit entities. Directors of centers with this type of governing boards tend to be experiencing fewer symptoms of burnout. These treatment centers also tend to place relatively higher value on being achievement oriented.

Centers with active boundary spanning boards tend to be least likely to have a medical doctor on staff or contract and are more likely to offer both inpatient and outpatient treatment services. These boards are also found in centers which tend to have larger percentage of clients presenting with opiates as primary drug of abuse. Centers with these boards were more likely than others to have expanded programs and staff in the past year. These centers are most likely to offer comprehensive care and most likely to make use of evidence based treatment practices compared to centers with other types of boards. Centers with active boundary spanning boards also had the lowest average operating margin.

Cluster 3: Active internally focused boards

This cluster contained 119 treatment centers or 23.8% of our sample. This cluster is described as 'internally active' because these boards emphasize involvement with internal management of the treatment center to a much greater degree than any of the other alternative board roles we measured, as well as lower involvement in boundary spanning

roles. The boards in these centers also tend to be relatively small, averaging just over 9 members. These boards are more likely than others to review and evaluate the director's performance. Centers with internally focused boards are least likely to be government owned and are more likely to be for-profit treatment centers that rely primarily on private sources of revenue. These centers also tend to be somewhat larger than the centers in other board clusters. Centers with active internally focused boards are least likely to be hospital based, and on average, tend to place less value on innovation and on being achievement oriented.

Centers with these boards also tend to place less strategic emphasis on growth. Centers with internally focused boards tend to have smaller percentages of counselors who are certified or who have completed a master's degree. These centers also tend to offer only outpatient treatment, and on average, provide lower levels of comprehensive care and use fewer evidence-based treatment practices, although their operating margin is slightly above the median for the sample.

Cluster 4: Inactive boards

This cluster contained 127 centers or 25.4% of our sample. This cluster is described as 'inactive' because they were described as having lower levels of involvement than the boards in the other clusters in all five areas that we measured. These boards tend to have slightly more members than the sample average. These boards are least likely to review director performance, be able to dismiss the center director, or provide an active advocate or champion for the center. These boards are most likely to be located in publicly funded non-profit centers. Treatment centers with inactive boards have fewer staff and are least likely to be accredited. These centers are less likely to have a growth strategy, but are somewhat more likely to value being achievement oriented.

These centers are least likely to have a medical doctor available and tend to have smaller percentages of counselors with masters degrees. Centers with inactive boards also are somewhat less likely to have expanded programs or staff in the past year and tend to offer less comprehensive care than average in our sample. Interestingly, centers with inactive boards have the largest average operating margin compared to other board clusters.

4.0 Discussion

SUDs treatment organizations, like other health service organizations in the US, are facing competing pressures in maintaining financial stability while delivering quality services to clients. Governing boards of these organizations have been virtually ignored in the research literature, but represent important opportunities for leveraging internal and external resources to realize value for the organization and its constituents (Huse, 2007). There is also no doubt of the potential role of boards in affecting organizational performance.

In this study, we used a limited set of measures and perceptual data provided by key informants from each of 500 SUDs treatment center organizations to explore the nature of governing board involvement. We found four distinct configurations of boards that take on significantly different roles in governing SUDs treatment centers. Second, we investigated the extent to which board and treatment center characteristics differ among the board configurations. Not only did the board role variables differ significantly between board configurations, but also some organizational and program attributes differed between the groups of centers governed by the varying types of boards. Third, we investigated the extent to which treatment centers corresponding to each board configuration provide higher quality treatment and produce sustainable financial results.

The classification in which a board was placed was linked with the extent to which centers provide comprehensive care, use evidence-based practices in substance treatment, and obtain positive financial results. While causality cannot be inferred from our results, treatment centers with active balanced boards and active boundary spanning boards provide higher levels of comprehensive care and are more likely to use evidence-based practices. Paradoxically, the centers with these types of boards have less favorable financial results than centers with more internally focused or inactive boards. A possible interpretation is that these centers have smaller margins because they are expending more resources to implement evidence based practices and/or offering more comprehensive services. That is, while some evidence based practices may involve greater expense (such as a motivational incentives program) and comprehensive care may require greater effort to obtain and coordinate services across, reimbursements may be limited to a fixed level of costs per 'patient slot'.

There is potentially a case that the roles assumed by governing boards reflect areas of weaknesses in the treatment centers. For example, centers with active boundary spanning boards have the lowest operating margins. Therefore the board focus on these functions may reflect the centers' dual needs for access to external resources for survival. The linkages with other organizations may be needed to improving patient treatment quality by providing wrap around services for clients. Similarly, centers with internally focused boards are laggards in offering comprehensive care and evidence based practices. These centers also have low percentage of counselors who are certified. It is possible that the boards have taken on a larger influence on internal management because this area needs attention and development. This perspective would be consistent with Huse's (2009) theory of the value creating board, as these boards are taking on roles needed to increase the value provided by the treatment centers. Centers with relatively inactive boards may have adequate financial performance in part because they are keeping costs low by spending less on staffing quality and limiting the comprehensiveness of care offered. In essence, these boards may be relatively inactive because the centers are not presenting specific problems, such as financial losses, that threaten organizational survival.

A taxonomy of boards such as the alternative configurations uncovered in this analysis could help not only in describing the variation in current practices, but also in increasing understanding of how boards can be more effective in meeting expectations of various stakeholders. The identification of configurations of board roles that are associated with better quality outcomes would contribute to better organizational performance and effectiveness of treatment outcomes. This would be especially valuable if the implications of alternative governing board roles are studied over time. However, the connection between board roles and SUDs treatment center performance may be difficult to establish due to the complex nature of board-director interactions and because the effects of board efforts may be felt by the organization only intermittently, as in instances of crisis or conflict. As Kane and colleagues (2009) have noted, the nature of the CEO's role as a member of the board and interaction with the board may be critical to board effectiveness.

The results highlight the need for further exploration of the meaning of variation in financial performance in these types of organizations. Given their missions and goals, it is possible that what might appear as poorer financial performance from a perspective highly biased by a profit-oriented orientation does in fact describe an organization stretching its resources to the limits in order to maximize service delivery, or to introduce new evidence-based practices that will enhance treatment outcomes among subgroups that have not been responsive to traditional practices.

Strengths, weaknesses, and future research

This study was strengthened by its use of data collected from a large representative sample of SUDs treatment centers operating across the United States. The data used in this study benefitted from the multi-year nature of the NTCS, as the information collected in the 2002–2004 period used in this study was verified for consistency prior to inclusion in the database with earlier information collected from each of the private-funded centers. We were also able to verify internal consistency of the data used for identifying board clusters by using information from each center obtained via separate data collection methods (Interviews and questionnaires completed at separate points in time).

A weakness of the study is the limited amount of information provided about the areas of board engagement. We were limited to five indicators of alternative areas of board emphasis collected in the administrative director interviews. While the areas of board emphasis we studied are very pertinent and important for treatment center performance and help characterize the nature and effects of board activities in the governance and enhancement of SUDs treatment centers, these measures did not cover some aspects of governing board activities that could provide a more complete view of alternative configurations of treatment center boards. In addition, other studies have suggested that the cooperativeness, transparency, and openness of a board's internal processes interact with roles in determining the effects of the board on organizational performance (Kane, et al., 2009). We did not have information about the process quality of the boards we studied. We also did not have information regarding the competencies of the boards in each of the areas in which the boards were active. In addition, since the data are cross-sectional, causal direction cannot be established and we do not have information in these data about the stability of the board emphases over time.

As suggested by earlier studies of hospital boards (McDonagh, 2006) the effectiveness and impact of a board may depend on how well the efforts across all areas of board emphasis are inter-connected. Future research should strive to untangle the different factors associated with performance, while explicitly including governance board roles in the equation. In addition, our data about treatment center performance outcomes are only suggestive. Because the relationship between board effectiveness and treatment center performance and outcomes are important, future research assessing value creating board functions should also examine the interaction of board activities with the competencies of treatment center management. Synergy of board and staff roles may create the leadership, management and financing approaches to closing the quality gap in alcohol and drug treatment.

From a practical perspective, the configuration approach explored in this study may also prove useful in helping treatment center board members better understand alternative governance roles and the possible relationship of these roles with center performance. This may in turn help board members to develop and exercise collective competencies and internal processes that help treatment center clinical and management staff improve financial and treatment performance. In a similar study of the taxonomy of boards of over 1300 hospitals, Lee and colleagues (2008) found evidence for 5 clusters. Their study used data about board involvement in hospital strategy/mission, evaluation and oversight of hospital performance, and external relationships. Two of the five hospital board clusters were internally focused, either concentrating on working with management staff on strategic issues or evaluation of hospital performance. The other clusters were active and balanced across the three areas, externally focused, and relatively inactive. It is not appropriate to attempt a direct comparison because hospitals operate in a different environment, are larger organizations, and are less reliant on public funding than SUDs treatment centers. However, it is interesting that among the hospital boards, only 6% fell into the 'inactive' cluster compared to 25% of the boards in our sample of treatment centers. Conversely, 42% of the

hospital boards were in the active balanced cluster compared to 29% for board in our sample. To the extent that the level of board involvement across areas may improve treatment center performance, as suggested by some of the information in Table 3, there may be opportunities for gains in treatment quality by increasing intensity of SUDs center board actions. It is possible that a more fully specified model of board configurations, organizational and environmental characteristics might better uncover the factors that increase both board effectiveness and contribute to reducing the quality chasm in SUDs treatment.

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References

- Alexander JA, Lee SYD. Does governance matter? Board configuration and performance in not-for-profit hospitals. *Milbank Quarterly*. 2006; 84(4):733–58. [PubMed: 17096640]
- Alexander JA, Lee SYD, Bazzoli GJ. Governance forms in health systems and health networks. *Health Care Management Review*. 2003; 28 (3):228–42. [PubMed: 12940345]
- Breckenridge JN. Validating cluster analysis: Consistent replication and symmetry. *Multivariate Behavioral Research*. 2000; 35(2):261–285.
- Chait, RP.; Ryan, WP.; Taylor, BE. *Governance as leadership: Reframing the work of non-profit boards*. Hoboken: John Wiley & Sons; 2005.
- Conger, J.; Lawler, E.; Finegold, D. *Corporate boards: Strategies for adding value at the top*. San Francisco: Jossey-Bass; 2001.
- Conway JM, Lance CE. What reviewers should expect from authors regarding common method bias in organizational research. *Journal of Business Psychology*. 2010; 25:325–334.10.1007/s10869-010-9181-6
- Daily CM, Dalton DR, Cannella AA. Corporate governance: decades of dialogue and data. *Academy of Management Review*. 2003; 28:371–382.
- Drake RE, O'Neal EL, Wallach MA. A systematic review of psychosocial research on psychosocial interventions for people with co-occurring severe mental and substance use disorders. *Journal of Substance Abuse Treatment*. 2008; 34:123–138. [PubMed: 17574803]
- Ducharme LJ, Mello H, Roman P, Knudsen H, Johnson JA. Service delivery in substance abuse treatment: Reexamining comprehensive care. *Journal of Behavioral Health Services & Research*. 2007; 34 (2):121–136. [PubMed: 17390225]
- Etheridge RM, Hubbard R. Conceptualizing and assessing treatment structure and process in community-based drug dependency treatment programs. *Substance Use & Misuse*. 2000; 35:1757–1795. [PubMed: 11138707]
- Fields D, Roman P. Total quality management and performance in substance abuse treatment centers. *Health Services Research*. 2010 in press.
- Forbes D, Millikin F. Cognition and corporate governance: Understanding boards of directors as strategic decision-making groups. *Academy of Management Review*. 1999; 24(3):489–505.
- Hendry K, Kiel GC. The role of the board in firm strategy: Integrating agency and organizational perspectives. *Corporate Governance: An International Review*. 2004; 12(4):500–520.
- Hillman AJ, Dalziel T. Boards of directors and firm performance: Integrating agency and resource dependence perspectives. *Academy of Management Review*. 2003; 28:383–396.
- Huse, M. *Boards, governance and value creation: The human side of corporate governance*. Cambridge: Cambridge University Press; 2007.
- Huse, M. *The value creating board*. New York: Routledge; 2009.

- Institute of Medicine. Medicare: A strategy for quality assurance. Vol. I. Washington DC: National Academy Press; 1990.
- Institute of Medicine. Crossing the quality chasm: A new health system for the 21st century. Washington DC: National Academy Press; 2001.
- Institute of Medicine. Adaptation to mental health and addictive disorders: improving the quality of health care for mental and substance-use conditions. Washington: National Academy Press; 2005.
- Institute of Medicine. Improving the quality of health care for mental health and substance-use conditions. Washington: National Academy Press; 2006.
- Kane NM, Clark JR, Rivenson HL. The internal processes and behavioral dynamics of hospital boards: An exploration of differences between high- and low-performing hospitals. *Health Care Management Review*. 2009; 34(1):80–91. [PubMed: 19104266]
- Kerber K, Buono AF. Rethinking organizational change: Reframing the challenge of change management. *Organizational Development Journal*. 2005; 23(3):23–38.
- Knight DK, Broome KM, Simpson DD, Flynn PM. Program structure and counselor–client contact in outpatient substance abuse treatment. *Health Services Research*. 2008; 43 (2):616–634. [PubMed: 18370970]
- Knudsen H, Roman PM. Modeling the use of innovations in private treatment organizations: the role of absorptive capacity. *Journal of Substance Abuse Treatment*. 2004; 26:353–361. [PubMed: 14698799]
- Kumar N, Stern L, Anderson JC. Conducting interorganizational research using key informants. *Academy of Management Journal*. 1993; 36(6):1633–1651.
- Lamb, S.; Greenlick, M.; McCarty, D. Bridging the gap between practice and research: forging partnerships with community-based drug and alcohol treatment. Washington: National Academy Press; 1998.
- Lee SD, Alexander JA, Wang V, Margolin F, Combes JR. An empirical taxonomy of hospital governing board roles. *Health Services Research*. 2008; 43(4):1223–1243.10.1111/j.1475–6773.2008.00835.x [PubMed: 18355260]
- Letza S, Sun X, Kirkbride J. Shareholding vs. stakeholding: A critical review of corporate governance. *Corporate Governance*. 2004; 12:242–262.
- Mandara J. The typological approach in child and family psychology: A review of theory, methods, and research. *Clinical Child and Family Psychology Review*. 2003; 6(2):129–146. [PubMed: 12836581]
- Marrone J, Tesluk P, Carson J. A multilevel investigation of antecedents and consequences of team member boundary-spanning behavior. *Academy of Management Journal*. 2007; 50 (6):1423–1439.
- McLellan AT. Congratulations on the 10-year anniversary of the National Drug Abuse Treatment Clinical Network - Now what's new for the coming decade? *Journal of Substance Abuse treatment*. 2010; 38(4, Supplement 1):S1–S3. [PubMed: 20307790]
- McDonagh K. Hospital governing boards: A study of their effectiveness in relations to organizational performance. *Journal of Healthcare Management*. 2006; 51 (6):377–389. [PubMed: 17184002]
- Nadler DA. What's the board's role in strategy development? Engaging the board corporate strategy. *Strategy and Leadership*. 2004; 32:25–34.
- National Institute on Drug Abuse. NIH Publication 99–4180. Washington: National Institutes of Health; 1999. Principles of drug addiction treatment.
- Orlikoff JE. Building better boards in the new era of accountability. *Front*. 2005; 21 (3):3–12.
- Phillips LW. Assessing measurement error in key informant reports: a methodological note on organizational analysis in marketing. *Journal of Marketing Research*. 1981; 18 (4):395–415.
- Price, RH. What we know and what we actually do: best practices and their prevalence in substance abuse treatment. In: Egertson, JA.; Fox, DM.; Leshner, AI., editors. *Treating Drug Abusers Effectively*. Oxford: Blackwell Publishers, Inc and the Milbank Memorial Fund; 1997.
- Rosenberg L. Quality as the cornerstone of behavioral health: Four critical issues. *The Journal of Behavioral Health Services & Research*. 2007; 34(4):353–356.
- Schaffer BS. Board assessments of managerial performance: An analysis of attribution Processes. *Journal of Managerial Psychology*. 2002; 17:95–115.

- Seidler J. On using informants: A technique for collecting quantitative data and controlling for measurement error in organization analysis. *American Sociological Review*. 1974; 39:816–31.
- Substance Abuse and Mental Health Administration. National expenditures for mental health services and substance abuse treatment 1991–2001. Rockville, MD: Office of Applied Studies, SAMHSA; 2009.
- Sundaramurthy C, Lewis M. Control and collaboration: Paradoxes of governance. *Academy of Management Review*. 2003; 28(3):397–415.
- Taylor DW. Facts, myths and monsters: Understanding the principles of good governance. *The International Journal of Public Sector Management*. 2000; 13:108–124.
- Useem, M. Decision making as leadership. In: Nohira, N.; Khurana, R., editors. *Handbook of Leadership Theory and Practice*. Cambridge: Harvard Business Press; 2010.
- Van den Berghe LAA, Levrau A. Evaluating boards of directors: What constitutes a good board? *Corporate Governance: An International Review*. 2004; 12(4):461–478.
- Weil TP. Governance in a period of strategic change in U.S. healthcare. *International Journal of Health Planning and Management*. 2003; 18:247–65. [PubMed: 12968801]
- Weisner, C.; McLellan, TA. Report of the Blue Ribbon Task Force on the National Institute on Drug Abuse (NIDA) Health Services Research. Washington, DC: National Institutes of Health; 2004.
- Westphal J. Collaboration in the boardroom: Behavioral and performance consequences of CEO-board social ties. *Academy of Management Journal*. 1999; 42(1):7–24.
- White WL. The mobilization of community resources to support long-term addiction recovery. *Journal of Substance Abuse Treatment*. 2009; 36:146–158. [PubMed: 19161895]

FIGURE 1.
Profile of governing board clusters for substance abuse treatment centers.

TABLE 1

Validation of board clusters

ANOVA Tests for Inter-cluster Differences

Board Area of activity	Mean square-between clusters	Mean square-within clusters	F value
Extent board raises funds in community	362.9	.99	365.46**
Extent board promotes public funding	201.9	1.59	127.34**
Extent board creates linkages with other providers	189.3	1.46	129.57**
Extent board elevates status in community	140.6	1.40	100.25**
Extent board involved in center management	213.8	1.30	164.88**

TABLE 2
Board, organizational, director and treatment program attributes for each type of governing board

	Active balanced (n = 147)	Active boundary spanning (n= 107)	Active Internal (n = 119)	Inactive (n = 127)	Total sample (n=500)	F value
<u>Board attributes</u>						
No. Board members	13.8	9.0	9.1	11.6	11.1	13.40**
Review Admin. Director (%)	60.3	64.8	71.3	56.7	62.9	2.06#
Dismiss Admin. Director (%)	69.5	69.5	69.6	56.6	66.3	2.31*
Board contains Ctr. champion (%)	83.0	82.9	72.2	70.5	77.3	3.16*
<u>Organizational Attributes</u>						
Government operated (%)	10.3	21.2	9.6	13.7	13.3	2.71*
Public funded non-profit (%)	44.8	35.6	36.5	54.0	43.2	3.60*
Private funded non-profit (%)	41.4	18.3	30.4	23.4	29.3	6.35**
Private funded for-profit (%)	3.5	25.0	23.5	8.9	14.2	12.41**
Size (FTEs)	43.8	45.8	47.2	32.2	43.8	1.59
Hospital-based (%)	15.9	17.3	11.3	17.7	15.6	.76
Rural location (%)	7.0	12.0	12.0	12.0	11.0	.71
Accredited by JCAHO or CARE (%)	44.9	46.7	42.0	33.9	41.8	1.65
<u>Director Attributes</u>						
Director strain/burnout (1–7 scale)	2.4	2.1	2.5	2.5	2.4	1.84
Director s experience in field (years)	18.4	20.2	19.0	17.9	18.8	.97
Director s tenure at center (years)	8.8	9.4	9.0	9.1	9.0	.10
<u>Management Tendencies and Values^A</u>						
Proactive (1–7scale)	4.0	3.7	3.7	3.8	3.8	1.07
Innovative (1–7 scale)	4.8	4.7	4.4	4.6	4.6	1.04
Values innovation (1–7 range)	6.8	6.7	6.3	6.5	6.5	1.23
Value being achievement oriented	6.9	7.2	6.2	6.9	6.6	5.36**
<u>Strategic Focus^A</u>						
High rate of growth (range 1–7)	4.9	4.4	4.2	4.3	4.5	3.03*
Financial strength	5.1	4.8	4.6	4.6	4.8	1.99#

p<.10;
* p<.05;
** p<.01

^AData for these variables come from questionnaires completed by administrative directors (N = 312).

TABLE 3

Treatment program and performance measures for each type of governing board, controlling for treatment center ownership/funding category and governing board size.

	Active Balanced (n = 147)	Active boundary spanning (n= 107)	Active Internal (n = 119)	Inactive (n = 127)	Total sample (n=500)	F value
<u>Program Attributes</u>						
No medical doctor (%)	30.7	20.2	28.8	32.8	28.5	2.23 [#]
Inpatient treatment only (%)	17.9	15.4	18.0	15.1	16.7	.32
Outpatient treatment only (%)	47.1	39.4	49.6	42.9	44.9	1.26
Both inpatient & outpatient (%)	35.0	45.2	32.4	42.0	38.4	2.52 [*]
Primary opiate clients (%)	13.1	20.6	15.5	14.6	15.6	3.23 [*]
Counselors certified (%)	62.3	55.5	55.1	59.9	58.6	1.78
Counselors with masters degree (%)	43.7	42.1	38.7	38.7	40.9	.66
Expanded programs in last year (%)	52.9	58.7	47.4	47.1	51.5	1.16
Expanded staff in last year (%)	52.9	61.1	47.4	45.6	51.6	1.85
<u>Program performance measures</u>						
Extent comprehensive care (range 0–1)	.50	.52	.49	.48	.50	2.17 [#]
Evidence-based treatment (range 0–12)	3.59	4.02	3.17	3.49	3.56	3.13 [*]
Operating margin (% revenue)	-.04	-.10	.02	.06	-.01	2.37 [#]

[#] p<.10;

^{*} p<.05;

^{**} p<.01;