

Privacy, professionalism and Facebook: a dilemma for young doctors

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OBJECTIVES This study aimed to examine the nature and extent of use of the social networking service Facebook by young medical graduates, and their utilisation of privacy options.

METHODS We carried out a cross-sectional survey of the use of Facebook by recent medical graduates, accessing material potentially available to a wider public. Data were then categorised and analysed. Survey subjects were 338 doctors who had graduated from the University of Otago in 2006 and 2007 and were registered with the Medical Council of New Zealand. Main outcome measures were Facebook membership, utilisation of privacy options, and the nature and extent of the material revealed.

RESULTS A total of 220 (65%) graduates had Facebook accounts; 138 (63%) of these had activated their privacy options, restricting their information to 'Friends'. Of the remaining 82 accounts that were more publicly available, 30 (37%) revealed users' sexual orientation, 13 (16%) revealed their religious views, 35 (43%)

indicated their relationship status, 38 (46%) showed photographs of the users drinking alcohol, eight (10%) showed images of the users intoxicated and 37 (45%) showed photographs of the users engaged in healthy behaviours. A total of 54 (66%) members had used their accounts within the last week, indicating active use.

CONCLUSIONS Young doctors are active members of Facebook. A quarter of the doctors in our survey sample did not use the privacy options, rendering the information they revealed readily available to a wider public. This information, although it included some healthy behaviours, also revealed personal information that might cause distress to patients or alter the professional boundary between patient and practitioner, as well as information that could bring the profession into disrepute (e.g. belonging to groups like 'Perverts united'). Educators and regulators need to consider how best to advise students and doctors on societal changes in the concepts of what is public and what is private.

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INTRODUCTION

Professionalism has been the subject of much recent discussion in both the general medical and the medical education literature.^{1–5} Although there is continued debate as to the definition and meaning of professionalism, most commentators agree on the centrality of professionalism to ‘sustaining the public’s trust in the medical profession’.³ Thus, illegal behaviour with no direct impact on individual care would be considered grounds for sanction by many medical jurisdictions (e.g.⁶). Maintenance of an appropriate demeanour,¹ of professional boundaries⁵ and respect for patients⁵ are generally accepted as components of medical professionalism. There is also agreement that expectations of professionalism change with societal changes and that concepts of professionalism are threatened by recent societal changes.^{2–4,7} The advent of social networking services (SNSs) (such as Facebook) and other electronic media (such as weblogs and YouTube) pose one such threat.

Facebook was established in 2004⁸ and, at the time of this study, had more than 150 million users worldwide.^{9,10} It was the fifth most frequently visited website in the UK at the time (September 2008), with over 18 million unique visitors in that month.⁹ Facebook was originally developed for users affiliated with colleges or universities in the USA, but access is now universal. Registered users can choose to join one or more ‘networks’ and by mutual agreement become ‘Friends’ with other members. (A ‘Friend’ is a user who has been granted access to another user’s postings and pages by that user.) Facebook offers users a number of features, including the opportunity to ‘post’ photographs of themselves, search for and find Friends, chat and comment on their activities, plans, thoughts and emotions, and join any of thousands of online groups.¹¹ Facebook shares with other SNSs four unique characteristics: ‘Persistence... Searchability... Replicability... Invisible audiences...’¹² These features, combined with the ease of searching and storing digital information, mean that a digital dossier on a user can be compiled relatively easily.¹³ This information can be accessed by unintended viewers, out of context and into the future, even if the SNS user has deleted the material or deactivated his or her account. For instance, a photograph posted by an account holder could be copied by a Friend, sent to others of the latter’s Friends, and so become widely available beyond the control of the member who posted it.

The challenges posed to medical professionalism by SNSs, YouTube and weblogs have been addressed recently in the medical literature.^{14–16} A medical student end-of-year show videoed and posted on YouTube led to consideration of the implications for professionalism of such actions.^{14,15} Such shows, previously private to the attendees, have become available to a wider public as a result of these media. This raises questions about whether this is likely to damage the profession or the public’s trust in it. To our knowledge this issue has not been researched, but we believe that it has that potential. As noted by Farnan *et al.*,¹⁴ there are many ‘comedy’ films and television programmes that show doctors (and other professionals) disparaging patients (e.g. *House, MD*). However, these are fictional and as such can be discounted by patients as not representative of the ‘real world’ of medicine. Such is not the case with weblogs, Facebook pages and YouTube productions that show real doctors and medical students behaving in ways that are not consistent with a professional demeanour or in ways that indicate disrespect for patients. Such behaviour has not been regarded as a cause for concern when it is carried out in private and is therefore not ‘visible’ to potential patients. However, the distinction between what is private and what is public is not clear in this digital world. Farnan *et al.*¹⁵ noted that ‘the digital intersection of ... personal and professional lives can be blurred in light of the medical profession’s accountability to society’. Similarly, Lagu *et al.*,¹⁶ referring to weblogs, noted that ‘medical blogs are part of the public face of medicine’ and are ‘public documents written in a diary style typically used for private thoughts’.

Privacy on SNSs has been the subject of considerable discussion and debate. As Zur *et al.*¹⁷ noted: ‘...the Internet blurs the line between what is personal and what is professional, as well as between self-disclosure and transparency.’ Although ‘*being seen* by those we wish to be seen by, in ways we wish to be seen ... are central motivations’¹⁸ for using such sites, this visibility can have a number of unwanted consequences. As well as the risk to the public’s trust in the profession, there have been a number of reports in the news and electronic media of students in the USA and the UK being disciplined or dismissed as a result of posts on Facebook (e.g.¹⁹). Similarly, there are reports of job applicants (in one case a young doctor) being vetted for and declined positions because of information sourced from Facebook.²⁰ In March 2008 Facebook updated its privacy controls so that, by default, access to a user’s profile is limited to others in the same network unless the user actively further

restricts access to his or her Friends.⁸ These controls were further updated in late 2009.²¹ However, of note on the 'privacy settings' page is the caveat that 'when you access a Facebook-enhanced application, it will be able to access your publicly available information, which includes Name, Profile Photo, Gender, Current City, Networks, Friend List, and Pages. This information is considered visible to Everyone'.²¹ To prevent this visibility, users must be aware of it and actively adjust their privacy settings.

The maintenance of professional boundaries is similarly threatened by the widespread availability of doctors' personal information. Although the place of self-disclosure by doctors to individual patients is debated,²² the UK's General Medical Council (GMC) document *Good Medical Practice*²³ states: 'You must not express to your patients your personal beliefs, including political, religious or moral beliefs, in ways that exploit their vulnerability or that are likely to cause them distress.' However, SNSs allow their members little control over who may eventually see material they have posted, including material on their religious, political and moral beliefs and behaviours. As a consequence, patients may learn information about their doctors that compromises the professional relationship: for example, if a patient learned from her doctor's Facebook site that he or she belonged to an anti-abortion group, this might delay the patient seeking a termination of pregnancy.

Finally, there are threats to patient confidentiality. Even if patients are not named, weblogs may disclose sufficient details to allow a doctor or patient to be identified,¹⁶ as may Facebook pages and photographs posted.

Cain,²⁴ considering the use of SNSs with respect to pharmacists, suggested that there may be 'another facet of professionalism emerging ... an "e-professionalism" that pertains to behaviour and communications in online settings'. Although there are clearly emergent threats to professionalism, as outlined above, we would suggest that, rather than these representing a new facet of professionalism, they perhaps require an increasing awareness of the principles underlying professionalism in terms of responsibilities to patients and the profession that extend beyond the immediate encounter with a patient, and the application of these principles in the digital era.

There has been only one previous direct study of online behaviour of medical professionals.^{25,26} This cross-sectional survey reported on the extent of use of

Facebook and its privacy options by medical students and residents, showing that residents were less active users of Facebook than medical students. Although the authors suggested that this showed a decline in the use of Facebook as students approached graduation,¹⁹ such a conclusion was not warranted given the cross-sectional study design; the alternative explanation refers to a generational effect. The study described in-depth details of the material posted for only 10 members and there were no details of how these 'in-depth' data were analysed.

Chretien *et al.*²⁷ explored the issue indirectly by surveying the deans of American medical schools regarding incidents of unprofessional postings on SNSs. Of the 60% of schools that responded, 60% reported at least one such incident, with profanity, discriminatory language and depiction of intoxication the most frequent causes of concern. However, this study was limited by its dependence on the deans' awareness of the incidents.

In light of the above we wished to study the extent of use of SNSs by doctors in New Zealand/Aotearoa and the nature of the material posted in order to inform regulators, educators and doctors themselves.

We therefore undertook the current study with the aims of establishing:

- 1 the extent of Facebook use by junior doctors;
- 2 the extent of the use of privacy options, and
- 3 the nature of the material readily available to a wider public.

METHODS

Participants

Using the Medical Council of New Zealand's (MCNZ) November 2008 medical register, we identified all doctors who had graduated in 2006 or 2007 from the University of Otago, one of the two medical schools in New Zealand.

Design

We examined Facebook, the SNS most commonly used in New Zealand.²⁸ At that time, its default settings allow access to other members of the user's network. We identified participants' profiles using their registered names, from within the networks 'Otago' (which is intended for the use of staff, students and alumni of

the University of Otago and had, at the time of the study, 8364 members, including two of the authors, SS and JM) and 'New Zealand' (which had 381 357 members at the time of the study). As information pertaining to participants could also be accessed by Friends of users, the total network is larger than the sum of members alone. Given the size of these networks, we considered that information to be public (see Ethics section for discussion of this decision).

We analysed information from the three most commonly used 'pages' of identified accounts: the 'Info' page (which displays personal information); the 'Wall' page (where users write comments), and the 'Photos' page.

Two of us (SS and PE) developed broad categories and definitions for classifying the range and type of information posted through an initial examination of 20 accounts selected randomly. SS reviewed all of the extracted data and proposed a system of categorisation based on themes that emerged from the data. These were discussed with PE and some smaller categories were collapsed to derive the final categories. SS subsequently examined all the participants' Info pages for personal details (e.g. birthdays, contact details, relationship status, sexual orientation), the most recent page of posts or the last 10 comments made on the participant's Wall page, and Photos pages to establish whether photographs were of the user, friends or family, and the type of activities depicted. The information was then organised according to the previously derived categories and displayed in tabular form to facilitate a simple quantitative analysis. When categorisation was not obvious, this was resolved by discussion with PE.

Data collection and analysis took place during November and December 2008.

Ethics

We did not consider ethical approval to be necessary as we only examined material that was available to users within the Otago network (and, by extension, their Friends), which we considered to be so widely available as to be public. In light of editorial comments we sought, and were granted, retrospective approval by the Central Regional Ethics Committee, Wellington.

We acknowledge that our original decision could be disputed and we are aware that the dilemmas of informed consent, confidentiality and privacy in this type of research have been debated in the literature, although without firm conclusions.^{29–32} Various

countries and institutions have ruled differently, depending on their respective privacy laws and on whether the ethical imperative is primarily deontological or utilitarian. In the USA, a more utilitarian approach has predominated, with the public usefulness of the research regarded as a key factor to be weighed against any potential harm to the researched; by contrast, in Europe a more deontological approach gives primacy to individual rights.^{32–34} In addition, the ethical issues are considered to differ if the researcher is covertly participating in an Internet forum as opposed to simply extracting data.³⁵ Moreno *et al.*³¹ suggested that a suitable 'analogy for research on social networking ... would be research on newspaper personal ads' as the material 'has been selected by its owner to be published in a public forum'. However, as outlined above, the issue of what is public and what is private on the Internet is not straightforward. Although we were able to access the Facebook sites because of our right to membership of the Otago network, we did not claim to be, or attempt to become, Friends of the participants. Therefore, the information we used was available to any of the 8364 members of the network and, by extension, to their Friends, Friends of these users, and so on. For this reason we deemed the information 'public' and took a utilitarian position that the research was of considerable importance to the profession and we could not envisage any harm befalling the researched (who are not identifiable); thus we did not seek the participants' consent. Kraut *et al.*³⁶ proposed that 'the greatest risk associated with online research centres on breaches of confidentiality, in which private, identifiable information is disclosed'. We have not quoted any material from users' sites and their membership of various networks is shared with others.

RESULTS

A total of 338 doctors currently registered with the MCNZ graduated from the University of Otago in 2006 or 2007 and 220 (65%) of them had Facebook accounts. Of these, 138 (63%) had privacy settings enabled, restricting access to their accounts to identified Friends. The study group was formed of the remaining 82 accounts (37% of Facebook users, 24% of graduates) accessible to us as members of the University of Otago network. The following results are based on this sample of 82 accounts. The mean age of these members was 26.1 years; 49 (60%) were male.

The mean number of Friends per user from outside the Otago network was 147.8. This constituted 87% of

the sample's Friends and indicates the ease with which information can potentially flow from within the network to the wider public. A total of 54 (66%) users had been active online in the preceding week, indicating that graduating as doctors had not caused them to discontinue their Facebook use.

The 'Info' page

Personal age, Friends and associated groups were frequently displayed on this page (Table 1). However, a number of users also revealed their political and religious views, their sexual orientation (notably, all of those doing so identified themselves as heterosexual) and their relationship status. Despite this being an online social network, very few revealed an e-mail address or web messenger contact details, and rather more revealed a mobile telephone number. A relatively high proportion of users revealed their home or current town and employment, thus enabling the curious viewer to confirm their identity.

Of note was the number of users who displayed an interest in healthy behaviours (e.g. sports) compared with the number listing alcohol-related interests. Most members belonged to groups that we defined as neutral (e.g. their medical class group, musical interest groups), some were associated with religious or political groups and a notable minority belonged to groups based on 'rude' humour (e.g. 'Perverts united'; 'F*** off Japan... leave the whales alone', which is arguably political and potentially offensive) or groups that we defined as potentially unprofessional (e.g. 'F*** medicine – I want to be a ninja', which was 'dedicated to medics who are sick and tired of the prospect of a hideously long training time, lack of respect, poor hours and rectal exams on elderly gentlemen').

The 'Wall' page

Although a minority of users commented on their personal state ($n = 22$, 27%), a number of personally revealing comments were posted (Table 1). The number of doctors revealing their vulnerabilities and information about their relationships in this potentially public arena was of concern.

Plans were revealed by 38 (46%) users, of whom 14 (17%) posted healthy plans (e.g. going skiing or hiking) and 23 (28%) described their plans for the weekend or holidays.

The most frequent unprofessional content on the Wall page was related to alcohol and offensive

language, although only a small number of students included such content.

The 'Photos' page

The mean number of photographs per account was 85.8. Like the Wall page, 'neutral' (e.g. working overseas) or healthy behaviour (e.g. cycling) was displayed in approximately half of subjects' photographs. However, there were as many showing alcohol consumption and a smaller number showing excessive alcohol consumption or other content that was potentially unprofessional (e.g. photographs including patients) or offensive (e.g. photographs of subjects making obscene gestures, cross-dressing or showing nudity). A photograph showing potentially criminal behaviour involved the member as a bystander, but could be interpreted differently if taken out of context.

DISCUSSION

This study shows that almost a quarter of a group of recent medical graduates had Facebook accounts that were accessible by others on their university or the New Zealand network, and therefore information about them was potentially accessible to members of the wider public. These young doctors used Facebook frequently. Over half of their Photo pages showed the doctor using alcohol, although only 10% of the photos suggested intoxication. A minority of users showed or described offensive behaviour, or belonged to groups that might give offence or bring disrepute to the profession. In addition, a number of users revealed personal information including religious views, sexual orientation, relationship status and personal health status. Equally as many referred to themselves engaging in healthy behaviour or belonging to groups that appeared inoffensive to the researchers, and could be seen as providing healthy role models for future patients.

Comparisons with the only other study of Facebook use in the medical profession^{25,26} are challenging because of the differences in medical training between New Zealand and the USA. Moreover, the US study did not detail the age of its participants, which is a potential confounding factor. New Zealand medical students generally commence medical school at 18 years of age, whereas many American medical schools have graduate entry only. Although these ambiguities limit comparisons, notably almost twice as many of our group had activated their privacy options (63% versus 38%). This may reflect the changes to Facebook privacy options in 2008, or may represent a

Table 1 Analysis of information on users' Facebook accounts (*n* = 82)

Field of information	Content	Definition	Users, <i>n</i> (%)
Personal information	Birthday or age		62 (75)
	Relationship status	Revealed? Single, married, engaged, de facto	35 (42)
	Home town		32 (39)
	Employment details		32 (39)
	Sexual orientation	Revealed? Homosexual/heterosexual	30 (37)
	Current town		27 (33)
	Interests/hobbies	Subcategorised as below	18 (22)
	Mobile number		14 (17)
	Religious views	Revealed? If so, Christian, Muslim, Buddhist, atheist, other	13 (16)
	Political views	Revealed?	11 (13)
Interests	Healthy behaviours	e.g. Cycling, gym	13 (16)
	Alcohol-related	Alcohol specifically stated as part of the interest	4 (5)
	Neutral	Any other, not included above	17 (20)
Associated groups	Class	Medical school class	35 (42)
	Potentially unprofessional/'rude' humour	Associations that may discredit the medical profession or are potentially offensive (e.g. 'Perverts united', 'F*** off Japan... leave the whales alone')	18 (22)
	Charity	e.g. Save the Children	11 (13)
	Based on religion		7 (8)
	Based on political views or parties		6 (7)
	Healthy behaviours	e.g. Athletics	5 (6)
	Neutral	Not fitting into the above	61 (74)
Comments on the Wall	Relationship status updates		13 (16)
	Injured/sick/tired/fatigued/overworked		16 (19)
	Work complaints	e.g. About employers or colleagues	6 (7)
	Plans to drink alcohol or being hungover		9 (11)
	Offensive language	e.g. Swearing	5 (6)
	Any of the above comments	Any comments about relationship status, personal injury, fatigue etc., plans to drink or offensive language	25 (30)
Personal photos	Travelling/holiday		44 (54)
	Alcohol in photo	e.g. 1–2 drinks shown	38 (46)
	Excessive alcohol/drunkenness	More than 2 drinks or person shown clearly drunk	8 (10)
	Healthy behaviour	e.g. Biking, hiking	37 (45)
	Photo of partner		19 (23)
	Offensive content/gestures	e.g. Waving middle finger at camera	4 (5)
	Potentially unprofessional	e.g. Showing patients, thus breaching confidentiality	3 (3.6)
	Silly humour	e.g. Cross-dressing or nudity	5 (6)
	Family shown in photos		29 (35)
Friends shown in photos		70 (85)	

cultural difference between New Zealand and the USA. Similarly, fewer of our group revealed their sexual orientation (37% versus 52%) or their political views (13% versus 50%). Given the limitations identified above of the qualitative data reported, we note that these authors expressed concerns similar to ours in terms of participants' membership of groups like 'I don't need sex cause grad school f***s me every day'.

The major strengths of this study are that it is the largest and most detailed published analysis of Facebook usage by medical practitioners and it has analysed data available on users' pages rather than their self-reported behaviour. It is also the first to consider the possibility of positive role-modelling as a result of SNS use. Its limitations concern the fact that it was confined to the graduates of one of the two medical schools in New Zealand and thus the extent of its generalisability is unclear, and its cross-sectional nature. It would be of interest to compare SNS use by doctors of different age groups and countries, and changes in use over time.

The results of this study have implications for both educators and regulators. It seems reasonable to assume that the public's trust in the profession may be threatened by the knowledge that its members belong to groups like 'Perverts united' or that they proudly display the results of their drunkenness. Given the current concern in the medical literature about the culture of binge-drinking among young people,³⁷ the displays of drunkenness and resulting behaviours (e.g. photographs of users clearly unconscious or in states of undress) are disturbing. Such photographs have the potential to reduce the credibility of any counselling about 'safe' alcohol consumption and moderation that these young doctors may espouse to their patients, even years later. Equally, it could be seen as reassuring that a minority of users ($n = 8$, 10%) posted such photographs and that there were considerably more photographs showing healthy behaviour ($n = 37$ users, 45%).

Education has been proposed as a response to such issues in other professions.^{24,38} Although role-modelling is frequently considered to be one of the key means of teaching professionalism,²⁷ many of the role models of today's young doctors are not members of SNSs and further, we would suggest, have little comprehension of the way in which a 'digital identity is an integral part of how they [young professionals] live'.³⁹ As noted by those authors, 'absence from the web is not a palatable option' for the younger generation of doctors.³⁹ Hershberger *et al.*⁴⁰ recently posited that self-control is a key

component of professionalism. This concept may be relevant to helping students negotiate a means of retaining an Internet presence without compromising their future professionalism.

Research suggests that users' concerns for privacy do not predict their use of measures to protect their privacy online.^{18,41} Education about 'the openness of access to one's Facebook account',⁴² both currently and in the future, is necessary in light of the apparent lack of awareness of this amongst users.^{18,43} Other topics suggested as part of educational programmes and of particular importance to young doctors are 'setting norms and considering how different actions will be interpreted'¹² and the importance of 'projecting an online persona that is characteristic of a young professional'.²⁴ A further concern, and focus for education, is the potential for patients to seek information about doctors³⁹ or to stalk them, which is made more possible when Facebook users make their addresses and private telephone or cellphone numbers available.

Such education will need to consider the issue of 'humour' in medicine. According to Wear *et al.*,⁴⁴ 'cynical or derogatory humour' is 'never intended to be within earshot of patients and their families'. Although the effects and appropriateness of such humour delivered out of earshot of patients are debatable, it is clear that patients can see such humour on SNSs and other electronic media relatively easily. The effects of this on patients are yet to be researched. We would suggest that education and discussions about derogatory humour should include discussion of such humour on SNSs.

Other authors argue that regulators need to produce guidelines for the profession, rather than relying solely on education.^{45,46} Thus regulators will be required to advise the profession on the extent and type of online revelation that is acceptable. This advice will need to balance the profession's duty to protect the public and maintain its trust in the profession with respect for the freedom of the individual to conduct a private life that is separate from his or her public, professional persona. The challenge inherent in this involves finding a way to guide the profession about the changing meaning of 'private', a term that may be largely meaningless in the online context. Disclosure of personal information that is not unprofessional *per se* can nevertheless cause distress to patients. Although there are varying reports of the positive or negative effects of doctor self-disclosure,⁴⁷ there seems to be acceptance that any self-disclosure should be in the interests of the patient

and should represent a planned intervention.⁴⁸ *Good Medical Practice* specifies that any such beliefs expressed to patients should not 'cause them distress'.²³ However, information disclosed online about a doctor's personal illness, relationship difficulties, wedding plans, religion or dying parent is potentially available to any patient who chooses to look for it. The effect, positive or negative, of such information on an individual patient cannot be predicted.³⁹ In effect, information can be 'taken' by any patient, rather than deliberately 'given' in a considered manner, to a particular patient, for a particular reason, by the doctor. Thus the current advice given to students about the maintenance of professional boundaries, already a challenging area for students, may need to be adapted.^{49,50}

Further research

Unanswered questions include whether the use of SNSs and the nature of the material posted on them change as professionals age and establish more of a professional identity, the optimal ways of educating students about the risks of SNS use, and the provision of concrete guidance as to what is reasonable to post on an SNS. This research needs to be repeated in different medical schools and different countries to determine the extent to which the findings are generalisable. The extent to which patients are aware of and attempt to access information about their doctors from SNSs is unknown, as is the effect on patients of accessing personal information about their doctors.

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REFERENCES

- Jha V, Bekker H, Duffy S, Roberts T. Perceptions of professionalism in medicine: a qualitative study. *Med Educ* 2006;**40**:1027–36.
- Stern DT, Papadakis M. Medical Education: the developing physician – becoming a professional. *N Engl J Med* 2006;**355** (17):1794–800.
- Cohen JJ. Professionalism in medical education, an American perspective: from evidence to accountability. *Med Educ* 2006;**40**:607–7.
- Cruess SR, Cruess RL. Understanding medical professionalism: a plea for an inclusive and integrated approach. *Med Educ* 2008;**42**:755–7.
- National Board of National Examiners. Assessment of Professional Behaviors. List of Behaviors. 2007. <http://professionalbehaviors.nbme.org/2008listofbehaviors.pdf>. [Accessed 13 July 2009.]
- New Zealand Government. New Zealand Health Practitioners' Competence Assurance Act, 100(1)(c) 2003.
- Hilton S, Southgate L. Professionalism in medical education. *Teach Teacher Educ* 2007;**23**:265–79.
- Facebook.com. Company Timeline. 2009. <http://www.facebook.com/press/info.php?timeline>. [Accessed 9 February 2009.]
- Facebook.com. Statistics. 2009. <http://www.facebook.com/press/info.php?statistics>. [Accessed 9 February 2009.]
- comScore.com. Facebook Displaces BBC Sites as the UK's Fifth Largest Property. 2009. <http://www.comscore.com/press/release.asp?press=2562>. [Accessed 9 February 2009.]
- Keller C. Seven things you should know about... Facebook II. 2007. <http://www.comscore.com/press/release.asp?press=2562>. [Accessed 9 February 2009.]
- Boyd D. Social Network Sites: Public, Private or What? 2007. <http://kt.flexiblelearning.net.au/tkt2007/edition-13/social-network-sites-public-private-or-what/>. [Accessed 9 February 2009.]
- Gross R, Acquisti A. *Imagined Communities: Awareness, Information Sharing, and Privacy on Facebook*. Privacy Enhancing Technologies, Sixth International Workshop, Cambridge, 2006;36–58.
- Farnan JM, Paro JA, Higa J, Edelson J, Arora VM. The YouTube Generation. *Perspect Biol Med* 2008;**51** (4):517–24.
- Farnan JM, Paro JA, Higa JT, Reddy ST, Humphrey HJ, Arora VM. The relationship status of digital media and professionalism: it's complicated. *Acad Med* 2009;**84** (11):1479–81.
- Lagu T, Kaufman EJ, Asch DA, Armstrong K. Content of weblogs written by health professionals. *J Gen Intern Med* 2008;**23** (10):1642–6.
- Zur O, Williams MH, Levahot K, Knapp S. Psychotherapist self-disclosure and transparency in the Internet age. *Prof Psychol Res Pract* 2009;**40** (1):22–30.
- Tufekci Z. Can you see me now? Audience and disclosure in online social network sites. *Bull Sci Technol Soc* 2008;**28** (1):20–36.
- Read B. Think Before You Share. Students' online socialising can have unintended consequences. *Chron High Educ* 2006;**52** (20):38–41.
- Du W. Job candidates getting tripped up by Facebook. 2007. <http://www.msnbc.msn.com/id/20202935/>. [Accessed 9 February 2009.]
- Facebook.com. Facebook.com. 2009. <http://www.facebook.com/home.php?#!/settings/?tab=privacy&>

- section=applications&field=learn. [Accessed 13 February 2010.]
- 22 Nisselle P. Is self-disclosure a boundary violation? *J Gen Intern Med* 2004;**19** (9):984.
 - 23 General Medical Council. *Relationships with Patients. Maintaining Trust in the Profession. Good Medical Practice*. London: GMC 2006;19.
 - 24 Cain J. Online social networking issues within academia and pharmacy education. *Am J Pharm Educ* 2008;**72** (1):1–7.
 - 25 Thompson LA, Dawson K, Ferdig R, Black EW, Boyer J, Coutts J, Black NP. The intersection of online social networking with medical professionalism. *J Gen Intern Med* 2008;**23** (7):954–7.
 - 26 Ferdig RE, Dawson K, Black EW, Black NMP, Thompson LA. Medical students' and residents' use of online social networking tools. *First Monday* 2008;**13** (9).
 - 27 Chretien KC, Greysen SR, Chretien J-P, Kind T. Online posting of unprofessional conduct by medical students. *JAMA* 2009;**301** (12):1309–15.
 - 28 Swann A. Facebook smokes MySpace. National Business Review 2008. <http://www.nbr.co.nz/article/facebook-smokes-myspace-34413>. [Accessed 9 February 2009.]
 - 29 Fox N, Roberts C. GPs in cyberspace: the sociology of a 'virtual community'. *Sociol Rev* 1999;**47** (4):643–71.
 - 30 Levahot K. 'MySpace' or Yours? The ethical dilemma of graduate students' personal lives on the Internet. *Ethics Behav* 2009;**19** (2):129–41.
 - 31 Moreno MA, Fost NC, Christakis DA. Research ethics in the MySpace era. *Pediatrics* 2008;**121** (1):157–61.
 - 32 Ess C. Internet research ethics. In: Joinson A, McKenna K, Postmes T, Reips U-D, eds. *The Oxford Handbook of Internet Psychology*. Oxford: Oxford University Press 2007;485–500.
 - 33 Ess C, AoIR Ethics Working Committee. Ethical decision-making and Internet research: recommendations from the AoIR Ethics Working Committee. Association of Internet Researchers 2002;1–33.
 - 34 Markham AN. The methods, politics, and ethics of representation in online ethnography. In: Denzin NK, Lincoln Y, eds. *Handbook of Qualitative Research*, 3rd edn. Thousand Oaks, CA: Sage Publications 2005;793–820.
 - 35 National Committee for Research Ethics in the Social Sciences and Humanities. Research ethics guidelines for Internet research. 2003. [<http://www.etikkom.no/no/In-English/Publications/Internet-research/>]. [Accessed 25 January 2010.]
 - 36 Kraut R, Olson J, Banaji M, Cohen J, Couper M. Report of Board of Scientific Affairs' Advisory Group on the conduct of research on the Internet. *Am Psychol* 2004;**59** (2):105–17.
 - 37 Frank E, Elon L, Naimi T, Brewer R. Alcohol consumption and alcohol counselling behaviour among US medical students: a cohort study. *BMJ* 2008;**338a**:2155 doi:10.1133/bmj.a.2155.
 - 38 Mangan K. Etiquette for the bar. *Chron High Educ* 2007;**53** (19):31–2.
 - 39 Gorrindo T, Groves JE. Web searching for information about physicians. *JAMA* 2008;**300** (2):213–5.
 - 40 Hershberger PJ, Zyrd TW, Rodes MB, Stolfi A. Professionalism: self-control matters. *Med Teach* 2010;**32**:36–41.
 - 41 Jones H, Soltren J. Facebook: threats to privacy. 2005. <http://groups.csail.mit.edu/mac/classes/6.805/student-papers/fall05-papers/facebook.pdf>. [Accessed 11 December 2008.]
 - 42 Kolek EA, Saunders D. Online disclosure: an empirical examination of undergraduate Facebook profiles. *NASPA J* 2008;**45** (1):1–25.
 - 43 Kornblum J, Marklein MB. What you say online could haunt you. USA Today. <http://www.usatoday.com/tech/news/internetprivacy/2006-03-08-facebook-myspace-x.htm>. [Accessed 9 February 2009.]
 - 44 Wear D, Aultman JM, Varley JD, Zarconi J. Making fun of patients: medical students' perceptions and use of derogatory and cynical humour in clinical settings. *Acad Med* 2006;**81** (5):454–62.
 - 45 Gorindo T, Groves JE. Intersection of online social networking with medical professionalism: can medicine police the Facebook boom? *J Gen Intern Med* 2008;**23** (12):2155.
 - 46 Guseh JS II, Brendel R, Brendel D. Medical professionalism in the age of online social networking. *J Med Ethics* 2009;**35**:584–6.
 - 47 McDaniel SH, Beckman HB, Morse DS, Silberman J, Seaburn DB, Epstein RM. Physician self-disclosure in primary care visits. *Arch Intern Med* 2009;**167**: 1321–6.
 - 48 Lussier M-T, Richard C. Self-disclosure during medical encounters. *Can Fam Physician* 2007;**53** (3):421–2.
 - 49 White GE. Setting and maintaining professional role boundaries: an educational strategy. *Med Educ* 2004;**38** (8):903–10.
 - 50 Gaufberg E. Alarm and altruism: professional boundaries and the medical student. *Clin Teach* 2006;**3** (4):206–9.

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