IS MEDICAL ETHICS EDUCATION EFFECTIVE ?

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Most, if not all medical schools in the United States, Canada, Western Europe, and a good deal of the remainder of the world require some form of ethics training during the undergraduate years. This state of affairs has arisen only over the past 35 years in response to at least two significant phenomena: (1) what has been perceived as an erosion of certain fundamental interactive skills in students, sometimes attributed to the preeminence, if not substitution, of scientific medicine over more affective areas of expertise and an accompanying loss of what has been deemed "professionalism" in students and young doctors; and (2) the rapid escalation of complex ethical conundrums brought about by new technologies, such as assisted reproduction techniques, solid organ transplantation, stem cell therapies, and the like. Ethics education does not end with graduation as it is also a major focus of postgraduate medical education [1]. All training programs certified by the Accreditation Council of Graduate Medical Education (ACGME) also require competency in professionalism (http://www.acgme.org/acWebsite/navPages/nav_commonpr.asp), which encompasses at least some of the standard precepts of clinical ethics. Coincident with these moves by the AAMC in the US, the British "Pond Report", published in 1987, endorsed the incorporation of a comprehensive course in medical ethics into the curriculum of UK medical schools [2]. It not only stressed the importance of creating and expanding a factual knowledge base for future doctors, but emphasized the parallel skill of enhancing moral reasoning, the ability to analyze the ethical dimensions of a situation, reach a conclusion about the possible "ought to" outcomes and then be able to justify them.

The stated aims of these programs are reasonably similar: to educate students and young doctors in ethical decision-making, the pertinent law and more broadly, to "develop physicians' values, social perspectives, and interpersonal skills for the practice of medicine" [3]. These are noble objectives, broad in scope. In practical terms, ethics education in the medical setting is asking no less than to not only make physicians *think* ethically, but perhaps *be* more ethical themselves. The recognition that this is a primary goal of medical education predates the rise of scientific medicine, but that notable, evolving achievement has perhaps amplified and complicated the challenge. Identifying and defining excellence in doctors dates at least to the ancient Greeks, but the 19th century saw the beginning explosion of both medical knowledge and education in general, especially in Western Europe and the rapidly expanding United States. This led to an increasing awareness that not everyone could or should be a doctor, along with the expectations of what a doctor should be like.

In 1869, Dr. James Paget of London's St. Bartholomew's Hospital, reviewed the sorry state of his experience with 1000 graduates of the hospital's affiliated medical school. Not surprisingly for the time, and the circumstances of medical education in the 19th century, Dr. Paget lamented that only 89 of the 1000 had achieved "distinguished" or "considerable" success, while significant numbers of students had careers of which he was not proud, to say the least [4]. His retrospective reflection led him to make the following conclusions about medical education:

> *"There might seem more hope of being able to tell the influence of different modes of education on the afterlife of medical students; and thence of deducing some scheme that should greatly increase the successes and decrease the failures…. Of course in watching and reflecting on the careers of my pupils, I have come to some strong beliefs on subjects of medical education…. Nothing appears more certain that the personal character, the very nature, the will, of each student had far greater force in determining his career than any helps or hindrances whatever."* [4]

Unfortunately, medical educators failed to heed his call for more rigor in choosing from amongst the varied applicants, perpetuating a situation in which many other distinguished physicians also saw a need to proselytize for improved standards, both academic and moral. No less an academic icon that Sir William Osler outlined the nature of medicine as a profession and thus the nature of the professionals who practiced it:

> *"You are in this profession as a calling, not as a business; as a calling which exacts from you at every turn self-sacrifice, devotion, love and tenderness to your*

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fellow-men…. You must work in the missionary spirit, with a breadth of charity that raises you far above the petty jealousies of life." [5]

Osler's description of the excellent doctor was echoed by a less-well-known, but erudite, father and son pair of physicians, the Drs. Cathell. In their *Book on the Physician Himself*, first published in 1882, the authors describe how

"Every Medical Man discovers sooner or later that The Practice of Medicine has two sides: A Greater Scientific Side, and a Lesser, but important, Personal Side…. There are many excellent gentlemen in the ranks of our profession to-day who are perfectly acquainted with all the scientific aspects of medicine, and can tell you what to do for almost every ailment that afflicts humanity, who, nevertheless, after earnest trial, have failed to achieve reputation or acquire practice simply because they are deficient on the personal side, and lack the professional tact and business sagacity that would make their other qualities successful." [6]

Clearly, many physicians were aware of the many-faceted demands of medical practice, requiring both intellectual rigor and certain admirable character traits, both inherent and acquired. Both Osler's and the Cathell's admonitions could be viewed as a call to extol the benefits of continuing education and an affirmation of the virtue of what we now label "professionalism". But were there guides, other than exemplars of excellence (such as Dr. Osler) that students and young physicians could refer to, by which they could measure the caliber of their practice? Were there rulebooks of professional practice?

Dr. Thomas Percival wrote what could be arguably the first formal treatise on medical ethics, in which he carefully and voluminously laid out his prescriptions and proscriptions (or, as he called them "institutes and precepts") for the professional (and personal) behavior of doctors in the manner with which they cared for patients and their families [7].

Some four decades later, the American Medical Association published the first edition of its Code of Medical Ethics [8]. The practice of medicine perhaps having become somewhat more focused, or perchance, the authors being less loquacious than Percival, the AMA's tract is only 20 pages, compared with Percival's capacious 194. But having a code of ethics for a profession is one thing. Making sure its members follow it and enhance it is another.

"Impressed with the nobleness of their vocation, as trustees of science and almoners of benevolence and charity, physicians should use unceasing vigilance to prevent the introduction into their body of those who have not been prepared by a suitably preparatory moral and intellectual training…. We are under the strongest ethical obligations to preserve the character which has been awarded, by the most learned men and best judges of human nature, to the members of the medical profession, for general and extensive knowledge, great liberality and dignity of sentiment, and prompt effusions of beneficence." [8]

It is interesting that the AMA Code bears many traces of Percival's influence, especially in the sections devoted to physicians' duties to patients and their conduct with other physicians. But perhaps unique to this document is the detailed portion allotted to describing the related duties that patients have to their physicians. Not surprisingly, given the AMA's concern with the plethora of poorly trained, amateurish doctors (presumably competing for the business of patients), there is a significant amount of text concerned with these inept interlopers. At the time, the US was overrun with proprietary, for-profit schools of medicine, turning out doctors whose expertise and knowledge was minimal. Furthermore, one didn't have to go to a medical school as one could set up shop after simply apprenticing oneself to an active practitioner. This situation did not change much for the remainder of the 19th century. Interestingly, the Supreme Court of the US weighed in on the matter in an 1889 case in which a doctor sued the State of West Virginia for requiring him to have certain academic accomplishments to obtain a license to practice; the Court held that it was well within the boundaries of State power to enact and enforce such requirements to protect the public welfare and such action was not an unreasonable restraint of trade [9]. This state of affairs of course eventually culminated in the so-called Flexner Report.

In 1910, Abraham Flexner published his famous report, *Medical Education in the United States and Canada* in which he denounced the current forms and varieties of medical education, heaping specific scorn on for-profit medical schools [10]. He also recognized the rapidly changing nature of medicine, from a profession in which folk remedies (and folk wisdom) were considerably more prevalent than those based in science, to one in which the physician who came to heal was extensively trained in the scientific foundations of disease and its cure. Accordingly, he issued a clarion call for students to be adequately prepared in chemistry, biology and physics before they entered medical school. But he did not ignore the humanistic side of medicine:

"So far we have spoken explicitly of the fundamental sciences only. They furnish, indeed, the essential instrumental basis of medical education. But the instrumental minimum can hardly serve as the permanent professional minimum…. The practitioner deals with fact of two categories. Chemistry, physics, biology enable him to apprehend one set; he needs a different and appreciative apparatus to deal with the other, more subtle elements. Specific preparation is in this direction more difficult; one must rely for the requisite insight and sympathy on a varied and enlarging cultural expe-

rience. Such enlargement of the physician's horizon is otherwise important, for scientific progress has greatly modified his ethical responsibility." [10]

Thus Flexner was calling for a well-rounded physician: skilled in the science of his/her field, but able to recognize and cope with the moral challenges raised in the everyday practice of medicine. Almost 65 years later, Pellegrino echoed these same sentiments when he commented on the multifaceted assaults on the humanity of medical practice by a tyranny of technology [11]. He did not dismiss the importance of craft; indeed, he extolled it as one of the essential components of the "Compleat Physician". Nonetheless, while necessary, it is not sufficient. Without the element of the bipartite "humanism", composed of an affective arm (compassion) and a cognitive arm (essentially knowledge of the world) doctors are incomplete as practitioners. Interestingly, his call for a renewed emphasis on the liberal arts in the education of physicians echoed that of the American Association of Medical Colleges (AAMC) when a section of the Medical College Admission Test in versions used from 1946-1977 emphasized "understanding modern society" or "general knowledge" [12]. This component of the test was removed from 1977 onwards, ostensibly to allow more room to test quantitative and scientific skills and knowledge. It is unclear if the new "verbal reasoning section [which] presents short passages drawn from the humanities, social sciences, and natural sciences followed by multiple-choice questions… intend[ing] to evaluate text comprehension, data analysis, ability to evaluate an argument, or apply knowledge from the passage to other contexts" measured knowledge of the world outside of science and medicine as was the intent of the sections on prior versions of the test [12].

It would seem as if a problem (or problems) has been recognized with how we train doctors, and what kinds of doctors we are producing. A remedy, or series of remedies (formal medical ethics courses) have been instituted and, in some cases, have been in place for a number of years. But the question remains: are they working? Do doctors communicate better with their patients and their families? Are they more respectful? Are physicians who have had an ethics course in medical school, succeeded by professionalism training in residency, any more skilled at recognizing and responding in acceptable ways to situations in which ethical challenges are present? Are we making doctors who both act ethically and are ethical as a result of our pedagogical interventions? It seems like the answer should resoundingly be in the affirmative, but the data are sorely lacking.

Some have suggested that all our efforts are bound to be for naught, given the profound antithetical effects of the so-called "hidden curriculum" to which students and house officers are exposed the minute they hit the clinics and wards and come under the powerful influence of their slightly older and more experienced peers, who quickly put them to rights about how things work in the "real world" [13-16]. In a recent comprehensive review of the extant literature on undergraduate ethics education, Eckles and her colleagues analyzed the state of the curricula, goals and outcomes in published reports [17]. They, too, identified a seeming dichotomy in the stated objectives (see above). On the one hand, the purpose appeared to be the formation of the virtuous or ethical physician, on the other, the training of doctors possessing a skill set which enabled them to recognize (diagnose) and respond in a correct manner (treat) situations in which ethical dilemmas presented themselves or were inherent. To a certain extent, the form of the curriculum was related to the desired outcome. But, most importantly, they noted that there was a dearth of empirical evidence supporting any particular method as effective in producing the intended result, or indeed that anyone had a successful approach to measuring outcome. For example, does an increase in moral reasoning as measured by the Defining Issues Test [18] over the medical school years imply an improvement in compassionate and understanding doctoring skills? Or does the ability to answer questions on a multiple choice test of medical ethical "facts" lead to better application of those facts in the clinical setting? Even though their paper was published in 2005, the following years have not yielded any significant progress in this area. Perhaps the only reliable predictor of future behavior in physicians appears to be their past poor behavior [19-20]. But the vast majority of students don't commit the kinds of major transgressions that bring them to the attention of licensing authorities. Of course they are not all excellent physicians: some are not particularly talented (but acceptable) and most are average. Perhaps the goal of undergraduate and postgraduate ethics education should simply be to attempt to nudge the curve to the right, thereby increasing the percentage of better-acting doctors.

Pellegrino calls attention to the unique significance of faculty as models of excellent behavior and that compassion, like any Aristotelian virtue, can be acquired and perfected by practice, under the tutelage of a wise teacher [11, 21]. This formulation requires medical school professors who are virtuous and excellent [22]. But many of them are themselves products of the "House of God" training system Pellegrino and others justifiably decry [23]. Even if such educational exemplars existed in ample numbers to teach the many thousands of students and house officers, the evidence for the efficacy of this approach is underwhelming [24]. If he is correct, that compassion, understanding, communication expertise and empathy are skills that can be learned and honed to something approaching perfection (albeit, an ideal), then we will need something more complex and comprehensive than the limited instructional possibilities of standardized patients. This is a skill that must be practiced everyday, refreshed and renewed.

Pellegrino defines compassion as *"the capacity and the willingness of the physician somehow to share in the pain and anguish of those who seek help from him… it is not to be confused with pity, condescension or paternalism"*. He notes that *"our fascination with technology, gadgets and*

instruments; the inherent depersonalizing influences of our highly institutionalized social structures; the replacement of care by the 'team'", all contribute to undermining either present or inherent capacities to enhance empathy and clinical compassion in students.

There is actually a fair amount of data, albeit much of it contradictory in nature, that suggests that various teaching approaches to medical students and house officers can improve ethical knowledge and perhaps even ethical sensitivity, the ability to sense the ethical dimensions of a clinical situation (see, for example [25-28]). Unlike other types of medical education, where we know that imparting certain types of practical knowledge along with methods of application, there is a fair amount of convincing data that certain methods work, and some work better than others [29-30]. But there is little-to-no evidence that these pedagogical interventions actually change behavior, thus making a less-than-ethically behaving doctor *act* better [31-32]. Do they make better decisions as a result of their ethics education? After all, it would be specious to suggest that the goal of these efforts is to make students perform better on tests of moral reasoning or sensitivity, rather than actually affect behavior at the bedside and clinic. Unless, of course, that performance on the former is predictive of the latter. Although there is reason to believe that students who demonstrate poor measures of professionalism do poorly on tests of moral reasoning, etc., and have a greatly increased chance to having troublesome behaviors later on [19, 33-35].

However, it would be mistaken to state that there have been no benefits to ethics education. It would be the rare house officer or junior faculty member who cannot recite the "four principles" of medical ethics [36] or who would make decisions for patients without consulting the patient or his/her family, thus at least superficially respecting autonomous decision-making. And while the process of obtaining informed consent often pays only lip service to a sought-for ideal, the fact that written informed consent is an ingrained part of medical practice offers hope that it can be improved. Surely, this must be considered progress. But the more far-reaching, ambitious objective of making better doctors rather than doctors being better (which is an instrumental, almost superficial change, rather than one that aims to improve character, as Dr. Pellegrino hoped for) remains out of our grasp.

Could there be other ways of teaching students to be exceptional physicians, combining the best of scientific, evidence-based medicine with respectful, compassionate, empathetic care? I think few would dispute the importance of formal didacticism, especially to impart significant factual knowledge about ethical principles and the law as it applies to medical practice. This material is critical to have in one's armamentarium of facts, in just the same way that a doctor knows various familiar treatments for common ailments. But echoing Pellegrino, a doctor is more than a drug-dispensing machine, more than a simple servant to the patient's desires. She/he is someone who understands that disease does not exist outside of a person, and that people come to doctors expecting to be both cared for and cared about.

> *"Medical science identifies what can be done and ethics gives guidance as to what ought to be done."* [37-38]

Perhaps we need to pay closer attention to the mentoring skills of medical school faculty and their abilities to serve as exemplars, and pay them and promote them accordingly. No one should deny the importance of scholarly achievement amongst faculty, but expertise at the bench is not perforce coincident with excellence at the bedside. While many schools can and do reward outstanding clinical teachers, the demonstration of clinical skills (broadly defined) takes time and cannot take place in a classroom, and the number of students any given teacher can demonstrate to is limited.

After several decades of experience, we may rightly ask if any of these programs are successful: are our current graduates more ethically sensitive, do they employ moral reasoning in a more effective manner, are they meeting the ethical challenges posed by modern, technological medicine any better than their forebears, do they show evidence of having been educated in medical ethics? I think the answer(s) is(are) decidedly mixed. But these goals are by no means novel, they are only reinvented, revised, and reworked from hundreds, if not thousands of years of experience and desire to train doctors to do good and be good, to be honorable and to practice honorably, to be respectful and respectable. In many ways, it is a noble (perhaps Sisyphean) endeavor that we continue to lament our failures and persist in trying to improve our pedagogy, to get it right, to produce excellent physicians.

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