Making Management Skills a Core Component of Medical Education

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Abstract

Physicians are being called upon to engage in greater leadership and management in increasingly complex and dynamic health care organizations. Yet, management skills are largely undeveloped in medical education. Without formal management training in the medical curriculum, physicians are left to cultivate their leadership and management abilities through a haphazard array of training programs or simply through trial and error, with consequences that may range from frustration among staff to reduced quality of care and increased risk of patient harm. To address this issue, the authors posit that medical education needs a more systematic focus on topics related to management and organization, such as individual decision making, interpersonal communication, team knowledge sharing, and organizational culture. They encourage medical schools to partner with business school faculty or other organizational scholars to offer a "Management 101" course in the medical curriculum to provide physicians-in-training with an understanding of these topics and raise the quality of physician leadership and management in modern health care organizations.

The practice of medicine and the organizational environments in which it occurs have grown increasingly complex over time. Amidst ongoing changes to health care policy, funding, and structures, this complexity seems likely to continue to increase. With these changes, alongside the increased focus on improving value, physicians are called upon to engage in greater leadership and management at all levels throughout modern health care, not just "at the top." Effective leadership and management are no longer only required of hospital CEOs or department chiefs; they are just as much a concern for a senior resident leading and managing conflict among a team of residents and nurses, for a division director trying to standardize practice and reduce variation, or for a physician in a community practice challenged with hiring and motivating staff while managing a partnership.

Physicians' careers are replete with challenges of day-to-day management and leadership, yet management skills are often underdeveloped, and frequently under-appreciated, in health care. All too often, individuals are selected for leadership or management roles based on clinical or research competencies with the hope that those clinical abilities will translate into effective management. The result is what could be called the "double loss": the removal of a highly skilled clinician from a clinical role and the installment of a leader who may not be adequately prepared or experienced in leading a complex health care organization.

Recognizing this need for better leadership, a broad set of management training programs have emerged in academic health centers and other organizations to provide management education for physicians and other staff. This has resulted in a haphazard array of specialized programs—usually offered for one particular department, specialty, or leadership level, and often housed exclusively within a single hospital or academic institution—that differ greatly in content, design, and desired outcomes.[1] Though this scatter-shot approach helps educate a small group of individual leaders (e.g., junior faculty attending a leadership workshop), it is unlikely to change practices and behaviors or have a lasting, systematic effect on physician leadership. When these individuals return from the program to their day-to-day work environment, they typically rejoin peers who may have a cynical attitude towards management concepts and who often provide only token support for implementing new practices.[1] Without this support from peers and superiors, the likelihood of individuals transferring the lessons learned from a training experience into their actual practice—and the likelihood of health care organizations committing to building needed management skills—is reduced, as studies of organizational training have consistently demonstrated this support to be a predictor of effective transfer.[2]

Adding "Management 101" to the Medical Curriculum

To overcome barriers to developing and enabling effective leadership and management skills throughout health care organizations, more systematic efforts are needed to bring management education to all physicians from the outset of their training. Doing so will not only increase the base number of better-informed physician leaders but also spread awareness of management concepts and help reduce the cynicism and resistance described above. We propose that the way to do this is to embed the fundamentals of management fully into the medical school curriculum, drawing on research from the

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organizational sciences and partnering with business school faculty and other management scholars to adapt concepts taught in MBA courses on management and organizational behavior to the health care context. In other words, what is needed is a "Management 101" course in medical education.

As others have called for greater attention in medical training to high-level issues of health policy (such as medical economics, health disparity, and care quality),[3] we call for corresponding attention to the on-the-ground skills and abilities needed to more effectively manage and lead cross-functional teams of care providers in complex modern health care systems. All physicians should be exposed to these management concepts in medical school and residency so that they can better contribute to the effective management of their organizations, which is currently the exception rather than the norm in health care, despite management and leadership being strongly associated with higher-quality clinical care.[4]

Many anticipated significant growth in this fundamental management training with the rise of joint MD/MBA programs in U.S. medical schools. However, the 2016 Association of American Medical Colleges Medical School Graduation Questionnaire reported that merely 0.7% of 2016 medical school graduates had completed an MD/MBA program—one-half the number completing MD/MPH programs (1.4%) and approximately one-fifth the number completing MD/PhD programs (3.2%)—whereas over 90% were reported as completing a standard MD degree.[5] As such, the overwhelming majority of medical school graduates have only the "standard" curriculum to prepare them for managing and leading as a physician.

Therefore, an education in the fundamentals of management should be incorporated into the required medical school curriculum, including training and exposure to topics related to individual and interpersonal dynamics (such as decision making, motivation, communication, and conflict management), team and unit dynamics (such as leadership, knowledge management, and team processes), and organizational dynamics (such as organizational culture, change management, and interorganizational relationships; see Table 1). These topics and issues are relevant to physicians in all settings and lie at the root of many of the types of waste, errors, and "never-events" in health care that have received substantial attention. Failures in individual decision making and interpersonal communication can prompt medication errors; poor team-level knowledge management and information sharing can result in a wrong-leg amputation; and inadequate organization-level coordination and relationships between two care institutions can result in patient harm during a transfer.

Table 1
Sample Management and Organization Curriculum Topics for Medical Education

Management domains	Sample topics
Individual and Interpersonal Dynamics	• Judgment and decision making • Motivation and job attitudes • Interpersonal relationships and communication • Negotiation and conflict management
Team and Unit Dynamics	• Leading and coordinating teams • Team norms and processes • Managing knowledge and information • Networks in organizations
Organizational Dynamics	• Organizational structure and design • Organizational culture • Change management • Interorganizational relationships

Without adequate training and exposure to management and organizational science (beginning in medical school and continuing throughout physicians' careers), it is not a surprise that we continue to observe these types of errors. Consider this: An 1846 article in the *Boston Medical and Surgical Journal* enumerated several causes of physician error, including issues of language precision and communication, problems of hierarchy and the resolution of conflicting opinions, debate regarding the influence of planets on illness, confusion as to the cause of malaria, and doubts about the existence of idiopathic or self-limiting diseases.[6] One hundred seventy years later, physicians seem to have moved past the latter topics on that list, but we would be unsurprised to find the former continuing to reside on a similar list of modern causes of medical error. This dichotomy seems tightly linked to the presence of malaria and idiopathic disease in the curriculum of every U.S. medical school and the relegation of topics like communication, conflict management, leadership, and hierarchy to one-off seminars or trainings (which are often not grounded in management theory or science). Yet research in psychology, sociology, and organization studies (a growing portion of it conducted in health care settings) has yielded significant insight and evidence-based practices for addressing these types of management challenges, and we believe that the lives of physicians—as well as the lives of patients, families, and other organization members—will be improved by incorporating these insights into medical education.

A Step in the Right Direction

We are not naïve enough to believe that instituting "Management 101" in medical education will completely resolve the leadership challenges facing physicians, or that it will be easy to find time in medical school curricula to incorporate this type of course (although this may be a smaller concern than conventionally thought[3]). Still, it is a necessary first step toward elevating management abilities onto more equal footing with clinical knowledge for the majority of medical school graduates, and more adequately preparing these graduates to lead and manage the delivery of high-quality, safe care in the modern medical enterprise.

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Teaching and Learning Moments
The Modern Iteration of the House Call

I must confess that I wasn't even aware that physicians did home visits in this day and age. They seemed a relic of the past, something I associated with Norman Rockwell's *Doctor and Doll*, the classic depiction of a physician intently listening to the heartbeat of a small girl's doll, the iconic black leather bag at his feet. Shortly after being accepted to medical school, my father passed on to me a similar leather bag given to him by his parents when he graduated from medical school. The bag was decades old, but I distinctly remember its pristine appearance. It had never been used.

It was with more than a bit of surprise then that I learned that I would be participating in a home visit as a medical student. I heard the highlights of the patient's history as we drove to her house. She was in her early 90s and had vascular dementia with severe cognitive impairment, hypertension, hyperlipidemia, and diabetes. The patient's daughter (herself in her 70s) was the primary caregiver. Both were born, raised, and lived in the same city their entire lives.

We arrived outside a small, one-story rambler, with peeling paint and a general aura of fatigue. The patient's daughter met us at the door and immediately hugged the resident and nurse practitioner, something I had never seen in the clinic. After we entered the house, we engaged in several minutes of chit-chat, which, to the casual observer, may have seemed marginally inane. As I watched the resident and nurse practitioner, though, I realized that they were subtly, and astutely, starting to write their HPI. How was the patient doing since the last visit? Were there any syncopals or hypoglycemic episodes? How was her memory? Had she been able to get out of bed at all?

The patient lay in a hospital bed in the living room. A plethora of family pictures on the walls told us about her life—she had eight children, a career in retail, and was quite the chef for her family during the holidays. Her appearance was the exact opposite of the relentlessly aging house. The sheets were starched and glowing white, with crisp hospital corners. Despite being bed-bound, she was immaculate—skin clean and moisturized, wearing a spotless gown, and not a decubitus ulcer to be found. The patient's pristine appearance was the physical manifestation of her daughter's love.

Norman Rockwell's physician would have recognized our examination—heart rate, respiratory rate, and blood pressure all measured manually. Not merely listening to, but actually taking the time to hear, the heart and lungs. Carefully palpating the abdomen. Thoroughly inspecting the skin. Making a few minor medication adjustments. Even without the Meaningful Use checklists, the requisite clicks in the electronic health record, typing that "a 12-point review of systems was performed," and including the mandatory prepackaged, and often only tangentially useful, Patient Education text, it was obvious that medicine was still being practiced. There was no customer satisfaction survey to complete; nevertheless, the gratitude of the patient and her daughter was evident.

Those 30 minutes taught me a great deal—that family members are important providers in their own right; that there is much more to a patient than a collection of symptoms; that a careful examination of the patient's general appearance and surroundings yields valuable clinical clues; and that looking a patient in the eye and examining her still matters, certainly to the patient, but perhaps even more to me. It was obvious that the value and substance of this experience would be impossible to recreate under the harsh, synthetic fluorescent lighting of an exam room.

Perhaps this experience was only an ephemeral, albeit magnificent, anachronism. If the patient were critically ill, we would absolutely need a modern hospital. And yet, as we left the house, I smiled as I saw that my stethoscope, blood pressure cuff, and ophthalmoscope filled my hands. I should've brought that black leather bag after all.

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