Factors affecting the perceived effectiveness of senior leadership teams: A survey of CEOs of health system-affiliated hospitals

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Prepared for the American College of Healthcare Executives by

Andrew N. Garman, PsyD, MS
Professor, Health Systems Management, Rush University

Kristoffer Hammarstrom, BA
Research Assistant, Health Systems Management, Rush University

Introduction

In recent years, health systems in the United States have been undergoing a period of substantial consolidation (American Hospital Association, 2015). Mergers of previously freestanding hospitals into larger systems can provide much-needed financial stability as well as operational efficiency (Center for Healthcare Economics and Policy, 2013); however they can also raise concerns about whether merged hospital can continue to be as sensitive to local patient and community needs (Cutler & Morton, 2013).

Governance structures and senior leadership teams (SLTs) have important roles in successfully balancing local community needs with the priorities of the broader health system. For example, recent reviews have found factors such as the availability of well-involved and skilled board members as well as setting clear and measurable goals for improvement to be significantly associated with care quality and safety (Jiang, Lockee & Fraser, 2012; Millar, Mannion, Freeman, & Davies, 2013). However most studies of governance and SLTs have focused on practices, with much less attention being paid to how these teams are structured, including how governing roles and responsibilities are divided between health systems and their component hospitals.

To address this knowledge gap, the American College of Healthcare Executives collaborated with researchers at Rush University to develop and implement a national survey to examine these components of organizational leadership, as well as their perceived effects on organizational effectiveness. Using a survey of ACHE-member CEOs leading system-affiliated hospitals, we sought to address four research questions in particular:

1. How does health system size affect perceived SLT effectiveness?
2. How does local decision-making authority affect perceived effectiveness?
3. How does SLT composition affect perceived effectiveness?
4. How does SLT meeting structure (frequency, duration) affect perceived effectiveness?

Methods

Survey Design

The survey used in this study was part of a larger project ACHE conducted to understand the nature of senior leadership teams (SLTs) within hospitals affiliated with health systems.(Athey & Garman, 2016). Some survey items were adapted from a 2014 study of SLTs working within freestanding hospitals (Athey & Garman, 2014); others, particularly those focused on governance practices, were developed specifically for this survey. Once developed, the survey was pilot-tested with the help of eight hospitals CEOs who were each individually interviewed for feedback on clarity and relevance. The survey was then edited based on this feedback into final format. Wording for the effectiveness dimensions is provided as Appendix A; a copy of the complete survey is available by request from this report's lead author.

Survey Sample and Distribution

Our survey sample was identified by the Research staff of the American College of Healthcare Executives, who queried their member database to identify all members who were currently listed as CEOs of hospitals within health systems. A total of 1326 individuals with deliverable addresses were identified. Surveys were distributed to these members via two rounds of post mail during October-December of 2015. Completed surveys were mailed back to ACHE, who oversaw keypunching of responses into an Excel file according to a prespecified coding protocol. Individual responses that did not readily fit into pre-existing coding categories were discussed among ACHE and Rush staff until consensus on coding was reached. Survey data provided to Rush were anonymized as to respondent as well as employer.

Results

A total of 398 usable surveys were completed and returned, representing a response rate of 30%. Of the CEOs responding, 89% indicated they had a master's degree in either health administration or another administrative area, 14% had a nursing background, 3% had an MD or DO degree, 9% had an "Other" clinical degree and 2% had a doctorate in health administration or another administrative area (numbers add up to more than 100% because respondents could indicate more than one area for their educational background).

In terms of setting, 70% were located in metropolitan areas, 16% were located in micropolitan areas, and 13% were located in rural areas. Twenty three percent of the hospitals were in 2-5 hospital systems; 20% were in 6-10 hospital systems; 16% were in 11-20 hospital systems, and 41% were in 21+ hospital systems. In terms of annual expenditures, 24.4% of systems had expenditures of $1B or smaller; 22.1% were $1-2B, 25.4% were $2-5B, and 28.1% were $5B+.

Health system size and perceived effectiveness

Associations between perceived effectiveness and health system size, as measured by number of hospitals, are shown in Table 1. Larger health systems were significantly associated with lower

perceived effectiveness of SLTs on three dimensions: *Communicating clearly with the community* (r (N=395) = -.11, p < .01)*; Maintaining trust of the medical staff* (r (N=395) = -.15, p < .01)*;* and *Maintaining trust of other employees* (r (N=395) = -.17, p < .01).

Table 1. Differences in perceived effectiveness according to organizational setting

	Average Perceived Effectiveness			
	2-5 hospitals (N=91)	6-10 hospitals (N=79)	10-20 hospitals (N=64)	21+ hospitals (N=161)
Coordinating/aligning local operations with system-level operations?	3.9	3.9	4.0	3.8
Prioritizing short- and long-term capital needs, and representing those needs to system leadership?	4.1	4.1	4.0	3.9
Representing your community's needs to system leadership?	3.9	4.2	4.0	3.9
Communicating clearly and consistently with the community?	3.9	4.0	3.6	3.7
Maintaining the confidence and trust of the board?	4.5	4.5	4.4	4.3
Maintaining the confidence and trust of the medical staff?	4.2	4.1	4.0	3.9
Maintaining the confidence and trust of other employees?	4.1	4.1	3.9	3.8
Developing leaders within your organization?	3.4	3.6	3.4	3.4
Maintaining succession plans for senior leaders in your hospital?	3.1	3.3	2.9	2.9
Ensuring your senior leadership team keeps their skill sets current related to healthcare reform?	3.6	3.5	3.4	3.4
Engaging in productive disagreements?	3.8	3.9	4.0	3.8
Reaching consensus about important decisions?	4.3	4.3	4.3	4.1

Rated on a 5-point scale (1 = Not at all effective ←→ 5 = Very effective)

Local decision-making authority and perceived effectiveness

Two questions on the survey related to level of local decision-making authority. The first question asked how decisions are made about the structure and composition of the SLT, and responses could range from 1 ("Complete local authority – all structuring decisions are under my control") to 5 ("Complete system authority – all decisions are made at the system level, with little or no input from me"). Associations between control over team structuring and perceived effectiveness were assessed via Kendall's Tau correlations. Most associations were not statistically significant, however one significant and negative association was found between the level of CEO control and perceived effectiveness in *Maintaining the confidence and trust of the board* ($r(N = 389) = -.15$, $p = .001$). In other words, greater levels of local CEO control were associated with lower levels of perceived effectiveness in maintaining trust of the board.

SLT composition and perceived effectiveness

Potential associations between SLT composition and perceived effectiveness were assessed through a series of inferential statistics. First, the relationship between SLT size (total number of executives on the SLT) was tested via Pearson correlation. This analysis indicated that all correlations were positive in direction (i.e. larger SLTs were associated with greater perceived effectiveness), all effect sizes were relatively small, and the only association at a level of statistical significance ($p = .05$) was for *Maintaining succession plans for senior leaders in your hospital*.

We next assessed whether there were any relationships between perceived effectiveness and whether executives were shared between the hospital and either other hospitals or other components within the health system. The presence of shared executives was significantly and positively associated with five dimensions of perceived effectiveness: *Coordinating/aligning local operations with system-level operations* ($F(1,386) = 4.3$, $p = .04$); *Representing your community's needs to system leadership* ($F(1,386) = 4.4$, $p = .04$); *Maintaining the confidence and trust of the medical staff* ($F1,393) = 4.1$, $p = .008$); *Maintaining the confidence and trust of other employees* ($F(1,393) = 2.2$, $p = .05$); and *Developing leaders within your organization* ($F(1,393) = 5.0$, $p = .03$).

We then assessed potential associations between SLT diversity and perceived effectiveness. First, the ratio of women to total non-CEO SLT members was correlated with perceived effectiveness. A small but still statistically significant negative correlation was found between this ratio and seven of the 12 dimensions of perceived effectiveness: *Coordinating/aligning operations* ($r (N=386) = -.08$, $p = .05$); *Prioritizing / representing capital needs* ($r (N=384) = -.08$, $p = .04$); Developing leaders ($r (N=393) = -.09$, $p = .03$); *Maintaining succession plans* ($r (N=391) = -.14$, $p < .001$); *Ensuring skills are kept current* ($r (N=393) = -.15$, $p < .001$); *Engaging in productive disagreements* ($r (N=391) = -.11$, $p = .004$); and *Reaching consensus* ($r (N=392) = -.09$, $p = .02$). It is important to note that these findings do not mean that the proportion of women on the team is associated with *actual* performance; a more likely

explanation, one that would be consistent with other prior research on gender differences in leader self-assessment, is that women executive leaders may create a climate of greater openness to self-critique (Fleenor, Smither, Atwater, Braddy, & Sturm, 2010).

Second, the total number of non-CEO SLT members from culturally diverse groups was calculated as a proportion of total SLT members, and then assessed against perceived effectiveness. No statistically significant relationships were found.

SLT meeting practices and perceived effectiveness

Two questions inquired about SLT meeting practices. The first asked how frequently the SLT meets; the second asked how long meetings typically last. A significant and positive association was found between meeting frequency and length (r (N=395) = .19, p <.001), suggesting that SLTs that met more often also tended to have longer meetings. The only statistically significant association between meeting practices and perceived effectiveness was for *Engaging in productive disagreements,* which was significantly and negatively associated with meeting frequency (r (N=392) = -.12, p = .01). In other words, CEOs whose SLTs met more frequently tended to view their SLTs as less effective in this area.

Discussion

Before discussing the potential implications of this research, it will be important to note several study limitations that may affect generalizability of the results. The first relates to the focus on hospitals within systems. According to the 2014 survey of the American Hospital Association, the most recent results available at the time of this writing survey, only 3,183 of the 5,627 hospitals in the United States (57%) were system-affiliated, and there is reason to believe that freestanding hospital SLTs will differ from system-affiliated SLTs. For readers interested in freestanding hospital SLTs, we recommend the prior survey of Garman and Carter (2014). A second limitation relates to the focus on ACHE member respondents. The 1,326 ACHE affiliates identified as prospective participants in the survey represent somewhat less than half (42%) of the total CEOs of system-affiliated hospitals (American Hospital Association, 2015). Given the ACHE's focus on professional management, it is possible that SLTs led by ACHE-member CEOs differ systematically from non-member SLTs in process as well as structure. A third limitation relates to the self-report nature of the study, particularly as related to perceived effectiveness. The present study as well as prior research tends to show a restriction of range, with a large majority of CEOs reporting that they view their senior leadership teams and governing boards as highly effective (e.g. Garman & Carter, 2014), generally in greater proportion than their board member counterparts (e.g. Prybil et al., 2012).

These limitations notwithstanding, results of this study do hold several implications worth further consideration, as summarized in Table 2. First, in terms of decision-making, results suggested some caution may be warranted in holding on to too much local control for structuring decisions, given that this could come at some expense of the confidence and trust of the system

board, and will not necessarily lead to greater perceived effectiveness in other aspects of the SLT's work. Similarly, SLTs who shared at least one senior leader with other hospitals or the system tended to be viewed as more effective than those whose leaders all worked primarily for the hospital.

In terms of board diversity, the negative association between the percentage of women on SLTs and perceived effectiveness may at first seem counterintuitive – especially since prior research has suggested that the effectiveness of women leaders, on average, tends to be viewed more favorably than for their male counterparts (e.g. Bantel & Jackson, 1989; Boatman, Wellins, & Neal, 2011). This apparent discrepancy can perhaps be best explained by the fact that the survey focused on perceptions of effectiveness rather than actual effectiveness. Since prior research has found that women leaders may tend to be more openly self-critical (Fleenor et al., 2010), it seems plausible that, by extension, teams with more women leaders may also reflect greater levels of self-critique.

However a recent meta-analysis has also called into question the belief that more diverse teams are, in and of themselves, associated with better performance outcomes (Homberg & Bui, 2013), and may require other supports in order to yield performance benefits.

With respect to SLT meetings, while conventional wisdom might predict that more frequent meetings would allow for a reduction in overall meeting time, our findings suggested the opposite – i.e. that more meetings were associated with more, rather than less, overall meeting time. Because the survey reflects a single point in time, it is impossible to tease out whether the more frequent meetings were causing more meeting time, or whether some teams required more meeting time due to specific circumstances they were facing. However the findings do suggest that CEOs who are interested in cutting down on overall SLT meeting time may want to experiment with less frequent meetings.

Overall, the sizes of relationships between perceived effectiveness and the structural facets of SLTs in this study were relatively small. It seems plausible that perceived effectiveness is less a function of structure than it is a function of process (e.g. the SLT's approaches to team decision-making and the quality of the relationships within and outside of the SLT) and environment (e.g. the economic climate and level of competition within a given region). Environmental variables, by definition, tend to involve phenomena that CEOs can't influence directly. Process variables, in contrast, are much more amenable to interventions that can ultimately improve overall effectiveness (Burke et al., 2006; Salas et al., 2015). Prior research on process interventions suggest their effect sizes are much larger than what we found in the structural research reported here (Salas et al., 2008), lending further credence to the greater importance of getting process right.

In summary, CEOs interested in improving the effectiveness of their SLTs are advised to first ensure that their team's processes – i.e. their approaches to working - are functioning effectively

before turning to structural changes. Although structural changes may seem on the surface to provide a quicker fix, prior research in combination with the present study suggest that process approaches may ultimately prove more effective. Ideally, future research will incorporates simultaneous foci on both process and structure, to provide greater insight into when structural changes, process changes, or both may be most helpful in improving team outcomes.

Table 2: Summary of relationships between SLTs, governance practices, and perceptions of effectiveness

	Effects					
Dimensions	*Health System Size (# hospitals)*	*SLT size*	*Local decision-making authority*	*Shared executives*	*Diversity*	*Meeting frequency/ duration*
Coordinating / aligning local operations with system-level operations				(+)	Gender(-)	
Prioritizing short- and long-term capital needs, and representing those needs to system leadership					Gender(-)	
Representing your community's needs to system leadership				(+)		
Communicating clearly and consistently with the community	(-)					
Maintaining the confidence and trust of the board						
Maintaining the confidence and trust of the medical staff	(-)			(+)		
Maintaining the confidence and trust of other employees	(-)			(+)		
Developing leaders within your organization				(+)	Gender(-)	
Maintaining succession plans for senior leaders in your hospital		(+)	(+)	Count (+)	Gender(-)	
Ensuring your senior leadership team keeps their skill sets current related to healthcare reform (e.g., clinical integration, mergers/acquisitions, ACOs, population health)					Gender(-)	
Engaging in productive disagreements					Gender(-)	Frequency (-)
Reaching consensus about important decisions					Gender(-)	

(+) significant positive association; (-) significant negative association

References

American Hospital Association (2016). "Fast facts on US hospitals." Available: http://www.aha.org/research/rc/stat-studies/fast-facts2014.shtml. Retrieved July 25, 2016.

American Hospital Association (2015). "Announced Hospital Mergers and Acquisitions, 1998-2014." Available: http://www.aha.org/research/reports/tw/chartbook/2015/chart2-9.pdf. Retrieved July 21, 2016.

Athey, L. & Garman, A. N. (2014). "Health Reform and the Evolving Senior Leadership Team: A Survey of Freestanding Hospital CEOs." White paper published by the American College of Healthcare Executives' CEO Circle, Chicago, IL.

Bantel, K. A., & Jackson, S. E. (1989). Top management and innovations in banking: Does the composition of the top team make a difference? *Strategic Management Journal, 10,* 107 – 124.

Boatman, J., Wellins, R., & Neal, S. (2011). "Women work: The business benefits of closing the gender gap. Available: http://www.ddiworld.com/ddi/media/trend-research/womenatworkgendergap_br_ddi.pdf. Retrieved July 15, 2016.

Burke, C. S., Stagl, K. C., Klein, C., Goodwin, G. F., Salas, E., & Halpin, S. M. (2006). What types of leadership behaviors are functional in teams? A meta-analysis. *Leadership Quarterly, 17,* 288-307.

Center for Healthcare Economics and Policy (2013). "How hospital mergers and acquisitions benefit communities." Available: http://www.aha.org/content/13/13mergebenefitcommty.pdf. Retrieved July 21, 2016.

Cutler, D. M., & Morton, F. S. (2013). Hospitals, market share, and consolidation. *Journal of the American Medical Association, 310(18),* 1964-1970.

Garman, A. N., & Carter, C. (2014). "Implications of health reform for healthcare executive positions: A national study of senior leadership teams in freestanding hospitals." Available: http://www.ache.org/pubs/research/implications_of_health_reform_for_healthcare_executive_positions_.pdf. Retrieved July 1, 2016.

Fleenor, J. W., Smither, J.W., Atwater, L. E., Braddy, P. W., & Sturm, R. E. (2010). Self-other rating agreement in leadership: A review. *Leadership Quarterly, 21,* 1005-1034.

Homberg, F., & Bui, H. T. M. (2013). Top management team diversity: A systematic review. *Group & Organization Management, 38(4),* 455-479.

Jiang, H. J., Lockee, C., & Fraser, I. (2012). Enhancing board oversight on quality of hospital care: An agency theory perspective. *Health Care Management Review, 37(2),* 144-153.

Millar, R., Mannion, R., Freeman, T., & Davies, H. T. O. (2013). Hospital board oversight of quality and patient safety: A narrative review and synthesis of recent empirical research. *The Milbank Quarterly, 91(3),* 738-770.

Prybil, L., Levey, S., Killian, R., Fardo, D., Chait, R., Bardach, D., & Roach, W. (2012). "Governance in large nonprofit health systems: Current profile and emerging patterns." Available: http://www.americangovernance.com/resources/reports/governance-reports/2012/2012-prybil-report.pdf. Retrieved July 1, 2016.

Salas, E., DiazGranados, D., Klein, C., Burke, C.S., Stagl, K.C., Goodwin, G. F., & Halpin, S.M. (2008). Does team training improve team performance? A meta-analysis. *Human factors, 50,* 903-933.

Salas, E., Shuffler, M. L., Thayer, A. L., Bedwell, W. L., & Lazarra, E. H. (2014). Understanding and improving teamwork in organizations: A scientifically-based practical guide. *Human Resource Management, 54(4),* 599-622.

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Appendix A. Survey dimensions of perceived effectiveness

Overall, how effective do you believe your hospital's current senior leadership structure is in the following areas? (Circle ***one*** number in each row.)

	Not at all effective	**Somewhat effective**	**Effective**	**Very effective**	**Extremely effective**
Coordinating / aligning local operations with system-level operations?	**1**	**2**	**3**	**4**	**5**
Prioritizing short- and long-term capital needs, and representing those needs to system leadership?	**1**	**2**	**3**	**4**	**5**
Representing your community's needs to system leadership?	**1**	**2**	**3**	**4**	**5**
Communicating clearly and consistently with the community?	**1**	**2**	**3**	**4**	**5**
Maintaining the confidence and trust of the boards	**1**	**2**	**3**	**4**	**5**
Maintaining the confidence and trust of the medical staff?	**1**	**2**	**3**	**4**	**5**
Maintaining the confidence and trust of other employees?	**1**	**2**	**3**	**4**	**5**
Developing leaders within your organization?	**1**	**2**	**3**	**4**	**5**
Maintaining succession plans for senior leaders in your hospital?	**1**	**2**	**3**	**4**	**5**
Ensuring your senior leadership team keeps their skill sets current related to healthcare reform (e.g., clinical integration, mergers/acquisitions, ACOs, population health)?	**1**	**2**	**3**	**4**	**5**
Engaging in productive disagreements?	**1**	**2**	**3**	**4**	**5**
Reaching consensus about important decisions?	**1**	**2**	**3**	**4**	**5**