"Likes" in Social Media: Does It Carry Any Implications?

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Abstract

Social media usage has drastically increased in recent years. In particular, social media usage among medical providers has become commonplace. It may offer a variety of benefits in the medical arena, with respect to information dissemination, health promotion, and education. However, the implications of social media usage and engagement remain to be seen. This narrative review aimed to describe and highlight the effects of social media usage and engagement and to provide guidance for engaging in social media as a medical professional. Our review demonstrates that active social media engagement unequivocally affords the urologist with meaningful opportunities for self-promotion, branding, education, networking, research, and enhanced recruitment efforts, but this engagement comes with the risk for burdensome exposure to misinformation and harassment. We encourage adherence with American Urological Association/European Association of Urology (AUA/EAU) social media best practices and provide our own recommendations for social media engagement.

Introduction

Social media (SoMe) represents a dynamic and interactive technology-based communication interface that has dramatically impacted virtually every aspect of society, including the field of medicine. Specifically, SoMe in healthcare has been utilized in a variety of ways, including promoting institutional branding and maintaining or improving both peer-to-peer and patient-to-clinician interactions[1]. There are several modalities of SoMe platforms, including Wikipedia, social networking sites such as Facebook, media-sharing venues such as YouTube, and microblogging platforms such as Twitter[2], all of which are ubiquitous and used worldwide. More recently, video-sharing platforms such as Instagram and TikTok have gained increasing recognition in the realm of medical knowledge acquisition and distribution[3].

Among its many potential roles, SoMe has become a significant tool for disseminating medical information and eliciting health promotion and education[4]. Possibly the best example of the widespread use of SoMe for information dissemination is the role SoMe played during the COVID-19 pandemic, where people relied on fast and effective platforms to seek, search, share, and distribute health-related information[5]. Indeed, many people rely on these platforms to consume information; in 2015, it was estimated that more than 60% of the entire US adult population utilized the internet and subsequently, more than 70% of users endorsed seeking medical information online[6].

The field of urology has readily adopted and incorporated SoMe into their practices. With the majority of both training and practicing urologists actively engaging in SoMe platforms, there has been increasing interest in the roles

Key Words

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Abbreviations

AUA American Urological Association
EAU European Association of Urology
SMD social media disorder
SoMe social media

and potential consequences of SoMe usage[7,8]. SoMe usage itself is not to be confused with SoMe engagement, which is the measurement of how people interact with a SoMe creator's account and content. Engagement metrics include likes, comments, favorites, clicks, mentions, shares, and other engagement actions based on the specific platform.

SoMe engagement is essential in measuring whether a creator's content is resonating with their audience. For SoMe influencers, high engagement often translates into sponsorships and financial success. But when it comes to medical professionals, what is the significance of SoMe engagement? Is being on SoMe enough or should medical professionals be encouraged to be more active on platforms instead of just "lurking"? In this narrative review, we investigate the implications of SoMe usage and engagement and provide recommendations for engaging in SoMe as a medical professional.

Social Media and Research

Content creation on SoMe provides users with significant opportunities at the personal, professional, and institutional levels. From a research perspective, SoMe utilization can improve paper citation rates. Eysenbach demonstrated a statistically significant positive correlation between tweets and citations[9]. Furthermore, highly tweeted articles (those in the top 25th percentile with respect to tweets) were approximately 11 times more likely to be top-cited articles[9]. With this information, the author concluded that SoMe metrics such as tweets can be used by scholars and institutions to not only monitor the impact of their research but also as a filter to direct users to highly impactful works.

Interestingly, this relationship between Twitter presence and academic citations has garnered substantial support. A study by Ozkent et al. showed a significant relationship between increased number of tweets about an article and the article's increased number of citations[10], again suggesting the utility of Twitter in disseminating academic and scholarly work. In a systematic review aimed to describe the varying tactics and strategies employed by medical journals to both engage with their readers and spread their research, Erskine et al. concluded that promotion via Twitter may improve a variety of metrics such as article dissemination, article readership, and citations, which may ultimately result in higher-impact work. In response to these data, several key strategies were adopted by medical journals to increase public attention to scholarly work; these include tweeting the link and title of their published articles, including infographics, having podcasts, and hosting monthly virtual journal clubs[11]. It appears that study authors should not only have a Twitter account to keep up with the most recent literature but also be tweeting about their work to best capture audiences and maximize research impact. Despite this data, it is not entirely clear whether more content engagement by consumers yields a greater impact. While further research is needed, there remains an overall positive sentiment on the utilization of SoMe in this manner.

Social Media and Self-Promotion

SoMe can play a role in the promotion of one's practice, institution, or brand. When looking at the Twitter engagement of over 340 medical residency training programs, it was noted that accounts that were tweeting more often had significantly more followers than those with fewer tweets (240 followers vs. 107 followers, respectively). Furthermore, the authors found that all types of content engagement with Twitter (such as likes, tweets, retweets, and comments) was associated with a larger following[12].

In surveying physicians who endorsed utilizing SoMe (eg, Facebook, YouTube, blogs), Campbell et al. revealed that participants highlighted SoMe utility in branding, marketing, and networking[13]. Additional survey data has substantiated that branding represents a common reason for physicians to adopt SoMe[14]. As evidenced by our plastic surgery colleagues, a beneficial means of incorporating SoMe into practice is by offering the public a glimpse into the life and practice of a surgeon; by creating an Instagram account and categorizing a portion of the content as "Private Life," a significant number of likes, clicks, and new followers were obtained when compared to posts designated as "Scientific"[15]. Thus, the personalization and access to a provider's daily life may attract a large SoMe following and enable enhanced branding and marketing opportunities.

From a professional standpoint, creating SoMe accounts may improve one's chances of academic promotion or tenure. As SoMe continues to be implemented into medicine, programs may consider developing and implementing institution-specific protocols describing an explicit set of guidelines delineating the types of SoMe activities and presence that may be considered for career advancement[16]. Criteria for SoMe-based scholarship in health professions education have already been suggested; a consensus of 52 health

professional educators from 20 organizations in four countries defined four key criteria for designation as SoMe-based scholarship, including originality, advancing the field, content being saved in more permanent states and disseminated among formal channels, and providing the community the ability to comment on and provide feedback in order to elicit discussion[17]. In evaluating 98 studies that assessed the use and benefits of engaging in SoMe for health communication, Moorhead et al. described several key overarching benefits. Namely, increased interactions with others, increased accessibility to information, peer social support, and the potential to influence health policy[4]. Truly, SoMe engagement—not just usage—has shown to help advance the careers of medical professionals in more ways than one.

Social Media and Education

SoMe can also facilitate medical education. Cheston et al. performed a systematic review aiming to gauge the use of SoMe in medical education in order to ascertain how educational interventions affect a host of factors such as satisfaction, knowledge, attitudes, and skills of physicians and physicians in training. They found that the incorporation of SoMe tools into educational pursuits was associated with increased knowledge, skillset, and attitude. SoMe tools (eg, blogs, YouTube videos, Twitter, and Facebook posts) were particularly effective in promoting learner engagement, eliciting feedback, and fostering collaboration and professional development[18]. A considerably useful role for SoMe use in education resides in the education of residents. After introducing Twitter as a tool to facilitate education, the SMART-ME study showed that 38 of 40 (95%) residents felt that SoMe could be useful as a medical education medium. Interestingly, even prior to the intervention, 77% of participants were already using SoMe for educational purposes[19].

Within the realm of urology, SoMe use has evolved to encompass multiple areas including acquiring urologic knowledge and conference participation[20]. In reviewing a European survey assessing the perceived role of SoMe in acquiring urology-related knowledge, 63% of participants rated SoMe as having a moderate-to-high impact on knowledge acquisition[21]. Supporting the importance of SoMe for urology residency, Dubin et al. highlighted that more than 99% of urology trainees utilized SoMe and 67.6% felt it was important to have SoMe presence during residency[8].

Furthermore, as it pertains to urology, social media may allow for virtual mentorship and dissemination of clinical practices and techniques, particularly for challenging procedures that may have a steep learning curve such as laser enucleation of the prostate[22]. From a research perspective, informational graphics may serve as powerful tools for advertising and information dissemination[23]. These were especially relevant during the COVID-19 pandemic, which had a profound impact on urological care[24]. Thus, with virtually all residents on and engaging in SoMe, it is imperative that urological training programs and associations continue to adopt new approaches toward educating trainees via SoMe.

Social Media and the Match

The implications of enhanced content engagement are far-reaching beyond the obvious effects on education and research. In the field of urology specifically, the impact of United States residency applicant engagement with residency programs on platforms such as Twitter and Instagram have been shown to influence match statistics. With the COVID-19 pandemic fueling an increased dependence on a virtual interview process, applicants are challenged with an inability to engage with residency programs directly in person. In lieu of in-person interactions, SoMe has provided both programs and applicants a unique opportunity to learn about and engage with one another. A recent study by Manning et al. revealed this interesting shift in content focus on Twitter within the urological community following COVID-19. Their trigram (three-word combination) analysis of academic urology program tweets demonstrated a major shift toward recruitment and education, with a focus on utilizing SoMe for recruitment efforts in the match process[25].

But beyond focusing content efforts on recruitment and the match, does SoMe engagement impact the match results itself? Heard et al. surveyed both residency applicants and program directors during the 2021 applicant season regarding their perspectives on SoMe and its role in the residency match process. Approximately 76% of applicants and 77% of program directors who were surveyed claimed to use SoMe in the residency match process, with the vast majority of activity occurring on Twitter[26]. While the majority (66%) of applicants followed their matched residency program on Twitter prior to matching, few had direct content engagement with matched program accounts prior to the match. Nonetheless, 66% of program directors felt their program's SoMe presence provided some benefit to the match, and 60% of applicants felt they gained better insight into residency programs from their SoMe activity. Importantly, no observed link between SoMe usage and match outcomes was found[26].

Despite observing no direct effect of SoMe activity on match outcomes, when questioned about specific circumstances, 15% of program directors in the above study noted that an applicant's SoMe activity helped their chances of matching, whereas 12% noted that an applicant's activity hurt their chances, suggesting a

meaningful influence of SoMe activity on a more individual basis[26]. Carpinito et al. similarly found that applicants to a single urology resident program utilized SoMe as a means of information gathering, though increased content generation and engagement did not impact match outcomes to that specific institution[27]. However, Friedman et al. also evaluated applicants to urology residency during the 2021 cycle and found that matched students were significantly more likely to have Twitter accounts (59% matched vs. 28% unmatched, $P = 0.02$), and that matched students were more likely to have Twitter accounts with more followers[28]. A study by Bukavina et al. also supported the idea that increased applicant SoMe engagement was associated with better match outcomes: among 250-matched and 45-unmatched urology applicants, matched applicants had higher numbers of Twitter followers and overall tweet likes. Having more followers, individual tweet likes, and total number of tweets increased overall odds of matching. Notably, all matched applicants followed their matched program on Twitter[29]. SoMe appears to play an important and evolving role on the part of both applicants and programs as the virtual application cycle becomes the norm, though direct effects of content engagement remain to be elucidated.

Negative Implications of Social Media

SoMe has many clear benefits, but its use can also have negative implications. Social media disorder (SMD) is a condition characterized by a behavioral addiction to SoMe, diagnosed in subjects meeting five or more of the nine criteria on the validated Social Media Disorder Scale (preoccupation, tolerance, withdrawal, persistence, escape, problems, deception, displacement, and conflict)[30]. In two studies, Dubin et al. found that 6.1% of practicing urologists and 11.3% of urology trainees met criteria for SMD[7,8]. Many aspects of SMD align with those involved in physician burnout. Burnout rates among urologists are one highest in all medical subspecialties[31,32]. It is possible, therefore, that increases in SoMe use could be associated with physician burnout. With a growing emphasis on the identification and prevention of physician burnout, a better understanding of SoMe and its contribution to burnout development will be imperative.

Another concerning finding in one of the studies was that 17.7% of practicing urologists reported online harassment by other physicians, highlighting issues with professional conduct by physicians on SoMe platforms[7]. These concerns were further warranted, as both studies by Dubin et al. revealed that the majority of urology attendings and trainees have never reviewed professional guidelines on the appropriate use of SoMe. It is clear that despite ubiquitous use of SoMe by urologists, there exists great need and potential for formal interventions geared toward educating urologists on best practices in SoMe use.

Social Media and Medical Misinformation

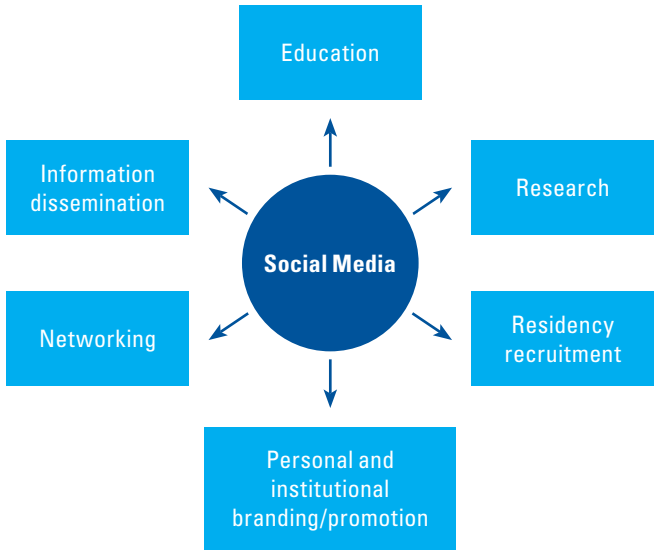
Content engagement on SoMe platforms and its apparent benefits across a multitude of medical specialties is not entirely without its challenges. Medical misinformation is rampant, and there are no current standards to which users must adhere when sharing health-related content. Studies have consistently shown poor overall quality of information regarding various urological conditions across YouTube, TikTok, and Instagram, with calls for the medical community to conduct collaborative efforts to enhance overall quality of information[33–36]. Increased content engagement inherently comes with increased reach and perceived influence on the part of users, and therefore efforts to address misinformation are pivotal in the hopes of preventing the propagation of medically false information or inaccurate claims. Engaging content filled with inaccuracies may be viewed as truthful simply by measure of popularity, a problem inherent to SoMe that must remain at the forefront of any campaign to address misinformation. In the following section we provide recommendations for SoMe engagement as well as suggestions for managing medical misinformation online.

Recommendations for Social Media Engagement

While having a SoMe presence as a medical professional has been controversial in the past, it has now become clear that the potential benefits of utilizing SoMe outweigh the potential pitfalls (**Figure 1**). The risks,

FIGURE 1.

Potential benefits of social media engagement



however, are still potentially significant, and it is imperative that urologists who choose to engage in SoMe be thoughtful of their online activities. Despite both the American Urological Association (AUA) and the European Association of Urology (EAU) providing SoMe best-practice guidelines, the majority of urology trainees and attendings have not reviewed either[7,8]. Thus, we recommend that any urologist active on SoMe platforms familiarize themselves with these guidelines to optimize their SoMe experience.

Since the start of the COVID-19 pandemic, medical information and misinformation online has become a growing concern among medical professionals. Current research has confirmed fears of the promotion of misinformation through SoMe platforms such as TikTok, Instagram, and YouTube[33–36]. In an attempt to address medical misinformation, urologists and other physicians have begun to focus their SoMe efforts on discounting inaccurate information online while endorsing more medically accurate information. This kind of online engagement can potentially result in unwelcome consequences including harassment and, understandably, can defer many urologists from actively addressing medical misinformation on SoMe. While not all urologists may feel compelled to dispute medical misinformation online, we think it is essential that every physician understand the ways in which they can best provide patients with accurate information both online and offline (**Figure 2**).

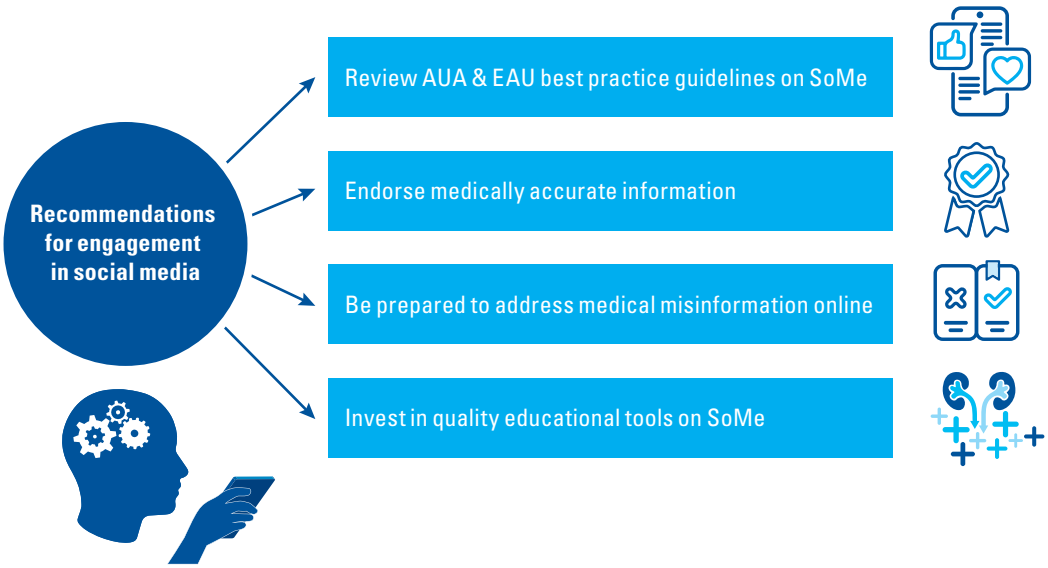
Urologists interested in actively addressing medical misinformation on SoMe should engage in manners that align with the AUA/EAU best practices. It is important to provide accurate, thoughtful commentary on the medical information and, if possible, limit personal commentary on the accounts/people providing the misinformation, as providing personal commentary can distract from the message and encourage further harassment. Other ways in which the urological community can continue to expose medical misinformation is by continuing to invest in good online educational tools for patients interested in researching their health. The Urology Care Foundation website is an excellent tool that provides accurate and easily digestible information for patients[37]. The creation of YouTube channels by many urologists through which they provide medically accurate information has also become a popular and important tool for patient education. Urologists should continue to support and promote these websites to patients both online and offline. Although SoMe is a valuable tool for medical information, the best way to provide medically accurate information remains through direct patient engagement. Medical information is personal and private. By creating a safe environment and talking with their patients, physicians give themselves the best opportunity to address any patient concerns or questions about medical misinformation.

Conclusions

Through significant research efforts as well as the events following the COVID-19 pandemic, prior questions regarding the value and sustainability of SoMe in medicine have been answered: social media in medicine is here to stay. SoMe is used by virtually all training and attending urologists and provides its users with various personal and professional opportunities.

FIGURE 2.

Recommendations for engaging in social media



Simply having a SoMe account is much different than actively engaging on the platforms and although both provide benefits, there is growing literature supporting that increased SoMe engagement provides users with increased benefits. Increasing engagement may come with risks and so we urge all urologists on SoMe to familiarize themselves with the AUA/EAU social media best practices. Despite the continuing pressure and clear benefits of being present on SoMe, urologists should not feel compelled to be online. SoMe engagement often requires time and resources, and with the already established high rates of burnout among urologists, urologists should engage in SoMe only if they are interested.

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