Abstract

The COVID-19 crisis has forced physicians to make daily decisions that require knowledge and skills they did not acquire as part of their biomedical training. Physicians are being called upon to be both managers—able to set processes and structures—and leaders—capable of creating vision and inspiring action. Although these skills may have been previously considered as just nice to have, they are now as central to being a physician as physiology and biochemistry. While traditionally only selected physicians have received management training, either through executive or joint degree programs, the authors argue that the pandemic has highlighted the importance of all physicians learning management and leadership skills.

And leadership skills. Training should emphasize skills related to interpersonal management, systems management, and communication and planning; be seamlessly integrated into the medical curriculum alongside existing content; and be delivered by existing faculty with leadership experience.

While leadership programs, such as the Pediatric Leadership for the Underserved program at the University of California, San Francisco, and the Clinical Process Improvement Leadership Program at Mass General Brigham, may include project work, instruction by clinical leaders, and content delivered over time, examples of leadership training that seamlessly blend biomedical and management training are lacking.

The authors present the Leader and Leadership Education and Development curriculum used at the Uniformed Services University of the Health Sciences, which is woven through 4 years of medical school, as an example of leadership training that approximates many of the principles espoused here. The COVID-19 pandemic has stretched the logistical capabilities of health care systems and the entire United States, revealing that management and leadership skills—often viewed as soft skills—are a matter of life and death. Training all physicians in these skills will improve patient care, the well-being of the health care workforce, and health across the United States.

What Skills Do Physicians Need?

The management skills providers urgently need fall into the broad categories of interpersonal management, systems management, and communication and planning. These skills are needed both for immediate action and for achieving longer-term goals. In the realm of interpersonal management, physicians should have skills that enable them to lead teams, listen actively, resolve conflicts, motivate others, manage relationships, and give and receive feedback. Critical skills in systems

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652
management include those related to process analysis and improvement, logistics and supply chains, managing incentives, organizational design, and measurement and data analytics. Finally, physicians need a set of competencies related to communication and planning, including how to negotiate effectively, convey decisions, develop strategies, build culture, and manage change.

How Do We Teach These Skills?
Medical educators should aim to seamlessly integrate these skills into standard training in a manner that is relevant to all specialties. Given that physicians draw on these skills in all aspects of their work—including how they communicate difficult information to patients, interact with peers, and structure individual workflows—this goal is feasible. For example, in medical school, creating a management and leadership thread that is integrated alongside existing content in patient–doctor courses would reinforce the centrality of these skills in everyday care while providing opportunities for trainees to engage in relevant role plays. In residency, these skills should be addressed and rehearsed as part of existing simulation curricula. For attendings, assessment of relevant management skills could be integrated into continuing medical education (CME) requirements. This type of content may be welcomed by faculty who have advanced in their careers and are increasingly facing management and leadership challenges, potentially even with greater frequency than some of the clinical content that is no longer a part of their practice. As with biomedical knowledge, this assessment of management and leadership skills should occur at regular intervals. This goal could be achieved by using an objective structured clinical examination to address issues such as interpersonal conflict on a clinical team, allocation of scarce resources, or giving feedback to a colleague who is not performing up to standards.

Some faculty will need to develop new skills to successfully deliver leadership and management content in tandem with traditional biomedical knowledge. Faculty whose medical careers have provided opportunities to gain management experience can use that knowledge in training medical students. Such experiences might be derived from administrative roles related to research, education, or hospital leadership. Regardless of their level of management experience, all faculty should be trained to teach and assess management and leadership competencies. One approach for building these skills across a school’s faculty would be to partner with other academic programs in the same university—for example, the university’s business, public health, or public policy schools—to develop these skills across a broad swath of existing faculty, rather than having to recruit faculty specifically to teach leadership and management. Such partnerships may be the key to guiding the lasting development of curricula and assessment methods for these skills.

Yet examples of leadership training that blend biomedical and management training in a seamless manner are lacking. While the literature includes diverse examples of initiatives to impart leadership skills to trainees and practicing physicians, none meet the criteria of presenting content that is integrated with existing subjects and coursework and longitudinal across the career trajectory. Some examples of existing programs from the authors’ home institutions include the Pediatric Leadership for the Underserved (PLUS) program at the University of California, San Francisco, and the Mass General Brigham Clinical Process Improvement Leadership Program (CPIP). In the PLUS program, small-group seminars focused on community engagement and leadership are interspersed through 3 years of residency training, and leadership lessons are reinforced through reflection sessions with mentors who themselves are clinicians and leaders. In the Mass General Brigham CPIP, clinicians take part in a quality improvement and leadership curriculum over multiple sessions spanning 4 months and engage in interdisciplinary quality improvement projects that encourage them to apply newly learned skills. Notably, clinical leaders from across the institution serve as faculty for the program, and participants receive CME credits. However, in these examples and broadly in the literature, content is most commonly delivered in increments over a limited period of time and is set apart from traditional curricula. Self-assessments predominate, with external evaluation of skills being less common.10–12

One example suited to the military that approximates the principles we espoused was created at the Uniformed Services University of the Health Sciences (USUHS). USUHS’s leadership curriculum—known as Leader and Leadership Education and Development (LEAD)—is woven through all 4 years of medical school and delivered in formats ranging from plenary sessions to flipped classrooms (in which learners are introduced to concepts through out-of-classroom assignments, and classroom time is subsequently used to explore topics in more depth). LEAD uses a conceptual framework organized around 4 elements—character, competence, context, and communication—that operate across 4 levels: personal, interpersonal, team, and operational.13

The arc of the curriculum moves from how students develop themselves to how they work in teams and function within larger organizations, with sessions addressing topics such as emotional intelligence, effective communication, team building, and performance under stress.14 Classroom-based content is punctuated by assessments of practical skills, including a capstone combat simulation in which students are evaluated on both clinical and leadership skills as they encounter combat casualties and operational problems over 4 days.15

An assessment tool measures leadership capabilities during the capstone exercise and identifies students who may need remedial training before graduation.16 Notably, USUHS faculty are working to integrate LEAD concepts into all medical coursework so that students can, for example, think about how teamwork plays out in the anatomy lab just as it might during clinical rounds.17

Leadership—For the Sake of Health
The COVID-19 pandemic has stretched the economic and logistical capabilities of the entire United States. Within health care, the crisis has required doctors to take on responsibilities for which they were not formally trained—ranging from making decisions about scarce resources to rallying colleagues to action—and has shown us that the management skills often viewed as soft are actually critical to health and well-being. It is time that we trained doctors in these skills with the same emphasis and continuity we use to train them in physiology.
Such an approach will benefit the care provided to our patients, the well-being of our workforce, and the health of people nationwide. Further, it will allow physicians to draw on these skills naturally not only in times of acute crisis but also once our system returns to a normal pace of operation.

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