

REVIEW ARTICLE

Best Practices of Social Media for the Clinician

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Abstract: Over recent years, social media use has substantially expanded not only for millennials, but across all generations. Today, it no longer remains a means for simple social networking. It has evolved into a powerful tool that can be used for career development, continued professional development and global scientific engagement. Medical professionals, have employed social media platforms to search for job opportunities, advertise meetings, participate in case discussions and network with the medical community at large.

However, some caveats limit its widespread application amongst the clinical community.

The purpose of this review is to discuss the utility of social media, its drawbacks and best practices for the clinicians.

Keywords: Social media, evidence based medicine, safety, confidentiality, medical professionals, clinicians.

1. INTRODUCTION

Over recent years, social media use has substantially expanded not only for millennials but across all generations. Today, it no longer remains a means for simple social networking. It has evolved into a powerful tool that can be used for career development, continuing professional development and global scientific professional engagement. Medical professionals have employed social media platforms to search for job opportunities, advertise meetings, participate in case discussions and network with the medical community at large. However, some caveats limit its widespread application amongst clinicians. The purpose of this review is to discuss the utility of social media, its drawbacks and best practices for the cardiologists.

2. UTILITY OF SOCIAL MEDIA

Clinical practitioners of all specialties have made use of the different social media outlets, namely Twitter, Facebook, LinkedIn, and SnapChat. Each of these outlets has been used differently. Educational campaigns for trainees and patients are routinely scheduled on SnapChat. For example, a recent chat on the application requirements, application process and member benefits for the Royal College of Physicians (MRCP-United Kingdom) registered remarkable global success. Applicants were able to hold an informal conversation with other Clinicians about their experience and obtain tips on how to prepare for the examination including potential review courses. Another example was a Question and Answer session moderated by specialized gastroenterologists

for patients. The session was very successful in educating patients suffering from Celiac Disease. On symptoms, diagnosis, diet and follow up. Newly diagnosed patients also had the opportunity to ask questions and engage in a conversation with other patients about stores and restaurants in their respective areas with gluten-free products and menus. These sessions have now replaced many meetings that were previously conducted in person in hospitals and clinics with limited space and capacity. Not only is the audience wider, but it has facilitated the participation of patients who cannot afford transportation or live far away from expert centers.

Another very popular utility of social media is case discussions and tutorials. Twitter and Facebook, in particular, are common platforms to ignite discussions and field expert recommendations on diagnosis and management strategies of complex clinical cases often requiring multidisciplinary input. Brief case histories often with images, angiograms, and findings are shared. Global input is commonly collected. In addition, procedural techniques and steps are illustrated. Many have equated this to a global multidisciplinary team meeting and a complications session at any conference. For instance, cases of Spontaneous Coronary Artery Dissection (SCAD) have been posted routinely on Twitter, Instagram and Facebook. Some cardiologists have turned to experts in the field to guide clinical decisions about management including stenting the value of stenting and cutting balloons. Published data by experts in the field has often been referenced to guide the decision-making processes, follow up and further investigation of such patients [1]. Tutorials usually revolved around the latest guidelines, trials, or novel procedures. Commonly, an expert provides a summary or clinical pathway on a specific topic. Clinicians engage by raising concern or supporting the proposed pathway. Another popular educational platform is a Twitter Journal Club. A publica-

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tion is discussed with particular messages highlighted. It includes one or more authors with moderators that direct the discussion. A recent journal club registering tremendous success was the one conducted by EuroIntervention on Twitter. It is better known as #EIJCardioChat and it covered the EAPCI Consensus document on the Clinical Use Intracoronary Imaging Part 2 [2] with the primary author Thomas Johnson [3].

Aside from patient related issues, many physicians and recent graduates found social media beneficial for their career development. For instance, many publish their curriculum vitae and highlight their areas of expertise on LinkedIn. This particular platform has served as a recruitment portal for agencies, hospitals and individuals as well. Not only are job opportunities made available, but committee applications, fund applications, and speaking opportunities are advertised by societies, centers, experts, industry and individuals. For example, the European Association of Percutaneous Coronary Interventions (EAPCI) advertised its training fund in 2019 on multiple sites including Twitter, Facebook and LinkedIn. The reach was global, and ten awardees were announced at the EuroPCR 2019 Congress.

In terms of conferences, social media has also played an integral role in keeping clinicians who are unable to attend apprised of the latest cutting edge science that's presented in the meeting. Commonly, live cases, late-breaking clinical trial session and opening or award ceremonies are live-streamed through applications like Periscope or Facebook Live. Aside from live streaming, updates on presented data are usually discussed at length on social media. Many experts critique the presented trial and statistical methods. Often virtual attendees voice their views as well. Many have equated these discussions with the floor microphone that enables the audience to ask questions to the expert panelists. It is very common to see the discussion on trials continue long after the conference has concluded. There are several examples of this observation. The most notable are the discussions revolving around the ORBITA trial which was a placebo controlled randomized trial presented at TCT 2017 (Transcatheter Therapeutics) and published in the Lancet for stable coronary artery disease and the Expert Consensus Document of the EAPCI on the Clinical Use of Intracoronary Imaging Part 2 which was presented at EuroPCR 2019 [4, 5].

3. DRAWBACKS OF SOCIAL MEDIA

First and foremost, all social media platforms are public networks. Clinicians have a responsibility to uphold guideline directed medical care and maintain patient confidentiality at all times. They also have a responsibility to maintain the integrity and reputation of the centers they work at as well as their own professional standing. There are nuances to public networking that could jeopardize these fundamental professional pillars.

Since all platforms are public, posts are subject to scrutiny by anyone including patients, family members, co-workers, editors, journalists, reporters, lawyers, employers and administrators, members of the medical industry, students, trainees and researchers. Any HIPAA violation renders a clinician vulnerable to questioning. Anonymizing im-

ages and information is usually sufficient; however, rare cases and complications can be easily identified even without a direct label such as the name and medical record number. Breach of confidentiality and complications can potentially lead to litigation or questioning by any institutional privileging review board. In addition, it is safe to assume that all posts are permanent. Even if one attempts to delete or edit it, many times followers have already obtained screenshots that become evidence in any dispute and investigation.

Furthermore, social media outlets engage users from all over the world. Users usually have different backgrounds, language skills and experience. The discussions can often be misunderstood. Recently, Korean researchers published a manuscript in the American Journal of Emergency Medicine with the intent to demonstrate that women are as capable and safe as men at endotracheal intubation [6]. There was a robust discussion on Twitter with strong rejection of the intent and wording. The authors publically apologized and requested a retraction from the journal [7]. This was an example of how discussions on social media fail to convey the intended meaning and lend little opportunity for authors to clarify especially with the limited characters and inability to display emotion.

The practice of medicine is frequently based on judgment and techniques can vary from one center to another or one region to another and protocols. Regions adapt their approach to the allocated resources and health priorities unique to their patients. As such, case discussions frequently illustrate wide variation in practice protocols amongst clinicians. As an example, there are several two stent bifurcation techniques each with its supporting evidence (*e.g.* DK Crush and Culotte) [8, 9]. Operators have adopted their own preference and level of expertise for these strategies each school referencing their own supportive randomized data. Once again, discussions and disagreements on the advantages and disadvantages of the different techniques are public. They can confuse patients, referring physicians and trainees who witness experts disagreeing on care plans. In such circumstances, an author of a case does risk his/her reputation with patients, referring physicians and privileging boards in their own institution.

At this point, it is important to address direct patient engagement. Many healthcare professionals have received posts from patients requesting appointments or medical opinions. There is a controversy on how to handle such requests. The cornerstone of any reply is patient safety. The limited information that is provided in a tweet, a picture or a post precludes a comprehensive evaluation upon which a safe recommendation or prescription can be made. Scheduling appointments in a timely manner can be difficult. Engaging in a conversation with a patient about their symptoms and procedures on a public platform can directly violate an institution's regulations or breach confidentiality. The healthcare professional can be held liable for such an infraction.

Social media has leveled the ground and allowed any user to engage in the conversation. However, many times, those who contribute to the conversation are not experts. There is no review board that will ascertain their credibility or validate their statement or the safety of their proposed technique. In published journals or in panel discussions at

conferences, the peer review process and the moderators will rigorously regulate the discussions and ensure that statements are validated scientifically. In other words, unless a link to a publication or guideline document is furnished in a post, one cannot be certain that the statements are evidence-based recommendations. In this respect, social media has been heavily criticized by academics to be opinion based medicine. Established academics have written editorials on MedPage Today suggesting that much of the social media discussions fail to bring forward evidence and carry strong bias that ignores evidence [10].

Finally, recently many have adopted techniques that have not been proven safe and efficacious through randomized trials. For instance, distal radial access as the default approach has been adopted worldwide and courses are routinely conducted. Access management and complications have not been examined through scientific research that provides the evidence for this technique's safety. Another concerning precedent is many operators "watch" a technique on videos on social media and proceed to "try" it in the lab without formal proctorship or training. These safety concerns of such a practices have been voiced by many in the medical community. It brings self-development and the maintenance of certification of individual cardiologists to question.

4. PROPOSED BEST PRACTICES

Given the outlined drawbacks of the use of social media, several best practice tips have been proposed [11]. It is imperative that all professional users are familiar with their own institution's and country's regulations and bylaws. Specifically, they need to be aware of their institution's privacy laws as they pertain to the institution itself or the patients to avoid breach of confidentiality. Disclosure of any conflict of interests as they pertain to products or industry overall, is wise and avoids insinuations that may arise in future discussions. Individuals who are leaders of societies, editors of journals or serve in any official capacity in any institution, society or journal should adhere to the mission of the entity they represent. More importantly, though, they should distinguish their personal views and opinions from those of the entity they serve. This prevents attributing opinions to an official body and may protect individuals and institutions from litigation.

In terms of conversations on social media, healthcare professionals should qualify their statements and recommendations by referencing trials and publications. As with any publication, understanding plagiarism and its implications is vital. Crediting authors, respecting embargos (even one's own) and providing links or citing publications is the appropriate means to avoid plagiarism. The discourse itself reflects an individual's professionalism. Maintaining composure, using appropriate language, and maintaining a respectful demeanor is wise and recommended. This includes how one critiques or disagrees with a colleague. It is unwise and unprofessional to troll, politicize, polarize or discriminate in these public forums. It is advisable to apologize for errors preemptively.

When demonstrating a procedure, it is crucial that one maintain patient privacy, utilize approved devices and techniques and outline potential complications and contraindications.

This is particularly useful for trainees and novel operators. Off-label use of any device should be indicated clearly. Reproducing novel procedures based on videos without structured proctorship subjects the patient and operator to unnecessary risk and is discouraged. When possible, a disclaimer should be added if a disturbing image is posted (this is applicable to all sensitive material). It is wise to obtain patient consent before posting images, even if all patient identifiers have been removed.

Ultimately, the image a professional portrays on social media is one that those who know him/her (professionally and personally) can identify and bare witness to. Remaining authentic is a cornerstone. Falsifying credentials and expertise, posting cases belonging to other colleagues and inappropriate online behavior can expose a physician to unnecessary investigation and/or career damage. It may also impact future opportunities.

Recently, some have speculated that social media addiction contributes to burnout and is linked to anxiety disorders and depression [12, 13]. Some have also implied it consumes time that could be spent with family, patients or to promote healthy self-care habits. Finding the right balance of time spent networking, engaging in family functions, and career obligations remains a struggle with and without social media. It is incumbent upon the individual to self-regulate all aspects of life.

CONCLUSION

As social media integrates itself with our daily life, we must establish a code of conduct that governs the professional use of the different outlets. Social media has become a vehicle for the continued educational process and the dissemination of knowledge for students, trainees and established clinicians. Those in their early career seek mentorship, job opportunities, research opportunities and knowledge by engaging with leaders in the medical community on social media. Those who are leaders have reached out to industry, journals, conferences and other colleagues in their field to recruit sites for their trials, readership for their publications, and collaborators in clinical pathways. The industry has studied the needs in each community by listening in on the discussions and conversations. Societies and journals have engaged with their members and subscribers promoting their activities and contents. Conferences have employed social media to advertise events and recruit faculty. Centers and universities have also resorted to social media to brand their services and mission.

With all these applications, it is important to maintain professionalism at an individual and institutional level. The continued expansion of social media will pose new challenges to clinicians which they must be prepared for. We believe that will only be possible by embracing social media more rather than by avoiding it.

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CONFLICT OF INTEREST

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