

Outcomes of a Program in Business Education for Physicians and Other Health Care Professionals

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Background: We sought to determine the expectations that graduates of one business of medicine program had upon enrollment and to ascertain fulfillment of those expectations after completion, as well as the extent to which participating in the program improved business skills and led to advancement in office practice or career development.

Methods: A postal mail survey was conducted of graduates of The Johns Hopkins University's Business of Medicine Program, a year-long, four-course certificate program to educate midcareer academic and nonacademic physicians and other health care professionals about fundamental business practices and their application to health care.

Results: Surveys were sent to 285 graduates, and responses were received from 136 (48%) of them. Most respondents expected the program to expand their management skills, to enhance their knowledge of marketplace trends, and to advance their careers. These results were not correlated with respondents' age, sex, or profession (ie, physician, non-physician). More than 87% of respondents agreed that their overall expectations had been fulfilled by the time they completed the survey. Participants noted, however, that several expectations were unfulfilled upon replying to the survey.

Conclusion: Programs designed to educate physicians and other health care professionals—in private practice, academia, or industry—about

the business aspects of medicine can be effective but need to be designed carefully to integrate business theory and application to the medical setting.

Key Words: business of medicine, management education

The rapidly changing medical and health care landscape has created a demand for physicians and other health care professionals who have business skills.^{1,2} Administrative roles for physicians in particular in the business and management of medicine expanded widely during the 1990s.³ At a time when health care faces dramatic changes, many physicians have embraced business education as a pathway to leadership. Sparked by a growing need for physician leaders who are able to apply business and clinical knowledge to decision making, the trend to increased administrative roles for physicians has affected many points along the health care continuum. Academic medical centers, for example, have recruited department leaders who are able to combine strong clinical skills with sound business acumen. Health systems, payers, and other health care enterprises have sought physicians with proven management and administrative skills.⁴ Similarly, physician private practices (including many academic faculty practice plans), guided by a desire to achieve economic and operational viability, have expanded the traditional role of the physician to include managerial functions.⁵ Increasingly, nontraditional employers such as consulting and

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Key Points

- Physicians increasingly need business skills, to survive in an increasingly competitive environment or to transition their careers from clinical care to management.
- Physicians have high expectations for programs intended to develop their business skills.
- The program under study in this manuscript met most of those expectations, but fell short in certain respects.
- Effective business programs for physicians must concentrate on translating business theory into direct application to the reality of medical practice.

investment firms are recruiting physicians with business backgrounds. Overall, physicians are being driven to become “bilingual”⁶—that is, to learn the languages of medicine and of business to survive in a fiercely competitive marketplace.

The surging demand for physicians with special training in business and administration resulted in a proliferation of formal graduate level business educational programs designed to prepare physicians to meet the administrative challenges of a commercial enterprise.⁷ Medical schools, business schools, and professional associations are currently offering an array of business programs ranging from single courses to certificate programs to masters degree programs.^{8,9} Some universities have created joint degree programs, such as MD/MBA and MD/MHA degree programs, to increase their attractiveness to students.

During the 1990s, the marketing of business education to physicians by medical schools and academic medical centers has become a growing trend in medicine internationally.^{10,11} However, measuring the impact of these programs has been challenging, partly due to the newness of the concept and to the lack of published research assessing the value of these specialized educational curricula. Few programs systematically track and report longitudinal data about the career development and professional outcomes of their physician graduates. Reports of the success of individual programs and their graduates have largely been anecdotal.^{12,13}

The reasons why physicians enroll in formal business programs and what specific goals they seek to attain are other issues that have not been, as far as we know, reported. But both the expectations of physicians and the extent to which those expectations have been realized are critical in determining the impact of business of medicine programs. To our knowledge, this is the first published report assessing the impact of such a program.

Methods

The Johns Hopkins Business of Medicine Program

The Johns Hopkins Business of Medicine Program was inaugurated in 1994 as a joint effort between the Johns Hopkins University School of Medicine and what is now the University’s School of Professional Studies in Business and Education. Its initial purpose was to educate mid-career, senior-level faculty leaders at the School of Medicine about fundamental business principles and their application to health care. The curriculum for the yearlong, four-course, 12-credit certificate program consisted of the following: Managed Care: Perspectives and Practices; Accounting for Decision-making in Medicine; Managerial Finance for Medical Services; and Leadership and Organizational Behavior in Medical Settings.

The first cohort consisted of 41 mid-career, senior-level Hopkins physicians. In fall 1995 the program was offered to physicians outside of Hopkins. Nonphysician clinicians, such as nurses and pharmacists, and health care administrators

without clinical training began to be admitted in fall 1996. A full MBA degree with a concentration in Medical Services Management was added in 1997. From the beginning of the program to the end of the 2001 academic year, 541 students have taken at least one Hopkins Business of Medicine course, 334 of whom have received the graduate certificate. Of the graduate certificate recipients, 81 continued on to earn an MS in business degree or an MBA degree. Of the 150 students enrolled in fall 2001, approximately half worked at Hopkins and approximately half worked elsewhere, and about 70% were physicians, 15% were other clinicians, and 15% were health care administrators.

The Survey

The two-and one-half page survey (Fig. 1) of the Hopkins Business of Medicine Program graduates focused on four issues:

1. What did students expect before they enrolled?
2. To what extent were those expectations realized?
3. What specific business skills were improved as a result of having participated?
4. Did these newly acquired skills translate into significant advancement in their practices or career development?

Surveys were sent to program graduates who had valid postal addresses. A second copy of the questionnaire was sent approximately 6 weeks later to those who had not yet responded.

Results

Demographics of Respondents

Of the 334 Hopkins Business of Medicine Program graduates, valid addresses were available for 285. Completed surveys were received from 136 (48%). Table 1 summarizes the demographics of the survey respondents. The distribution of respondents by sex, age, and highest educational degree was not statistically significantly different from the overall population of certificate graduates (data not shown). Also, the distribution of respondents matched the target audience for the program, mid-career physicians. As Table 2 shows, most certificate graduates began the program while their major professional activity was inpatient care, in which they have remained. However, a net of about 6% moved into administration. A cross-tabulation of major professional activity before and after the program (data not shown) indicated that about 20% of respondents changed their major professional activity.

The demographics of primary affiliation showed that about 40% of respondents were primarily affiliated with a university before the program, and about 45% at survey (Table 2). Johns Hopkins University was the primary university

The Johns Hopkins University Business of Medicine Outcome Study

Name (optional): _____

Year Business of Medicine Certificate Program (BMCP) completed: _____

Medical specialty (primary): _____

Medical specialty (secondary): _____

Participant demographics at time of BMCP: [Circle only one.]

Age: 20–39 40–49 50–59 60+

Sex: Male Female

Highest degree: Bachelor's BSN Master's MSN MD DO PhD Other

Major professional activity before BMCP: [Circle only one.]

Patient care
 Education
 Research
 Administration
 Fellow (specify area: _____)
 Resident (specify year: PG1 PG2 PG3 PG4 PG5 Other)
 Medical student

Primary affiliation before BMCP: [Circle only one.]

Private practice
 Hospital or system
 Managed care organization/insurance company
 University (specify: _____)
 Industry
 Other (specify: _____)

Current major professional activity: [Circle only one.]

Patient care
 Education
 Research
 Administration
 Fellow (specify area: _____)
 Resident (specify year: PG1 PG2 PG3 PG4 PG5 Other)
 Medical student

Current primary affiliation: [Circle only one.]

Private practice
 Hospital or system
 Managed care organization/insurance company
 University (specify: _____)
 Industry
 Other (specify: _____)

Please indicate the extent to which each of the following was your expectation of the program at the time you enrolled.

| | Strongly agree | Agree | Disagree | Strongly disagree |
|--|----------------|-------|----------|-------------------|
| Improve my practice/department profitability | 4 | 3 | 2 | 1 |
| Enhance my knowledge of market place trends | 4 | 3 | 2 | 1 |
| Improve my ability to run an office practice | 4 | 3 | 2 | 1 |
| Improve my practice's efficiency | 4 | 3 | 2 | 1 |
| Expand my management skills | 4 | 3 | 2 | 1 |
| Advance my career | 4 | 3 | 2 | 1 |

(continued next page)

Fig. 1 The Hopkins Business of Medicine Certificate Program (BMCP) survey.

*(continued)***After completion of the BMCP, were your overall expectations realized? [Circle only one.]**

Yes

No

Please indicate the extent to which you realized your expectations in the following areas.

| | Strongly agree | Agree | Disagree | Strongly disagree |
|--|-----------------------|--------------|-----------------|--------------------------|
| Improve my practice/department profitability | 4 | 3 | 2 | 1 |
| Enhance my knowledge of market place trends | 4 | 3 | 2 | 1 |
| Improve my ability to run an office practice | 4 | 3 | 2 | 1 |
| Improve my practice's efficiency | 4 | 3 | 2 | 1 |
| Expand my management skills | 4 | 3 | 2 | 1 |
| Advance my career | 4 | 3 | 2 | 1 |

Please indicate the extent to which the program improved the following specific skills.

| | Strongly agree | Agree | Disagree | Strongly disagree |
|---|-----------------------|--------------|-----------------|--------------------------|
| My ability to negotiate a managed care contract | 4 | 3 | 2 | 1 |
| My skills in analyzing financial statements | 4 | 3 | 2 | 1 |
| My ability to assess a balance sheet | 4 | 3 | 2 | 1 |
| My leadership skills | 4 | 3 | 2 | 1 |
| My ability to run a department/organization | 4 | 3 | 2 | 1 |
| My ability to develop a business plan | 4 | 3 | 2 | 1 |

Since completing the BMCP:

Have you realized an increase in income?

Yes

No

Have you changed your job?

Yes

No

Have you assumed more of a leadership role in your organization?

Yes

No

If you wish, please add further comments about the BMCP: _____

Thank you for taking the time to complete this survey.**Fig. 1 Continued**

affiliation of respondents (data not shown). Before and after the program, about 25% were primarily affiliated with a hospital or system, 22% with private practice, 6% with an insurance company, and 3% in industry.

These results suggested that primary affiliation remained

the same after the program. However, a cross-tabulation of primary affiliation before and after the program (data not shown) found that 96 (71%) changed their affiliation from when they started the certificate program to when the survey was conducted. For example, 21 (16%) moved from a uni-

Table 1. Demographics of survey respondents

| Characteristic | Percentage (n = 136) |
|------------------|----------------------|
| Sex (M/F) | 64/36 |
| Age (yr) | |
| <40 | 33 |
| 40-49 | 40 |
| 50-59 | 24 |
| ≥60 | 3 |
| Highest degree | |
| MD/DO | 71 |
| PhD | 4 |
| MSN | 2 |
| Other master's | 10 |
| BSN | 3 |
| Other bachelor's | 9 |
| Other | 2 |

Table 2. Professional activity and affiliation of survey respondents

| | Percentage (n = 136) | |
|-----------------------------|----------------------|---------------------------|
| | Before program | After program (at survey) |
| Major professional activity | | |
| Patient care | 60 | 55 |
| Administration | 21 | 27 |
| Research | 10 | 11 |
| Fellow/resident/student | 6 | 3 |
| Education | 2 | 4 |
| Primary affiliation | | |
| University | 43 | 41 |
| Hospital/system | 26 | 24 |
| Private practice | 21 | 22 |
| Insurance company | 5 | 6 |
| Industry | 2 | 3 |
| Other | 2 | 4 |

versity to a hospital/system setting, whereas 16 (12%) moved from a hospital/system to a university setting.

Fulfillment of Expectations

Figure 2 shows the expectations that respondents recalled from when they had enrolled, and the extent to which the respondents perceived that these expectations were later fulfilled. All respondents agreed (or strongly agreed) that they expected the program to expand their management skills. Almost all (98%) expected the program to enhance their knowledge of marketplace trends. Eight-seven percent expected the program to advance their careers. Between 72 to



Fig. 2 Students' expectations versus fulfillment.

81% of respondents expected the program to improve practice or departmental profitability, to improve practice efficiency, and to improve their ability to manage an office practice.

These expectations were not correlated with the respondents' age, sex, or profession (that is, physician or nonphysician) (data not shown). Those who changed their major professional activity (such as from patient care to administration) or their primary organizational affiliation (such as from university to private practice) after graduating from the program were statistically significantly more likely to have expected the program to help advance their careers (data not shown).

More than 87% of respondents agreed that their overall expectations before starting the program had been fulfilled subsequently by the time they replied to the survey (data not shown). Figure 2 shows that the percentage of respondents who agreed on specific expectations before taking the program was highly correlated with the percentage of respondents who agree that specific expectations had been fulfilled by the time they replied to the survey.

One negative result is that, for every category except "Improve My Ability to Run an Office Practice," fewer respondents reported that their expectations were fulfilled by the time of the survey than they had expected upon enrollment in the program. For example, 88% of respondents expected the program to enhance their careers, but only 75% found that the program actually did so. A separate analysis (data not shown) found that for every category the number of respondents who reported that the program did not fulfill expectations was higher than the number who reported the program more than fulfilled expectations. The "Advanced Career" category had the most (39) respondents replying that the program less than fulfilled their expectations, and the fewest (8) replying that the program more than fulfilled their expectations. The "Improve My Practice's Efficiency" category had the fewest (26) replying that the program less than fulfilled their expectations, and the most (16) replying that the program more than fulfilled their expectations.

The extent to which participants' expectations were realized was not correlated with respondents' age, sex, or profession (data not shown). However, those who changed their

primary organizational affiliations or their positions after graduating from the program were statistically significantly more likely to agree that the program helped to advance their careers (data not shown).

Improvement of Business Skills

Figure 3 shows the extent to which respondents reported that they acquired improved specific business skills from having the Hopkins Business of Medicine program. About 95% agreed or strongly agreed that the program improved their skills in analyzing a financial statement or a balance sheet and in leadership. About 87% agreed or strongly agreed that the program improved their ability to administer a department or organization and to develop a business plan. However, only 62% stated that the program improved their ability to negotiate a managed care contract. (This latter result is not surprising, given that the topic of contract negotiation is addressed only briefly in the certificate program.) Respondents' perceived improvements in business skills did not correlate with their age, sex, or profession, or with subsequent changes in major professional activity or primary organizational affiliation (data not shown). The only statistically significant correlation was that those who changed their positions after the program were more likely to agree that the program improved their ability to negotiate a managed care contract.

Reported Accomplishments

The survey sought to find out if newly acquired skills learned from the program translated into significant advancement in professional practice or career development. Respondents' reported their accomplishments since completing the Hopkins Business of Medicine program. Twenty-nine percent of respondents changed their positions, 39% had an increase in income, and 56% assumed a greater leadership role in their organizations. Although this study did not track the individual successes of program graduates, we have learned anecdotally about substantial alumni accomplishments, including several alumni who assumed senior leadership positions in

their existing or new organizations, started successful entrepreneurial ventures, and negotiated a contract for a popular health care book.

Discussion

The results of the survey provide preliminary evidence of the benefits of a formalized business education program for physicians and other health care professionals. The overwhelming majority of respondents indicated that their overall expectations for this particular program were realized. The findings in this study are consistent with anecdotal reports supporting the value of executive business education for physicians¹² and claiming that such programs "set physicians apart from the pack."¹⁴

Because many of the survey participants worked in environments where they were able to apply readily their newly acquired management skills, they realized an immediate and tangible benefit from having participated in the program. One can postulate that specific skills acquired in the program helped to reinforce their managerial and administrative competence.

Not surprisingly, the survey demonstrated that the expectations of respondents were quite high. Like many other postgraduate programs targeted to professionals, the Hopkins Business of Medicine program tended to attract a highly motivated and goal-oriented group. The participants' keen focus on achievement of educational objectives in pursuit of career development no doubt buoyed their expectations.

Medical education traditionally does not include any didactics relating to business and leadership, so program participants must learn quickly when they start taking business courses. Therefore, one can surmise that the expectations of health care professionals in a structured medical-business program are magnified, accounting for the high level of expectations found by the survey.

The retrospective design of the survey might partly also explain why survey respondents reported such a resoundingly high level of expectations. Because survey participants were asked to rank their expectation level *after* they had already completed the program, many participants might have been influenced by their subsequent professional experiences—and by the experiences of their fellow alumni. Future studies might better assess the benefits of business education for physicians by surveying participants' expectations *before* course work begins.

In addition to the high expectations of the participants, the program faced the challenge of meeting the needs of a more heterogeneous group of students than is immediately apparent. There were (and continue to be) three distinct groups in the program: academic faculty who viewed this program as necessary for career advancement; private practitioners who saw this program as a way of bolstering their practice's efficiency and income potential; and health care professionals

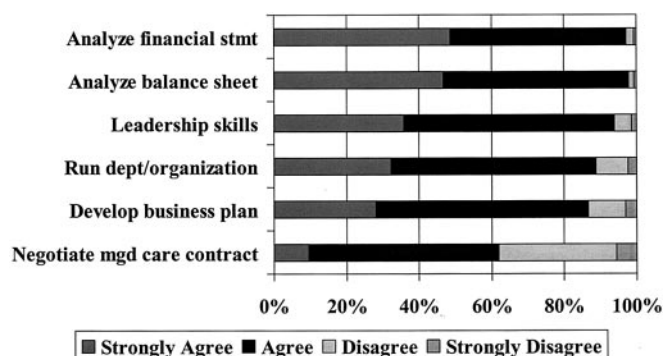


Fig. 3 Students' improvement of business skills.

with clinical or academic backgrounds who were looking to make a career change into a management or entrepreneurial position. Each of these groups had uniquely different goals and objectives, and it is not surprising that all their goals and expectations were not uniformly met. Most striking is the fact that 87% of those surveyed indicated that their objectives were successfully met.

Despite the high realization of expectations noted in the survey, it should be kept in mind that these results must be interpreted with caution, since the survey focused on a four-course certificate program, which can be completed over a single academic year. This contrasts significantly with the full MBA program, which is a 17-course, 4-year graduate-level business curriculum. It is reasonable to surmise that a survey of MBA graduates might have yielded different outcomes. Outcomes of the MBA graduates are currently being investigated.

Conclusions

A growing number of physicians and other health care professionals are embarking on formal business training to achieve professional enhancement and to reclaim control over their professional lives. Individuals with both medical and business degrees have been aptly described as persons who can “pivot quickly—at least in theory between the world of stethoscopes and the world of spreadsheets.”¹⁴ The acquisition of business basics by physicians and other health care professionals may contribute to critical improvement in the health care system. According to some physician executive experts, “the rate limiting step to good health care is managerial.”¹⁵ Unfortunately, physicians often find themselves at a disadvantage when it comes to management training and have begun to seek out specialized programs, such as the one profiled in this report. This study has shown that physicians and other health care professionals demand a tangible return on their investment of time, money, and effort. Programs that

aspire to teach business skills to them must be careful to manage expectations—and to deliver what they promise.

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**I am a little pencil in the hands of a writing God
Who is sending a love letter to the world.**

—Mother Teresa