Leadership in Undergraduate Medical Education: Training Future Physician Leaders

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ABSTRACT

To confront the challenges facing modern health care, experts and organizations are calling for an increase in physician leadership capabilities. In response to this need, physician leadership programs are proliferating, targeting all levels of experience at all levels of training. Many academic medical centers, major universities, and specialty societies now sponsor physician leadership training programs. To meet this need, The Warren Alpert Medical School of Brown University, as part of its Primary Care-Population Medicine (PC-PM) Program, designed a four-year integrated curriculum, *Leadership in Health Care,* to engage with leadership topics starting early in the preclinical stages of training. This paper describes the design and implementation of this leadership curriculum for PC-PM students.

KEYWORDS: Physician Leadership Programs; Training Future Physicians

THE PHYSICIAN LEADERSHIP IMPERATIVE

To confront the challenges facing modern health care, experts and organizations are calling for an increase in physician leadership capabilities.[1,2,3] The Institute of Medicine describes a need to "develop leaders at all levels who can manage the organizational and systems changes necessary to improve health..."[4] The Association of American Medical Colleges (AAMC) calls for "new roles for physician leaders" and a "focus on organizational leadership in a new era of health care."[5] In graduate medical education, the requirement to develop physician leaders is explicit. The Accreditation Council for Graduate Medical Education's (ACGME) requires residents to demonstrate the ability to "work effectively as a member or leader of a health care team or other professional group."[6] Finally, the Royal College of Physicians and Surgeons of Canada's CanMEDS physician competency framework includes "Manager" as one of the essential roles of physicians.[7]

In response to this need, physician leadership programs are proliferating, targeting all levels of experience at all levels of training. Many academic medical centers, major universities, and specialty societies now sponsor physician leadership training programs.[8,9] In the United Kingdom, the National Health Service (NHS) established a Healthcare Leadership Model and development program for all health care providers.[10] At the same time, leadership has become an essential competency for medical students. Among the expected behaviors of medical school graduates, as described by the AAMC, is the ability to "provide leadership skills that enhance team functioning, the learning environment, and/or the health care delivery system."[11]

Despite this changing paradigm and evidence that leadership training should begin in undergraduate medical education (UME) and continue throughout training,[12,13,14] many schools lack formal leadership curricula. This may reflect time constraints in the existing curriculum, limited resources, beliefs that leadership cannot be taught, a lack of consensus about the content in leadership courses, or a host of other factors. Recent developments indicate progress toward addressing the need for student leadership training imperative. For example, the American Medical Association's Accelerating Change in Medical Education consortium (AMA-ACE) includes schools with proposals focused on student leadership development such as the Brody School of Medicine at East Carolina University.[15] In addition, a new special interest group, the Leadership and Innovation in Medical Education (LIME) was formed through the Association of American Medical Colleges (AAMC) with the vision of creating longitudinal, integrated leadership development programs for students. These initiatives will undoubtedly yield more formal, evidence-based training to prepare students as health care leaders.

The Alpert Medical School of Brown University (AMS) was chosen as one of the AMA-ACE schools for its new Primary Care – Population Medicine (PC-PM) program (see George et al in this issue for further details). We describe the ambitious leadership education effort that is one of the central elements of this new effort.

LEADERSHIP EDUCATION AT THE WARREN ALPERT MEDICAL SCHOOL OF BROWN UNIVERSITY

This fall, the first cohort of up to 24 students will enroll in the Primary Care-Population Medicine (PC-PM) program. This unique program allows medical students to earn a Master of Science in Population Medicine (ScM) in addition to their Doctorate of Medicine (MD), through a course of study

that includes research methods, population science, and leadership.

A special four-year integrated course, *Leadership in Health Care,* was designed for PC-PM students to engage with leadership topics starting early in the preclinical stages of training. The course required careful planning and preparation, owing to the challenges of tackling a complex and multifaceted topic that would need to be both relevant and engaging to UME students. The most immediate philosophical question to consider was whether leadership can be taught at all. Is leadership innate, trait-based, or acquired only through experience? If an educational construct does apply, what leadership models should inform the curriculum? What are the program's goals, and what are the most effective learning experiences to achieve them? What specific knowledge, skills, and attributes should be emphasized? What outcomes should be measured to indicate program effectiveness? Answering these questions has been a process, resulting in a longitudinal, integrated curriculum on leadership.

INFLUENTIAL THEORIES AND GUIDING PRINCIPLES

We designed the *Leadership in Health Care* course based on multiple needs assessments, interviews with physician leaders, and consideration of a wide range of leadership theories that are relevant to health care and appropriate to student curriculum. This course is influenced by three major leadership theories: transformational, situational, and servant leadership. Each has features that align with expressed beliefs about physician leadership. The theory of transformational leadership contends that leaders stimulate others to transcend their own self-interest to reach higher-order goals or visions.[16] This approach emphasizes motivating others by raising awareness of idealized goals, and is achieved through role modeling. Servant leadership theory posits that a leader's influence derives from serving the needs of others. Characteristic behaviors of servant leaders include listening, empathizing, accepting stewardship, and actively developing other's potential.[17] In situational leadership theory, effective leadership depends on selecting the right leadership style contingent on the followers or group context. Situational leaders shift flexibly among four behaviors: directing, coaching, supporting and delegating in response to follower readiness.[18] As with all forms of leadership, effective physician leadership likely requires the right combination of personality traits, modifiable behaviors, and context.

While it may seem peripheral to curriculum development, exploring leadership theories and how they relate to the professional role of the physician was an essential step early in the process. Clarifying personal beliefs and assumptions about physician leadership helped articulate the program's guiding principles as well as subsequent goals, objectives, and competencies for the *Leadership in Health Care* course (**Tables 1 and 2**).

DETERMINING COMPETENCIES

While there is growing emphasis on leadership education, there is no consensus on what defines effective physician leadership, nor is there much in the literature about best practices to guide curriculum planning. As a result, medical school leadership curricula vary widely in the competencies they emphasize and their methods of delivery.[19] For example,

Table 1. Guiding Principles for Leadership in Health Care

Leadership is both an essential aspect of the physician identity and a professional responsibility
Leadership is a developmental process, best learned through practical application and experience
Leadership in health care should emphasize teamwork and a service orientation
Leadership training should be competency-based and informed by evidence

Table 2. Leadership in Health Care Course Objectives

At the completion of the course, participants will:
Identify as a physician leader, with the self-awareness to articulate what makes them a leader, in what context, and to what end.
Identify their personal leadership style, strengths, and weaknesses
Explain the definitions and prevailing theories of leadership
Demonstrate core physician leadership attributes including personal integrity, emotional intelligence, patient-centeredness, and selflessness
Apply leadership knowledge to improve team dynamics and effectiveness
Demonstrate effective verbal and nonverbal communication skills to persuade, motivate, influence, and inform followers
Demonstrate critical thinking skills and an understanding of quality improvement principles
Demonstrate the ability to apply leadership skills to a change initiative (the Leadership Action Project)

some curricula stress quality improvement, while others emphasize clinical or academic leadership development.

Most contemporary leadership models are organized by broad domains divided into competencies that describe the specific knowledge, skills, or attitudes desired of learners. One example is the National Center for Healthcare Leadership's (NCHL) Health Leadership Competency Model. Its three domains – transformation, execution, and people – are further defined by twenty-six leadership competencies such as analytical thinking, project management, and interpersonal understanding.[20] The United Kingdom's Healthcare Leadership Model includes nine dimensions (or domains), with detailed descriptions of leadership competencies within each dimension.[21] The Medical Leadership Competency Framework (MLCF), also developed by the NHS, describes five domains: setting direction, demonstrating personal qualities, working with others, managing services, and improving services. Within each MLCF domain are four competencies for leadership directed toward undergraduate medical students.[22] In defining the requisite skills and competencies for *Leadership In Health Care*, we drew on components of these established models. We also mapped leadership to AMS' Nine Abilities – the core competencies that define Alpert Medical School's overall curriculum.

Leadership in Health Care is also based on evidence from the few studies that have examined physician-specific leadership competencies. One study examined physician beliefs regarding nine leadership competencies and determined that interpersonal and communication skills, professional ethics and responsibility, and continuous learning and improvement were the most important.[23] Taylor asked aspiring and established physician leaders about the knowledge, skills and attitudes they believed were fundamental to being a successful physician leader. Participants consistently described the importance of emotional intelligence and vision.[24] Another study examined faculty, medical student, and administrator attitudes regarding the competencies necessary for a UME leadership curriculum and found that communication, ethics, and conflict resolution were the most highly rated.[25] The *Leadership in Health Care* course aligned with known leadership models and evidence, but also considered the specific needs of our students. In a 2014 needs assessment survey, AMS students rated emotional intelligence, communication, and teamwork as the most important competencies to include in the leadership curriculum.

CORE TOPICS AND TEACHING METHODS

Each *Leadership in Health Care* session will focus on one core topic using techniques that address the

Table 3. *Leadership in Health Care* core sessions

Understanding leadership theory and competencies
Becoming a change agent
Leading with personal integrity
Communicating effectively
Speaking persuasively
Managing conflict and negotiating
Exerting influence within health care organizations
Creating and sharing a vision
Developing others
Networking and advocacy
Managing crises: high stakes clinical teamwork
Risk-taking and creativity
Enhancing your EQ: emotionally intelligent leadership
Developing life-long leadership habits

Table 4. An example core session

Session 3
Leading with Personal Integrity

Topics
- Defining and cultivating integrity
- Servant leadership
- Ethical decision-making
- Personal accountability

Goals and Objectives
- Understand how deeply help personal values inform leadership behaviors
- Describe the characteristics of authentic leadership
- Reflect on the relationship between ethics, service and leadership effectiveness
- Explain the components of trust; how it is developed and manifested
- Describe methods for identifying personal core values

Reading/Preparation
- Excerpts from: *"Five Days at Memorial: Life and Death in a Storm-Ravaged Hospital." By: Sheri Fink*
- Collins J. Level 5 Leadership. Harvard Business Review. January 2001
- Leadership integrity case vignettes 1&2; prepared written responses to vignettes DUE this session

Additional Optional Resources
- George B, Sims P, McLean AN and Mayer D. Discovering Your Authentic Leadership. Harvard Business Review. February 2007
- Souba WW. The Being of Leadership. Philosophy, Ethics, and Humanities in Medicine. 2011; 6:5

Class Activities
- Personal core values exercise
- Guided discussion of "Five Days" case summary
- Screening and discussion of: Escape Fire: *The Fight to Rescue American Health Care*; Chapters 6&7
- Integrity case discussion facilitated by expert panel

needs of adult learners (**Table 3**). Sessions are designed to be goal-oriented, related to prior experiences, practical, and interactive. Teaching methods are intended to encourage action, teamwork, and higher-order thinking skills using a variety of techniques. Examples include: cooperative learning activities, demonstrations, debates, expert panels, simulations, public speaking, negotiation exercises, design challenges, case analysis, and reflective writing. **Table 4** describes an example session. The course will run over a period of eight months in the 2nd year of medical school, with curriculum also embedded in the 3rd and 4th years.

EXPERIENTIAL LEARNING

Many leadership programs are centered on the transfer of conceptual knowledge; they teach theory and principles in a traditional lecture format. Like the acquisition of clinical skills that occurs during residency, however, developing as a leader is a process that requires learning new behaviors and skills through experience. It requires experimentation, application, and deliberate practice.

A critical component of *Leadership in Health Care* is the leadership action project (LAP), an experiential learning activity that allows students to apply lessons learned in class to their leadership development. The LAP is a longitudinal, team activity completed over the course of the semester. Teams will focus on an issue or concern related to medicine, and take the required steps to lead change. Projects may arise from clinical, educational, or research experiences. Mentored learning teams will meet regularly to develop the project and prepare briefs at critical junctures – framing the problem, generating and deciding on solutions, communicating with stakeholders, selecting implementation strategies, and preparing a timeline. At the completion of the process, teams will prepare a report and present to a panel of experts and health care leaders as a final project.

FUTURE DIRECTIONS

It is exciting to report on progress towards a formal leadership curriculum at AMS that addresses a well-recognized educational gap. Although it is still in its infancy, *Leadership in Health Care* has been designed with the complementary experiences that predict a successful leadership program: classroom didactics, faculty mentorship, and experiential learning. As the program matures, we hope to measure its outcomes in terms of individual leadership ability, organizational benefit, and societal impact. Developing appropriate measurement tools for these outcomes is the next challenge.

CONCLUSION

If the four years of medical school are the ideal time to introduce integrated physician leadership competencies, then AMS' new Primary Care-Population Medicine program may be the ideal setting. With its mission to *"educate a new type of physician through a course of study that emphasizes teamwork and leadership,"* the program has already attracted students with impressive leadership capacity. *Leadership in Health Care* promises to strengthen their leadership foundations and prepare them to confront the many challenges ahead. If successful, this leadership course may provide a generalizable model for leadership training at AMS (for all students) and US medical schools in the future.

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