

Gaining competence through social media

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Users of social media generate and exchange information, and social media applications are being used increasingly to complement medical education. Medical trainees are adopting social media and Web-based technologies to facilitate education, communication and resource sharing. Educators include social media resources in their teaching methods. Patients increasingly seek online sources for medical information and call for efficient patient–physician electronic communication. Social media offers potential in teaching and assistance in achieving competency within the Canadian Medical Education Directives for Specialists (CanMEDS) framework as components of e-learning curricula.

The 2015 CanMEDS framework developed by the Royal College of Physicians and Surgeons of Canada outlines the proficiencies required for Canadian physicians. They update the seven core competencies identified in 2000,¹ emphasizing high-quality patient care.² The manager role is replaced with “leadership” focusing on quality improvement and resource stewardship.² Highlights of the scholar role include evidence-based medicine, critical appraisal and curating information from diverse resources. Communication between physicians, patients and their families is heavily emphasized in addition to the role of interprofessional interactions. Internet-based applications are now integrated into CanMEDS 2015 to support physician–patient communication, complementing the modern era of virtual health care and technology advances in medical education.

As the traditional “classroom” evolves, evidence accumulates that online learning increases educational capacity by enabling real-time, international resource sharing while allowing flexibility to meet the varied learning needs of students.³ Massive open online courses (MOOCs), which enable crowdsourcing of content, efficiently educate participants without restrictions of time and location.⁴ An evaluation of all MOOCs offered by the two largest providers to determine their relevance to the CanMEDS competencies categorized most as relevant to the roles of medical expert and scholar.⁵ These roles are most frequently illustrated by online technologies as they

apply to broad populations, focusing on disease pathways and basic science.⁵

A review of social media in medical education considered that 14 studies had measurable educational outcomes akin to the CanMEDS framework, including communication and interpersonal skills, professionalism, knowledge and scholarly approach.⁶ Results showed multiple social media platforms promoting clinical excellence through these educational outcomes. Platforms included blogs of personal reflection and professional networking; user-generated question banks with answers; physician-dedicated websites drawing on specialist expertise; and medical wikis with links to citations to aid in staying up to date with medical advances.⁶ Conversely, inappropriate use of social media is a threat to professionalism. Previous research has found that a substantial proportion of medical trainees demonstrates unprofessional behaviour on social media, with little policy on how this behaviour is best managed.⁷

Social media assists in health care advocacy through the widespread dissemination of medical expert knowledge. In one pilot telemedicine study by the International Parkinson and Movement Disorder Society, digital media such as live video, chats and audio conferencing were used to educate physicians in sub-Saharan countries.⁸ During the 2011 earthquake in Japan, Twitter was used to play a vital role in notifying patients where to obtain medical assistance and medications. Agencies such as the World Health Organization and the Centers for Disease Control and Prevention use social media applications to report their most recent recommendations, disease outbreak patterns and prevention strategies.⁹ These can assist physicians’ efforts at advocacy through tools for

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KEY POINTS

- Internet-based applications are now integrated into the Canadian Medical Education Directives for Specialists (CanMEDS) 2015 framework.
- The roles of medical expert, scholar and communicator are most naturally applied to social media applications by ease of widespread dissemination of expert knowledge, online critical appraisal and contributions to educational curricula.
- Physicians should be careful and diligent when using social media to protect patient confidentiality and to avoid brevity and generalizations for individualized and complex patient cases.

patients, increasing awareness and mobilizing resources to underserved populations.

Virtual journal clubs are becoming increasingly popular, imparting critical appraisal skills and establishing a dialogue between authors, editors and readers.¹⁰ Twitter is particularly appealing for virtual journal clubs, as the hashtag creates cyber communities and the associated character limitations demand brevity and clarity. Online journal clubs have the added benefit of analytical capabilities, enabling study and analysis of club impact. Puljak evaluated how the creation of a Facebook page that posted summaries of systematic reviews by the Cochrane Collaboration could be disseminated using social media.¹¹ There were nearly 1500 followers of the page within months, highlighting how social media educates and helps achieve scholarly competence in evidence-based medicine.

Few online resources exist for targeting professional development in areas other than clinical expertise and scholarly activity. Authors of the website Academic Life in Emergency Medicine (ALiEM) launched the Medical Education in Cases (MEdiC) series to engage physicians in online courses teaching the intrinsic CanMEDS competencies.⁴ The MEdiC series consists of monthly cases published to the ALiEM website that detail complex nonclinical dilemmas. Authors moderate a week-long online discussion by posting questions and co-facilitating commentary on both Twitter and a blog. The case concludes with participants receiving responses to their comments and downloading a summary with references to the relevant CanMEDS roles.⁴

Social media improves global access to medical education and teaching of new techniques.⁶ However, social media applications may not be the most suitable portal for complex case discus-

sions and interpersonal interactions owing to the brevity of discussions and concerns regarding patient trust and confidentiality. Future studies of medical education using social media should be designed to offer insight into the quality of social media-based educational methods compared with validated methods in achieving proficiency within the intrinsic CanMEDS roles.

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