



Education in Internal Medicine

Training and learning professionalism in the medical school curriculum: Current considerations

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ABSTRACT

Recommendations in the literature concerning measures to address the challenges to professionalism have converged on the establishment of an education community, on a structured curriculum dealing with professionalism, on developing programs for role modelling and mentoring, and on attention to the assessment of professional conduct. The interventions in the field of medical education appear central among these efforts, since it is during medical school that the template for professional conduct in medicine is primarily learned. This article attempts to provide a more in-depth discussion of the goals, purposes and current factors influencing teaching and learning professional behaviour in the medical school curriculum and the residency programs.

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1. Introduction

Maintenance of a doctor's professional status depends on the public's belief and trust that professionals are trustworthy. Such status is not an inherent right, but must be seen as something granted by society. The doctor's professionalism can be threatened by self-interest, peer pressure and commercialism. These can often lead to a conflict between altruism and self-interest [1], potentially leading to for example abuse of power, lack of conscientiousness, failure of self regulation, and inability to adequately address issues important to society [2]. It is now recognized that unprofessional behaviour is something that cannot be managed through disciplinary action and honour codes alone [3]. Instead, pro-active educational programs promoting professionalism are viewed as equally important [4,5]. Nowadays, professionalism and professional behaviour have become

core business for the medical educationalist over the last decade, as evidenced by the enormous rise in the number of articles published on these topics.

Recommendations in the literature concerning measures to address the challenges to professionalism have converged on the establishment of an education community, on a structured curriculum dealing with professionalism, on developing programs for role modelling and mentoring, and on attention to the assessment of professional conduct [6,7]. The interventions in the field of medical education appear central among these efforts, since it is during medical school that the template for professional conduct in medicine is primarily learned [7,8]. Apart from implementing a formal teaching curriculum addressing professionalism, it is claimed that in order to sustain a sufficient level of professionalism, medical schools and teaching hospitals should address at least four other broad areas:

(1) improving selection of future doctors, (2) improving the formal instructions of their learners and teachers (students and residents and teaching staff and clinicians), (3) improving the clinical learning environment (workplace) and (4) remediating their own unprofessional practices [9,10]. The development and maintenance of

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professional development thereby becomes a continuum spanning the years of medical training, residency and further professional career.

This article attempts to provide a more in-depth discussion of the goals, purposes and current factors influencing teaching and learning professional behaviour in the medical school curriculum and the residency programs.

2. Why would we teach and assess professional behaviour: who is to benefit?

The reasons for teaching and assessing professional behaviour during medical school are threefold. First, it should instil and nurture the development of personal qualities, values, attitudes and behaviours that are fundamental to the practice of medicine and health care. Second, it should ensure that students understand the importance and relevance of these concepts, demonstrate these qualities at a basic level in their work, and are willing to continue to develop their professional identity [11]. Third, education in and assessment of professionalism and professional behaviour should enable students and faculty to understand the origins of professionalism and the proper set of responsibilities of the professional.

This way of teaching and assessing professional behaviour serve a purpose for the trainee, for the curriculum, for the institution, and for the public. The trainee builds on individual strengths and remediates weaknesses, develops self-reflection and self-remediation, and thereby gains access to advanced training. The institution can implement curricular changes where necessary, thereby creating curricular cohesion. The institution can identify candidates for specialised training and promotion, promote faculty development, create and analyze data for educational research, and can share developed educational values with other institutions. For the public it serves the purpose of being certain that only certified and qualified graduates enter health care. The public is shocked by reports on for example the physicians Michael Swango (US) [12], and Harold Shipman (UK) [13] who murdered several of their patients. These reports make the public wonder whether physicians are fulfilling their professional responsibility to protect the public, and give rise to the question how it was possible for them to make it through medical school.

3. Does identification of professional lapses provide opportunity for remediation?

The underlying assumption of teaching and assessing professional behaviour during medical school is that displayed professional lapses in medical school or during residency training are predictive of unprofessional behaviour after graduation. Identifying these lapses (and attempting to remediate identified unprofessional behaviour) suggests that this provides possibilities for future prevention in some cases. If *insufficient* attention is paid to development of professionalism, problems arising with professional behaviour during medical training can certainly project into their career as a practicing physician [4–16]. The supposed relationship between unprofessional behaviour during medical school and subsequent problems as a physician has recently indeed been demonstrated [15,16]. Those who were described as irresponsible or as having diminished ability to improve their unprofessional behaviour during medical training are those who are most likely to experience disciplinary action during active practice as a physician [15]. Conscientious behaviour (as for example measured by reports on immunisation compliance) in pre-clinical years was found to be predictive of outcomes in professionalism as found by the review board in clinical setting in year 3 [14]. Similar findings were recently reported for residents in internal medicine [16]. Poor performance on behavioural and cognitive measures during internal residency programs were associated with greater risk for state licensing board actions against practicing

physicians in a very recent study [16]. So far, the licensing boards *cannot* demand remediation of poorly performing graduates, but in many countries medical schools and residency programs *can*. Moreover, since a strong positive relationship exists between doctor's interpersonal skills and patient compliance, attention to professional behaviour of medical students and residents *could* potentially improve health care outcomes [17,18]. Whether *extreme* examples of unprofessional behaviour as mentioned can be prevented by these measures has not been studied, and it is unlikely that such studies will ever be performed.

An important approach to identify professional lapses is to establish training and assessment programs for professional behaviour and professionalism. The students' view is important when developing a training program regarding professionalism, and their 'view from the trenches' should therefore not be ignored [10]. For example, the demonstrated lack of awareness and knowledge regarding professionalism issues among students, their abundant practical experiences with professional lapses (e.g. mistreatment and abuse), and identification of learning points from contemporary teaching and assessment practices (e.g. the unprofessional clinical learning environment with poor role modelling) are all aspects of the explicit medical school professionalism curriculum that require attention, and will successively be discussed.

4. Are medical students sufficiently aware of professionalism?

A recent paper reporting what medical students know about professionalism, answered this question basically with: "Not a great deal" [19]. Most medical students have no fundamental understanding of what it means to be a physician and what constitute the core professional values [19]. Medical school applicants frequently have given little thought to what it means to be a physician in terms of professional values [19]. Outside medical school training and at the undergraduate level it seems that medicine is not "getting the word around" properly [19]. "Speaking to the choir" (in highly valued medical journals, where the volume of articles on the topic explodes) may thus not be the same as informing the public (including future medical school applicants) [19]. A recent study by Wagner et al. investigated the meaning of medical professionalism to medical students [20]. Students considered knowledge and technical skills important as underscored by the use of words like "lifelong learning" and "developing a knowledge base" [20]. In the past, despite efforts of organisations in medicine to promote professionalism, trainees tended to view professional values as peripheral and/or non-essential [19]. This view may have changed over recent years. Wagner recently reported that students also emphasize communication skills in their relationship with patients and colleagues, and character virtues like compassion. This aspect of professionalism, which involves the patient relationship and communication with patients and colleagues, is essential to them. The majority of the conversation during the focus group interviews in this study dealt with the developing awareness of the reciprocity of the patient–doctor relationship and the need for colleagues to respect students [20]. Once in medical school most students thus express great enthusiasm for "doing good" and being *service-oriented* [10], but are not necessarily receptive of the notion that they are *obliged* to act accordingly in these respects [19]. In summary: increasing the awareness and knowledge regarding professionalism issues among medical students should be an integral part of a training program in the medical curriculum.

5. Which dilemmas do students face?

Opinions vary and evolve about how students and professionals should behave [21,22]. Medical students are nonetheless expected to demonstrate the currently professionally appropriate and ethical behaviour. Knowing what constitutes this specific behaviour however, appears to be extremely challenging for students [23] as well as

teachers, since context (e.g. time, place and culture) all influence the expected behaviour. Furthermore, evaluation of professionalism, when practiced in a *clinical learning environment* where teachers frequently display unprofessional behaviour invites conflict, and may leave students confused [10]. In attempts to optimize strategies it is critically important to combine current theories on professionalism with practical experiences of medical students. The sparse literature on this topic relies largely on the recollection of frequency and severity of professional and ethical dilemmas faced by students [24], and has focused more on prevalence than on the nature of the dilemmas [3]. The most salient dilemmas are:

5.1. Mistreatment and abuse, and resulting cynicism

Baldwin et al. studied students' experiences of perceived mistreatment and abuse, first at one [25], later at 10 medical schools [26], and still later using a national sample of residents [27] and reported a high prevalence of perceived unprofessional behaviour. Other authors confirmed the high prevalence of such unprofessional behaviours in undergraduate and graduate medical education [28–31]. Second year medical students reported to have experienced one or more problematic interactions in their first year related to issues of role transition [32]. A pilot survey among third year medical students showed that these students also commonly witnessed or were victim to mistreatment (verbal abuse, unfair tactics), resulting in a more cynical attitude towards academic life in three fourths of students [28]. This is not a new finding, since similar results were already reported previously in the 1950s [33]. Probably such increasing cynicism as students further progress in medical school gives rise to "ethical erosion" [28,33,34]. It is therefore widely suggested that medical education should add reality preparation for the 'complex, power driven competition in the medical marketplace' [35]. A later study in pre-clerkship medical students revealed many faults in the same areas, also committed by fellow students and to other students [36]. Some authors therefore suggest that the chief barrier to medical professionalism education is unprofessional conduct by medical educators (i.e. poor role modelling), which is protected by an established hierarchy of academic authority [10].

5.2. Unprofessional learning environments inviting conflicts

This is evidenced by the result from several studies. A survey of 108 clinical students who were one year away from completing medical school reported that during medical training 47% had been placed in a clinical situation in which they had felt pressure to act unethically, and that 61% had witnessed a clinical teacher acting unethically [37]. Three categories of ethically problematic situations were revealed:

- conflict between the priorities of medical education and patient care; for example performing a femoral puncture in a patient not in need of the procedure
- responsibility exceeding a student's capacities; for example having a student close a wound, without the student knowing to close it properly, and
- involvement in patient care perceived to be substandard: for example patients requested narcotic free vaginal delivery but was given intravenous narcotics without her knowledge [37].

The ethical problems were seldom discussed with the clinical teacher.

In focus group interviews final year medical students report to have witnessed critical issues in professionalism in the clinical setting, and these issues could be classified as communicative violations to or about patients or other health care professionals, role resistance (torn between the learner's contract with the teacher and the caregiver's contract with the patient, the student is confused, chafing against role constraints, and her professional dilemma manifests itself as an oscillation between alternative actions), objectification of patients

(ignoring patients or treating them as vehicles for learning), accountability (for example avoiding patients, failing to disclose information), physical harm and crossfire (being put in the middle of struggle between supervisors) [24]. A study by Roberts et al. comparing medical students' and residents' perspectives revealed that ethical conflicts are seen as common, especially by women and advanced trainees. 58% of respondents (200 medical students and 136 residents) indicated high frequency of encounters with ethical conflicts [38].

5.3. The distinction between newly observed versus unprofessional behaviour is troublesome

The transition from lay people to medical student, being in an "betwixt and between" stage of professional development, not knowing what is simply new, not previously observed behaviour and what is morally questionable, can be troublesome [23], even for students by students that would otherwise tend naturally toward avowed professional virtues [10]. Whether this means that the abovementioned, *identified* ethical conflicts represent only the tip of the ice-berg, is not clear.

5.4. Personal learning benefit versus potential patient harm

Another professional dilemma occurs when trainees take part in daily patient care as part of their training. Patients may not benefit from doctors in training and medical students participating in their care, and even be harmed by it [37]. Although educating doctors is critical to society, and society as a whole benefits, this is not necessarily the case for the individual patient. Professional behaviour in practical training therefore implies balancing the good for society and potential benefit to individual participants against potential harm to those participants, avoid unfair distribution of risks and benefits, and maintain respect for patient autonomy [39]. Respect for individuals is essential. It is known that patient satisfaction does not decrease when students participate in their medical care, and that patients are willing allow students to participate in invasive procedures and pelvic examinations based on the belief that the balance of potential benefits to themselves and society outweighs the risks. Altruism, rather than perceived benefit to self, seems to be the primary motivation for participation in medical education [40]. As long as this does not conflict with the principle of beneficence, the decision of doctors whether the balance of risks and benefits justifies requesting participating in patient care. Whether provider experience is linked to outcome remains inconclusive however [41]. Furthermore, the "burdens" of medical education are not distributed fairly. Disadvantaged patients may not feel empowered to withhold consent, whereas children of doctors are less likely seen by trainees [42]. Thus the concepts of respect for individuals, beneficence, and distributive justice coming from research ethics, can also be applied to medical education [39].

6. (Dis)satisfaction with teaching professionalism in the medical school curriculum

In summary, the exposure to ethically problematic behaviours does begin as early as the first years in medical school, is common, and persists over the years in medical school [43]. These data are in support of the view that teaching and assessment of professional behaviour should begin early in the curriculum. Few studies however address the question of satisfaction with contemporary training in professionalism. The available evidence on this topic is discussed in the remaining paragraphs of this article.

In a study using a survey instrument consisting of brief scenarios challenging professionalism issues, among students, house officers, and practicing physicians, 40% expressed dissatisfaction with their education and training in professionalism (52% of medical students, 24% of house officers, 41% of practicing physicians). There was a significant relation

between hours of formal course work in professionalism issues and overall satisfaction with training regarding professionalism. Most respondents had less than 10 h of course work in professionalism. However, teaching rounds were regarded the most effective setting to learn professionalism issues (81%), but informal discussions had major impact (65%) as well.

Thus, although didactic course work alone is generally regarded as *insufficient* for teaching and learning issues related to professionalism, the satisfaction of the respondents with their training related significantly to their amount of course work taken. On the other hand, informal discussions indeed also contributed a great deal to learning of professionalism issues [44]. Increasing level of working experience was associated with a modest, but significant increase of the adequacy of response to scenarios that challenged professionalism (medical students 42%, house officers 49%, physicians 53%). Higher levels of training within the groups resulted in a higher percentage of adequate responses as well. In a survey among 200 medical students (all years) and 136 psychiatry residents (years 1–3), respondents (women more than men) strongly endorsed professionalism topics, although only 18% found current professionalism preparation sufficient [38]. Respondents, residents more than medical students, were most enthusiastic about *clinically* oriented and multidisciplinary expertise-oriented learning approaches (role modeling, ethics discussions during clinical rounds, incorporation of ethics topics in formal lectures, consultation with ethics experts) [38,45]. Regarding assessment, a similar pattern emerged, with clinically oriented approaches being preferred over techniques remote from everyday patient care [38].

7. Conclusions

Teaching and assessing professionalism serves a purpose for the trainee, for the curriculum, for the institution, and for the public. Teaching professionalism should involve a formal, structured curriculum regarding professionalism. Currently, more than half of students are dissatisfied with current training practices relating to professionalism. Increasing time spent in *formal courses* in professionalism is associated with increasing satisfaction with training regarding professionalism, although (clinically oriented) teaching rounds and *informal discussions* were considered to be important and highly valued as well. Improving selection of future doctors, improving the formal instructions of their learners and teachers and improving the learning environments and workplace based learning practices have been mentioned as additional measures to improve teaching regarding professionalism [9,10]. These formal programs should be constructed and further improved by hearing the students' voice on this topic. Medical school applicants frequently have not given much thought to what it means to be a physician in terms of professional values. Critical dilemmas relating to professionalism and professional behaviour however start to occur early in the medical curriculum, and partly originate from the finding that differentiation between not previously observed and morally questionable behaviour can initially be troublesome for beginning medical students. Apart from adequate guidance of medical students, more attention should thus be given role modelling and the unprofessional learning environment. Since development of problems with professional behaviour arising during medical training can project into their career as a practicing physician, it is essential that the development and maintenance of professional behaviour not only starts *early* in the curriculum, but also forms a *continuum* with the later years of medical training, the subsequent residency training and following professional career as a medical staff member.

8. Learning points

- Professional behaviour cannot be managed through disciplinary action and honour codes alone, pro-active educational programs

promoting professionalism are currently viewed as at least equally important.

- The teaching and assessment of professionalism serves a purpose for the trainee, for the curriculum, for the institution, and for the public.
- Teaching professionalism should involve a *formal*, structured curriculum in combination with *informal* discussions and clinically oriented teaching rounds. One without the other is less effective.
- In the informal curriculum students are often exposed to unprofessional environments. This creates a conflict between what is taught and what is preached. Attention to role modelling and the unprofessional learning environment need to be part of the educational situation.

References

- [1] Cruess SR, Cruess RL. Professionalism must be taught. *BMJ* 1997;315(7123):1674–7.
- [2] Stern DT. Measuring medical professionalism. New York: Oxford University Press 1978-0-19-517226-3; 2006.
- [3] Baldwin Jr DC, Daugherty SR. In: Stern DT, editor. Using surveys to assess professionalism in individuals and institutions. In: Measuring medical professionalism. New York: Oxford University Press 1978-0-19-517226-3; 2006.
- [4] Papadakis MA, Osborn EH, Cooke M, Healy K. A strategy for the detection and evaluation of unprofessional behavior in medical students. University of California, San Francisco School of Medicine Clinical Clerkships Operation Committee. *Acad Med* 1999;74(9):980–90.
- [5] Papadakis MA, Loeser H, Healy K. Early detection and evaluation of professionalism deficiencies in medical students: one school's approach. *Acad Med* 2001;76(11):1100–6.
- [6] Medical professionalism in the new millennium: a physicians' charter. *Clin Med* 2002;2(2):116–8.
- [7] Reynolds PP. Reaffirming professionalism through the education community. *Ann Intern Med* 1994;120(7):609–14.
- [8] Hatem CJ. Teaching approaches that reflect and promote professionalism. *Acad Med* 2003;78(7):709–13.
- [9] Cohen JJ. Professionalism in medical education, an American perspective: from evidence to accountability. *Med Educ* 2006;40(7):607–17.
- [10] Brainard AH, Brislen HC. Viewpoint: learning professionalism: a view from the trenches. *Acad Med* 2007;82(11):1010–4.
- [11] Stephenson A, Higgs R, Sugarman J. Teaching professional development in medical schools. *Lancet* 2001;357(9259):867–70.
- [12] Stewart JB. Blind eye: the terrifying story of a doctor who got away with murder. Simon and Schuster; June 15th 2000. ISBN-13: 978-068465638 2000.
- [13] Esmail A. Physician as serial killer—the Shipman case. *N Engl J Med* 2005;352(18):1843–4.
- [14] Stern DT, Frohna AZ, Gruppen LD. The prediction of professional behaviour. *Med Educ* 2005;39(1):75–82.
- [15] Papadakis MA, Teherani A, Banach MA, Knettler TR, Ratner SL, Stern DT, et al. Disciplinary action by medical boards and prior behavior in medical school. *N Engl J Med* 2005;353(25):2673–82.
- [16] Papadakis MA, Arnold GK, Blank LL, Holmboe ES, Lipner RS. Performance during internal medicine residency training and subsequent disciplinary action by state licensing boards. *Ann Intern Med* 2008;148(11):869–76.
- [17] Ong LM, de Haes JC, Hoos AM, Lammes FB. Doctor–patient communication: a review of the literature. *Soc Sci Med* 1995;40(7):903–18.
- [18] Beck RS, Daughtridge R, Sloane PD. Physician–patient communication in the primary care office: a systematic review. *J Am Board Fam Pract* 2002;15(1):25–38.
- [19] Hafferty FW. What medical students know about professionalism. *Mt Sinai J Med* 2002;69(6):385–97.
- [20] Wagner P, Hendrich J, Moseley G, Hudson V. Defining medical professionalism: a qualitative study. *Med Educ* 2007;41(3):288–94.
- [21] American Board of Internal Medicine, Committee on Evaluation of Clinical Competence. Project professionalism. Philadelphia: ABIM; 1995.
- [22] Arnold EL, Blank LL, Race KE, Cipparrone N. Can professionalism be measured? The development of a scale for use in the medical environment. *Acad Med* 1998;73(10):1119–21.
- [23] Robins LS, Braddock 3rd CH, Fryer-Edwards KA. Using the American Board of Internal Medicine's "Elements of Professionalism" for undergraduate ethics education. *Acad Med* 2002;77(6):523–31.
- [24] Ginsburg S, Regehr G, Stern D, Lingard L. The anatomy of the professional lapse: bridging the gap between traditional frameworks and students' perceptions. *Acad Med* 2002;77(6):516–22.
- [25] Baldwin Jr DC, Daugherty SR, Eckenfels EJ, Leaks L. The experience of mistreatment and abuse among medical students. *Res Med Educ* 1988;27:80–4.
- [26] Baldwin Jr DC, Daugherty SR, Eckenfels EJ. Student perceptions of mistreatment and harassment during medical school. A survey of ten United States schools. *West J Med* 1991;155(2):140–5.
- [27] Baldwin Jr DC, Daugherty SR. Do residents also feel "abused"? Perceived mistreatment during internship. *Acad Med* 1997;72(10 Suppl 1):S51–3.
- [28] Sheehan KH, Sheehan DV, White K, Leibowitz A, Baldwin Jr DC. A pilot study of medical student 'abuse'. Student perceptions of mistreatment and misconduct in medical school. *JAMA* 1990;263(4):533–7.

- [29] Silver HK, Glick AD. Medical student abuse. Incidence, severity, and significance. *JAMA* 1990;263(4):527–32.
- [30] Uhari M, Kokkonen J, Nuutinen M, Vainionpaa L, Rantala H, Lautala P, et al. Medical student abuse: an international phenomenon. *JAMA* 1994;271(13):1049–51.
- [31] Cook DJ, Liutkus JF, Risdon CL, Griffith LE, Guyatt GH, Walter SD. Residents' experiences of abuse, discrimination and sexual harassment during residency training. *McMaster University Residency Training Programs. Cmaj* 1996;154(11):1657–65.
- [32] Braddock 3rd CH, Edwards KA, McCormick TR. New challenges for ethics education: ethical concerns of beginning second-year medical students. *American Society for Bioethics and Humanities, Philadelphia, PA, October 28–31; 1999.*
- [33] Eron LD. Effect of medical education on medical students' attitudes. *J Med Educ* 1955;30(10):559–66.
- [34] Wear D, Aultman JM, Varley JD, Zarconi J. Making fun of patients: medical students' perceptions and use of derogatory and cynical humor in clinical settings. *Acad Med* 2006;81(5):454–62.
- [35] Bloom SW. Professionalism in the practice of medicine. *Mt Sinai J Med* 2002;69(6):398–403.
- [36] Ginsburg S, Kachan N, Lingard L. Before the white coat: perceptions of professional lapses in the pre-clerkship. *Med Educ* 2005;39(1):12–9.
- [37] Hicks LK, Lin Y, Robertson DW, Robinson DL, Woodrow SI. Understanding the clinical dilemmas that shape medical students' ethical development: questionnaire survey and focus group study. *BMJ* 2001;322(7288):709–10.
- [38] Roberts LW, Green Hammond KA, Geppert CM, Warner TD. The positive role of professionalism and ethics training in medical education: a comparison of medical student and resident perspectives. *Acad Psychiatry* 2004;28(3):170–82.
- [39] Jagsi R, Lehmann LS. The ethics of medical education. *BMJ* 2004;329(7461):332–4.
- [40] Magrane D, Gannon J, Miller CT. Student doctors and women in labor: attitudes and expectations. *Obstet Gynecol* 1996;88(2):298–302.
- [41] Rich EC, Gifford G, Luxenberg M, Dowd B. The relationship of house staff experience to the cost and quality of inpatient care. *JAMA* 1990;263(7):953–7.
- [42] Diekema DS, Cummings P, Quan L. Physicians' children are treated differently in the emergency department. *Am J Emerg Med* 1996;14(1):6–9.
- [43] Satterwhite 3rd WM, Satterwhite RC, Enarson CE. Medical students' perceptions of unethical conduct at one medical school. *Acad Med* 1998;73(5):529–31.
- [44] Barry D, Cyran E, Anderson RJ. Common issues in medical professionalism: room to grow. *Am J Med* 2000;108(2):136–42.
- [45] Fryer-Edwards K, Wilkins MD, Baernstein A, Braddock 3rd CH. Bringing ethics education to the clinical years: ward ethics sessions at the University of Washington. *Acad Med* 2006;81(7):626–31.