

## How leadership matters: The effects of leaders' alignment on strategy implementation

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### ABSTRACT

Research has confirmed that leader behavior influences group and organizational behavior, but we know less about *how* senior leaders ensure that group and organizational members implement their decisions. Most organizations have multiple layers of leaders, implying that any single leader does not lead in isolation. We focused on how the consistency of leadership effectiveness across hierarchical levels influenced the implementation of a strategic initiative in a large health care system. We found that it was only when leaders' effectiveness at different levels was considered in the aggregate that significant performance improvement occurred. We discuss the implications of these findings for leadership research, specifically, that leaders at various levels should be considered collectively to understand how leadership influences employee performance.

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### 1. Introduction

Leadership has been a central, but sometimes controversial, topic in organizational research (e.g., Chemers, 2000; Hogan, Curphy, & Hogan, 1994; House & Aditya, 1997; Judge & Piccolo, 2004; Khurana, 2002; Meindl, 1990). For example, reflecting a macro-OB perspective, Podolny, Khurana and Hill-Popper observed that “for at least the past thirty years, the concept of leadership has been subject to criticism and marginalization by the dominant organizational paradigms and perspectives” (2005:1). Part of this skepticism has resulted from questions about the definition of the construct as well as whether leadership has discernable effects on organizational outcomes (Hannan & Young, 1984; Pfeffer, 1977). Proponents of leadership argue that leaders, by their very roles, are responsible for making decisions that help their organizations adapt and succeed in competitive environments (e.g., Bass, 1991; Waldman & Yammarino, 1999). In contrast, those who view organizations as heavily constrained claim that leadership is largely irrelevant and, at best, a social construction (e.g., Hannan & Freeman, 1989; Meindl, 1990).

While provocative, the assertion that leaders in organizations do not play a distinct role in influencing groups and individuals to achieve organizational goals, is not supported by the empirical evidence; leaders often have a substantial impact on performance (e.g., Barrick, Day, Lord, & Alexander, 1991; Bass, Avolio, Jung, & Berson, 2003; Bertrand & Schoar, 2003; Judge & Piccolo, 2004; Judge, Piccolo, & Ilies, 2004; Koene, Vogelaar, & Soeters, 2002). The circumstances under which leaders are able to affect performance are less clear, however (e.g., Hambrick, Finkelstein, & Mooney, 2005).

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One situation in which leadership effectiveness may be most visible is when an organization changes its strategy. Adopting a new strategic initiative is distinct from implementing it (Pfeffer & Sutton, 2000), but research investigating leaders' roles in such change often blurs the two processes. For example, studies of CEO succession that examined subsequent changes in organizational performance associated with the appointment of a new CEO have implicitly assumed that the new CEO was able to implement change throughout the entire organization and that leaders at lower hierarchical levels were supportive of the change (e.g., House & Aditya, 1997; Lieberman & O'Connor, 1972; Thomas, 1988; Wasserman, Anand, & Nohria, 2001; Weiner & Mahoney, 1981). A more nuanced perspective, however, would acknowledge that for a senior leader to affect organizational performance requires that managers and employees at lower levels also support the new strategy (e.g., Guth & Macmillan, 1986; Lee & Miller, 1999).

To implement a new strategic initiative, leaders at subordinate levels must reinforce it; that is, they must allocate resources for it, deal effectively with resistance to it, and convince employees that the new initiative is important and in the employees' interests to support (Cannella & Monroe, 1997; Rotemberg & Saloner, 1993). A number of studies have illustrated how a crucial determinant of successfully implementing a new strategic initiative is whether lower level leaders support the change (e.g., Burgelman, 1983). For example, in a study of 196 managers across 20 organizations, Wooldridge and Floyd (1990) found that the more involved middle level leaders were in formulating their organization's strategy, the more the organization's performance improved as a result of the new strategy. Guth and Macmillan (1986) reported that when middle level leaders did not support the strategy, they were sometimes able to sabotage it. In a study of more than 200 senior leaders, Stagner (1969) reported that the degree of consensus among employees about the strategy was an important determinant of subsequent firm profitability. Other studies have shown that consensus within the top leadership team about the strategy can also help or hinder its execution (Dess, 1987; Hrebiniak & Snow, 1982). This suggests that to realize performance gains from a strategic change requires that both senior and subordinate leaders effectively communicate the strategy and take actions to ensure its implementation; that is, if subordinate leaders are not committed to the strategy, implementation is at risk.

### 1.1. Alignment of leaders

Understanding the effects of leadership on organizational performance requires examining multiple levels of leadership simultaneously (Hunter, Bedell-Avers, & Mumford, 2007). In organizations of any size it is likely that organizational performance should be related to the aggregate effects of leaders at different hierarchical levels. Most previous studies of leadership have focused on the effectiveness of a single person (e.g., the CEO, a general manager, or supervisor), but leaders at different organizational levels are clearly important too (Hunt, 1991). For example, Berson and Avolia (2004) argue that upper-level leaders' actions influence the ways lower level leaders translate and disseminate information about a new strategy. The mechanisms by which leaders provide meaning about critical elements in the work environment may influence this alignment. For example, one of the critical ways leaders influence the performance of work groups is by providing a compelling direction for the group (Hackman & Wageman, 2005). Similarly, Podolny, Khurana, and Hill-Popper (2005) argue that the roots of executive leadership are in the creation of meaning within the organization. If these messages lack clarity and consistency across leaders at different levels they may reduce members' ability to understand the importance of and implement strategic initiatives (Cha & Edmondson, 2006; Osborn, Hunt, & Jauch, 2002).

Thus, it is clear that leaders at different levels influence strategic initiatives and their implementation, *how* aggregate leadership influences organizational performance is not straightforward. For instance, a powerful senior leader may compensate for less effective leaders at lower levels. Alternatively, a less effective but highly aligned set of leaders across levels may successfully implement change. Or, an effective set of subordinate managers who do not support a strategic initiative may block change. Regardless of the effects of an individual leader, alignment or misalignment of leaders across hierarchical levels may enhance or detract from the successful implementation of a strategic initiative.

### 1.2. Hypotheses

We propose that leadership at one level may compensate for or undermine the effects of leadership at another. Said differently, senior leaders' ability to implement a strategic initiative may depend critically on the alignment of organizational leaders across hierarchical levels. This suggests two hypotheses. The first is the conventional expectation that any focal leader can affect performance, or more formally,

**Hypothesis 1.** The higher a department perceives that its leader (CEO, division leader, immediate or direct leader) supports a new strategy, the stronger the likelihood that the new strategy will be implemented in that department, that is, result in increases in strategically relevant organizational performance.

Our second hypothesis reflects our expectation that it is the aggregate effects of leadership across levels that matters. That is, even the strategic support demonstrated by leaders who do not personally lead a department will influence the extent to which a strategic initiative will be implemented, specifically,

**Hypothesis 2.** The more department members perceive that leaders, aggregated *across* hierarchical levels support a new strategy, the stronger the likelihood that the new strategy will be implemented, that is, result in increases in strategically relevant organizational performance in that department.

### 1.3. The present study

#### 1.3.1. Assumptions

Part of the ambiguity in leadership research stems from the lack of clarity in the many definitions of the construct itself (Alvesson & Sveningsson, 2003; Bedeian & Hunt, 2006). “Leadership” has been used to describe everything from the effects of first-level supervisors on subordinates’ attitudes to the effects of CEOs on organizational performance (e.g., Eden & Shani, 1982; Hofmann & Jones, 2005; Thomas, 1988), from the attributional processes raters use to characterize leaders to the specific activities that leaders engage in (Lord, 1985; Meindl & Ehrlich, 1987), and from the characteristics of people who emerge as leaders to the effects of actual leaders themselves (Judge, Bono, Ilies, & Gerhardt, 2002) including the ability to generate an emotional response (Dasbarough, 2006). To avoid this lack of precision, we define leadership as a person’s ability, in a formally assigned hierarchical role, to influence a group to achieve organizational goals (e.g., Hogan et al., 1994; Judge et al., 2002). Specifically, we focus on ratings by subordinates of those actions taken by formally assigned leaders at three hierarchical levels to articulate a vision for the unit, set a strategic direction, define measurable objectives reflective of the strategy, align the reward system, motivate subordinates, and effectively deal with resistance to change. Although this is a very common way of assessing leaders, there are a number of assumptions embedded in it. First, the way we operationalize leadership assumes that holding a management position corresponds to leadership. Second, and perhaps of more consequence, using subordinates’ ratings of formal leaders assumes that subordinates actually have seen the actions taken by the leader and the items being used to assess leadership are relevant to the situation and familiar to the subordinates (Hunter et al., 2007). This is a common problem in much of the leadership research. In our case, the actions we ask subordinates to rate are likely to have been observed, however there other aspects of leaders’ behaviors that subordinates may not have directly seen that could still influence the group.

#### 1.3.2. The organization context

We investigated the relation between leadership alignment and strategy implementation in a large health care organization that provides comprehensive health care to well over one million plan members. Central to the organization is a medical group of more than 3000 physicians who work in 19 large medical centers or clinics. The medical group is organized as a professional corporation with all physicians holding an equal number of shares of stock. The group is governed by a board of directors that is elected by the physician shareholders, all of whom are physicians in the group; the board, in turn, recommends a chief executive officer (CEO), also a physician in the group, who must be elected by the full set of physicians.

Within the medical group, there are three levels of direct physician management. Physicians working in each center are organized into specialty groups (e.g., primary care, general surgery, etc.) that are headed by a Department Chief (him or herself a physician). The Department Chiefs report to the Physician-in-Charge (PIC) of the medical center who is responsible for the overall operations of the medical center. In turn, the PICs report to the CEO of the medical group. We examined how department leaders alone and in concert with the CEO and PIC influenced the extent to which an organizational change effort was implemented at the department level.

At the time we collected data for this study, a new CEO had been elected and the organization was undergoing a substantial change in its market strategy. The organization’s previous strategy had been to use the advantages of its size to provide the same quality of care as traditional fee-for-service providers but at a lower price. Although successful in some ways, the cost of this strategy was that patients perceived the organization to be impersonal and bureaucratic and generally expressed a low level of satisfaction. With the growth of for-profit health maintenance organizations and insurance-driven preferred provider plans, the competitive landscape of health care had shifted and new health care organizations were able to undercut the price advantage the medical group we studied had enjoyed.

Because of these changes, the CEO and board of directors concluded that they would have to change the way patients perceived them to successfully compete against the new set of low price providers. Therefore, the aim of the new strategy was to compete not on cost but on quality and service. The overall goal of strategic change was to significantly increase patient satisfaction, which had not been a central aspect of the previous low-cost approach. Thus, the measure of satisfaction is the key indicator of the success of the new strategy.

Successfully implementing a new strategy generally requires both tangible and intangible resources and processes (Ray, Barney, & Muhanna, 2004). In this case, the implementation occurred in two broad, somewhat overlapping phases. The first phase focused primarily on articulating the new strategy and allocating tangible resources to support the change. For example, a new scheduling system and redesigned call centers were brought on-line across the entire organization. In the second phase, the emphasis was on changing the nature of the interactions between patients and their physicians. This represents a major leadership challenge for the CEO, PICs and Chiefs, since how a physician deals with her patients is difficult to monitor and standardize. Moreover, changes in patient–physician interactions would more likely result from shifts in physicians’ perceptions and priorities than from implementing formal control systems. Changing employees’ attitudes and behaviors toward patients is therefore a critical aspect of implementing the new strategy.

## 2. Method

### 2.1. Respondents and study design

The participants in this study were physicians in eight specialty departments – emergency medicine, head and facial surgery, OB/GYN, ophthalmology, orthopedics, pediatrics, surgery, and urology – working in six medical centers for a total of 46 departments. As described above, all physicians were members of the same medical group and all of the medical centers operated

using the same policies. The departments ranged in size from 3 to 49 physicians ( $\bar{x}=13.37$ ,  $s.d.=10.48$ ). Within these departments, 313 physicians participated in the study by completing surveys. As independent researchers we sent them surveys along with a cover letter assuring them of the confidentiality of their responses, including pointing out that they did not need to include their name on the survey. Fifty-three percent of those to whom we sent the survey returned a completed survey to us. Respondents ranged in age from 30 to 69, with the largest number between the ages of 40 and 49 (34.1%). Average tenure within departments was 10.38 ( $s.d.=3.13$ ) years. Thirty-six percent were women and 37% were members of ethnic groups other than Caucasian. Individual respondent data were aggregated to the department level. We excluded departments with fewer than three returned surveys, yielding a final sample of 40 medical departments comprised of 280 individual respondents.

Our research design falls into the category that Klein, Dansereau and Hall (1994) characterize as a mixed determinant intervention in which a change (a new strategic initiative) is coupled with other predictors (individual leader effectiveness and aggregate leadership alignment) to influence a criterion of interest (variations in unit performance).

## 2.2. Dependent variable: patient's ratings of access to service

Prior to the strategic change, the medical plan contracted with a national polling firm to survey a random sample of patients regarding their overall satisfaction with their experiences with the medical plan. Patients were surveyed following a specific visit for treatment. Questions ranged from issues such as the ease of scheduling that visit to the quality of interactions with various staff members, including physicians. The polling firm aggregated responses into categories, and they provided summary scale scores to the medical group's management on a quarterly basis. The firm surveyed approximately two million visits per year and aggregated the responses by department (e.g., pediatrics, ophthalmology) within each medical center. The medical group's management provided us with measures of the Patient Global Access Rating scale for each of the 40 departments at two points in time. This scale measures patients' perceptions of their interactions with their physician on dimensions such as extent of listening and level of consideration as well as perceptions of quality and accessibility of the care received. Each cross-section was based on approximately 50,000 patient survey evaluations. Data were provided for the period of the survey in 2003 (mean = 61.54,  $s.d.=5.74$ ) and equivalent data for 2001 (mean = 56.40,  $s.d.=5.97$ ).

Since we were interested in the role of leadership in capturing gains from a change in strategy, we focused on physicians' behavior change. Recall that the first phase of the change involved implementing new systems. Actions taken during this phase primarily affected resources and systems and were generally implemented across the entire system.

The second phase was aimed more directly at changing physicians' behaviors and included extensive communication with physicians and education programs for PICs and Chiefs. Therefore, we assessed two periods that corresponded to this second phase of the implementation of the new strategy. The baseline satisfaction data was identified as the period after the new strategic focus on service within the organization had been communicated to the organization and the new systems necessary to support this change had been initially installed throughout the entire organization. We asked the senior management to specify the point in time at which the benefits from the changed systems would be reflected in the patient satisfaction surveys and that further changes were likely to be the result of patient interactions with physicians. The second point in time for assessing change in overall patient satisfaction was two years later. It was at this time that we collected of the survey data. Using baseline patient satisfaction at time 1 as a predictor of patient satisfaction at time 2 permitted us to assess changes in satisfaction over the two-year period. It is during this time frame that the change effort focused primarily on changing the behavior of individual physicians.

## 2.3. Independent variables

### 2.3.1. Leaders' effectiveness: leaders' support of the new strategic initiative

Leadership support for the strategy in this study refers to those actions taken by formally assigned leaders (CEO, PICs, and department leaders) to implement the new strategy. With this definition, respondents were asked to indicate, on a survey we designed and distributed, the extent to which a set of statements applied when describing the actions of their leaders, including separate assessments of the organization's CEO, PIC (the leader of their medical center), and their Chief (the leader of their medical department). Respondents rated each leader on a 7-point Likert scale from "not at all" to "a great deal" on six common items reflecting strategic leadership. These items included assessments of the degree to which the leader articulated a strategy, set a vision, provided measurable objectives, rewarded progress in the change effort, dealt with resistance, and motivated people to change.

Using factor analysis and individual level responses ( $N=280$ ), we verified that respondents were able to distinguish among the three leadership roles. Table 1 reports the results of a Varimax rotation of the principal components solution for the 18 leadership effectiveness items. Results show three well defined factors, each with an eigenvalue greater than one, which correspond to the three levels of leadership: the CEO, PIC, and Chief. Based on these results we used factor loadings to compute a scale for each leader. Each scale displayed high internal consistency (the reliability coefficient ranged from .92 to .95). We developed the group level measures of leadership by averaging the individual factor scores of the physician respondents within each department.

### 2.3.2. Aggregating individual responses

Before proceeding with the group level analysis we tested for the appropriateness of aggregation of the leadership and support for strategic change items using  $r_{wg(j)}$  (James, Demaree, & Wolfe, 1984) on the raw item scores. All values were sufficient to

**Table 1**  
Varimax factor loadings for leadership ratings ( $N = 280$ ).

Items	Factor 1	Factor 2	Factor 3
	CEO leadership	Center leadership	Department leadership
<b>CEO</b>			
1. Clearly articulates the strategy	.87	.08	.10
2. Provides a compelling vision	.91	.08	.08
3. Provides measurable objectives for implementing the vision	.82	.27	.26
4. Recognizes and rewards progress in implementing change	.72	.33	.25
5. Responds effectively to resistance to change	.69	.31	.28
6. Personally inspiring and motivating for the change	.80	.18	.16
<b>Center director</b>			
1. Clearly articulates the strategy	.64	.53	.14
2. Provides a compelling vision	.54	.70	.19
3. Provides measurable objectives for implementing the vision	.57	.66	.30
4. Recognizes and rewards progress in implementing change	.39	.76	.24
5. Responds effectively to resistance to change	-.04	.64	.09
6. Personally inspiring and motivating for the change	.44	.72	.23
<b>Department head</b>			
1. Clearly articulates the strategy	.27	.14	.79
2. Provides a compelling vision	.23	.21	.87
3. Provides measurable objectives for implementing the vision	.23	.21	.87
4. Recognizes and rewards progress in implementing change	.09	.15	.91
5. Responds effectively to resistance to change	.09	.15	.88
6. Personally inspiring and motivating for the change	.14	.10	.90

justify aggregation (support for the new strategy – median  $r_{wg(j)} = .91$ ; CEO leadership – median  $r_{wg(j)} = .90$ ; center leadership – median  $r_{wg(j)} = .87$ ; and department leadership median  $r_{wg(j)} = .84$ ).

#### 2.4. Control variables

We used four control variables in models testing our hypotheses. First, since group size has been shown to affect a variety of group outcomes, we also included the size of each department as a control in all analyses (mean = 13.37, s.d. = 10.48, range 3–49). Second, since an individual's tenure may affect how he or she perceives the organizational change effort and personal willingness to change, we computed a mean tenure score for each department and used it as a control variable (mean = 10.38 years, s.d. = 3.16). Third, in order to represent improvement in Patient Global Access Ratings between 2001 and 2003, we included the 2001 Patient Global Access Rating scores as a control variable in all analyses (mean = 56.40, s.d. = 5.97).

Finally, we controlled for employees' support for the strategic initiative to rule out the possibility that our results would be driven by how much respondents supported the strategic change, rather than the influence of their leaders. Therefore, independent of the assessment of leadership effectiveness, respondents were asked to indicate how much they personally supported the new strategic initiative. Each participating physician indicated, on a 7-point scale, from "strongly disagree" to "strongly agree," how personally excited they were by the new strategy, the difficulties they would face if they failed to implement it, how much it was in their personal interest to adopt the strategy, and how convinced they were that the strategy was the right one for the organization. Using the individual level data ( $N = 280$ ), Table 2 reports the results of a factor analysis of these items revealing that the items loaded on a single factor. These items were summed to form an index of the degree to which each individual supported the new strategy ( $\alpha = .91$ ). A group score was then computed by averaging the individual scores for each group (median  $r_{wg(j)} = .91$ ). The mean score indicates the overall support of group members for the new strategy. We standardized this variable before including it as a control variable in the regression analyses used to test the hypotheses.

#### 2.5. Analysis

Our conceptual framework specifies that implementing change is a phenomenon involving multiple levels of an organization. Our dependent variable, the 2003 Patient Global Access Rating scores, was collected at the department level of the medical group. Likewise, the independent and control variables in this study were either collected at the department level or were aggregated

**Table 2**  
Factor loadings for employee support of the strategy ( $N = 280$ ).

Items	Factor 1
1. I am personally excited about implementing our strategy.	.88
2. I recognize the difficulties we will face if we fail to implement this strategy.	.88
3. It is in my personal interest to help implement our strategy.	.92
4. I am personally convinced that this strategy is the right one for [our organization].	.87

from the physician-level to the department level of analysis. Nevertheless, the departments are nested within centers, which in turn are nested within the medical group; as a result, departments within the same center are potentially more similar than departments from within other centers.

We addressed the multilevel nature of this phenomenon statistically by using hierarchical linear modeling (HLM) (Rabe-Hesketh & Skrondal, 2005; Raudenbush & Bryk, 2002). We used HLM to combine in a single regression equation a two-level hierarchical linear random-intercept model, which enabled us to estimate variability between centers within the medical group and between departments within centers. Level 1 of the model examined variability within centers, looking at how departments varied in their patient satisfaction scores. Level 2 of the model examined variability between centers. The separation of between-center and within-center, between-department variability made possible by using HLM controls for the effects of unobserved heterogeneity that may affect patient-satisfaction-score differences across centers. We standardized our independent variables to facilitate interpreting our results.

### 3. Results

Table 3 shows the means, standard deviations, and correlations among the variables. Consistent with the strategic initiative, patient ratings between 2001 and 2003 improved from a mean of 56.40 to 61.54 ( $t = 5.63, p < .01$ ). Also, consistent with critics of leadership, without controlling for various department and organizational characteristics no significant correlations between any of the leadership effectiveness measures and patient ratings of service emerged. Importantly, there are no significant correlations among the effectiveness ratings for the three levels of leaders, enabling us to enter the three variables simultaneously into our model testing hypothesis 2 without being concerned that multicollinearity would artificially inflate our results. There is a significant correlation between CEO and Chief leadership effectiveness and mean physician support for the strategy. These findings simply suggest that units with higher ratings of CEO and department leader effectiveness are also more likely to support the strategy, not a surprising finding given the cross-sectional nature of these data. There is a marginally significant association ( $r = .28, p < .10$ ) between mean tenure with the organization and patient ratings in 2003, suggesting that longer service groups have slightly higher patient satisfaction ratings. Group size is unrelated to either leadership or patient ratings of service.

In hypothesis 1, we proposed that the more a department perceives that its leader supported the new strategic initiative, the higher the likelihood that the new strategy would be implemented in that department, that is, result in increases in strategically relevant organizational performance as reflected by a change in patient ratings between 2001 and 2003. In hypothesis 2, we proposed that the more department members perceive that leaders aggregated across hierarchical levels support a new strategy, the higher the likelihood that the new strategy will be implemented, that is, result in increases in strategically relevant organizational performance.

Models 1 through 3 in Table 4 show the regressions of the control variables, including patient ratings in 2001 and employee support for the strategy, and leadership effectiveness ratings for the CEO, PIC, and Department Chief separately on patient global access ratings for 2003 accounting for variance between centers within the medical group and between departments within centers. Contrary to hypothesis 1, results show no significant independent effects for the CEO or PIC leadership effectiveness measures and only a marginally significant effect for the Chief leadership effectiveness measure on change in patient satisfaction ratings over the two-year period, even with relevant control variables included in the model and taking into account the two levels of analysis.

Consistent with hypothesis 2, however, Model 4 shows that when the leadership effectiveness variables across hierarchical levels are entered simultaneously, the adjusted  $R^2$  increases and all leadership effectiveness variables are positive and significant. To confirm this effect, we computed a total leadership effectiveness score by summing the three separate leadership effectiveness ratings (CEO, PIC, and Chief). The results from Model 5 show that the aggregate effects of leadership are strongly and positively associated with improved patient ratings over the two-year period. These results support the idea that it is leadership alignment across hierarchical levels that is associated with the successful implementation of strategic change.

Although not shown in Table 4, we also examined the interaction effects of leadership effectiveness on change in patient ratings of access and service. Model 4 was re-estimated to include three two-way interaction effects among CEO, PIC and Chief entered in

**Table 3**  
Correlations among variables ( $N = 40$ ).

Variables	Mean	SD	1	2	3	4	5	6	7
1. CEO leadership	0.08	0.65	–						
2. Center leadership (PIC)	–0.02	0.61	–.05	–					
3. Department leadership (chief)	–0.07	0.74	.15	–.19	–				
4. Department size	13.37	10.48	.04	.02	.14	–			
5. Mean tenure within dept (years)	10.38	3.16	–.03	.07	.22	–.08	–		
6. Support for the new strategy	22.99	2.32	.63***	–.01	.48***	–.03	.29*	–	
7. Patient ratings (2001)	56.40	5.97	.10	–.18	.09	–.12	.23	.24	–
8. Patient ratings (2003)	61.54	5.74	.03	.03	.26	.09	.28*	–.05	.48***

\* $p < .10$ .

\*\*\* $p < .01$ .

**Table 4**

Effects of leadership alignment on 2003 patient global access ratings.

Variables	Model 1	Model 2	Model 3	Model 4	Model 5
Control variables					
Department size	0.05 (0.12)	0.00 (0.13)	0.04 (0.12)	0.03 (0.11)	0.01 (0.11)
Mean tenure within department	0.35 (0.13) *	0.27 (0.13) **	0.26 (0.13) **	0.26 (0.12) **	0.25 (0.12) **
Patient global access ratings (2001)	0.48 (0.13) ***	0.49 (0.13) ***	0.47 (0.13) ***	0.55 (0.12) ***	0.55 (0.12) ***
Employee support for the strategy	−0.44 (0.16) ***	−0.30 (0.12) **	−0.37 (0.13) ***	−0.69 (0.16) ***	−0.65 (0.15) ***
Independent variables					
CEO leadership ( $L_1$ )	0.23 (0.15)	–	–	0.33 (0.14) **	–
PIC leadership ( $L_2$ )	–	0.17 (0.12)	–	0.25 (0.11) **	–
Chief leadership ( $L_3$ )	–	–	0.26 (0.13) *	0.35 (0.12) ***	–
Aggregate leadership (CEO + PIC + Chief) ( $L_{all}$ )	–	–	–	–	0.30 (0.08) ***
Random variance components					
$\psi$ (Between-center variance)	0.20	0.26	0.15	0.16	0.19
$\theta$ (Between-department variance, within centers)	0.43	0.42	0.44	0.34	0.34
$R^2$	0.37	0.32	0.41	0.50	0.47
$R_1^2$	0.39	0.40	0.37	0.51	0.51
$R_2^2$	0.33	0.13	0.50	0.47	0.37

Entries are standardized coefficients (betas). 2-tailed tests.

\*  $p < .10$ .

\*\*  $p < .05$ .

\*\*\*  $p < .01$ .

the final step. Results showed one highly significant interaction effect between CEO and PIC leadership ( $\beta = .29, p < .01$ ). Fig. 1 illustrates this interaction. The largest change in patient ratings of access and service occurred when the CEO and PIC were both seen as effective leaders, with the slopes showing a decreasing impact on change in performance as leadership effectiveness diminishes.

Also shown in Table 4 is a significant negative association between employee support for the new strategy and change in patient ratings. This indicates that those units with lower initial employee support showed more change over the two-year period in patient satisfaction than did units with higher levels of initial employee support, suggesting that leadership effectiveness may be more potent when employees are less committed to the change. Although no formal hypothesis was offered for this control variable, this finding suggests that departments with lower patient ratings in 2001 showed the most improvement by 2003. This may reflect either the positive impact of leadership on poorer performing units or a ceiling effect in which units that were initially higher in patient satisfaction had less ability to improve, even with effective leadership.

#### 4. Discussion

The preponderance of empirical evidence over the past 20 years shows that leadership matters; the important but less frequently addressed question is how and when leaders are more or less likely to influence employees to achieve organizational objectives. Wasserman and his coauthors argued that research on leadership needs to move beyond the “tentative and exploratory stage” of simply looking for associations between leadership and performance outcomes and begin to focus on how these effects

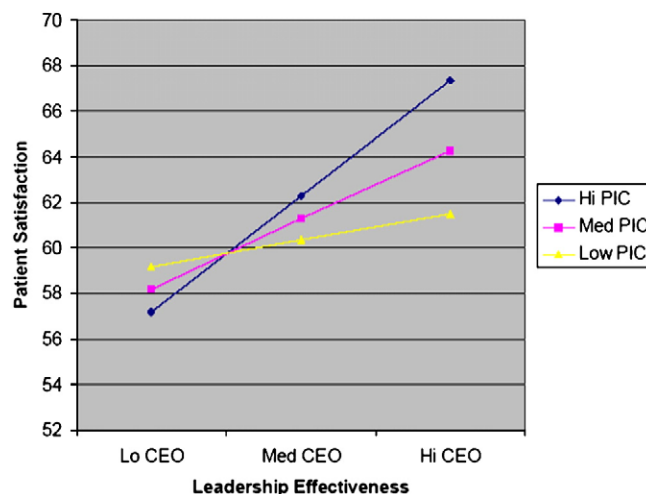


Fig. 1. Interaction effects of leadership effectiveness on patient ratings of global access and service.

occur (Wasserman et al., 2001: 26). Phills (2005) highlights the importance of examining the processes through which leaders affect change, and, drawing from the medical sciences, suggests the need for researchers to examine “mechanisms of action” or the processes through which leaders affect organizational performance. In this spirit, our study showed that although there were no separate independent effects of leadership effectiveness ratings of the CEO, medical center director (PIC), or department manager (Chief) on the outcome of a strategic change, there were significant positive effects of leadership in the aggregate. Strategic change, assessed as the change over a two-year period in overall patient satisfaction with access and service, was related to the joint evaluations of leaders across hierarchical levels.

What is the underlying process that might explain these findings? Because the data are not fully longitudinal, we cannot determine causality (Smith & Tonidandel, 2003). However, the findings are consistent with several theoretical perspectives. First, one explanation may be that there is a threshold effect, with the aggregate effects of leadership across levels being positively associated with strategic change. The impact of more effective leaders, regardless of the underlying leadership theory chosen, aggregates across hierarchical levels (e.g., Klein et al., 1994; Waldman & Yammarino, 1999). If true, this allows for the possibility that leadership may have both supplementary and compensatory effects. In the former, what may matter is the degree to which leaders at different levels are aligned in their support of the strategy and achieve a threshold that results in performance. The significant interaction between CEO and PIC leadership and change in performance is consistent with this interpretation. Alternatively, there may also be compensatory effects whereby the combined effects of leadership at several levels may compensate for lower effectiveness at another level. What mattered in our study was that employees perceived that there was a critical total level of leadership support for the new strategy.

Although the data here are largely cross-sectional and inferences about causality cannot be made, one can still consider the likelihood that leadership affected performance or the reverse, where changes in performance affected the ratings by employees of their leaders. In the first instance, the articulation of a new strategy and the alignment of organizational structure, processes and leader effort behind this strategy resulted in improved patient ratings over a two-year period. In this case, leadership at different levels was associated with positive changes in performance. In the latter case, it could be that patient satisfaction improved for exogenous reasons and, in the face of these changes, physicians attributed these changes to the effectiveness of their leaders (CEO, PIC, and Chief) (Lord, 1985). While this explanation cannot be ruled out, given the resources and commitment of formal leaders to the improvement of patient access and satisfaction, it seems to be a less plausible explanation than the alternative. Based on our qualitative experience with the medical care system, we cannot identify any possible exogenous explanation that might result in improvements in patients' ratings of the access, service, and quality of the medical care they received.

Our results are also consistent with previous research that has shown that the effects of senior leadership are likely to be moderated by a number of factors, including the resources available to the leader, how much discretion he or she has, and how much support exists among subordinate managers for the initiative (e.g., Dess, 1987; Thomas, Litschert, & Ramaswamy, 1991). We extend these findings by showing that it is not the effectiveness of a leader in isolation that affects organizational performance, but the alignment of leaders across hierarchical levels that is associated with the successful implementation of a strategic change. Had this study focused solely on the effectiveness of a single leader (the CEO, medical center director, or department chief), we would have concluded that leadership had no effect. It was only after examining the combined effects of leadership and employee support for the new strategy that the effects on performance became apparent. As previous authors have noted, given the complexity of understanding performance and change in complex organizations, isolating the effects of leaders requires attention to the effects of time, cross-level effects, and a host of potential contextual and moderating effects (e.g., Judge et al., 2002; Smith & Tonidandel, 2003; Waldman & Yammarino, 1999).

As Meindl and his colleagues demonstrated, there may be a tendency for observers to over-attribute responsibility for outcomes to a leader (e.g., Chen & Meindl, 1991; Meindl & Ehrlich, 1987). However, to an important degree, leadership is a perceptual phenomenon, with followers observing the words and actions of their superiors and making inferences about their motives (Epitropaki & Martin, 2004; Lord, 1985; Pfeffer, 1981). Even if perceptual measures of leadership effectiveness are affected by implicit leadership theories, there is evidence that these ratings converge with objective measures of performance (Judge et al., 2002; Hogan et al., 1994). In the current study, the CEO remained constant over the time of the data collection, yet there was wide variation in how effective or ineffective he was seen to be. These perceptual variations were associated with variations in objective organizational outcomes, suggesting that how employees see and interpret the behaviors of leaders can be an important moderator of performance. Recognizing this, Podolny, Khurana and Hill-Popper (2005: 47) argued that leadership is explicitly about those words and actions that create meaning for employees. In our study, when followers believed in the new strategy and saw their leaders as effectively supporting it, overall patient satisfaction improved. When there was disagreement about the strategy or leaders were seen as ineffective, performance was lower. The same “objective” actions on the part of leaders resulted in different “subjective” interpretations and substantive variations in unit performance.

There are several limitations to this study that might be addressed in future research. First is the comparatively small sample size; the 41 medical departments is somewhat modest and future research might increase this sample size to enable more confidence in the reliability of our results. A second limitation concerns the nature of the organization we studied. Professional service organizations present leaders with a different set of challenges and constraints than conventional firms (Lorsch & Tierney, 2002). Health care organizations in particular are influenced by a range of external and internal factors including the unique regulatory environment in which hospitals operate, the presence of unions, and the presence of strong professional groups. These factors may reduce the extent to which we can generalize these findings to other types of organizations. Leadership in this context may also be different than in other organizations. For instance, leaders in the organization we studied do not have the same formal authority as leaders in other organizations might have. The CEO is elected by his or her fellow physicians and reports to a board of



directors made up of physician partners. Department leaders are chosen from the specialty department members and may return to the group after the leadership term ends. These factors reduce the extent to which leaders can use rewards or sanctions or simply rely on the legitimacy of a leadership position to change the behavior of individual physicians. But, while leadership in professional firms may be different from conventional organizations, it also represents a growing segment of the economy and is “one aspect of leadership about which we know very little (Hogan et al., 1994, p. 500).”

A third limitation of this study lies in how we defined and measured leadership. Although our approach is similar to that in much of the empirical research on leadership, investigating only formal leaders ignores how other, emergent leaders might do things to either enhance or inhibit implementing a strategic change. In addition, relying on subordinates' ratings constrains our evaluation of effectiveness to only those things that can be observed by subordinates and therefore may ignore many other important actions leaders might take to support or impede the change effort. Finally, our dependent measure of patient satisfaction is quite distal from the actions of leaders. Although it represents the ultimate goal of the strategic change, it may well be influenced by other things. Thus, the measure itself is likely to represent a conservative test of a leader's influence. More proximal measures, such as physician behaviors, might be more strongly related to a leader's actions. Developing a comprehensive theory of how leadership alignment affects key performance outcomes will require understanding the processes through which leader behavior leads to the presumed changes in physician behavior that influence satisfaction.

As House and Aditya (1997, 445) note in their comprehensive review, there has been little research on the processes by which strategic leaders affect organizations. “It is almost as though leadership scholars...have believed that leader–follower relationships exist in a vacuum.” The current study suggests that in large organizations it may be the aggregate effect of leaders at different hierarchical levels that helps or hinders the implementation of strategy and thereby affects organizational performance. Whether the effectiveness of a leader results from traits, behaviors, relationships or charisma is not the focus of this study (e.g., Chemers, 2000; House & Aditya, 1997). Rather, we confirm the intuition that to be successful in implementing a new strategic initiative, in this case improving patient ratings of satisfaction and service, it is the alignment of leadership across hierarchical levels that matters.

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