

Dual-degree MD–MBA Students: A Look at the Future of Medical Leadership

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In an increasingly turbulent medical care system, business training is one way doctors and medical students are seeking to redefine their ability to lead and wield influence. Changes in the health care system have fostered the need for physician executives with business training who can serve as liaisons between administrative and clinical personnel. As the development of integrated delivery systems has combined clinical and administrative functions, the roles of physician executives have increased, as well as the demand for related training of physician leaders. Growth in the number of physician executives is expected to continue as such individuals demonstrate their ability to facilitate provider–physician relations and lend unique expertise and perspective in the health care delivery system.¹

The transition from clinical roles to administrative functions can be challenging for physician executives.^{2,3} Moving into administrative roles presents challenges different from those inherent in medical training and practice.⁴ If the physician manager is to be considered an effective asset to an organization, the new role requires distinct shifts in thinking, philosophy, attitudes, and behavior.⁵ Because traditional clinical training of physicians contrasts with management training and functions, few physicians are prepared for the requirements of management roles.⁶

Several studies of leadership and management have found that leaders' personality and behavioral characteristics are reliably predictive of group performance.^{7,8} Leadership success is associated with interpersonal ability, group-oriented behaviors, empathy, boldness in times of uncertainty, internal locus of control, and confidence.^{9,10} Leadership theory suggests that effective leaders are able to identify and actively respond to changes in a profession, organization, or situation.⁸

Although a growing number of practicing physicians have obtained business (MBA) degrees, relatively few educational initiatives have been focused on business and management training within the medical school program.¹¹ In response to this demand, a limited number of medical schools are offering dual-degree programs in medicine and business. Established through cooperative agreements between medical and business schools, these programs offer a variety of arrangements through which medical students can obtain business and clinical training concurrently.

Students enrolled in dual-degree programs make up an important group for exploratory research. If dual-degree medical students exhibit characteristics associated with successful leaders, this might indicate their ability to function as effective leaders in both clinical and management roles. Within the traditional medical school environment, it is possible that this group is reshaping individual beliefs about physician roles and the fit between clinical and administrative functions. Their career goals and the factors influencing these students to seek business training might provide an indicator of the leadership styles and roles of future physician executives.

Method

According to *Peterson's Guide to Graduate Programs in Business, Education, Health and Law*, there were eight medical schools that offered dual-degree MD–MBA programs in 1997. Of the eight schools, six had coordinated MD–MBA programs for which program directors were designated and students followed a defined path

in course work. Students in these programs were selected for inclusion in the present study.

Of the six dual-degree programs, one MD–MBA program could be completed in four years by using summers for course work. The other programs that were examined required five or six years of study. Each of the dual-degree programs had some component of an administrative internship for the students.

Survey and interview measures were used to analyze students at the six medical schools offering MD–MBA programs ($n = 87$): Bowman Gray School of Medicine, Jefferson Medical College, the University of Chicago, the University of Pennsylvania, the University of Illinois at Urbana–Champaign, and Tufts Medical School. The 87 students who were enrolled in dual-degree programs were surveyed; a control group of traditional medical students was also surveyed ($n = 115$). Traditional medical students at each site were selected based on a set of characteristics matched with those of the dual-degree students. The data were also compared with the findings from a national survey of graduating medical students compiled by the Association of American Medical Colleges. Forty of the 87 dual-degree medical students surveyed were also interviewed. The interviews were analyzed using Ethnograph, and survey data were analyzed using SPSS.

To assess whether they might overcome the barriers between clinical and management roles, dual-degree medical students were compared with traditional medical students on dimensions that were selected for their potential to indicate leadership ability. Dual-degree students were also asked about their career goals and the factors that had influenced them to seek business training.

Results

The response rate for the survey of the 87 MD–MBA students was 85%; the response rate for the 115 medical students in the control group was 69.6%. A major finding of the study is that there are indeed significant differences between dual-degree and traditional medical students on a number of dimensions that relate to career plans, leadership, motivation to be leaders, and confidence.

One set of questions was intended to assess students' beliefs, concerns, and perceptions about the future of medical practice. The set of questions was designed to compare the attitudes of dual-degree and traditional medical students regarding the changes in health care and the evolution of the physician role. The students were asked to rank statements such as "job opportunities for physicians are increasingly limited" and "the health care financing system is too burdensome on physicians." Answers to these questions provided a composite index of students' perceptions, including attitudes concerning the role of physicians in society. Both survey responses and interview feedback support the hypothesis that dual-degree students are very conscious of the changing nature of the medical care system and the need to transform physician roles. Dual-degree students were less likely to feel negative about changes in job opportunities for physicians or about regulatory or financial constraints in medicine. The data also support the hypothesis that dual-degree students are influenced to obtain business degrees because of concern about the changing job market for physicians.

The members of both the dual-degree and control groups were asked what they expected to earn five and ten years after completing residencies. The MD–MBA group had an expected mean in-

come after five years of \$167,986, while the MD students had a mean of \$132,208. The means of the two groups were significantly different; $t(147) = 3.66, p < .0001$.

As an indicator of their career plans and aspirations, dual-degree students were asked to rank activities according to how they would feel about them as primary job responsibilities. Job responsibilities ranged from CEO of a for-profit hospital to medical director of an inner-city health clinic. Job responsibilities were provided as indicators of the types of positions these students might desire, particularly related to their tendencies toward more altruistic positions compared with activities that might be traditionally associated with the "business" of medicine. The job activities were organized into subgroups based on activity type and were developed to reflect items that might indicate students' altruistic versus economic philosophies. The first group included medical director of an HMO, CEO of a biotechnology company, medical director of an insurance company, and chief of staff of a for-profit hospital system. In contrast to the first group of activities, the second group included activities traditionally associated with the public-services arena. This group included medical director of an inner-city health clinic, chief of staff of a rural hospital, medical liaison for the World Health Organization, and deputy director of the state board of health.

The combined group ratings were compared using t -tests, and the subgroup scores were significantly different. The mean for the "business" subgroup was 1.83; the "public services" subgroup mean was 2.26. The dual-degree students considered the business group significantly more appealing, $t(105) = 3.02, p < .05$.

Both dual-degree and traditional medical students were asked to select their preferences from a list of career activities, including such things as full-time faculty appointment, private clinical practice, and administrative duties. Seventy-eight percent of the dual-degree students expressed an interest in a combination of clinical and administrative duties; 13.5% of the dual-degree students planned administrative jobs with no clinical practice. Several dual-degree students interviewed stated that they planned to forego residency training to initiate careers in the private sector.

Both traditional medical and dual-degree students were asked whether they were confident that they would have necessary clinical and administrative skills when they graduated from their respective educational programs. These results were compared with corresponding information from the national database of graduating medical students as well as from the control group of students. Dual-degree students expressed little doubt in their clinical or administrative abilities and were significantly more confident than were their medical student counterparts (clinical skills— $t(151) = 6.409, p < .0001$; administrative skills— $t(150) = 2.913, p < .01$).

Confidence in one's ability to influence others and the environment is associated with leadership.¹² Yet, misplaced confidence can lead to poor decision making for both clinicians and managers. It is interesting that the dual-degree students were more confident than were the traditional medical students with respect to both clinical and administrative skills. Although a positive self-concept may be beneficial, the students' confidence has implications for the future of medical care. The potential overconfidence of the MD-MBA students needs to be understood and managed to avoid potential disastrous effects; confidence is a positive attribute for leaders and managers, but overconfidence can be a barrier to effective decision making. Individuals who are overconfident might fail to seek consensus among groups and lack the discipline to seek out information in solving clinical and management problems.

Students' influences and motives for choosing the dual-degree programs, as well as their career plans, provide an indication of the roles they will play in the delivery system. It was hypothesized that dual-degree students are motivated to seek business degrees because of a desire to be leaders in the health care delivery system. Their career goals and plans illustrate such motivation. In response to survey questions related to their reasons for seeking business education, the students rated most highly factors such as career op-

portunities, opportunity for innovation, opportunity to be a leader in medicine, and opportunity to make a difference in medicine.

Discussion and Implications

A new model of physician executives is emerging from dual-degree programs. Young physicians are making decisions not only at the beginning of their medical careers, but in most cases, for these students, at the beginning of their medical education. It is possible that dual-degree programs will produce individuals equipped to take leadership roles in managerial assignments early in their careers, perhaps even in residency programs.

This study underscores an important policy question for the health care system and medical education. The challenges facing the health care system are both economic and equity-related. Escalating costs are combined with serious problems of underserved populations. Some of the most significant management challenges in the delivery system relate to the challenge of how to provide equalized distribution of health care services as well as how to improve access to basic health care services. Physicians with business training are needed in all areas, not only in the areas of high technology and high costs. The study findings suggest that dual-degree programs are attracting students primarily with business interests. Eleven of the 40 students interviewed had full-time and significant work experience in areas such as investment banking and health care consulting prior to matriculation in medical school. Students interested in working with public health needs and underserved populations are not well represented in the dual-degree programs.

Are the programs too narrowly focused on dealing with the business of health care delivery? As early adopters of an innovative medical education initiative, dual-degree students provide a unique perspective on the direction of medical leadership and alternatives to traditional medical careers. A key finding of the study suggests that this cohort wants to direct hospital and insurance companies more than they want to work in the public sector. This indicates that the motivation for those students to seek dual-degree programs, as well as motivating factors behind program development, were related to business and high-technology settings. The students' job-activity preferences and income expectations provide support for this conclusion. Traineeship experiences and mentors provided by the dual-degree programs may need to be modified to address these trends.

Physician executives are likely to have a pivotal role in the uncertain future of health care.¹³ The management of health care resources requires a combination of skills that balance the principles of economics, finance, and accounting with patient and population health needs. Dual-degree medical education programs can help develop physician leaders who can blend clinical and management skills into an effective vision for the future of health care delivery.

The authors of *In Search of Physician Leadership* observe that physicians are entering management in increasing numbers and at increasing levels of responsibility, a trend they assert portends well for the medical profession and the health care system.¹⁴ Medical education programs combining business and clinical education are training students who can contribute to this positive trend. As one student stated, "[Dual degrees] can bring values of medicine into the business world. It used to be totally different, but now things are beginning to merge. We can do the best for both fields."

This is an exploratory study of an innovation in medical education. The early stages of this field offer the opportunity to step back and consider the professional identity desired among dual-degree medical students. Dual-degree programs are producing a prototype of physician executive whose training is remarkably different from that of traditional physicians. The data suggest that there is an interesting range of expectations among dual-degree medical students and the careers that they anticipate. The interests and career

preferences of the students reveal several trends of concern, but also suggest that these programs can make an important contribution to the health care system.

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