

Society for Vascular Surgery (SVS) best practice recommendations for use of social media platforms

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Introduction

The use of social media (SoMe) in medicine has grown exponentially in the last 5 years, with increasing numbers of physicians, trainees, students, and patients utilizing a variety of platforms to grow their professional network, stay up to date on research and news, advertise or to learn about training programs, or obtain medical information. However, given the instantaneous transfer of information to millions of people across the world it is important to realize that any information, and in some instances, misinformation, that is shared on social media can have significant impact and consequences. Considering these challenges, when used appropriately, SoMe can grow the presence and influence of vascular surgery significantly.

The Society for Vascular Surgery (SVS) is committed to supporting the appropriate and effective utilization of social media through content that is honest, well-informed, and accurate. To that end, the Young Surgeons Committee of the SVS convened a writing group of SVS members with diverse geographic, cultural and practice modality backgrounds with the goal of crafting a set of recommendations to guide novice and advanced users alike in the appropriate use of SoMe platforms in vascular surgery. These guidelines are not all-encompassing but rather serve as a platform to advocate for best practices in SoMe use among vascular surgeons and trainees. We recognize that SoMe use, and its associated platforms, is an ever-changing landscape. While these recommendations reflect best practices in regards to patient privacy and physician transparency, they are not intended to supersede local, state or national policy on appropriate communication in social media.

Social Media use for Vascular Surgeons

The fact that terms such as “e-patient” and “e-health” are now part of medical lexicon is perhaps the strongest evidence of how the digital revolution is transforming medicine and health care. SoMe has become a powerful tool utilized by the general public, patients, health professionals, and other stakeholders (hospital administrators, medical and academic institutions, healthcare organizations, government agencies, etc.) to generate discussions, shape policies, and potentially improve health outcomes¹⁻⁵. These platforms have developed into distinct networks and communities which are categorized based on the features and functions they provide to the individual users. Different forms of SoMe include microblogs (eg, Twitter), social networking sites

(eg, Facebook), professional networking sites (eg, LinkedIn), media sharing sites (eg, YouTube, Slideshare, TikTok), wikis (eg, Wikipedia), and more specialized thematic sites (eg, 23andMe, HealthMap), among others⁶⁻⁷.

The high penetration of SoMe into most aspects of society has been well described⁸⁻¹⁰. In 2005, when the Pew Research Center began collecting data on the adoption of SoMe by the general population, only 5% of American adults reported using any form of SoMe platform. By 2019 figure had risen to 72%¹⁰. More importantly, as the number of users has increased, the demographics of the SoMe user base has become more representative of the general population with respect to age, gender, race, and educational level¹⁰⁻¹¹. SoMe use by patients and health care professionals has mirrored that of the general population, with notable differences related to the types of networks used, motivations for engagement, and specialized nature of the content shared¹²⁻¹⁵.

This has been a global phenomenon with no discernable geographical or collaborative barriers⁹. The democratization of health information and communication, and the ability to crowdsource solutions to difficult clinical questions, has reverberated across all aspects of clinical practice. Similarly, the expectation for health professionals to have a digital presence and provide digital solutions has grown¹²⁻¹⁴. Use of SoMe in clinical practice has been shown to improve professional development through networking and sharing of educational resources, increase accessibility of up-to-date information between clinician-to-clinician and clinician-to-patient, and provide social and emotional support for clinicians and patients^{2-4, 7, 12-14}. In addition it can be employed in branding, recruitment and mentorship. This is of particular value with travel and networking restrictions during the novel Coronavirus-19 (COVID-19) pandemic, as well as to increase participation in and engagement by members of the diversity, equity and inclusion community^{15, 16}.

However, this new landscape of clinical practice comes with certain concerns and pitfalls. Many physicians remain unaware of social media's relevance and potential applications, its inherent risks, and how these risks may be mitigated^{2-4, 7, 17}. Furthermore, the development of appropriate "professional guidelines" involving social media interactions has been a difficult task given the wide range of issues that warrant careful consideration and the changing definition of contemporary "professionalism"¹⁸⁻²⁵. Finding consensus on potentially controversial topics such as cultural, social, and political norms and values, as well as defining the boundaries between professional and personal identities add to the complexity of this matter. Additionally, the medical-legal implications related to liability and malpractice, lack of robust mechanisms for monitoring and ensuring information quality, and the

paucity of evidence-based data on the effectiveness of the various types of social media are major barriers to the adoption of social media in clinical settings^{2-4, 17}. The codification of any policy to govern communication across this platform must reconcile social media's sometimes contradictory regional (eg, health departments) and institutional (eg, hospital and university) policies and accommodate the rapid rate at which social and digital technologies evolve.

This document is meant to serve as an SVS member guide. It is not meant to be conclusive, and in fact, acknowledges the urgent need for comprehensive evaluation of policies by key stakeholders in government, institutional, and public health organizations that are responsible for safeguarding computer-mediated communication in health care^{3, 7, 26-28}. The medical-legal issues related to standardization and verification of medical information are part of an ongoing debate that will not be resolved by this document. Below, are several considerations that SVS members should weigh when deciding how to best engage with social media (Table 1). These suggestions are meant to represent "best-practices" and serve as a starting point for ethical and responsible use of this powerful communication device rather than instructions or restrictions on personal behaviors. Ensuring the highest possible safety and effectiveness of digital interactions is a mutual responsibility of individual participants, industry, professional associations, and government agencies.

Patient Privacy in Social Media

Over 85% of people using SoMe research doctors, hospitals, and medical information²⁹. Health Insurance Portability and Accountability Act (HIPAA) violations do occur and have increased as more providers turn to promoting their career and business on SoMe. A breach of HIPAA is any use or disclosure of protected health information (PHI). Examples of prior HIPAA violations include posting gossip about a patient, even when the name is not disclosed, and sharing a picture from the workplace which has a patient in the background. Overt HIPAA violations where images of patients were posted may result in termination and/or state fines. It is imperative that providers remember that private groups or even private messaging on Facebook, Twitter, or email does not meet HIPAA standards to protect PHI. Sharing of PHI is to be done solely through encrypted patient methods. While SoMe can be a powerful forum for sharing challenging/interesting clinical cases, appropriately navigating such posts can be quite tricky.

When posting interesting cases, even if information is de-identified, there is still known information about the surgeon's place of employment. Combined with the type of procedure, and also its date, someone familiar with the patient may be able to identify the particular case. If a patient has a unique marking and this is included in the social media post, someone familiar with the person could recognize them. A surgeon must also take the sum of the material posted in conjunction with other publicly available information and news media; one cannot consider a single post as an isolated event.

Most institutions have specific and individualized policies covering SoMe, and it is the surgeon's responsibility to be familiar with these. Certain institutions allow no posting of any type of images that contain patients, even if the patient cannot be recognized, or information including surgeries. Other institutions may allow for information to be posted with informed written consent. In these cases, a separate consent for use of photographs and SoMe is usually required (Supplemental Figure 1). This landscape continues to evolve, and to avoid liability one must know the policies at their respective institutions. In the event there is a discrepancy between national policies and institutional policies, the stricter of the two will supersede and will likely determine subsequent consequences.

Should patient consent be obtained, and to what extent?

We recommend that physicians obtain patient consent prior to posting clinical information to SoMe platforms. Many institutions have implemented specific patient consents for use of PHI in health stories and complex clinical care descriptions. For institutions looking to develop these, the consent should be highly detailed and allow patients to select information they are comfortable with sharing on SoMe, and specific information they do not want shared (Supplemental Figure 1). The consent should stipulate if photographs or video are to be used and also the method by which the information is to be shared (print, radio, blog, social media platform: Facebook, Twitter, YouTube). In addition to the explicit information patients are/are not willing to share, the consent should allow patients to set an expiration date and be revocable by written notice, with the knowledge that once used in an online setting, digital media may be difficult if not impossible to remove from the internet. If a physician's

practice is such that a treated patient may not be seen in the future to provide consent for image sharing, it may be prudent to obtain consent in advance. To avoid conflicts, this consent should still be obtained separate from, and ideally after any surgical or endovascular procedure consent. Patients should also understand that if they refuse to consent to release of information, this will not affect the surgical care they receive. Posting of images regarding care of minor patients is more complex given the nature of minor and parental consent. While we caution against posting of images regarding the care of minor patients, in cases where the pathology is specific to pediatric patients, such as in congenital vascular malformations, we recommend parental consent, and when possible, patient discussion and assent. We also recommend careful attention to the physician's institution regarding existing policy in these cases.

Appropriate use of vascular images

Using selected images to illustrate a case or technique on online SoMe platforms has significant advantages over written descriptions alone. An image, whether intraoperative photo, angiogram, or CT scan, educates the viewer about the circumstances of the case and the methods employed in diagnosis and treatment. Given character constraints of online platforms such as Twitter, images can maximize the impact of an individual post. As patients use SoMe, images allow individuals to view technical aspects of a procedure and potentially have a better understanding of their disease process, particularly when linked with various grouping hashtags (ie, #filterOUT, #comprehensivevascularcare)³⁰. However, there are significant ethical considerations about the appropriate use of images in an unregulated, open SoMe environment.

Posting of de-identified operative photos or radiographic images on SoMe platforms with the intent to educate others is considered ethically appropriate according to the American Medical Association Journal of Ethics, provided that tenets of patient privacy and confidentiality are strictly followed^{31, 32}. Although de-identified data is not restricted according to HIPAA guidelines, as showcased above one must also take into account how the posting of a unique case has the possibility to undermine confidentiality if there is a reasonable chance of identification³³.³⁴ Furthermore, today's interesting case may become tomorrow's complication. Once a photo has been released on a SoMe platform, it is impossible to guarantee that it can be subsequently removed or that it has not been

shared or downloaded. Thus, we recommend an appropriate interval between the timing of a procedure and the sharing of related images online.

Informed consent to post medical images on SoMe should recognize that the patient's image will be shared online, likely in perpetuity. Patients have a range of views regarding medical photographs. Ninety percent of patients who undergo medical photography are comfortable with their doctor sharing photos for one-on-one learner education³⁵. However, only 42% of the same patients feel that reuse of the photos on SoMe is appropriate. When the intent to post content to SoMe arises, we recommend documenting that consent in a written fashion. We recommend having the discussion about posting of medical images separately from that of the surgical or procedural consent, to avoid any unintentional link that may be formed between consent for the surgery and consent for the sharing of media³⁶. When performed correctly and with appropriate ethical judgment, the sharing of vascular images has the opportunity to educate other healthcare workers, patients and trainees about our specialty.

Conflicts of Interest

We recommend disclosure of any relevant financial relationship when sharing associated content on SoMe platforms. Relationships between vascular surgeons and industry partners can be mutually beneficial. These interactions may help maintain vascular surgery at the forefront of innovation, especially in the endovascular space where technology is rapidly evolving. With regard to the public forum of SoMe, vascular surgeons can promote new techniques and novel devices simply by sharing interesting and complex cases. The dissemination of information across social media is rapid and far-reaching, and while these types of posts can be educational, it is important that conflicts of interest (COI) be explicitly acknowledged in order to maintain an environment of objectivity. It is appropriate to engage in online discussion even when potential COI exists, as long as the conflict is allowed in the venue, clearly stated, and transparent. Relevant COI may include financial relationships such as consulting or speaking honoraria, research funding, personal or family investments, and stakeholder positions within the company in question. Unfortunately, previous studies have indicated that within SoMe, COI is seldom disclosed³⁷.

Our recommendation to include any relevant COI disclosures in full form within the main post to ensure that these disclosures are not missed. However, social media posts are short and character-limited by their nature, which presents a challenge to including a full COI statement. Some options for reporting include within the physician's profile, within the SoMe post itself, or via direction to the physician's institutional profile where COI disclosures are listed or directly to openpaymentsdata.cms.gov/physician³⁸. In these cases, a reference to the disclosure should still be included in the main post in order to satisfy the need for transparency without compromising the ability of the poster to relay a succinct, educational message to the audience. The hashtags #COI and, conversely, #NOCOI are good options to limit character use. The Federal Trade Commission (FTC) has additional guidelines for disclosure of financial relationships on SoMe³⁹.

Determining whether COI exists in a post is not always straightforward. A disclosure is certainly required if a company and/or product is specifically named. In addition we recommend disclosure whenever the shared content allows for sufficient identification of the relevant company or technology. When in doubt, it is safer to err on the side of caution and include a disclosure. Each institution, university, or academic department may have their own guidelines for social media posts involving COI as well; individuals should always be aware of, and follow, their own local regulations.

Managing conflict in social media

Differences of opinions are not uncommon among participants, particularly of different specialties, and efforts to manage these conflicts professionally on SoMe are important. While it is certainly appropriate to ask pointed questions regarding indications, technique, and outcomes, these should be focused on addressing the educational benefit to the audience⁴⁰. Depending on specialty, patient characteristics and philosophy, there are alternative methods to treating vascular patients. When posted cases report on treatment(s) which are thought to be outside the accepted standard of care or contain errors, it may be most helpful to address your concerns via private message to the author of the post rather than to the wider public forum, as these may appear as an attack on the poster, and this information is visible to the patients.

While we advocate promoting vascular and endovascular surgery, and our unique ability to provide comprehensive vascular care to the patient, it is never appropriate to disparage another specialty and their

treatment practices. It is particularly inappropriate to make ad-hominem attacks against the original poster or other participants in the discussion. It should be noted that in extreme circumstances, disagreement noted in a public forum may serve as impetus or support for litigation ⁴¹.

Cyberbullying in social media

We strongly condemn harassment, bullying or targeting of any kind on social media platforms. We recognize anonymity within SoMe limits options to address cyberbullying and associated behavior. The recommendation of this group is to promote courteous and honest communication whenever possible to resolve online conflicts.

A downside of social media is the potential exposure to cyberbullying ⁴². Cyberbullying is harassment that can take many forms ranging from comments related to characteristics of personal identity i.e. age, race, ethnicity, gender, and gender identity, to demeaning professional comments targeted at specialty, work location, or education and training. Cyberbullying can include doxing or giving away someone's personal information, and harassment. Harassment is also not only a risk from colleagues, but from the general public or patients. There are many options to deal with cyberbullying if and when it occurs (help.twitter.com). First and foremost, further harassment can often be curtailed by simply ignoring the comment or post. Further options to avoid interacting with an individual's post or content include muting, or even blocking, their content. In some cases when you want to share an experience but wish to avoid commentary, you can disable comments. It should be noted this may sometimes invite criticism by not allowing feedback. Lastly, the SoMe user should remain cognizant of the value of "unplugging" – stepping away from SoMe should cyberbullying occur or persist. If you feel that cyberbullying may negatively impact you in a longstanding personal or professional way, it may be helpful to save records of these negative interactions in case they are needed in the future.

How to establish your SoMe presence?

The first step in establishing a public SoMe presence is to identify your goals. These include intention for use of the platform, the target audience, and the type of content in which you are interested. Depending on the platform utilized this can affect the tone of one's posts, and be intertwined with other personal interests like art,

music, humor, etc. Social media can be a powerful tool to connect to others around the world who share similar interests for camaraderie, peer support, collaboration, jobs, and mentorship.

A helpful starting point in establishing a SoMe presence is to understand different types of content that can be engaging to the reader. Depending on your specific goals consider developing your SoMe presence across various available platforms; adjust your content and approach accordingly (Table 3). While not every SoMe platform is identical, we use Twitter as an example due to its high adoption in the medical community. An excellent introduction to Twitter for surgeons can be found in the ACS Bulletin ⁴³. Varying the content of your posts can help increase engagement. This can include sharing links to articles or meetings, inviting discussion by tagging others, and embedding questions and polls. Sharing key points or slides from a meeting, as well as visual abstracts can promote engagement and education, while being mindful of HIPAA compliance and intellectual property (recognize that some national and international meetings do not permit live tweeting). SoMe may amplify dissemination of your scholarship and enhance impact. One can participate in or host a live moderated chat or Journal Club, in which several questions to a group are answered via tweet in a defined time period. Additionally, "Tweeterials" or threads comprise several connected tweets on any topic.

After deciding on goals, audience, and methods of engagement it is important to build a network of individuals both to share your content, and receive curated information. These individuals can range from friends and mentors, to people whose content you find valuable, or sometimes just entertaining. From there one can "share" what matters to you, growing your social media presence organically. Simply engaging, sharing your ideas and responding to those shared by others will inevitably help networks coalesce around you ⁴⁴. Authenticity and sincerity go a long way to attract like-minded people, and quickly expand your personal network.

It can be easy to become excessively drawn into SoMe (it is designed to do this); so, it is also important to limit your time on these platforms. While posting at least twice a day and responding to interactions within 4 hours will help increase one's reach and followers, this is not always realistic (or wise) for the busy vascular surgeon. Every individual's personal limit and time commitment are unique. One can hire SoMe marketers or use applications such as Hootsuite or Buffer to manage content posting. The sheer volume of information present in one's daily feed can be overwhelming, and even with the algorithm you will never see 100% of the content produced by those you follow. This problem can be mitigated by limiting who you follow or making lists of

accounts that you regularly check. For instance, one can compile a list of journals of interest, departments of vascular surgery, vascular surgeons, etc. One should use SoMe as a tool, and the extent and manner of use or involvement is your own personal decision. There are definite benefits to be realized by interacting with others virtually, balancing consistency and frequency with time for other important pursuits. Lastly, it is inevitable that at some point, one will experience a negative interaction within the SoMe arena. To that end there are valuable tools, including muting of conversations or individuals or even temporarily deactivating an account, to prevent one from being consumed by what should be an otherwise positive and valuable online platform.

SoMe represents a unique platform to educate and mentor students and trainees who have interest in vascular surgery. Of equal importance, these online platforms provide a forum for older surgeons to collaborate, ask clinical questions, and receive up-to-date information on new and emerging technology. Benefits range from following prominent figures to discovering topics of interest in real time as they surface on various SoMe platforms. Currently, there is no guidance on how trainees can gain additional vascular surgery exposure online or engage in existing networks. This can be aided by establishing a centralized list of related hashtags (Figure 1) and identifying active educators/mentors on Twitter that trainees can follow. From a trainee perspective, prominent SoMe users can be searched by using such hashtags and identifying high volume contributors. Networking, educational and research opportunities have been developed within the various SoMe communities. The use of online journal clubs allows for interested trainees to participate in up-to-date clinical discussions. In addition, SoMe networks can be utilized to introduce/disseminate valuable educational resources that are clearly underutilized such as the Houston Methodist DeBakey Education Lecture series (Table 3). SVS Connect provides an online registry of virtual mentors to connect future vascular surgeons with research opportunities, advice and guidance. While this cannot compare to role models and exposure to vascular surgery in real life, their participation should be encouraged and welcomed.

Supporting Collaboration with Other Specialties

Health care professionals have adopted SoMe to create viable virtual communities. The most common activity in these health care virtual communities is the exchange of experiential domain-specific knowledge. There is increasing evidence that using a SoMe platform to share domain-specific knowledge reduces the evidence

practice gap⁴⁵. Historically, other specialties that treat vascular disease, including interventional radiology and interventional cardiology, have utilized SoMe platforms at a higher rate than vascular surgeons^{46,47}. However, vascular surgeons are uniquely poised to bridge gaps between endovascular therapy, open vascular surgery and vascular medicine. Contributing knowledge, continuously, globally, and in real time, results in real time collaboration, dissemination, and rapid turnover of data. This active and continuous collaboration provides a collective experience that can change the way we do things, or practice, immediately.

The symbiotic relationship between domain-specific health care community and its stakeholders creates an ethos of knowledge sharing in a Web-based context. Effective domain-specific knowledge transfer, among health care providers treating the same domain, can drive innovation and development of novel industry. Knowledge sharing via SoMe should be driven by a culture of altruism, collectivism and reciprocity, and trust. The virtual community should support a respectful and noncompetitive environment. For the community to thrive, contributions should be valid, reliable, accurate, and evidence-based. Group behaviors that are perceived as negative (i.e. harbor a negative or contentious tone) have an undesirable effect on both the willingness to share knowledge and retention of community members.

Wellness practices in social media

Social media can help promote physician wellness. Promotion of physician wellness can be accomplished through a virtual community of physicians connected by common personal and professional ties⁴⁸. A positive method for promoting wellness is to demonstrate a healthy work-life balance. Showing out-of- work activities, such as hobbies and sports, can show other physicians, particularly young trainees, that there is life outside of the hospital. If one chooses to do so, posting about time with family and friends is integral to demonstrating what a contemporary well-rounded physician is. In regards to protecting oneself from potential cyberbullying and loss of anonymity, it is important to keep in mind whether one chooses to have a public profile, a private profile, or a combination of the two depending on the intended SoMe use. Generally speaking, a private account is one where you control all or some aspects of the content that can be publicly viewed. In some cases content may only be viewed by family or friends who you identify via the platform. In a public account your content is more likely to be

viewed by the public at large. Private accounts may be useful for family or friends, while public accounts are more likely to facilitate growth and interaction with new individuals on SoMe.

Another common benefit for social media activity is the active support of colleagues. Social media can be used for direct peer to peer support as well as in the development of mentor-mentee relationships. Peer to peer support can include managing complex patient scenarios, addressing work conflict, or sharing personal concerns. Overall discussions of shared experiences can help physicians support each other and is essential for professional growth. Mentor-mentee relationships can also be developed virtually between physicians who may not normally interact with each other, or when distances between the two make it impossible to meet in person⁴⁹. These interactions can lead to collaboration and sponsorship.

Conclusion:

The use of social media continues to grow. Given the current constraints of the COVID-19 pandemic, SoMe has become integral to contemporary personal and professional life. In addition to promoting and advertising a professional specialty, as our online presence as vascular surgeons grows, we have more opportunities to impact our colleagues within medicine, patients, and the public at large. With these opportunities comes responsibility regarding the appropriate use of current and future SoMe forums. With that in mind we hope you find these recommendations helpful to guide your own growth on online platforms, and we look forward to continuing to showcase the comprehensive care that we vascular surgeons provide to patients, physicians and the community at large.

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