Social Media in Medical Education
An Information Paper

Background

Blogs and podcasts are thought to be the 21st century textbooks and lectures, yet we know little about their quality and impact. Over the last decade emergency medicine has been a leader in its use of social media for medical education.

While many of the social media resources available have garnered praise by experts in our field, these accolades have been matched by the apprehension of others about which resources are reliable and whose content can be trusted. More recently, tools to evaluate quality of content have emerged in order to address such concerns and promote further development of useful education resources.

What is FOAM?

Free Open Access Medical Education[1] (FOAM) is described as a "dynamic collection of resources and tools for lifelong learning in medicine." FOAM heavily relies on social media to share these resources, enabling education to be without fees, and available to anyone who wants to learn. While blogs, podcasts, and Twitter posts have been most highly associated with FOAM, the concept is actually not bound by the platform used.

Social Media Resources

One of the most popular forms of social media for healthcare is Twitter[2]. Messages with no more than 140 characters are publically shared, allowing exchange of information.

Hashtags (#) may precede a word or phrase to categorize topics and allow for searches and information clumping. Examples of common hashtags used in emergency medicine education are #FOAMed, #MedEd, and #EMConf.

Twitter has been cited as a tool to increase engagement among medical education, share information, interact with content and network. Potential pitfalls include unfiltered and unregulated information.

Blogs and podcasts have gained popularity as a way to share education content and allow for engagement. Popular blogs in emergency medicine include: Academic Life in Emergency medicine (ALiEM), EMCrit, BoringEM, Life in the Fast Lane, and Dr. Amal Mattu's EKG videos, among a growing number of other blogs.

Blogs and podcasts provide for sharing education material, often for free, among a wide population. On blogs and podcasts, there is no limit of space and time for content like Twitter, and the materials can easily be shared and incorporated into other learning plans. Many can now view material at different times and locations that was once only available to a small group.

Social media allows for distribution of the best education materials to anyone who seeks to learn. Facebook, Google, Reddit, and LinkedIn are other tools used for sharing material and networking.

Criticism and Evaluation
Committed educators have strived to improve the quality of education content long before social media. It is not surprising that medical educators would take advantage of social media as a means to disperse material. The number of emergency medicine and critical care educational resources that utilize social media continues to increase exponentially.
There is a growing interest in evaluating individual resources for impact and quality. The intention of such tools is to help educators know which resources are credible and also to reward quality content in order to encourage further development of reliable resources.

This has a been a great challenge, as systems used to appraise research articles, such as impact factor, are not well suited for social media resources. In fact, it is argued that the high impact factor applied to scientific research does not necessarily correlate with quality of research from accredited journals although historically it has been used for promotion. Therefore, an effort has been made to develop better tools that are specific for the intended outcomes of education resources.

The Social Media index (SMi) developed by Dr. Brent Thoma[3] was developed to critically appraise quality of secondary resources in medical education. Currently, a group including Dr. Thoma and others is working on an international consensus on quality for emergency medicine blogs and podcasts.[4] The goal of this group is to establish a critical appraisal tool to be used by learners and educators for quality assessment for emergency medicine social media products. This will be another step in ensuring that we as educators are providing our learners with the best possible learning experience.

Additionally, the blog ALiEM has developed the AIR Series[5] (Approved Instructional Resources) that consists of a formal peer review process applied to blogs and podcasts. The AIR executive board, in coordination with the Council of Emergency Medicine Residency Directors (CORD), shares approved material that can be used for academic credit. This system helps direct residents and residency programs to quality FOAM resources to incorporate into a residency curriculum.

Current research is evaluating the utility of these markers. The AIR series has been approved by the Accreditation Council for Graduate Medical Education (ACGME) for individualized interactive instruction (III), a method of documented asynchronous learning used to decrease the weekly conference time for residencies. Residents can obtain conference credit by participating in the AIR series.

Regarding the AIR process, the nine member AIR executive board critically appraises each proposed blog or podcast, and rates each on their score sheet. A seven point Likert scale is used in five measurement outcomes: 1) BEEM (Best Evidence in Emergency medicine) score; 2) Content Accuracy; 3) Educational Utility; 4) Evidence Based Medicine; and 5) Referenced. A score of >30 out of 35 earns the AIR "Stamp of Approval."

Program directors have access to the data for their program to see who has completed each module, including the quiz. Currently there are nine modules with recommended III time ranging from two to four hours.

Conclusion

Advancing technology has led to blogs and podcasts being used by learners whether or not their programs have approved them. These blogs and podcasts are a part of the FOAM movement that is being led by emergency medicine.

It is the responsibility of the leaders of the FOAM movement to ensure quality in their products for residents or attendings. Current work is underway to produce validated appraisal tools to ensure this quality. Members of ACEP's Academic Affairs Committee have been involved and are continuing to collaborate with these leaders to make these tools a reality.

References

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3. Thoma B, Sanders JL, Lin M, et al. The Social Media Index: Measuring the Impact of Emergency medicine and Critical Care Websites. *West J Emerg Med*. 2015 Mar; 16(2): 242–249

4. Thoma B, Chan TM, Paterson QS, et al. Emergency medicine and Critical Care Blogs and Podcasts: Establishing an International Consensus on Quality. *Ann Emerg Med*. 2015 Mar 31 (Epub ahead of publication)

5. ALiEM AIR series: http://www.aliem.com/new-air-series-aliem-approved-instructional-resources/

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