An Argument to Integrate Social Media into Professionalism Training in Undergraduate Medical Education

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Introduction

The World Journal of Medical Education and Research (WJMER) (ISSN 2052-1715) is an online publication of the Doctors Academy Group of Educational Establishments. Published on a quarterly basis, the aim of the journal is to promote academia and research amongst members of the multi-disciplinary healthcare team including doctors, dentists, scientists, and students of these specialties from around the world. The principal objective of this journal is to encourage the aforementioned, from developing countries in particular, to publish their work. The journal intends to promote the healthy transfer of knowledge, opinions and expertise between those who have the benefit of cutting edge technology and those who need to innovate within their resource constraints. It is our hope that this will help to develop medical knowledge and to provide optimal clinical care in different settings. We envisage an incessant stream of information flowing along the channels that WJMER will create and that a surfeit of ideas will be gleaned from this process. We look forward to sharing these experiences with our readers in our editions. We are honoured to welcome you to WJMER.

An Argument to Integrate Social Media into Professionalism Training in Undergraduate Medical Education

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Contextualising Professionalism in the Social Media Setting

Social media usage is growing[1]. Certain elements are pertinent to individual medical practitioners and the wider profession. Practicing within this evolving societal context presents challenges to doctors' professionalism. This can be avoided by choosing not to engage with Facebook or Twitter, for example, but the potential benefits of engaging for patients and practitioners means that many are already choosing to contribute.

Professionalism is contextual, with different meanings between different professions[2] and even within professions geographically[3] and institutionally[4]. These cultural differences are important to consider when discussing professionalism in the wider context and when designing professionalism curricula[5, 6]. Professionalism is far from static, a historical perspective can often be helpful in understanding the developmental trajectory and underlying motivators for professionalism as a concept[7].

So if professionalism is, to some degree at least, locality and profession specific, how can we create a working definition and learning outcomes for medical practice in a global digital environment such as Twitter? Two approaches to answering this question are applied:

- Review of the literature on professionalism internationally for commonalities in the definition used.
- Analysis of professionalism discourses internationally for common themes with review of the available professional guidance.

Despite differences in cultural dimensions that contextualise the society within which professionalism is defined geographically[8,9], research on essential attributes of professionalism found that 4 key areas (personal characteristics, relationships with patients, workplace practices and relationships and socially responsible behaviour) held true internationally[3]. It is of note that these attributes are found consistently if a historical view on professionalism discourse is taken[10]. Several attributes were identified with variable levels of necessity geographically[3] and a selection of these (*i.e.* being accessible to patients, acting in a responsible fashion towards society and being adaptable to changes in the workplace) may be especially pertinent to professionalism in the social media context.

Social Media and Medicine

There is a small but growing body of literature on professionalism in social media, much of it is descriptive in nature. The articles tend to have a certain pattern in content with a discussion around the wider dangers of social media to various professions, a descriptive account of professionalism lapses by medical practitioners, advice for institutions or individual practitioners and finally a discussion of the potential benefits of social media[11-14]. A further article covers these areas and also discusses the topic in the context of free speech in the USA[15].

Other work is more specific in nature discussing, for example, the interplay between professionalism and humour in medicine in the context of comedy videos posted on YouTube by medical students[16].

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Work from Washington D.C. looked at the postings on the social networking platform Twitter (called Tweets) from 260 users who self-identified as physicians in their online profile. Of the 5156 tweets analysed 49% were health or medical related with 3% of these being deemed unprofessional in some way by the researchers. Reasons included; potential patient privacy violations, profanity, sexually explicit material and discriminatory statements. Of those responsible for the privacy violations 92% of offending physicians were easily identifiable by the information on their profile[17].

A study conducted in 2007 found that the majority of medical students at a single US school had high levels of familiarity and usage of a variety of social media platforms[18]. A similar study from New Zealand, concentrating on Facebook and conducted in 2010, showed similarly high levels of participation[19]. If the growth in usage amongst entrants to medical school reflects that of the wider developed world we can safely assume that almost all our current first year medical students have some kind of social media presence[1]. Another study from the USA found high proportions of students to have Facebook accounts[20]; a reply to this article predicted an increase and called for professional guidance[21].

Despite individual studies having various weaknesses such as selection bias[17, 19, 22], small sample sizes [18] and all being conducted in developed English speaking countries these studies provide good evidence for a direction of travel mirroring that of society as a whole, the integration of the Internet and social media in our personal and professional lives. There are potential benefits, but potential pitfalls to maintaining a professional practice also exist. This has become clear to numerous regulatory bodies across the developed world and has dictated the need for professional guidance. This guidance is a useful framework on which to build a curriculum.

Professional Guidelines
The draft guidelines from the General Medial Council, UK [23] reflect the published work discussed above. As a draft for a regulatory framework the document is not practical as to how to use social media professionally, but it does provide clarity on what is not acceptable. One statement from this document best summarises all of the guidance internationally and is worth repeating:

"The standards expected of doctors do not change because they are communicating through social media rather than face to face or through other traditional media. However social media does raise new circumstances to which the established principles apply."
This is reflected in guidance from Australia and New

Zealand[24], Canada[25] and the USA[26]. As this is new guidance in these countries it is perhaps not surprising that a search of developing countries regulatory bodies' websites did not yield any guidance.

From the evidence and guidance above two separate guides by professional bodies in the UK have been produced[27, 28]. These guides are helpful references for students learning about social media professionalism and offer practical advice on applying the guidance from statutory bodies.

Working Definition and Learning Outcomes
Within my context, practicing in the UK, the definition of professionalism from the GMC is particularly relevant, for their definition of a 'good doctor' is what defines professionalism; the rest of their guidance simply applies these principles in a variety of situations:

"Good doctors make the care of their patients their first concern: they are competent, keep their knowledge and skills up to date, establish and maintain good relationships with patients and colleagues, are honest and trustworthy, and act with integrity."[29]

So if my definition of professionalism does not change for this context what does that mean for developing learning outcomes? Applying the ethical principles and professional guidance of existing professionalism curricula to this new context, thereby concentrating on applied ethics[30] and focusing on the four key aspects discussed above[3]. Alongside this, learning outcomes focusing on the specific hazards of social media are included, though it is recognised that the rapid pace of technology means that this will be quickly out of date, hence the importance of the underlying principles. Taking these principles and applying a combination of Bloom's taxonomy[31], Miller's pyramid[32] and more specifically Norcini's adaptation; the following learning objectives are postulated[33]:

- Apply the principles of Good Medical Practice to their social medical interactions
- Identify professionalism lapses online
- Define the potential benefits of doctors engaging with social media for patients
- Apply confidentiality settings online, maintaining an awareness that they are inherently fallible
- Develop an awareness that information posted online is permanent
- Respond to requests from patients for contact via social media in an appropriate manner
- Respond to colleagues' breaches of confidentially via social media appropriately
- Interact with colleagues via social media in an appropriate way

Integrating Social Media into a Pre-existing Undergraduate Professionalism Curriculum

The working definition of the formal curriculum used herein is "the stated, intended and formally offered and endorsed curriculum"[34] within the context of a pre-existing professionalism education programme in an undergraduate medical education context in the United Kingdom. It cannot be assumed that all medical schools offer curricular content on professionalism, but the General Medical Council has stated that this should be the case[35].

Instruction in professionalism necessitates alignment with the stance that professionalism is, to some degree at least, acquired rather than inherent. This aligns with recent work applying psychological constructs to philosophical assumptions of professionalism[36] and how the student develops disparate entities, or domains of professionalism, into a functioning professional possessing "practical wisdom"[37].

The inclusion of social media within, or alongside, an existing professionalism curriculum reflects the realities of professionalism as a dynamic concept[38]. The content and techniques used in its instruction must not be set in stone. Any faculty proposing to deliver the content must recognise that technology moves rapidly and the curriculum must be flexible enough to cope with this. Technology is also fickle and while Facebook and Twitter are popular today they may suffer the decline that has befallen other enterprises such as MySpace[39]. Educators may have to shelve obsolete teaching endeavours shortly after their implementation.

Teaching

Providing teaching on professionalism and social media within the social media space may help embed the theoretical knowledge alongside the practical application of the medium, essentially applying situated learning theory[40], but runs the risk of isolating those not yet experienced and confident with the technology[41].

The argument for integrating social media professionalism within an existing professionalism course is a strong one. Evidence suggests that medical students begin the process of developing their professional identity early in the course[42] and that it occurs at a variable rate through the curriculum[43]. Therefore placing educational interventions at the end of the course, for example, is nonsensical. This may not be possible in the postgraduate setting, but that is not the focus of this essay.

Learning opportunities that provide students with the chance "to engage in active sense-making activities" may help foster a deeper understanding of professionalism[4].

So learning tasks that encourage a combination of practical application and reflection should prove more effective than didactic instruction.

The teaching of professionalism should be shared by all those involved in the education of doctors[44, 45], but this may be difficult in the social media context. The proportion of more senior doctors who have engaged with the medium is considerably lower than students and junior doctors[46]. This does raise the possibility of near-pear teaching as a strategy, something that is accepted by students in the broader sense[47], has many potential benefits[48] and in certain circumstances seems to be just as effective as faculty-led teaching[49, 50]. Peer tutors have been used in the setting of teaching clinical skills[50, 51], as problem based learning co-tutors[52] and in electrocardiogram interpretation education[53] with success. This concept of peer teaching can also be extended to peer assessment[54].

The first aspect of the curricular content is ensuring learners are aware of what is expected of them as developing professionals. The guidelines from statutory bodies[23] and more practical guides from professional associations[27, 28] contain the essence of this material. This could be delivered to students through lectures or by signposting to required reading[55, 56].

Providing opportunities for experiential learning[57], and bridging the gap between the professional guidance and the practical experience that experiential learning can provide is where the real learning is likely to occur. This blurs the boundary between the hidden and informal curriculum and may be one way of bringing the two closer together[58, 59].

Small group learning sessions are a method that has been used for broader professionalism education. An example is a tutor-facilitated session whereby the group are introduced to some examples of professionalism lapses on social media by healthcare professionals. They would then discuss and reflect on their own online presence. Finally they would be asked to apply the relevant professional guidelines. This basic framework could be fit into a variety of curricula. The professionalism lapses could be fed into a problem based learning scenario[61], however this is not always easy to achieve[62].

The use of reflection and reflective writing in numerous guises including blogging[63, 64], learning portfolios[65, 66] and student narratives[67] seems to help shape students' professionalism[68]. The features of these methods that engender successful pedagogy are not clear, but they all share encouragement of creativity[69, 70] and engagement[71]. It may be that the use of the various social media in question could facilitate the process of

The environment within which it would be placed would have to be secure, *i.e.* an internal network rather than the wider Internet.

By using social media in a professional context students can apply and then reflect upon the realities of remaining professional. Social media has been used positively in several different ways including rebutting erroneous media health scares[72], helping those with mental health problems and social isolation[73] and running a Twitter Journal Club[74]. As part of a group learning task students could be asked to plan and implement something similar and reflect on the process.

As a guide figure 1 maps (seen in the next page) maps the teaching sessions discussed above to the learning objectives outlined in the first section. Mapping the curriculum within a complex, multi-site, multi-institute spiral curriculum is a complicated task, but this map can act as an initial guide.

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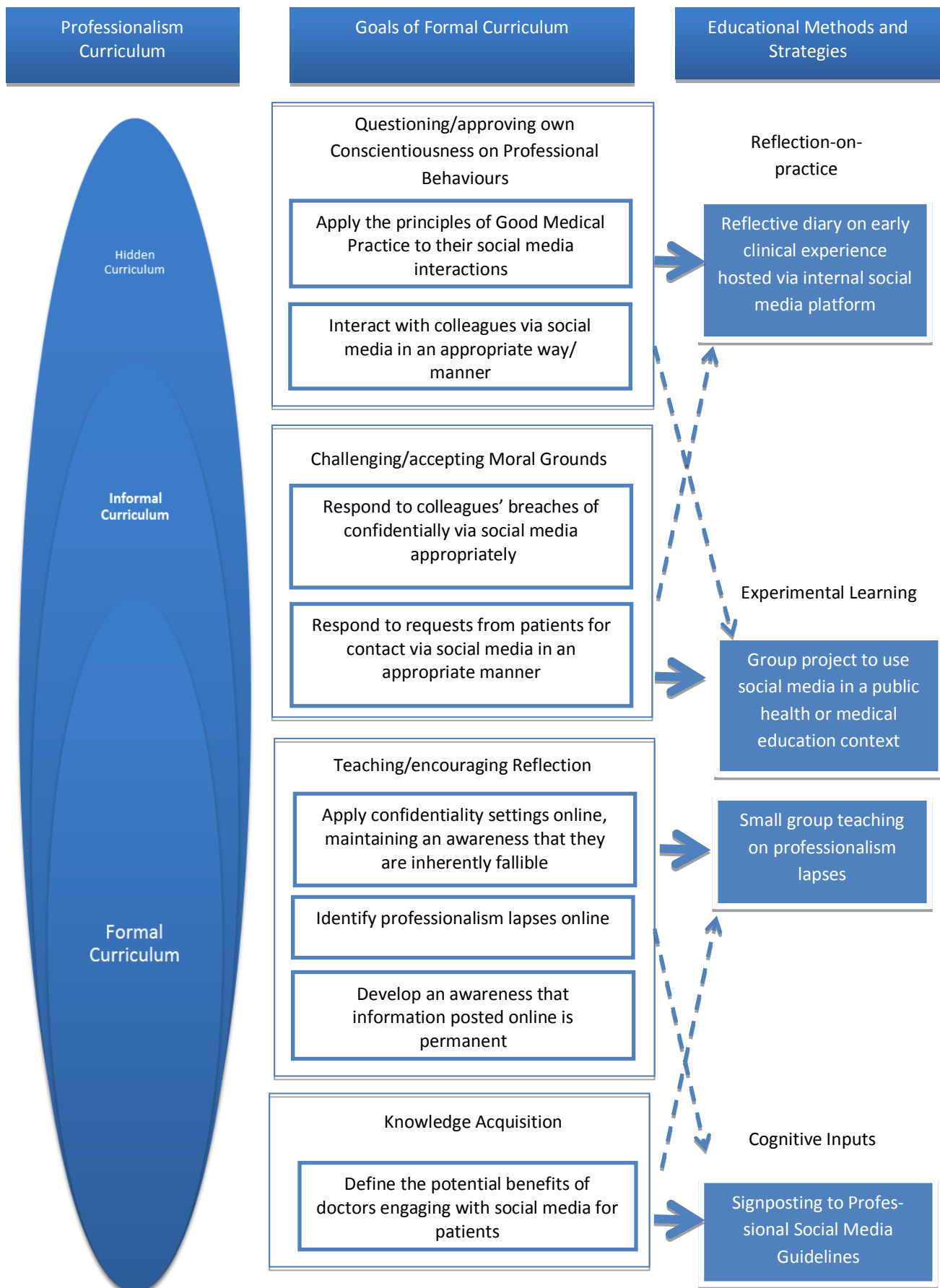**WJMER**

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Figure 1: *Teaching methods mapped to learning outcomes*

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These processes could help facilitate the unguided journey of self-discovery that I have experienced developing and maintaining my professionalism online. For me I have relied on a combination of trial and error, common sense and learning from other's mistakes. I now feel reasonably secure interacting online but I have made mistakes along the way. The novelty of the environment and the initial small audience have meant that these mistakes have been without repercussion. For doctors entering the arena now, or on a larger scale students well accustomed to social media having to modify their behaviour as they develop professionally, mistakes are less likely to go unnoticed or unpunished. This is very much reminiscent of, in a much-compacted way, the development of concepts and practices of professionalism in medicine generally.

Assessment

Society demands professionalism from its doctors, with professionalism now forming the core of clinical competence. It is increasingly being assessed with equal weight as medical knowledge and clinical skills[75, 76]. Assessing professionalism validates it as important and for a variety of reasons encourages students to engage in learning on the subject[77]. Including social media recognises the changing scope of modern medical practice.

Taking the decision that someone is or is not professional is a difficult one. Taking multiple pieces of evidence collated from a variety of sources is the current best method of determining this[6]. While this is in part due to different methods assessing different aspects of professionalism, the inherent weakness of most of the assessment methods means that no single method can be relied upon[78].

There is also the dichotomy between assessing professionalism attitudes and behaviours. There are multiple observational tools to assess students' behaviour[76, 79-82] and these have been used as a proxy for students' attitudes. However it is likely that observed behaviour is a poor proxy for attitudes, particularly when external constraints such as the pressure of being observed or examined is in place[83]. This may lead to the danger of 'faking it students' passing assessments and students with positive attitudes failing due to a solitary slip[83]. This brings us back to the importance of on-going professionalism assessment[6].

Including social media in professionalism assessment need not increase the burden of assessment, integrating it within an existing system of professionalism assessment is a practical solution. Potential methods of doing this could be:

- Including social media contacts in multisource feedback exercises or having a specific multisource feedback for the social media presence.
- Including online activity in inventories such as the poly-professionalism inventory II[84] and the conscientiousness index[85, 86]. Such tools may have a role for peer assessment of professionalism[87].
- Including social media interactions in learning portfolios[65, 88].

These assessment methods are mapped to the learning objectives identified in figure 2.

Professionalism Curriculum

Goals of Formal Curriculum

Assessment Methods and Strategies

Hidden Curriculum

Informal Curriculum

Formal Curriculum

Questioning/approving own Conscientiousness on Professional

Apply the principles of Good Medical Practice to their social media interactions

Interact with colleagues via social media in an appropriate way

Challenging/accepting Moral Grounds

Respond to colleagues' breaches of confidentially via social media appropriately

Respond to requests from patients for contact via social media in an appropriate manner

Teaching/encouraging Reflection

Apply confidentiality settings online, maintaining an awareness that they are inherently fallible

Identify professionalism lapses online

Develop an awareness that information posted online is permanent

Knowledge Acquisition

Define the potential benefits of doctors engaging with social media for patients

Reflection-on-practice

Reflective writing during clinical years about how their social media presence would appear to a patient.

Experimental Learning

Multi-source feedback for social media presence

Including on-line presence in conscientiousness index

Cognitive Inputs

Assessing knowledge of guidelines during multiple choice question written examinations
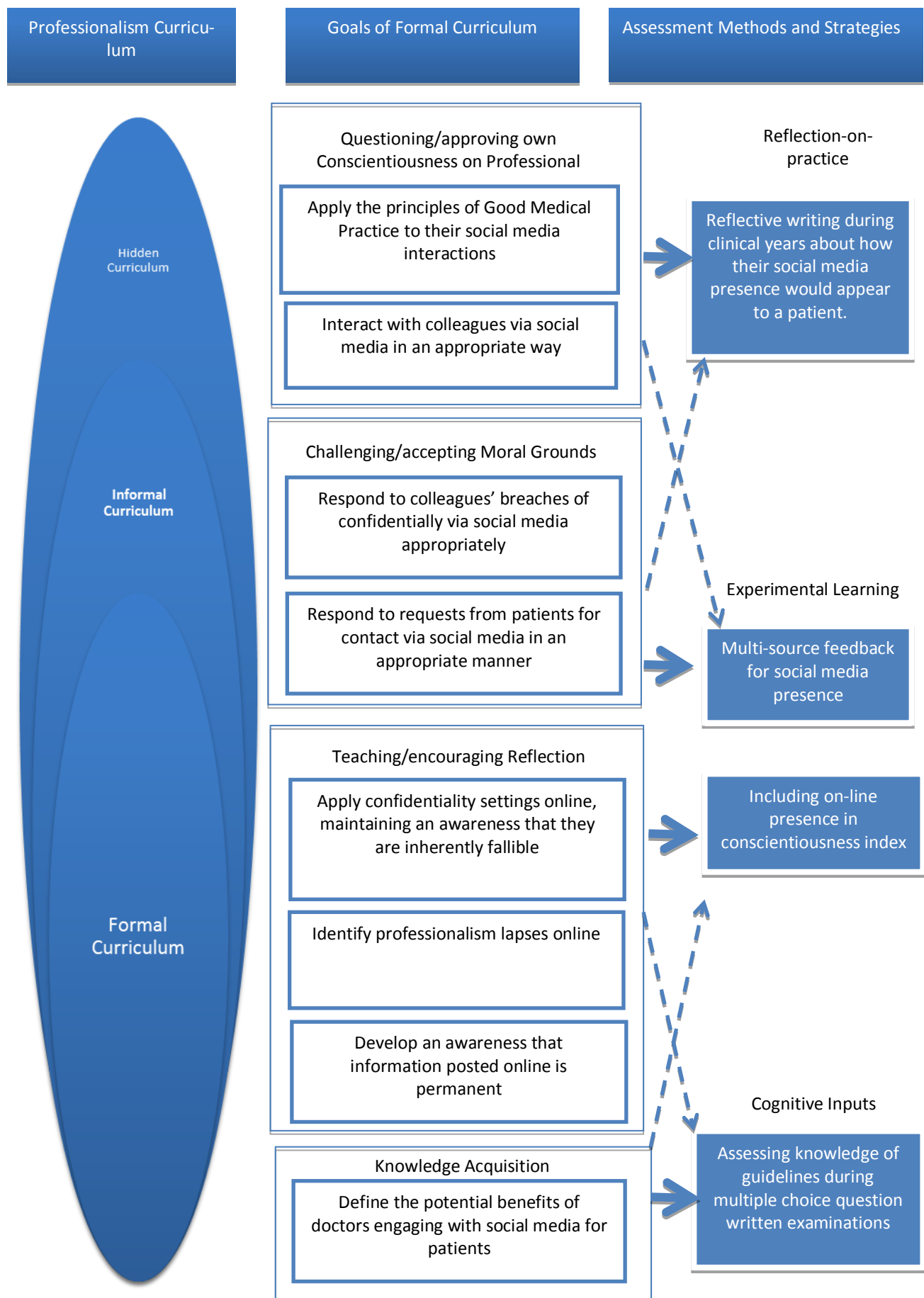
Figure 2: Mapping Learning Outcomes and Assessment

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The interactions that occur within social media can be described as being strongly placed within the informal curriculum, especially if emphasis is given to terms such as "unscripted"[34] and "opportunistic"[89] and the setting being "nonclinical"[89] or "outside formally identified learning environments"[34]. It is also about interaction between healthcare providers and trainees[89] and particularly the "interpersonal" nature of such interactions[34] are reflected in the central tenants of the informal curriculum: role modelling and socialisation.

Role Modelling

If doctors are to engage online then they not only have to think about how they appear to their patients and the general public, but also to their students. It could be argued that all students and junior doctors that engage either actively or passively with doctors in the social media window are to a greater or lesser extent going to be influenced by their behaviour. If and how this occurs is really an unknown but there is no reason why it will not relate to the process that occurs during face-to-face interaction, which is so important for developing students' behaviours, values and attitudes[90]. Reflecting on this, as discussed above, may help move from "reflection and abstraction" into "translating insights into principles and action"[91].

How previously identified attributes of a positive role model[91, 92] apply online is dependent on a doctor's specific use of social media. Whether a doctor is trying to be a teacher, campaigner or commentator, demonstrating a sustained effort to be "as consistently good as we can be"[91] is likely to display some element of being a positive role model. The postulation that professionalism lapses by medical educators is the chief barrier to professionalism education[93] is perhaps relevant in this setting

Integrating this with my own experience, I would ask students to reflect on how their own behaviour online might reflect their role model status. A useful exercise for senior medical students might be for them to review their current social media accounts/pages/streams and write a short reflective piece on what a patient and a first year medical student might think upon seeing the content. This could form part of their reflective portfolio for either summative of formative assessment.

Socialisation

Social media can play several roles in the socialisation process of medical education. The possible engagement between junior and senior medical students, medical students and junior doctors, and between doctors and academics that would not normally interact has no immediately obvious negative. Doctors and medical students need networks of support, but these are not immediately available[94] especially when they need them most such as when dealing with death[95].

I have had social media conversations with many junior doctors, mainly via Twitter, to help them deal with a bad day/shift/event. There is nothing special about the platform on which the conversation takes place, merely having the conversation may be enough to move a stressful situation from unmanageable to one that the individual may cope with[96, 97]. These interactions may form the basis of an interesting discussion with students around dealing with stress and maintaining patient confidentiality when discussing work online.

The incremental identity transformation that occurs during medical education[98] can be observed in microcosm on social media. From college students trying to engage to get an edge in their application to medical school, through students of all stages of healthcare education to the editor of the BMJ and a former Chief Medical Officer; all of the stages of development of a healthcare professional can be conceptualised.

As discussed above, professionalism lapses do occur on social media formats. The nature of the specific acts differs from that found in undergraduate clinical care interactions in which consent[99], patient safety and dignity breaches, lack of disclosure about students' identity and student abuse[100] predominate[101]. The impact of observing others acting unprofessionally on social media as compared to observing doctors or peers unprofessional behaviour in the clinical setting is unknown. The depersonalisation associated with digital media may have some parallels to the depersonalisation of cadaveric material in the teaching of anatomy, something that is beginning to be utilised in early professionalism instruction[102-104].

The "vast network of unwritten social and cultural values, rules, assumptions and expectations"[89] of healthcare professional and student engagement in social media is likely to be as complex as it is offline[105, 106], though as of yet not as well studied.

An organisation's approach to social media represents one element of the hidden curriculum. Some hospitals and universities are actively engaging with patients, students and staff in a positive and managed fashion. The benefits and risks are not clearly delineated but it does represent an acceptance of the media and possible corporate advantage for early adopters[107, 108].

Social media is part of an institution's culture; even a decision not to engage in the media says something about that institution. My institution actively engages with Twitter but not Facebook, advertising jobs and

learning events via the medium. Local conferences often have their own Twitter hash tag so that delegates can post thoughts and questions. The importance of institutional culture to professionalism education is a central part of the informal and hidden curriculum. Recent work examining this from an ecological[109] and narrative approach[110] suggest that, while less than tangible, the complex multilevel and dynamic relationships can be altered to change overall institutional culture to one which is more able to foster professionalism development. Social media may play a part in this in the future.

Conclusion

I have argued for the inclusion of social media within professionalism education for undergraduate medical students by contextualising the issue of social media and medicine and professionalism. Taking this argument further I have outlined how this can be integrated into existing professionalism curricula.

References:

1. Bannon D. State of the media:the social media report 2012. Slide Share: 2012.

2. IFL. Professionalism and the role of professional bodies. http://www.ifl.ac.uk: Institute for learning, 2009.

3. Chandratilake M, McAleer S, Gibson J. Cultural similarities and differences in medical professionalism: a multi-region study. Medical Education. 2012;46(3):257-66.

4. Monrouxe L, Rees C, Hu W. Differences in medical students' explicit discourses of professionalism: acting, representing, becoming. Medical Education. 2011;45(6):585-602.

5. Passi V, Doug M, Peile E, Thistlewaite J, Johnson N. Developing medical professionalism in future doctors: a systematic review. Int J Medical Education. 2010;1:19-29.

6. Wilkinson T, Wade W, Knock L. A Blueprint to Assess Professionalism: Results of a Systematic Review. Academic Medicine. 2009;84(5):551-8.

7. Cook D. Some historical perspectives on professionalism. In: Cunningham B, editor. Exploring professionalism. London: Institute of Education, University of London; 2008.

8. Hofstede GH, Hofstede GJ, Minkov M. Cultures and organizations : software of the mind : intercultural cooperation and its importance for survival. 3rd ed. ed. New York ; London: McGraw-Hill; 2010.

9. Schwartz S. A theory of cultural values and some implications for work. Applied Psychology-an International Review-Psychologie Appliquee-Revue Internationale. 1999;48(1):23-47.

10. Calman KC. Medical education : past, present, and future : handing on learning. Edinburgh: Churchill Livingstone; 2007.

11. Greysen S, Kind T, Chretien K. Online Professionalism and the Mirror of Social Media. Journal of General Internal Medicine. 2010;25(11):1227-9.

12. Mostaghimi A, Crotty B. Professionalism in the Digital Age. Annals of Internal Medicine. 2011;154(8):560-W197.

13. Jain S. Becoming a physician: Practicing Medicine in the Age of Facebook. New England Journal of Medicine. 2009;361(7):649-51.

14. Chauhan B, George R, Coffin J. Social media and you: what every physician needs to know. J Med Pract Manage. 2012;28(3):206-9.

15. Farnan J, Paro J, Higa J, Reddy S, Humphrey H, Arora V. The Relationship Status of Digital Media and Professionalism: It's Complicated. Academic Medicine. 2009;84(11):1479-81.

16. Farnan J, Paro J, Higa J, Edelson J, Arora V. THE YOUTUBE GENERATION implications for medical professionalism. Perspectives in Biology and Medicine. 2008;51(4):517-24.

17.   Chretien K, Azar J, Kind T. Physicians on Twitter. Jama-Journal of the American Medical Association. 2011;305(6):566-8.

18.   Farnan J, Higa J, Paro J, Reddy S, Humphrey H, Arora V. Usage of digital media amongst medical trainees: Perceptions on policy and professionalism. Journal of General Internal Medicine. 2008;23:432-.

19.   MacDonald J, Sohn S, Ellis P. Privacy, professionalism and Facebook: a dilemma for young doctors. Medical Education. 2010;44(8):805-13.

20.   Thompson L, Dawson K, Ferdig R, Black E, Boyer J, Coutts J, et al. The intersection of online social networking with medical professionalism. Journal of General Internal Medicine. 2008;23(7):954-7.

21.   Gorrindo T, Groves J, Gorrindo P. Intersection of Online Social Networking with Medical Professionalism: Can Medicine Police the Facebook Boom? Journal of General Internal Medicine. 2008;23(12):2155-.

22.   Thompson L, Black E, Dawson K, Ferdig R, Black N. Intersection of Online Social Networking with Medical Professionalism: Can Medicine Police the Facebook Boom? Reply. Journal of General Internal Medicine. 2008;23 (12):2156-.

23.   GMC. Doctors' use of social media: a draft for consultation. http://www.GMC-uk.org: 2011.

24.   A joint initiative of the Australian Medical Association Council of Doctors-in-Training tNZMAD-o-TC, the New Zealand Medical Students' Association and the Australian Medical Students' Association. Social media and the medical profession - a guide to online professionalism for medical practitioners and medical students. 2010.

25.   Colombia CoPaSoB. Social Median and Online Networking Forums. 2010.

26.   Boards FoSM. Medical Policy Guidelines for the Appropriate Use of Social Media and Social Networking in Medical Practice. Euless, TX: 2012.

27.   RCGP. Social Media Highway Code. London, UK: Royal College of General Practitioners, 2013.

28.   BMA. Using social media: practical and ethical guidance for doctors and medical students. London, UK: British Medical Association, 2011.

29.   General Medical C. Good medical practice : guidance for doctors. [Updated ed.]. ed. London: General Medical Council; 2009.

30.   Hundert E, DouglasSteele D, Bickel J. Context in medical education: The informal ethics curriculum. Medical Education. 1996;30(5):353-64.

31.   Anderson LW, Krathwohl DR, Bloom BSToeo. A taxonomy for learning, teaching, and assessing : a revision of Bloom's taxonomy of educational objectives. Complete ed. ed. New York ; London: Longman; 2001.

32.   Miller GE. Teaching and Learning in Medical School. USA: Commonwealth Fund; 1961.

33.   Norcini J, Burch V. Workplace-based assessment as an educational tool: AMEE Guide No. 31. Medical Teacher. 2007;29 (9-10):855-71.

34.   Hafferty F. Beyond curriculum reform: Confronting medicine's hidden curriculum. Academic Medicine. 1998;73(4):403-7.

35.   General Medical C. Tomorrow's doctors : recommendations on undergraduate medical education: General Medical Council; 2009.

36.   Bryan C, Babelay A. Building Character: A Model for Reflective Practice. Academic Medicine. 2009;84(9):1283-8.

37.   Hilton S, Slotnick H. Proto-professionalism: how professionalisation occurs across the continuum of medical education. Medical Education. 2005;39(1):58-65.

38.   Cruess S, Cruess R. Professionalism must be taught. British Medical Journal. 1997;315(7123):1674-7.

39.   Torkjazi M, Rejaie R, Willinger W. Hot Today, Gone Tomorrow: On the Migration of MySpace Users. 2nd Acm Sigcomm Workshop on Online Social Networks (Wosn 09). 2009:43-8.

40. Cruess R, Cruess S. Teaching professionalism: general principles. Medical Teacher. 2006;28(3):205-8.

41. Hampton K, Sessions L, Her E. CORE NETWORKS, SOCIAL ISOLATION, AND NEW MEDIA How Internet and mobile phone use is related to network size and diversity. Information Communication & Society. 2011;14(1):130-55.

42. Ginsburg S, Lingard L. 'Is that normal?' Pre-clerkship students' approaches to professional dilemmas. Medical Education. 2011;45(4):362-71.

43. Niemi P. Medical students' professional identity: self-reflection during the preclinical years. Medical Education. 1997;31(6):408-15.

44. Buyx A, Maxwell B, Schone-Seifert B. Challenges of educating for medical professionalism: who should step up to the line? Medical Education. 2008;42(8):758-64.

45. Stirrat G, Johnston C, Gillon R, Boyd K, Signato IMEA. Medical ethics and law for doctors of tomorrow: the 1998 Consensus Statement updated. Journal of Medical Ethics. 2010;36(1):55-60.

46. Osman A, Wardle A. Is it time for medicine to update its Facebook status? British Medical Journal. 2011;343.

47. Bulte C, Betts A, Garner K, Durning S. Student teaching: views of student near-peer teachers and learners. Medical Teacher. 2007;29(6):583-90.

48. Ten Cate O, Durning S. Peer teaching in medical education: twelve reasons to move from theory to practice. Medical Teacher. 2007;29(6):591-9.

49. ten Cate O, van de Vorst I, van den Broek S. Academic achievement of students tutored by need-peers. International Journal of Medical Education. 2012;3:6-13.

50. Tolsgaard M, Gustafsson A, Rasmussen M, Hoiby P, Muller C, Ringsted C. Student teachers can be as good as associate professors in teaching clinical skills. Medical Teacher. 2007;29(6):553-7.

51. Colaco S, Chou C, Hauer K. Near-peer teaching in a formative clinical skills examination. Medical Education. 2006;40(11):1129-30.

52. Martinez W, Azzam A, Mack K. Student near-peer co-tutors in PBL groups. Medical Education. 2009;43(5):475-6.

53. Raupach T, Hanneforth N, Anders S, Pukrop T, ten Cate O, Harendza S. Impact of teaching and assessment format on electrocardiogram interpretation skills. Medical Education. 2010;44(7):731-40.

54. Norcini J. Peer assessment of competence. Medical Education. 2003;37(6):539-43.

55. Jethwa S, Bryant P, Singh S, Jones M, Berlin A, Rosenthal J. Your Life in Their Pocket: Students' Behaviors Regarding Confidential Patient Information. Family Medicine. 2009;41(5):327-31.

56. Borgstrom E, Cohn S, Barclay S. Medical Professionalism: Conflicting Values for Tomorrow's Doctors. Journal of General Internal Medicine. 2010;25(12):1330-6.

57. Spencer J, Jordan R. Learner centred approaches in medical education. British Medical Journal. 1999;318(7193):1280-3.

58. Kalet A, Krackov S, Rey M. Mentoring for a new era. Academic Medicine. 2002;77(11):1171-2.

59. Ginsburg S, Regehr G, Lingard L. The disavowed curriculum - Understanding students' reasoning in professionally challenging situations. Journal of General Internal Medicine. 2003;18(12):1015-22.

60. Goldie J. Integrating professionalism teaching into undergraduate medical education in the UK setting. Medical Teacher. 2008;30(5):513-27.

61. Maudsley G, Strivens J. Promoting professional knowledge, experiential learning and critical thinking for medical students. Medical Education. 2000;34(7):535-44.

62. Goldie J, Dowie A, Cotton P, Morrison J. Teaching professionalism in the early years of a medical curriculum: a qualitative study. Medical Education. 2007;41(6):610-7.

63.   Sandars J. Twelve tips for using blogs and wikis in medical education. Medical Teacher. 2006;28(8):680-2.

64.   Rosenthal S, Howard B, Schlussel Y, Herrigel D, Smolarz G, Gable B, et al. Humanism at Heart: Preserving Empathy in Third-Year Medical Students. Academic Medicine. 2011;86(3):350-8.

65.   Fard N, Asghari F, Mirzazadeh A. Ethical issues confronted by medical students during clinical rotations. Medical Education. 2010;44(7):723-30.

66.   Zeichner K, Wray S. The teaching portfolio in US teacher education programs: what we know and what we need to know. Teaching and Teacher Education. 2001;17(5):613-21.

67.   Sandars J, Murray C, Pellow A. Twelve tips for using digital storytelling to promote reflective learning by medical students. Medical Teacher. 2008;30(8):774-7.

68.   Karnieli-Miller O, Vu T, Holtman M, Clyman S, Inui T. Medical Students' Professionalism Narratives: A Window on the Informal and Hidden Curriculum. Academic Medicine. 2010;85(1):124-33.

69.   Handfield-Jones R, Nasmith L, Steinert Y, Lawn N. Creativity in medical education - the use of innovative techniques in clinical teaching. Medical Teacher. 1993;15(1):3-10.

70.   Huang C, Li T, Wang H, Chang C, Spector J, Sampson D, et al. A collaborative support tool for creativity learning: Idea storming cube. 7th IEEE International Conference on Advanced Learning Technologies, Proceedings. 2007:31-5.

71.   Graffam B. Active learning in medical education: Strategies for beginning implementation. Medical Teacher. 2007;29 (1):38-42.

72.   McCartney M. FROM THE FRONTLINE We shouldn't fear social media. British Medical Journal. 2011;343.

73.   Betton V, Tomlinson V. Social Media in Mental Health Practice: Leeds and York Partnership NHS Foundation Trust; 2013. Available from: http://www.leedsandyorkpft.nhs.uk/_documentbank/2418_DMH_e_book_2_1.pdf.

74.   @twitjournalclub. Twitter Journal Club 2013. Available from: http://www.twitjc.com.

75.   Arnold L. Assessing professional behavior: Yesterday, today, and tomorrow. Academic Medicine. 2002;77(6):502-15.

76.   Papadakis M, Teherani A, Banach M, Knettler TR, Rattner SL, Stern DT, et al. Disciplinary Action by Medical Boards and Prior Behavior in Medical School. New England Journal of Medicine. 2005;353:2673-82.

77.   Epstein R. Medical education - Assessment in medical education. New England Journal of Medicine. 2007;356(4):387-96.

78.   Jha V, Bekker H, Duffy S, Roberts T. A systematic review of studies assessing and facilitating attitudes towards professionalism in medicine. Medical Education. 2007;41(8):822-9.

79.   Hassell A, Bullock A, Whitehouse A, Wood L, Jones P, Wall D. Effect of rating scales on scores given to junior doctors in multi-source feedback. Postgraduate Medical Journal. 2012;88(1035):10-4.

80.   Whitehouse A, Hassell A, Wood L, Wall D, Walzman M, Campbell I. Development and reliability testing of TAB a form for 360 degrees assessment of Senior House Officers' professional behaviour, as specified by the General Medical Council. Medical Teacher. 2005;27(3):252-8.

81.   Whitehouse A, Hassell A, Bullock A, Wood L, Wall D. 360 degree assessment (multisource feedback) of UK trainee doctors: Field testing of team assessment of behaviours (TAB). Medical Teacher. 2007;29(2-3):171-6.

82.   Stern D, Frohna A, Gruppen L. The prediction of professional behaviour. Medical Education. 2005;39(1):75-82.

83.   Rees C, Knight L. Viewpoint: The trouble with assessing students' professionalism: Theoretical insights from sociocognitive psychology. Academic Medicine. 2007;82(1):46-50.

84.   Roff S, Dherwani K. Development of inventory for polyprofessionalism lapses at the proto-professional stage of health professions education together with recommended responses. Medical Teacher. 2011;33(3):239-43.

85.   McLachlan J, Finn G, Macnaughton J. The Conscientiousness Index: A Novel Tool to Explore Students' Professionalism. Academic Medicine. 2009;84(5):559-65

86. Kelly M, O'Flynn S, McLachlan J, Sawdon M. The Clinical Conscientiousness Index: A Valid Tool for Exploring Professionalism in the Clinical Undergraduate Setting. Academic Medicine. 2012;87(9):1218-24.

87. Finn G, Sawdon M, Clipsham L, McLachlan J. Peer estimation of lack of professionalism correlates with low Conscientiousness Index scores. Medical Education. 2009;43(10):960-7.

88. Kalet A, Sanger J, Chase J, Keller A, Schwartz M, Fishman M, et al. Promoting professionalism through an online Professional Development Portfolio: Successes, joys, and frustrations. Academic Medicine. 2007;82(11):1065-72.

89. Wear D, Skillicorn J. Hidden in Plain Sight: The Formal, Informal, and Hidden Curricula of a Psychiatry Clerkship. Academic Medicine. 2009;84(4):451-8.

90. Steinert Y. Educational theory and strategies for teaching and learning professionalism. In: Cruess RL, Cruess SR, Steinert Y, editors. Teaching medical professionalism. Cambridge: Cambridge University Press; 2009.

91. Cruess S, Cruess R, Steinert Y. Teaching rounds - Role modelling - making the most of a powerful teaching strategy. British Medical Journal. 2008;336(7646):718-21.

92. Paice E, Heard S, Moss F. How important are role models in making good doctors? British Medical Journal. 2002;325 (7366):707-10.

93. Brainard A, Brislen H. Viewpoint: Learning professionalism: A view from the trenches. Academic Medicine. 2007;82 (11):1010-4.

94. Radcliffe C, Lester H. Perceived stress during undergraduate medical training: a qualitative study. Medical Education. 2003;37(1):32-8.

95. Rhodes-Kropf J, Carmody S, Seltzer D, Redinbaugh E, Gadmer N, Block S, et al. "This is just too awful; I just can't believe I experienced that...": Medical students' reactions to their "most memorable" patient death. Academic Medicine. 2005;80 (7):634-40.

96. Harkness A, Long B, Bermbach N, Patterson K, Jordan S, Kahn H. Talking about work stress: Discourse analysis and implications for stress interventions. Work and Stress. 2005;19(2):121-36.

97. Ziegler J, Kanas N, Strull W, Bennet N. A stress discussion group for medical interns. Journal of Medical Education. 1984;59 (3):205-7.

98. Hafferty F. Professionalism and the socialization of medical students. In: Cruess RL, Cruess SR, Steinert Y, editors. Teaching medical professionalism. Cambridge: Cambridge University Press; 2009.

99. Rees C, Monrouxe L. Medical students learning intimate examinations without valid consent: a multicentre study. Medical Education. 2011;45(3):261-72.

100. Rees C, Monrouxe L. "A Morning Since Eight of Just Pure Grill": A Multischool Qualitative Study of Student Abuse. Academic Medicine. 2011;86(11):1374-82.

101. Monrouxe L, Rees C, Lewis N, Cleland J. Medical educators' social acts of explaining passing underperformance in students: a qualitative study. Advances in Health Sciences Education. 2011;16(2):239-52.

102. Hamilton S, Yuan B, Lachman N, Hellyer N, Krause D, Hollman J, et al. Interprofessional Education in Gross Anatomy: Experience With First-Year Medical and Physical Therapy Students at Mayo Clinic. Anatomical Sciences Education. 2008;1 (6):258-63.

103. Lachman N, Pawlina W. Integrating professionalism in early medical education: The theory and application of reflective practice in the anatomy curriculum. Clinical Anatomy. 2006;19(5):456-60.

104. Escobar-Poni B, Poni E. The role of gross anatomy in promoting professionalism: A neglected opportunity! Clinical Anatomy. 2006;19(5):461-7.

105. Golder S, Wilkinson D, Huberman B, Steinfield C, Pentland B, Ackerman M, et al. Rhythms of social interaction: Messaging within a massive online network. Communities and Technologies 2007. 2007:41-66.

106.   Brown J, Broderick A, Lee N. Word of mouth communication within online communities: Conceptualing the online social network. Journal of Interactive Marketing. 2007;21(3):2-20.

107.   Clauson K, Seamon M, Fox B. Pharmacists' duty to warn in the age of social media. American Journal of Health-System Pharmacy. 2010;67(15):1290-3.

108.   Hawn C. Take Two Aspirin And Tweet Me In The Morning: How Twitter, Facebook, And Other Social Media Are Reshaping Health Care. Health Affairs. 2009;28(2):361-8.

109.   Goldstein E, Maestas R, Fryer-Edwards K, Wenrich M, Oelschlager A, Baernstein A, et al. Professionalism in medical education: An institutional challenge. Academic Medicine. 2006;81(10):871-6.

110.   Suchman A, Williamson P, Litzelman D, Frankel R, Mossbarger D, Inui T, et al. Toward an informal curriculum that teaches professionalism - Transforming the social environment of a medical school. Journal of General Internal Medicine. 2004;19(5):501-4.

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