Perspective: Is It Time for Advocacy Training in Medical Education?

[This is a non-final version of an article published in final form as:

Croft D, Jay SJ, Meslin EM, Gaffney MM, Odell JD. Perspective: Is It Time for Advocacy Training in Medical Education? Academic Medicine. 2012 Sep;87(9):1165–70. Available from: http://dx.doi.org/10.1097/ACM.0b013e31826232bc]

Daniel Croft, MD, MPH, Stephen J. Jay, MD, Eric M. Meslin, PhD, Margaret M. Gaffney, MD, Jere D. Odell, MA, MLS

Dr. Croft is first-year resident in internal medicine, Dartmouth Hitchcock Medical Center, Lebanon, New Hampshire.

Dr. Jay is professor of medicine and public health and past founding chair, Department of Public Health, Indiana University School of Medicine, Indianapolis, Indiana.

Dr. Meslin is director, Indiana University Center for Bioethics; associate dean for bioethics, Indiana University School of Medicine; professor of medicine, medical and molecular genetics, public health, and philosophy, Indiana University, Indianapolis, Indiana; and co-director, Indiana University Center for Law, Ethics, and Applied Research in Health Information and the Indiana University -Moi Academic Research Ethics Partnership, Eldoret, Kenya.

Dr. Gaffney is clinical associate professor, Department of Medicine, and director, Introduction to Clinical Medicine course and Moral Reasoning and Ethical Judgment competency, Indiana University School of Medicine, Indianapolis, Indiana.

Mr. Odell is librarian, Indiana University Center for Bioethics in Indianapolis, Indiana.

Address correspondence to Dr. Croft, Dartmouth-Hitchcock Medical Center, Internal Medicine Residency Program, One Medical Center Drive, Lebanon, NH 03756; telephone: (603) 650-7684; fax: (603) 650-6122; e-mail: Daniel.P.Croft@hitchcock.org

Abstract

As the modern medical system becomes increasingly complex, a debate has arisen over the place of advocacy efforts within the medical profession. The authors argue that advocacy can help physicians fulfill their social contract. For physicians to become competent in patient-centered, clinical, administrative, or legislative advocacy, they require professional training. Many professional organizations have called for curricular reform to meet society's health needs over the past 30 years, and the inclusion of advocacy training in undergraduate, graduate, and continuing medical education is supported on both pragmatic and ethical grounds. Undergraduate medical education, especially, is an ideal time for this training, as a standard competency can be instilled across all specialties. While the Accreditation Council for Graduate Medical Education includes advocacy training in curricula for residency programs, few medical schools or residency programs have advocacy electives. By understanding the challenges of the health care system and how to change it for the better, physicians can experience increased professional satisfaction and effectiveness in improving patient care, systems-based practice, and public health.

Perspective: Is It Time for Advocacy Training in Medical Education?

Inclusion of formal advocacy training in undergraduate, graduate, and continuing medical education has been the subject of debate among medical professionals for decades. As advocacy is intrinsic to policymaking, the current crisis in health care suggests that new strategies for improving the quality and broadening the scope of health professions' advocacy are needed.

In this article we provide a historical, ethical, and evidence-based rationale for the adoption of advocacy training within the continuum of medical education. We assert the importance of the physician's role in advocacy through a review of the advocacy literature and highlight the limitations of counter arguments. The benefits and challenges of advocacy training are discussed in the form of testable hypotheses as the debate is ongoing. We describe the ethical foundations of advocacy and medicine's professional responsibilities to society. We present examples of undergraduate and graduate medical education programs in advocacy, including evidence of their impacts. We conclude with a discussion of the research needed if medical education is to realize the potential benefits of advocacy training in addressing the compelling needs of patients, public health, and the medical profession.

Physicians who advocate effectively help shape ethical health policy. Support for this assertion comes in many forms. Feldman¹ believes advocacy is an essential component of medicine, arguing that "to remain a profession of scientists and clinicians, we must have an open interchange with the public and with our elected leaders." Dharamsi et al.² see advocacy as a basic responsibility of physicians and part of their overarching contract with society. Many agree, calling for advocacy to be a mandated part of medical education or a tenet of professional

or ethical responsibility.^{3–10} However, others are wary, viewing physicians' advocacy as political action.^{11,12} Huddle argues that "the medical profession has no special authority or insight into what is demanded by justice or how far societal resources should support communal health rather than other priorities."¹¹ Simplifying the profession by excluding political action may be tempting, but the morass that is medical care in the United States today can't afford such simplification. As Virchow reminds us, "the very word Public Health shows those who were and still are of the opinion that medicine has nothing to do with politics the magnitude of their error."¹³

While the meaning of physician advocacy is evolving, Earnest et al.¹⁴ offer this definition: "Action by a physician to promote those social, economic, educational, and political changes that ameliorate the suffering and threats to human health and well-being that he or she identifies through his or her professional work and expertise." In contrast with Huddle's¹¹ limited view of advocacy as an avocation of a small group, we believe that all physicians should possess the skills to advocate effectively. The clinical years of undergraduate medical education are an ideal time for advocacy training because, with future professionals from all fields present, the training can be woven into their shared curriculum.¹⁵ And, in addition to teaching future physicians how to advocate for individual patients, this common training may foster cross-specialty collaborations that can advocate for the broad improvement of health care.¹⁴

The lack of a definition for physician advocacy from the Liaison Committee on Medical Education or the Accreditation Councils for Graduate and Continuing Medical Education makes discussing advocacy education difficult. The definition by Earnest et al.¹⁴ specifically includes political advocacy and Furrow¹⁶ details a spectrum that includes legislative, administrative, clinical, and patient-centered advocacy. May¹⁷ rejects the distinction between private and public duties altogether, calling it detrimental to society; he believes that loyalty to a patient is a public responsibility. We broadly define advocacy education as experiences that improve a physician's ability to advocate along a continuum, from issues arising for individual patients to those affecting health care policy. Seen in this way, the main goals of advocacy training are to (1) gain an understanding of the complex system of health care, including its limitations, and (2) learn how to affect positive changes within this system.

The Physician as an Advocate for the Patient

A physician's responsibility to advocate for patients has been defined in the Hippocratic Oath and other religious and secular philosophies of medical ethics.¹⁸ In the Prayer of Maimonides, the physician asks for the resolve to withstand those "conceited fools" who challenge his art, "because surrender would bring to Thy creatures sickness and death,"¹⁹ a plea that can be interpreted as a call to defend the profession against any force that keeps physicians from providing quality patient care. Applying this to modern medical practice, Pellegrino²⁰ states: "The virtue-based physician would see the importance of working within professional associations to change their character, to urge upon them the primacy of the patients' welfare and their advocacy for justice in health care." This expansive responsibility indicates the broad nature of advocacy needed within the medical profession.¹⁵

Physicians' ethical responsibility to their patients, also called "beneficence," is the foundation of advocacy efforts.²¹ Beneficence usually refers to the relationship between one doctor and one patient. It may be expanded, though, to cover the spectrum of ways physicians might improve their patients' health, described by Furrow's¹⁶ four areas of physician advocacy (legislative, administrative, clinical, and patient-centered). The principle of beneficence is met by supporting legislation that expands access to health care and reduces disparities in health services. It's met by working with hospital administrators to improve efficiency and quality of care. It's met by ensuring that clinicians follow best practices. Finally it's met by managing ethical conflicts, helping patients navigate the constraints of the medical system, and making sure they receive quality care. All four areas of advocacy allow physicians to act in their patients' best interests.¹⁶ How, then, can advocacy training help physicians in these situations?

Benefits of Advocacy Training

The benefits of advocacy training fall into three categories: enhancement of professionalism, support of public health, and improvement of patient care.

Professionalism

Physicians function in a complex web of interactions that affect their professional ethics, autonomy, and satisfaction. Not understanding these interrelationships can lead to feelings of helplessness that erode a physician's morale.^{22–24} We view advocacy education not as an addition to physicians' workloads, but as an organizing force, one that can increase physicians' awareness

of their professional ecology.^{16,25,26} When physicians understand the health system and how to improve it, they feel more empowered and engaged. By embracing the role of advocate and collaborating with colleagues to improve the health of individuals and communities, physicians can transcend the growing dissatisfaction with clinical practice.^{22,27} If increased satisfaction improves patient care, the physician becomes a more effective professional and participant in the health care system.^{25,28} Indeed, as Crawshaw et al. noted, "Only by caring and advocating for the patient can the integrity of our profession be affirmed. Thus we honor our covenant of trust with patients."²⁹

Public health

Legislatively active physicians advocate for preventive health proposals, such as smoking bans or improvements in access to care. If all physicians understand advocacy's importance, they will support those clinicians who choose to be legislatively active in trying to improve health care through their professional organizations. If this collective understanding allows physicians to speak with a more unified voice on behalf of those in need, it is likely to improve the health of the public.³⁰

Patient care

Through clinical advocacy, physicians improve patient care by promoting "best practices" within their respective fields. As their competence in advocacy increases, physician leaders can shape health systems to meet the needs of patients and society.¹⁶ Advocacy training can also help

providers find equitable and affordable ways for the health care system to honor its social contract.^{2,15} Finally, improvements to the health system will support patient centered advocacy, which will continue to be the foundation of the medical profession. These many potential benefits make it important to discuss the ethical basis for advocacy training.

Ethics of Advocacy Training

Branch³¹ stated that ethical behavior "integrates moral sensitivity (ability to recognize ethical issues), moral commitment (determination to do what is right), and moral behavior (skills at implementation), with moral reasoning (being able to weigh the rights of others and the principles at stake)." By providing an understanding of the complex interactions and interrelationships of medical practice, advocacy training provides a foundation for building students' ethical behavior. Specifically, with the addition of advocacy training, medical schools can expect to graduate physicians who have the reasoning skills and disposition to identify and address value-laden issues that arise in the care of patients. ^{26,31}

The consequences of not addressing ethical issues are striking. Medical students experience moral conflicts when their ideas of compassionate care are challenged by the realities of functioning on a hierarchical team in the hospital wards. The development of medical students' ethical behavior can slow or even regress from these experiences.^{21,31} Training students to channel the tenets of beneficence and justice by advocating for individual patients as well as patient groups could reverse this stagnation in ethical development.

7

The ethics of advocacy training should also be viewed in the broader context of the medical education system including undergraduate, graduate, and continuing medical education. Incorporating an advocacy curriculum in the undergraduate years can help students acquire these skills over the continuum of their medical education. Students versed in advocacy become better physician–advocates for their patients and develop a stronger foundation of ethical agency as medical professionals.³² The inclusion of advocacy training is consistent with the Liaison Committee on Medical Education's guidelines on the importance of ethics education.³³ The combination of the support for physician advocacy and resultant need for professional advocacy education offers strong empirical evidence supporting formal advocacy training in medical schools. Application of ethical behavior through advocacy is essential for both the growth of future physicians and the improvement of public health.

Medicine's Professional Responsibilities

Although public and professional approval for administrative or legislative physician advocacy is not universal, prominent organizations and physicians have supported such activities over the past 30 years.

Professional responsibility includes obtaining skills to improve health on individual, health system, and community levels.^{34,35} The American Medical Association (AMA) supported this assertion by recommending that significant changes in legislation or society in general should help shape medical curriculum.³⁶ Curricular changes such as the addition of advocacy training would assist physicians in meeting professional expectations, including one example mentioned

by the Association of American Medical Colleges: "...to advocate for access to health care for members of traditionally underserved populations."³⁷

Curricular changes, including advocacy training, are supported by Swick's³⁸ normative definition for medical professionalism, which included behaviors necessary to fulfill the responsibility of physicians to their profession, patients, and communities. He called for physicians to "respond to societal needs" and ensure that "their behaviors reflect a social contract with the communities served." This social contract supports the role of the physician as an agent of the patient and the community, an idea embodied in the AMA ethical standard of conduct for physicians: "A physician shall recognize a responsibility to participate in activities contributing to the improvement of the community and the betterment of public health."³⁸

The Physician's Charter, collaboratively developed by the European Federation of Internal Medicine, the American College of Physicians Foundation, and the American Board of Internal Medicine, calls on physicians to commit to improving quality of care, by taking responsibility "both individually and through their professional associations . . . for assisting in the creation and implementation of [appropriate] mechanisms"; to improving access to care, which involves "public advocacy on the part of each physician"; and to a just distribution of finite resources, which means "working with other physicians, hospitals, and payers to develop guidelines for cost-effective care."³⁹ Recently, RL and SR Cruess⁴⁰ stated: "Under the social contract, the collective expectations of patients, the public, and government of the medical profession constitute a functional definition of medical professionalism and a summary of medicine's professional obligations."

9

These broad responsibilities do not logically pair with a restriction on administrative or legislative advocacy. Indeed, no such restrictions were mentioned, leaving the onus on institutions to provide the skills necessary during undergraduate, graduate, or continuing medical education to meet these new responsibilities.^{38,39}

Medical schools and residency programs can address this problem by highlighting advocacy as an area of deficiency within medical education.⁴¹ When Rothman⁴² called on medical professionals to broaden their role in guiding public policy to benefit patient care and underserved populations, he expressed the importance of teaching medical students the skills needed to affect these changes.⁴² Relman¹⁵ echoed this need to teach the necessary skills in the undergraduate years to meet the social contract physicians have with their communities. Applying this social contract to current challenges in medicine, including wasteful spending, Fuchs and Milstein⁴³ described the ethical requirement for physicians to serve as a "catalyst of policies to accelerate diffusion of cost-effective care."

The view of the social contract as a one-sided relationship of a physician benefitting the community overlooks an important perspective introduced by Meslin and Cho.⁴⁴ Acknowledging that physicians and the public are mutually dependent partners within a greater movement is the first step in the "Recipe for Reciprocity." In a transparent way, Physicians must transparently ensure that any proposed benefit is, in fact, desired by the public, feasible, and devoid of conflicts of interest. The public would, in turn, trust the physicians to act on their behalf and provide necessary support.⁴⁴

Still, some raise concerns about physician advocacy, as even well intentioned policies can have unintended negative consequences. A physician entrusted with significant influence over health policy might advocate in self-interest or counter to the best interests of society. Nonetheless, as iterated by the many leaders in medicine and organizations who have called for advocacy training for physicians, its potential benefits far outweigh the possible risks of self-interested or malicious advocacy. Though some may be wary of this physician empowerment, we believe in the ability of trained professionals to ensure the widespread practice of ethical advocacy.

Advocacy Training Programs

While the need for inclusion of broader advocacy efforts within professional responsibility has been expressed for years and undergraduate, graduate, and continuing medical education national accreditation standards^{45–47} are consistent with such education and training, few medical schools or physicians have answered this call to action.¹¹ The adoption of advocacy training in residency programs and medical schools has likely lagged for lack of detailed comparative analyses and outcomes research.³⁹

Critics argue that advocacy education is not consistent with the function of a medical school, yet lack evidence-based or ethical support for this view.¹¹ The novel action of health professionals in the following examples makes a compelling counterargument to this stance. In a research-based health curriculum at the Montefiore Medical Center in the Bronx, N.Y., advocacy training projects have included community-based efforts to improve access to care for vulnerable

populations.³⁰ The University of Colorado School of Medicine's Leadership Education Advocacy Development Scholarship provides training to promote community health. After this training, students have reported improved leadership ability and a desire to continue their involvement in health advocacy efforts.⁴⁸ While many Canadian medical schools have similar programs,⁴⁹ only a few American medical schools do, including the University of California, San Francisco and the University of New Mexico, Albuquerque.⁵⁰

The Accreditation Council for Graduate Medical Education's Common Program Requirements, effective July 1, 2011, include advocacy.⁴⁵ While the adoption of advocacy training in undergraduate medical education has been slow, pediatric, family medicine, and medicine residencies have formally incorporated advocacy into their curricula. The Advocacy Clinic Training project, developed in 1999 through the Pediatrics Department at Harvard Medical School, included a curriculum consisting of community, legislative, and small-group experiences. Compared with a control group, the intervention group improved their knowledge about access to care and increased their advocacy skills and self-efficacy in working with legislators and community leaders.⁵¹ In the Communities and Physicians Together project, conducted through the University of California, Davis Health System, residents used asset-based community development principles to participate in capacity building with community leaders to advocate for child health. Graduates of this program have taken this program's principles to new areas of the country.⁵² Pediatric educators believe advocacy training is essential to help pediatricians combat childhood malnutrition, lead exposure, and substance abuse. If this training were universal, clinicians advocating for legislation or practice guidelines would benefit from a larger base of supportive colleagues who recognized the importance of their efforts.⁵³

While commitment to advocacy training is most widespread in pediatric residency programs, some family medicine programs offer residents similar opportunities. The Maine-Dartmouth Family Medicine Residency program in Augusta provides residents firsthand experiences working with public health professionals to address community health issues in underserved populations. These experiences boost the morale of residents and build lifelong skills in advocacy collaborations with community leaders.⁵⁰

The lessons learned from the programs in undergraduate and residency programs can guide the creation of advocacy training curricula in medical schools and graduate programs nationwide. Medical schools will need to consider logistical challenges, including curricular flexibility, instructional capacity, and alignment with current educational goals and objectives. In a survey by Patel,⁵⁴ medical school deans rated health policy education, ethics, politics, and preventive care as significant subject areas to include in undergraduate medical education, demonstrating administrative receptiveness to advocacy-related training. Linking advocacy training curricula, medical education and learning in practice may promote sustained benefits with improvements in health policy, quality improvement, and preventive medicine.^{55,56}

Future Considerations

Settling the long-standing debate over the place of advocacy training in medical education calls for research in three areas.⁵⁷ The first is to create an evidence-based approach for implementing advocacy training into undergraduate medical education. This would involve standardizing the

definition of physician advocacy. Next, the outcomes of advocacy training for medical professionals—regarding types of practice, satisfaction with clinical medicine, and success in incorporating advocacy into their practices—must be measured. Finally, the impact of advocacy education and training on patient care and public health must be assessed.

A logical model for implementation would begin with pilot projects in medical schools selected for their ability to support research in advocacy training. Once effective models are created, grants will be needed to further implement these programs and to conduct comparative analysis research. After successful models are identified and the literature on advocacy training grows, advisory boards will need to be organized to help make advocacy training part of medical education standards. This effort starts with individual programs, but will require the support of medical professional organizations, deans, medical educators, and the many physicians found along the continuum of medical education.

The Case for Advocacy Training

That few students leave their undergraduate or graduate medical education programs with formal training in advocacy is, in part, the result of skepticism about the role of advocacy education in competency-based curricula and of undue concern about political advocacy. Recent trends, however, suggest that clinicians and educators are increasingly interested in expanding opportunities for advocacy training. The ethical rationale and documented support from professional organizations for such training already exist. We must now uncover hard evidence

of the professional and societal benefits of advocacy. With such evidence, medical educators are sure to support the curricular changes necessary for making advocacy training universal.

Inequities in health care delivery, suboptimal outcomes, and physicians' growing dissatisfaction make it critical that we train physicians how to improve the future of health care. With a renewed sense of professional engagement and responsibility through advocacy training, physicians can forge a sustainable, collaborative effort to improve the health of patients and communities. "Knowing is not enough; we must apply. Willing is not enough; we must do."⁵⁸

Funding/Support: None

Other disclosures: None

Ethical approval: Not applicable

References

- Feldman AM. Advocacy: A new arena for the translational scientist. Clin Transl Sci. 2011 Apr;4(2):73-5.
- Dharamsi S, Ho A, Spadafora SM, Woollard R. The physician as health advocate: Translating the quest for social responsibility into medical education and practice. Acad Med. 2011 Sep;86(9):1108-13.
- Gottlieb LM, Johnson BM. Do medical professionalism and medical education involve commitments to political advocacy? Acad Med. Sep 2011;86(9):1063-1064; author reply 1065.
- 4. Halliday M. Do medical professionalism and medical education involve commitments to political advocacy? Acad Med. Sep 2011;86(9):1063; author reply 1065.
- Kuo AA, Arcilla L, Castro A, et al. Do medical professionalism and medical education involve commitments to political advocacy? Acad Med. Sep 2011;86(9):1061-1062; author reply 1065.
- Palfrey JS, Chamberlain LJ. Do medical professionalism and medical education involve commitments to political advocacy? Acad Med. Sep 2011;86(9):1062-1063; author reply 1065.
- Sandroni S. Regarding physician advocacy. Acad Med. Feb 2012;87(2):132; author reply 132.
- Schickedanz A, Neuhausen K, Bennett H, Huang D. Do medical professionalism and medical education involve commitments to political advocacy? Acad Med. Sep 2011;86(9):1062; author reply 1065.

- Stull MJ, Wiley EA, Brockman JA. Do medical professionalism and medical education involve commitments to political advocacy? Acad Med. Sep 2011;86(9):1064; author reply 1065.
- Sud SR, Barnert ES, Waters E, Simon P. Do medical professionalism and medical education involve commitments to political advocacy? Acad Med. Sep 2011;86(9):1061; author reply 1065.
- 11. Huddle TS. Perspective: Medical professionalism and medical education should not involve commitments to political advocacy. Acad Med. 2011;86(3):378.
- 12. Goldberg SL. A cure for what ails? Why the medical advocate is not the answer to problems in the doctor-patient relationship. Widener Law Symp J. 1996;1:325-363.
- Rosen G. From Medical Police to Social Medicine: Essays on the History of Health Care. New York: Science History Publications; 1974.
- 14. Earnest MA, Wong SL, Federico SG. Perspective: Physician advocacy: What is it and how do we do it? Acad Med. 2010;85(1):63-67.
- Relman AS. What medical graduates need to know but don't learn in medical school. J Am Board Fam Pract. 1990 Apr-Jun;3 Suppl:49S-53S.
- 16. Furrow BR. Ethics of cost-containment: Bureaucratic medicine and the doctor as patientadvocate. The Notre Dame Journal of Law, Ethics & Public Policy. 1987;3:187.
- May WF. The beleaguered rulers: the public obligation of the professional. Kennedy Inst Ethics J. 1992 Mar;2(1):25-41.
- Veatch R. Cross Cultural Perspectives in Medical Ethics. 1st ed. Boston, MA: Jones and Bartlett; 1989.

- 19. Dalhousie University. Oath and Prayer of Maimonides.
 (http://www.library.dal.ca/kellogg/Bioethics/codes/maimonides.htm). Accessed March 9, 2012.
- Pellegrino ED. Professionalism, profession and the virtues of the good physician. Mt Sinai J Med. 2002;69(6):378-384.
- Beauchamp TL, McCullough LB. Medical Ethics: The Moral Responsibilities of Physicians: Prentice-Hall Englewood Cliffs, NJ; 1984.
- 22. Zuger A. Dissatisfaction with medical practice. N Eng J Med. 2004;350(1):69-75.
- Leigh JP, Tancredi DJ, Kravitz RL. Physician career satisfaction within specialties. BMC Health Services Research. 2009;9(1):166.
- 24. Haas JS, Cook EF, Puopolo AL, Burstin HR, Cleary PD, Brennan TA. Is the professional satisfaction of general internists associated with patient satisfaction? J Gen Itern Med. 2000;15(2):122-128.
- 25. Hebert PC, Meslin EM, Dunn EV. Measuring the ethical sensitivity of medical students: A study at the University of Toronto. J of Med Ethics. 1992;18(3):142.
- 26. Cruess RL, Cruess SR. Teaching medicine as a profession in the service of healing. Acad Med. 1997;72(11):941.
- Holsinger Jr JW, Beaton B. Physician professionalism for a new century. Clin Anat.
 2006;19(5):473-479.
- 28. Shen J, Andersen R, Brook R, Kominski G, Albert PS, Wenger N. The effects of payment method on clinical decision-making: Physician responses to clinical scenarios. Med Care. 2004;42(3):297-302.

- 29. Crawshaw R, Rogers DE, Pellegrino ED, et al. Patient-physician covenant. JAMA. 1995;273(19):1553.
- 30. Cha SS, Ross JS, Lurie P, Sacajiu G. Description of a research based health activism curriculum for medical students. J Gen Intern Med. 2006;21(12):1325-1328.
- Branch Jr WT. Supporting the moral development of medical students. J Gen Intern Med. 2000;15(7):503-508.
- Pellegrino ED, Caplan A, Goold SD. Doctors and ethics, morals and manuals. Ann Intern Med. 1998;128(7):569-571.
- 33. Liaison Committee on Medical Education. Functions and Structure of a Medical School: Standards for Accreditation of Medical Education Programs Leading to the M.D. Degree.
 Washington, DC: Liaison Committee on Medical Education; 2011.
- 34. Houle CO. Continuing Learning in the Professions. San Francisco: Jossey-Bass; 1980.
- 35. General Professional Education of the Physician. Physicians for the Twenty-First Century. Washington, D,C.: Association of American Medical Colleges; 1984.
- 36. Council on Medical Education. Future Directions for Medical Education. JAMA: The Journal of the American Medical Association. 1982;248(24):3225-3239.
- 37. Anderson M, Cohen J, Hallock J, Kassebaum D, Turnbull J, Whitcomb M. Learning objectives for medical student education--guidelines for medical schools. Report I of the Medical School Objectives Project. Acad Med. 1999;74:13-18.
- Swick HM. Toward a normative definition of medical professionalism. Acad Med.
 2000;75(6):612.
- Medical professionalism in the new millennium: a physicians' charter. Lancet.
 2002;359(9305):520-522.

- 40. Cruess RL, Cruess SR. Expectations and obligations: Professionalism and medicine's social contract with society. Perspect Biol Med. 2008;51(4):579-598.
- Awasthi S, Beardmore J, Clark J. The Future of Academic Medicine: Five Scenarios to 2025. New York: Milbank Memorial Fund; 2005/2006.
- 42. Rothman DJ. Medical professionalism-focusing on the real issues. N Engl J Med. 2000;342(17):1284-1286.
- 43. Fuchs VR, Milstein A. The \$640 billion question: Why does cost-effective care diffuse so slowly? N Engl J Med. 2011;364(21):1985-1987.
- 44. Meslin EM, Cho MK. Research ethics in the era of personalized medicine: Updating science's contract with society. Public Health Genomics. 2010;13(6):378-384.
- 45. Pediatrics Committee, ACGME. ACGME Program Requirements for Graduate Medical Education in Pediatrics. Accreditation Council for Graduate Medical Education: Accreditation Council for Graduate Medical Education; 2007. [Effective: July 1, 2007; revised, effective: July 1, 2011].
 (http://www.acgme.org/acWebsite/downloads/RRC_progReq/320_pediatrics_07012007.pdf).

Accessed March 9, 2012.

46. Accreditation Council for Graduate Medical Education. Program Director Guide to the Common Program Requirements (IV.A.5.f): Educational Program: Systems-based Practice. ACGME; 2008. [Effective: July 1, 2011] (http://www.acgme.org/acWebsite/navPages/nav_commonpr.asp). Published May 20, 2008.

Accessed March 9, 2012.

47. Ophthalmology Committee, ACGME. Ophthalmology FAQs: Accreditation Council for Graduate Medical Education; 2011. Parboosingh J. Medical schools' social contract: More than just education and research. CMAJ. 2003;168(7):852.

(http://www.acgme.org/acWebsite/downloads/RRC_FAQ/240_Ophthalmology_FAQ.pdf). Published July 2011. Accessed March 9, 2012.

- 48. Long JA, Lee RS, Federico S, Battaglia C, Wong S, Earnest M. Developing leadership and advocacy skills in medical students through service learning. J Public Health Manag Pract. 2011 Jul-Aug;17(4):369-72.
- Parboosingh J. Medical schools' social contract: More than just education and research. CMAJ. 2003;168(7):852.
- 50. Bein B. Advocacy training can give students, residents skills to improve community health. AAFP News Now. 2010. (http://www.aafp.org/online/en/home/publications/news/newsnow/resident-student-focus/20100127advocacy-trning.html). Published January 27, 2010. Accessed March 3, 2012.
- 51. Roth EJ, Barreto P, Sherritt L, Palfrey JS, Risko W, Knight JR. A new, experiential curriculum in child advocacy for pediatric residents. Ambul Ped. 2004;4(5):418-423.
- 52. Hufford L, West DC, Paterniti DA, Pan RJ. Community-based advocacy training: Applying asset-based community development in resident education. Acad Med. 2009;84(6):765.
- 53. Shipley LJ, Stelzner SM, Zenni EA, et al. Teaching community pediatrics to pediatric residents: Strategic approaches and successful models for education in community health and child advocacy. Pediatrics. 2005;115(4):1150.
- 54. Patel K. Physicians for the 21st Century. Eval Health Prof. 1999;22(3):379.
- 55. Jay SJ, Anderson JG. Continuing medical education and public policy in an era of health care reform. J Contin Educ Health Profess. 1993;13(3):195-209.

- 56. Moore J, Donald E, Green JS, Jay SJ, Leist JC, Maitland FM. Creating a new paradigm for CME: Seizing opportunities within the health care revolution. J Contin Educ Health Profess. 1994;14(1):1-31.
- 57. Eckles RE, Meslin EM, Gaffney M, Helft PR. Medical ethics education: Where are we? Where should we be going? A review. Acad Med. 2005;80(12):1143.
- 58. Goethe JW. Werke: Wilhelm Meisters Wanderjahre oder die Entsagenden; Buch 3: Cotta;
 1830. [Translated from the German, p. 257: "Es ist nicht genug zu wissen man muss auch anwenden. Es ist nicht genug zu wollen man muss auch tun."]