TOP TEN

Top 10 ways to reconcile social media and 'traditional' education in emergency care

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ABSTRACT
Social media has been viewed by some as a threat to traditional medical education. In emergency care, the underpinning educational principles of social media, while sometimes innovative in their delivery, are often no different than long-standing techniques and methods. This article aims to encourage discussion and debate that reduces the divide between these two communities of practice.

INTRODUCTION
Medical education is an evolving discipline. Advances in healthcare delivery, changing patient demographics and shifts in workforce design necessitate frequent curricular review at undergraduate and postgraduate levels—the 'what' of learning in medicine.

Effective teaching and learning also requires integration of traditional education theory with technology-enhanced learning modalities—the 'how' of learning. In the past decade, the explosion of new concepts (eg, flipping the classroom[1]) and new cultures (social media) has influenced educational delivery, including health professional education.

In emergency and critical care medicine, there has been a movement towards creating, curating and consuming online educational content, especially that labelled as Free Open Access Meducation (FOAM).[2][3] This is not unique to these communities; however, there does appear to be a relationship between the fast-paced emergency department environment and the 'mindset' of these specialities, with rapid and efficient educational 'transactions' in learning and education.[4] Ultimately though social media has provided an effective vehicle for these transactions in any clinical specialty and offers advantages of speed and accessibility to expert opinion in an egalitarian environment. However speed and accessibility also bring challenges—posting content in an unregulated and unfiltered manner has caused consternation for social media, especially when new and 'unproven' techniques and ideas rapidly bubble to the surface of worldwide conversations.[5]

Clinical educators find themselves often caught between a rock and a hard place; a requirement to deliver a curriculum which is ever-increasing in size and complexity, and a body of students and colleagues wanting to embrace new ideas appearing daily on Twitter or blog posts to drive their own learning.

There are a spectrum of views. At the extreme—battle lines have been drawn between the 'old', 'slow', 'stale', traditional approaches to medical education and the 'new', 'technology enhanced', 'anarchist' social media learning. This is probably neither helpful nor sustainable. We believe that reconciliation is necessary. New and old approaches to medical education and the use of social media are not competitive. Evolving learning modalities will be effective if they follow core principles of effective learning. This article describes top 10 methods by which we believe this reconciliation can happen. They are based on the authors' experience both as clinical educators and as users of social media. They are not intended as didactic rules but as a framework to encourage reflection and debate.

1. Recognise effective use of social media is no different than effective use of 'traditional' medical education approaches

> **Definitions of social media**
> Social media is the social interaction among people in which they create, share or exchange information and ideas in virtual communities and networks (Wikipedia)
> Social media embraces a range of technologies that allow web-based and mobile applications to connect, create and engage user-generated content between individuals and organisations (Professor Simon Carley[6])
> Social media is an openly accessible participation and engagement platform (Dr Damian Roland).

Learners at all levels need a conceptual framework for their education. This should involve clarity of learning objectives, integration within a 'curriculum' (even for continuing professional development), flexibility of pace and process for learning, assessment of learning and evaluation of teaching—the core elements of any effective educational programme. Present use of social media has strengths in social media of these elements but considerable gaps in others.

Effective use of social media for learning or teaching is a skill, amenable to formal instruction, practice and feedback. To date, there has been limited formal guidance for either learners or teachers in developing these skills, and certainly little which is 'evidence-based'. As with our clinical skills, inconsistent, individualistic approaches are unlikely to lead to best practice.

Random roaming through the blogosphere or Twitter would not lead to optimal or efficient learning, just as flipping through pages of a large anatomy textbook or spend hours Googling three-dimensional demonstrations of the adult abdominal cavity may not either.

2. Reaffirm the utility of the 'effective' lecture, whether you call it a podcast or not?

Lectures offer a 'one-to-many' efficiency advantage and structured format for content. Critics cite low learner engagement, variable relevance to learning needs and ineffectiveness. Technology-enhanced ability to record and distribute material instantly means that lectures are more scrutinised, and are more accessible and no longer require synchronous learning. A podcast is simply a lecture available for download.

Lectures and podcasts are not innately 'good' or 'bad'. Core educational principles apply—lecturers must be prepared, have clear key points, ensure material is relevant to the learning context, use teaching approaches that maximise learner engagement, present material in a succinct timeframe and receive evaluation and feedback on their performance.

Technology-enhanced approaches offer opportunities within these principles—audience response systems, live-streamed interviews with experts, visual aids and animation to explain concepts—and offer distractions such as poor use of presentation software or learners ineffectively 'multitasking'.

The increasing use of live recordings and webexes means social media can raise the bar—best 'lecturing' practice becomes more visible and accessible,[7–9] duplication of material can be reduced via collaborative[10] or massive[11] open online courses, 'just in time' learning is easier (procedural skill videos) and distribution on social media can enhance debate and commentary to a wider audience.

3. Develop and adapt your critical appraisal and Evidence Based Medicine skills—same principles, different tools

Learners at all levels need guidance on critically appraising research and educational content. Navigating the world of FOAM is no more or less a task than navigating an article in the *Lancet*. The fundamental skills of structured critique need to be embedded in all healthcare professional education and regularly revised irrespective of the medium to which they are applied.

We believe 'traditional' peer review of medical research is flawed, as is pre- and post-publication, dissemination and commentary of social media content. The expert health professional learner is aware of the risks and benefits of each and has the ability to draw upon online resources to help EBM and critical appraisal skills.[12]

4. Educate the whole healthcare professional and not just technical or clinical aspects

Continuing, and long-standing, concerns about the delivery of compassionate care by healthcare professionals highlight that communication, leadership, professionalism may continue to be poorly taught compared with medical knowledge and technical skill domains in undergraduate and postgraduate curricula.[13]

A systematic review to identify the best evidence of how professionalism in medicine should be taught[14] identified themes of role modelling and personal reflections guided by faculty as the most effective techniques.

The opportunities for social media to distribute powerful narratives about the importance of patient-centred care can be synergistic with reminding medical educators to role model these attributes persistently and effectively. Enhancing the concept of a healthcare provider being more than the sum of their clinical knowledge is a good way to bring the positives of social media and traditional medical education together.

5. Evaluate new methods of reflection

Being a reflective practitioner is a vital component of personal development and professionalism. Traditional forms of reflection have been insular, that is, a healthcare professional making verbal or written notes on a particular incident and feeding back to a sole supervisor or mentor. Social media has empowered very personal but public-facing reflection. This has advantages in that key learning may be shared and perhaps, more importantly, common themes identified by those who having seen others acknowledge particular issues are now willing to do so themselves.

However, this open reflection may leave practitioners vulnerable to a wide audience, or potentially in breach of confidentiality.

The use of blogs as a personal reflective tool is not new but the growing development of online communities means that the sharing of this information is now happening at pace. The noticing, processing and future action questions that facilitate reflection[15] are prompted by the rapid natures of blog-sharing and commenting. Other mediums also exist in which reflection plays a significant role; for example, Twitter may be used to make short reflective statements in real time and through conferences like Social Media and Critical Care[8] public-orientated lectures with an expert reflecting on their practice are becoming more common. In our opinion medical educators must be comfortable with supporting reflection via all these methods and also be aware of personal safety and confidentiality of patients.

6. Use social media as a medium, not a curriculum

Social media is used to create, filter/'curate' and disseminate educational material but it is not a curriculum, which should be specific to a learner group and their context. However, the information available via social media can easily be used to populate curricula. Recently, the College of Emergency Medicine (UK) and Australasian College for Emergency Medicine have made efforts to incorporate FOAM that links to their own curricula.[16 17]

Social media curricular domains will require direct clinical contact or face-to-face learning, and be less easily satisfied with social media. Without the need to articulate explicit learning objectives, material on social media may lack a clear objective, although conversely, 'grey' areas in curricula may be well filled by unique educational content on social media.

Those with educational leadership responsibilities should undertake mapping exercises to determine gaps in delivery of curricular content, whether through 'traditional' delivery or social media. Awareness of quality FOAM resources will assist this process. Online 'conversations' relating to contemporary healthcare practice and challenges to accepted wisdom should also inform curricular evolution over time.

7. Remain professional—same principles, different medium

Social media has put a spotlight on unprofessional behaviour with a number of public cases of healthcare professionals undertaking behaviours not in keeping with their status. However, poor professionalism is not new, even if social media hastens and extends its visibility. Both traditional medical education and social media communities should reaffirm the importance of professionalism and positive healthcare cultures.

Medical schools and professional associations have developed and disseminated resources to assist social media users in this regard, and most institutions have developed policies on social media use.[18] The General Medical Council of the United Kingdom[19] has produced clear guidance on the use of social media for doctors which highlights the following point:

> 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, using social media creates new circumstances in which the established principles apply.

We believe a balance needs to be maintained between 'upholding standards' and 'stifling innovation/censoring'. Again this tension is not new—mainstream media has been navigating these grey zones since radio and television first appeared.

8. Use social media for faculty development

Teachers in healthcare and in other disciplines need preparation and training for their educational role. Many resources for educators exist on social media, and there are blogs and podcasts with faculty development as the primary focus, for example, iteachEM (iteachEM.net) and KeyLime (http://keylimepodcast.royalcollege.ca).

A systematic review of faculty development initiatives in medical education found key features associated with improved teaching effectiveness—use of experiential learning, provision of feedback, effective peer and colleague relationships, interventions following principles of teaching and learning and the use of a diversity of educational methods.[20] Integration of these principles within social media faculty development initiatives is underdeveloped. Experiential learning and peer feedback could be enhanced through technology-enabled peer observation of teaching. Building communities of educators through various social media platforms is a key step to collaboration and sharing expertise. As previously described, the resources available need to be 'pulled' into a carefully planned faculty development plan specific to healthcare educators role.

Conversely, 'traditional' faculty development initiatives may not include social media knowledge and skills as part of the educator's tool kit. Social media enthusiasts need to influence this community to assist development of teaching skills appropriate for the current generation of healthcare learners.

9. Enhance opportunities for assessment and feedback via social media

Assessment and feedback is important for ensuring that learning has occurred and for maintaining competency standards within healthcare professions. Assessment processes need to be valid, reliable, acceptable, feasible and have educational effect, that is, drive learning.[21] There have been significant changes in assessment practice in undergraduate and postgraduate medical training, which include a greater variety of methods, programmatic approaches and use of workplace-based assessments.

We observe that social media has currently had a very limited role in assessing health professional education, and to many that role may appear 'counter culture' to the FOAM experience, and more appropriately the province of 'traditional' institutions. However there are a number FOAM resources specifically devoted to examination preparation (http://lifeinthefastlane.com/exams/ or http://www.edexam.com.au/) and the online platform has enabled widespread accessibility and collaboration for these resources.

Further opportunities exist, including using crowdsourcing for assessment, as demonstrated by Peter Norvig's Stanford University Massive Open Online Course (MOOC),[22] which involved over 150 000 learners, or online assessment and feedback of procedural skills in distributed educational settings.[23]

Using Twitter for supervision of medical learners has been described: 'Supertwision'[24] offers opportunities, albeit within limits of patient and learner privacy and confidentiality.

10. Embrace social media as a method of dissemination of scholarly work

The dissemination of scholarly activity can be a challenge. Social media may be considered a helpful adjunct to more traditional mechanisms although there are risks in assuming that *reach* (or lack thereof) is synonymous with *impact*.[25]

Social media educators and researchers should adhere to principles of quality academic output. A short blog is not a substitute for a carefully considered review article—although both may have their use in the 21st century. Peer-review processes can be enhanced by the reach of social media,[26] either formally or informally via posts on blogs or websites.

Many 'traditional' journals are also modifying their formats and publication processes to more collaborative and social media approaches—multimedia offerings, and alerts via Twitter and Really Simply Syndication (RSS) feeds. Social media blog posts and podcasts offer a greater speed of dissemination and discussion following the release of new research than previously possible, through connected online professional communities.[27]

CONCLUSION

We believe that reconciling traditional with social media-based medical education is not difficult—effective approaches in either medium are based on classic educational theory and principles. Social media offers opportunities to enhance learning that were previously not available, but the principles are not new.

Finally, the distinction between these approaches is fast becoming a false dichotomy. Best practice in healthcare education now demands a hybridisation approach—in which media should be selected for their utility in achieving whichever learning outcomes are required.

What is already known on this subject?

► Social media is increasingly used as a platform to deliver education in emergency and critical care.
► There is the potential for a divide between those endorsing a traditional medical education approach and those who promote new, but potentially short-lived, innovations.

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