

The Perceived Need for Physician Management Training

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The degree of change in the practice of medicine in America over the last decade is immense. Several authors have described components of this change: competition, privatization, commercialism, declining physician independence, increasing health care costs, increasing technology, a potential physician surplus, and the trend toward large organizational structures.¹⁻¹³ Although these changes are described by some as an "evolution,"¹⁰ others describe them as a "revolution,"^{2,12} and changes will undoubtedly continue in the years to come.⁸

It is clear that new skills will be needed to an increasing degree for physicians to survive and thrive in this rapidly changing environment. Economics, organization management, contract evaluation, negotiation and mediation skills, methods of allocation of limited resources, information science, and consumerism are knowledge areas that will become important to physicians. To help physicians, Krlewski et al¹⁴ urge adding material in medical school and residency covering such topics.

There is very little evidence in the medical literature that such management training currently occurs. Only one medical school appears to have an integrated management curriculum.¹⁵ A 1987 American Association of Medical Colleges survey of new medical school graduates revealed that 71% felt time devoted to practice management study was inadequate.¹⁶ At the residency level family practice programs appear to be the only specialty attempting to include some management content. A 1981 survey of family practice residency directors showed strong support for the concept of management training during residency, though 73% of the represented programs had only 1 to 30 hours of didactic content, and only 58% had some form of experiential training.¹⁷ Indeed, various surveys of family

practice residency graduates undertaken between 1979 and 1981 have in general shown perceived inadequate preparation in management areas.¹⁸⁻²³

Several questions were formulated to examine management training at the School of Medicine of the University of Missouri-Columbia. Do medical students and residents perceive a need for such training? In what specific management areas do residency graduates feel incompetent or inadequately trained? Is such training felt to be important only by graduates with certain backgrounds or in certain practice settings? The study reported here was undertaken to answer these questions.

METHODS

A Likert scale questionnaire was developed to assess respondents' perceptions as to the importance of 18 specific management areas, the adequacy of their formal and informal training in those areas, and their current competency in each of those areas. An area termed *overall practice management* was included. Demographic information was elicited in addition. The graduate questionnaire also had an open-ended essay question regarding general thoughts about management training. The anonymous questionnaire was sent to all senior medical students (n = 112), all current family practice residents and fellows (n = 45), and all graduates (excluding the authors) (n = 95) of the family practice residency program of the University of Missouri-Columbia School of Medicine. Questionnaires were sent out in mailings over a 3-month period from February to April of 1987, subsequent mailings being sent only to nonrespondents.

Means between the three groups were compared using analysis of variance (ANOVA). A composite mean score (mean of means) of Likert scales for all the management areas listed was tabulated for the importance, training, and competency categories for each questionnaire.

continued on page 351

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continued from page 348

Type of Scale	Scores
Perceived Importance Scales*	Mean (All Respondents) > 4.00
Managing personal stress and time	4.4
Malpractice and risk management	4.3
Overall practice management	4.3
Interphysician relationships	4.2
Dealing with Medicare and Medicaid	4.1
Long-range planning	4.1
Personal finance	4.1
Physician contracts and agreements	4.0
Practice budgeting and expense control	4.0
Office personnel management	4.0
Perceived Training Adequacy Scales*	Mean (All Respondents) ≤ 2.00
HMO/PPO participation and contracts	1.7
Insurance coding and claims	1.7
Practice accounting and taxes	1.7
Practice banking and financing	1.7
Long-range planning	1.8
Physician contracts and agreements	1.8
Computers in the medical office	1.9
Marketing and practice promotion	1.9
Collections and billing policy	2.0
Practice budgeting and expense control	2.0
Perceived Competency Scales*	Mean (All Respondents)
Insurance coding and claims	1.9
HMO/PPO participation and contracts	2.0
Practice accounting and taxes	2.0

*Likert scales: Importance 1 = not important, 5 = very important. Training 1 = inadequate, 5 = very adequate. Competency 1 = very incompetent, 5 = very competent.

RESULTS

The return rates for the questionnaires were 64/112 (57.1%) for senior medical students, 41/45 (91.1%) for residents and fellows, and 74/95 (77.9%) for residency graduates. For all respondents, the Likert scale mean for overall practice management importance was 4.3 (1 = lowest, 5 = highest) with no significant difference between medical students, residents, and graduates. The scale mean for overall practice management training was 2.2, with medical students having a significantly lower and

graduates a significantly higher mean than residents (ANOVA $P = .0001$). The competency mean for this area was 2.5 with the same significant trend between the three population groups (ANOVA $P = .0001$). Specific management areas with very high and very low scale scores are listed in Table 1.

Demographic characteristics including sex, existence of school loans, amount of school loans, history of full-time employment before medical training, choice of a primary care specialty for medical students, and years out from residency for graduates did not correlate in general with overall practice management or composite score means. Respondents in private practice, however, had higher mean scores for importance and competency for overall practice management.

About 80% of graduates responded to the essay question, with 90% of those responding feeling there should be management training. Some respondents questioned the ability of academic faculty to teach practice management.

DISCUSSION

The most striking feature of the results is the marked discordance between high importance scores and low competency and even lower training scores. There was some evidence of increasing competence with increasing levels of training. The low training scores might imply that this comes from learning by trial and error rather than by educational intervention.

Although only a minority of graduates responding to the essay question thought management training should occur in medical school, the high importance scores of the medical students suggest receptivity to such training at that level. Others have advocated medical school training,²⁴ and indeed, the University of Kentucky recently began a Professional Development and Practice Management Project integrated into all 4 years of medical school and throughout residency years.¹⁵

There is some rudimentary didactic management input at the University of Missouri-Columbia. A health care systems course is taught early in the medical school curriculum, and medical students are required to take a community-based preceptorship. Family practice residents have exposure to three 1-day management seminars and three different practice settings. This study, however, appears to show a need for more effective management training.

This study suggests the need for increased effectiveness of the management curriculum at the University of Missouri-Columbia and perhaps other institutions. The rudimentary didactic practice management seminars common in many family practice residencies could be expanded

into a more comprehensive curriculum, including experiential training, perhaps using the recently published American Academy of Family Physicians practice management text.²⁵ Results of this survey clearly reflect the need for more effective and integrated physician management training as the American health care revolution continues.

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