
Who Should Lead a Healthcare Organization: MDs or MBAs?

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EXECUTIVE SUMMARY

Debates often arise about who is best suited to manage a healthcare organization. Therefore, we argue that an examination of the ability of healthcare organizations' chief executive officers (CEOs) to make strategic decisions is warranted. Is the most appropriate leader the medically educated CEO, whose training in patient care allows him or her to be most cognizant of the quality-of-care needs of the organization? Or is it the managerially educated CEO, whose training makes him or her most aware of the organization's financial needs?

This article presents a study involving senior managers from two integrated healthcare organizations. The study revealed that no significant differences exist between medically educated and managerially educated senior managers in their ability to make strategic decisions that maximize the net income or the quality of care of the healthcare organization. The debate that pits the "MDs" against the "MBAs" is misdirected. Characteristics other than educational degree appear to have a stronger influence on a CEO's ability to make successful strategic decisions. Therefore, candidates' educational background should not play such an important role in the processes for selecting CEOs.

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In the 1990s, healthcare transitioned from fee-for-service to managed care. As a result, major changes have occurred such as the trend toward noninstitutional care, primary care, and outcome assessment and the emphasis on developing alliances between healthcare organizations (Brooks 1994). This unrelenting pace of change makes strategic management of healthcare organizations even more challenging, and the changes are expected to continue in the near future.

To researchers and practitioners who adhere to a strategic-choice perspective (Child 1972), individual decision makers are critical to navigating the changing healthcare environment. The decisions made by individuals within healthcare organizations determine the relative success or failure of an organization. In particular, strategic decisions—those decisions that undertake important actions, commit important resources, or establish significant precedents (Mintzberg, Raisinghani, and Théorêt 1976)—are critical. While the extent to which these strategic decisions are preplanned or emerge overtime has been debated (e.g., Mintzberg and Waters 1985), most strategic management research purports the critical role of chief executive officers (CEOs) and other senior executives in making strategic decisions (for a review, see Finkelstein and Hambrick [1996]). In industries other than healthcare, extensive research has been conducted on how the strategic decision making of CEOs and senior executives affects organizational performance (*cf.* Eisenhardt 1989; Fredrickson and Mitchell

1984). In the healthcare management literature, however, we find that little attention is paid to the quality and impact of strategic decisions made by top executives.

This lack of research is particularly of concern given the unique performance criteria of healthcare organizations. While attentiveness to bottom-line financial performance is characteristic of all organizations, healthcare organizations are also held accountable by society for the quality of care they deliver to patients (Institute of Medicine 2001; Kenagy, Berwick, and Shore 1999). These dual performance goals present top managers with unique challenges that are not present in nonhealthcare organizations and suggest that particular research on the strategic decision making of healthcare executives is necessary.

This special research focus is also warranted because of the professional makeup of healthcare organizations. Human resources research has long highlighted the unique challenges associated with the management of organizations whose primary product or service is delivered by professionals such as attorneys, physicians, or professors (e.g., Beyer 1981; Gouldner 1957; Scott 1982; Von Glinow 1983; Wallace 1995; Wilensky 1964). Given the complexity and importance of the work performed by professionals and the typically high level of autonomy afforded them in the completion of their work, managers who are not members of the profession encounter vastly different mind-sets than would be found when managing workers in nonprofessional settings.

Within the field of healthcare, Freidson (1972) has noted significant differences between the mentality of physicians and that of nonmedically educated managers who often oversee their work. Physicians typically develop a clinical mentality. As part of this mentality, they believe that their primary allegiance is to their client, authority relationships should be collegial, feedback will be immediate and concrete, and responsibility for decision making is personal. In contrast, managers develop a managerial mentality. Managers believe that their primary allegiance is to the organization, authority relationships should be hierarchical, feedback can be delayed and vague, and responsibility for decision making is shared (Freidson 1972).

These differing mind-sets can influence not only the day-to-day operations of healthcare organizations but also the manner in which senior managers who come from either of the two backgrounds approach their strategic decision making. The senior executive positions of healthcare organizations have long been dominated by managerially educated executives whose primary focus is on the organization. Their business education and training has led them to be versed in the requirements for maintaining financial viability within organizations, but they are often perceived to fall short in their understanding of the requirements for delivering high-quality care to patients.

More recently, a newer breed of senior executive has been rising to the top of management ranks, namely physician executives and other medically trained professionals (Weber

1995; LeTourneau and Curry 1997). In 1975, the American College of Physician Executives had 64 charter members; by 1995, its membership had risen to 10,909 (LeTourneau and Curry 1997). In contrast to managerially trained senior managers, medically trained senior managers began their career with an emphasis on patients and with knowledge of the requirements for delivering high-quality care. More and more organizations have come to rely on medically trained managers to help contain costs, improve the quality of care rendered to patients, and enhance a hospital's reputation within the community and the medical profession.

Physician CEOs are often perceived to have a unique perspective on healthcare delivery, which stems from their combined knowledge of medicine and the healthcare environment and their motivation to serve as patient advocates (Sherer 1993; LeTourneau and Curry 1997). Physician CEOs also often have solid, long-standing relationships with the board of directors and with the community, which foster trust and mutual understanding (Sherer 1993). Some observers also claim that physicians exhibit diverse approaches to management and develop important insights when identifying opportunities for their organization (Brown, Larson, and McCool 1988; Seibert and Singleton 1996). These are the positive traits of medically trained CEOs that helped bring about an increase in their numbers.

Another view on the capabilities of medically trained executives can be taken, however. Executives with

knowledge of financial operations have greater managerial power (Rothberg 2001), but many believe that physician executives frequently lack this general business and financial expertise (Dworek et al. 1998; Johnsson 1992). Surveys of healthcare CEOs indicate that the capabilities most necessary for the future are financial, marketing, and negotiating skills (Sieveking and Wood 1992; Eubanks 1990; Parsons et al. 1997). However, an independent survey of 50 physician CEOs found that 32 percent expressed their lack of business training and financial expertise as a disadvantage to their organization (Sherer 1993). When hospital and system CEOs were asked to rank a physician executive's ability to fulfill key responsibilities, responses indicated that physician executives performed least effectively in influencing the utilization of financial and other resources (Belfiglio 2000).

Despite the perceived lack of managerial training, physician executives are essential to the administrative structure of a healthcare organization. A report on America's "Top 100 Hospitals," which judges hospitals on performance measures such as patient mortality, profitability, and asset turnover, concluded that ". . . conspicuous among winners at every level were physician-led organizations . . ." (Weber 2001).

The combination of dual performance goals and distinct professional backgrounds has given rise to debates about who is best suited to manage a healthcare organization. As Golden, Dukerich, and Fabian (2000, 1157) observe, "Professional organizations have long been depicted as rife with

conflict between professionals, who are assumed to represent the interests of their profession, and managers, who are assumed to represent the potentially competing interests of the organization." A report from a leading healthcare executive search firm, Witt/Kieffer, highlights not only the challenge confronted when attempting to select an executive for the top position of a healthcare organization but also the perceived strengths and weaknesses of executives with different training backgrounds (Lloyd 2001):

Unlike other industries, where management tracks include experience in production, marketing, finance and operations, healthcare executives lack such training programs. Healthcare CEOs overwhelmingly agree there exists a lack of top management training. Physician executives rarely have broad financial responsibility; patient care executives have few responsibilities in external marketing; and when was the last time a CFO [chief financial officer] had responsibility for nursing? When a CEO vacancy occurs, the next-tier executive frequently lacks broad experience that is needed at the top level of the organization.

Who, then, is most qualified to lead a healthcare organization? Is it the managerially educated executive, who understands the financial metrics of organizations, or is it the medically educated executive, who understands the requirements for quality patient care? Who is better able to make the strategic decisions that maximize both the financial and the quality-of-care goals of healthcare organizations?

These are questions that we have heard debated frequently in the halls of hospitals, clinics, and health plan organizations, but we have thus far been unable to find empirical evidence supporting one position over another (for a notable exception, see Golden, Dukerich, and Fabian [2000]). We argue that questions such as these are too important to be left to speculation or bias and that it is important to conduct scientific research to determine whether differences in strategic decision-making ability exist between medically educated and managerially educated healthcare executives. If differences do not exist at this level, what are the characteristics of those executives whose strategic decisions have the most positive impact on the dual performance goals of healthcare organizations? In this article, we report findings of our initial investigation of these important research questions.

PREVIOUS RESEARCH AND HYPOTHESES

Research on decision making in general has a rich history within the field of management science (e.g., Allison 1971; Anderson 1983; Cohen, March, and Olsen 1972; Langley et al. 1995; Lindblom 1965; March and Simon 1958; Nutt 1984; Pettigrew 1973; Thompson and Tuden 1959). Academic studies focused specifically on strategic decision making exist as well (for an introduction, see Eisenhardt and Zbaracki [1992]; Hitt and Tyler [1991]). A number of research related to healthcare senior management—such as leadership development (Lyons 1999), CEO turnover (Moore 2000;

Dinsmore 1998) and compensation (Moore 1998), and the behavioral patterns of physician executives (Seibert and Singleton 1996; Singleton 1994)—have appeared within the healthcare literature. However, relatively little attention has been paid to the precursors of successful strategic decision making by executives in the healthcare industry. Given the dual performance goals of healthcare organizations and the unique professional makeup of healthcare executives, we argue that the connection between strategic decision making and organizational performance in healthcare organizations deserves closer research attention.

In pursuing this study, we seek to address a number of important research questions, the answers to which can have implications for the selection and development of senior executives of healthcare organizations.

1. Is the strategic decision making of medically educated executives more effective than that of managerially educated executives in improving the quality of care delivered to patients?
2. Are managerially educated executives better able to improve the bottom-line financial performance of healthcare organizations?
3. Is one executive group, medically educated or managerially educated, better able to balance the dual goals of quality of care and financial viability?

To answer these questions, we turn to the management literature in general

to gain insights on important factors that influence strategic decision-making outcomes. The influential work of Hambrick and Mason (1984) has generated an extensive stream of research on the demographic characteristics of the "upper echelons" of senior management and the impact these characteristics have on strategic decisions and organizational outcomes. Their model theorizes that demographic characteristics, such as age and educational background, contribute to a perceptual filtering process that influences the type and amount of information executives use in their decision making. As a result, executives who are confronted with a similar situation are likely to focus their attention on different pieces of information based on their personal demographic characteristics. These differences in information processing in turn lead to differences in strategic decisions, which then have differential organizational performance outcomes. The upper-echelons stream of literature thus suggests that the demographic characteristics of an executive can have an important influence on executives' strategic decision making and the resulting organizational performance.

Here, we report the results of our study into the determinants of successful strategic decision making in the healthcare industry. In doing so, we take direction from Hambrick and Mason (1984) and examine a key demographic characteristic of healthcare executives, namely educational background. Our interest in the influence of educational degrees is driven by perceptions that the educational background of senior managers influences their interest and ability to achieve the dual

performance goals of healthcare organizations. The dual performance goals of healthcare institutions are captured in the widely stated aphorisms of "no money, no mission" and "no health, no wealth."

Healthcare institutions are held accountable not only for maintaining financial viability and low-cost healthcare services but also for delivering the highest possible quality of care. As we suggested earlier, medically educated managers are sometimes perceived to be more in tune with the needs of patients as a result of their education and therefore are more likely to make decisions that benefit the quality of care delivered to patients. In contrast, managerially educated executives, as a result of their education, are perceived to be more conscious of the requirements for financial viability of an organization and therefore are more likely and better able than their medically educated counterparts to make decisions that benefit the financial performance of healthcare organizations. These perceived strengths from each educational background are also often associated with perceived weaknesses. While medically educated managers are viewed as being attuned to quality of care, they are sometimes faulted for an inability to appreciate the bottom-line financial impact of their decisions. Similarly, managerially educated managers may be perceived to attend to financial needs but that they do so at the expense of patient care.

Based on these perspectives and drawing on the upper-echelons theoretical framework (Hambrick and Mason 1984), we hypothesize that the educational background of senior

healthcare managers will influence the type of information they use during strategic decision making and that these differences will influence the organizational performance outcomes they achieve. Specifically, we hypothesize that medically educated senior managers (e.g., MDs, RNs, LPNs) will use more quality-of-care-related information in their decision making and achieve higher levels of quality-of-care performance for their organizations than will their managerially educated counterparts. Furthermore, we hypothesize that managerially educated senior managers (e.g., MBAs, MIAs, MPHs) will use more financial information in their decision making and achieve higher levels of financial performance for their organizations than will their medically educated counterparts.

METHODOLOGY

To test these hypotheses, an experiment employing a personal-computer-based simulation was conducted. (Additional details on the simulation are available on request from Dr. Schultz.) Computer simulations have been used frequently in management decision-making research (*cf.* Hollenbeck et al. 1998, 1995; Lant and Hewlin 2002). This simulation was developed by the Healthcare Forum in cooperation with 10 nationally recognized healthcare organizations, including Kaiser Permanente and the University of Michigan Health System, and with funding from 3M. Like other computer simulations, which have been used successfully in a variety of healthcare settings (*Health Care Strategic Management Review* 2001; Clague et al. 1997; Ledlow, Bradshaw, and Perry 1999; Merkle 2002), the

simulation is used in the training of healthcare executives to expand their understanding of the dynamics of the current healthcare environment. The task of participants in the experiment was to make resource allocation decisions using 9 decision variables and 15 feedback items over the course of 20 periods (years) for a hypothetical integrated healthcare organization. The participants were instructed to pursue the dual goals of maximizing net income and improving customer satisfaction.

The simulation is complex and dynamic, with more than 150 interrelated variables within networks of nested causal relationships. The simulated organization has revenues of \$524 million and expenses of \$476 million, serves a population of 300,000, has four competitors, and has a staff of 7,500. The simulation has numerous feedback loops that reinforce or inhibit interaction among variables and, consistent with "systems thinking" (Senge 1990; Senge and Sterman 1992), emphasizes the importance of understanding the whole system rather than only parts of it. Because of the complexity and the partial transparency of the simulation (not all variables and relationships are visible to the participant), decisions may have unintended consequences and undesirable or unexpected effects. An additional challenge is that decisions have irreversible consequences, which makes trial-and-error experimentation difficult or impossible. Although participants cannot directly see the linkages among variables (i.e., the algorithms on which the simulation is constructed), it is assumed that experienced senior man-

agers are aware of these relationships and can deduce their influence from the feedback items they view in the simulation. Performance is tied to the ability to deal with feedback and to anticipate how decisions will play out over multiple periods. A high level of performance is thus associated with a high level of knowledge in healthcare strategic decision making.

Study participants consisted of 38 senior managers from two large, midwestern integrated healthcare organizations. All participants were briefed according to institutional review board guidelines for human subjects and signed informed-consent disclosures. On average, the study participants were 3.1 reporting levels below the CEO of their organization. Twenty of the managers had managerial degrees, and 18 had medical degrees. None of the managers held joint managerial and medical degrees. The mean age of study participants was 45 years (s.d. = 8.0), and the mean number of years of work experience in the healthcare industry was 18.4 (s.d. = 8.6). Participants also had an average of 10 years (s.d. = 6.9) of healthcare management experience. While the medically educated participants in the study had begun their careers as practicing physicians, all had at least two years of full-time equivalent healthcare management experience, with an average of 8.7 years (s.d. = 6.3). All participants were employees of the sponsoring organizations.

Measures

Our theoretical model and hypotheses examine the connection between

demographic variables (the independent variable) and information use and performance outcomes (the two dependent variables). Our primary demographic variable of interest is the educational degree held by the study participant, although in the Conclusions section of this article we also report on other demographic variables that were gathered.

We used three different measures of our first dependent variable—*information use*: financial information use, quality-of-care information use, and total information use. Unknown to study participants, a computer program was running in the background as they completed the simulation. As participants made decisions, this program tracked and recorded how long they viewed each of the 15 feedback items included in the simulation (i.e., net income, market share, service level, etc.). Total information use was calculated as the number of seconds per year a participant viewed all 15 feedback items. In addition, an expert panel of healthcare professionals categorized the 15 items as being financial-performance related or quality-of-care-performance related. Financial information use was then calculated as the number of seconds per year a participant viewed the 5 feedback items that were categorized as financial related. Quality-of-care information use was the number of seconds per year that the 6 quality-of-care-related items were viewed by participants. (Four items were not clearly categorized as financial or quality-of-care related.)

We also used three measures for our second dependent variable—

organizational performance: customer satisfaction, net income percentage, and years in business. The first two were among the feedback items provided to participants as they completed the simulation. These items were selected as representative of the dual performance outcomes for which healthcare organizations and executives are held accountable. As part of the study, participants were instructed to maximize both customer satisfaction and net income. Within the simulation, customer satisfaction was based on the access to and quality of services received by patients and therefore represented a good summary measure of the quality of care being delivered to patients. Customer satisfaction appears as an index from 0 to 100, with an initial value of 80. Net income is the percentage of sales that are remaining after all expenses are deducted. The initial value for net income was 7.5 percent. The number of years a participant was able to stay in business was a third measure of performance. While the simulation was set up to run for 20 simulated years, 28 of the 38 participants were unable to maintain a positive cash balance for that length of time. The variable—years in business—was calculated as the number of years a participant's simulated organization maintained a positive cash balance. The analysis in this study is based only on data for the years during which participants stayed in business.

A number of control variables, such as experience with personal computers, were also measured but did not influence the results.

EMPIRICAL RESULTS

Table 1 presents an analysis of variance (ANOVA), including means and standard deviations for the key variables. The only statistically significant difference between medically educated and managerially educated senior managers appears in the area of quality-of-care information use. While no difference was seen in the use of financial information or total information, medically educated participants used more quality-of-care information in their decision making than did managerially educated participants. This finding is consistent with our hypothesis that a medical background will be associated with giving more attention to issues related to quality of care, but it is inconsistent with our assertion that a managerial background will be associated with greater attention to financial issues.

More important than the difference in use of quality-of-care information is the lack of statistically significant differences in any of the performance outcomes. While managerially educated participants scored better on all three measures of performance (financial, quality of care, and years in business), these differences were not statistically significant. As a result, we find no support for our performance-related hypothesis that educational background will translate into superior performance in the area most closely associated with that education. We also find that neither managerially educated nor medically educated participants, as a group, were able to outperform the other in extending the longevity of their

TABLE 1

Analysis of Variance for Information Use and Organizational Performance ($n = 38$)

Dependent Variable	Medically Educated		Managerially Educated		F	P
	Mean	S.D.	Mean	S.D.		
<i>Information use (seconds)</i>						
Financial information use	17.4	6.8	15.0	6.8	1.1	.294
Quality-of-care information use	17.0	6.1	11.5	3.9	11.0	.002
Total information use	44.4	13.3	35.6	14.0	3.9	.057
<i>Organizational performance</i>						
Customer satisfaction (index)	67.7	17.9	71.7	19.7	.44	.511
Net income (percentage)	-10.6	11.5	-8.1	16.8	.30	.591
Years in business	13.3	4.5	14.3	5.1	.34	.562

organization as measured by years in business.

CONCLUSIONS

In pursuing our research, we sought to assess empirically what we found to be commonly held perceptions about relative ability of healthcare executives from two different professional backgrounds. These perceived differences in decision-making ability implied that medically educated executives would be more in tune with the requirements for higher levels of patient care and would make strategic decisions that result in higher levels of patient care but that potentially sacrifice financial performance. These perceptions also held that managerially educated executives would be better able and more likely to make strategic decisions that improved the financial performance of healthcare organizations but would potentially do so at the expense of quality of care.

The results of our study suggest that these perceptions may be inaccurate. Using a simulated decision-making scenario, we find no statistically significant differences between medically educated and managerially educated senior managers' ability to make strategic decisions that improve the quality of care or the financial performance of healthcare organizations. We did find that medically educated participants used more quality-of-care information in their decision making, but this did not translate to superior quality-of-care performance.

Another important finding of our study was that no significant differences based on educational degree were found in the ability of senior managers to extend the longevity of their healthcare organizations. Of the 38 senior managers who completed the study, only 10 were able to make strategic decisions that kept their simulated organizations in business for the entire

20 years of the simulation. Twenty-eight of the senior managers made decisions that led to the bankruptcy of their organization—some as quickly as three years into the simulation. Similarly, wide differences in financial and quality-of-care performance were apparent across study participants.

The key finding we report here is that while significant differences exist in the ability of senior managers to make strategic decisions that improve the quality of care, financial health, and long-term viability of their organization, these differences are not significantly attributable to the educational background of the executive. As part of the data collected for this study, we also examined the influence of other demographic variables, such as age, gender, years of work experience, and years of management experience, on performance outcomes. All of these factors were found to be unrelated to performance outcomes.

We must note that this study into differences in ability to make strategic decisions was completed with a sample size of 38 executives, and as such the statistical power (Cohen 1988) of the ANOVA tests is not high. As a result, one can conclude that large effects on strategic decision making ability do not exist because of educational backgrounds, but it is not possible to rule out that medium to small effects could be present.

It is also important to understand the limitations of an experiment using a computer-based simulation as a research method. While simulations used in experimental settings offer advantages such as their ability to compress

time and to minimize or control for influences that are not of interest to the study (e.g., differences in organizations' ability to effectively implement the decisions that are made), they are also suspect to artificiality (Babbie 1986). That is, does the simulation reflect the true nature of the underlying phenomenon being studied? We believe that the extensive effort put into the development and use of the simulation by 10 respected healthcare systems speaks highly of its validity, but future research employing alternative methodologies such as surveys or observational studies should be considered. Both surveys and observational studies offer the advantage of examining real-world decision making *in situ* rather than in a laboratory setting (Singleton, Straits, and Straits 1993).

We encourage additional research into this important area of healthcare management. As healthcare systems become increasingly turbulent and complex, the quality of strategic leadership and strategic decision making becomes ever more important. The dual goals of healthcare organizations to sustain financial viability ("no money, no mission") and to deliver high quality of care ("no health, no wealth") raise unique challenges for their CEOs and other senior executives. An underlying, often unarticulated, debate is, Who is the best person to lead a healthcare organization? We have argued that this issue is too important to be allowed to fester in board rooms or in the popular press, and we have pursued empirical data to support the strategic decision making superiority of one group over another. Our results indicate that while

there may be small or medium influences, large differences in strategic decision making ability do not exist between medically educated and managerially educated healthcare executives. Our research suggests that much of the discussion over the advantages of one type of educational background versus another may be misguided. Further research that examines characteristics beyond educational background is necessary to identify the important precursors of successful and unsuccessful executive strategic decision making in the healthcare industry.

We recommend that future research delve into other factors such as the number or type of work experiences and additional educational training beyond medical or managerial degrees. By pursuing additional research in this area, we will be better able to select and develop the new breed of leaders required in today's healthcare environment. It is our hope that practitioners and researchers alike will move beyond speculation and prejudice and turn to empirical research for answers to the question of who is most qualified to lead our modern healthcare organizations.

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PRACTITIONER APPLICATION

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Serving as the CEO of a health system requires enormous talent and commitment. A CEO, or CEO candidate, must possess strong academic credentials as well as a record of leadership achievement to earn credibility with the board, medical staff, associates, volunteers, and community. Today, the CEO role is increasingly

played by MDs and MBAs as well as MHAs (master's of health administration), attorneys, accountants, nurses, and other professionals.

The study's simulation exercise focused on the relative effectiveness of resource-allocation decisions made by executives with either an MD or an MBA as measured by customer satisfaction, net income percentage, and years with a positive cash balance. The authors found no statistical differences in the decision-making abilities between these two groups of executives related to the above measures. It is worth noting that the performance of any healthcare CEO will also be measured against a great number of other objective and subjective factors.

Without exception, the CEO of each hospital in Solucient's "100 Top Hospitals" report or in the "America's Best Hospitals" edition of the *U.S. News & World Report* will be able to show that his or her organization delivered outstanding clinical quality of care and produced impressive financial performance. However, the best CEOs, whether clinically, managerially, or otherwise educated, will be recognized by directors, physicians, volunteers, and staff only if they prove to be gifted leaders who have the vision, energy, and self-discipline to demonstrate consistent results over a number of years and through at least one economic downturn.

Being appointed to the CEO role is a notable achievement. However, as the authors suggest, no specific graduate degree has proven to give its holder a superior edge in being recruited, retained, or regarded as a leader who can articulate a vision, engage knowledgeable workers in service to others, and develop relationships with the many special-interest groups invested in healthcare concerns.

Further research efforts may identify the life experiences, work histories, and personality types that mark the CEOs of those healthcare organizations that have a consistent record of earning "Top 100" or "America's Best" status. The years ahead will be predictably more turbulent. It will be essential to move beyond the debate over MD or MBA as CEO if healthcare organizations are to attract, develop, and retain dynamic men and women who have career alternatives that promise greater economic rewards and fewer personal sacrifices.