Society for Vascular Surgery best practice recommendations for use of social media

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ABSTRACT

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 learn about training programs, and 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, can have significant impact and consequences. Considering these challenges, when used appropriately, SoMe can grow the presence and influence of vascular surgery significantly.

The use of social media (SoMe) in medicine has demonstrated the ability to advance networking among clinicians and other healthcare staff, disseminate research, increase access to up-to-date information, and inform and engage medical trainees and the public at-large. With increasing SoMe use by vascular surgeons and other vascular specialists, it is important to uphold core tenets of our commitment to our patients by protecting their privacy, encouraging appropriate consent and use of any patient-related imagery, and disclosing relevant conflicts of interest. Additionally, we recognize the potential for negative interactions online regarding differing opinions on optimal treatment options for patients. The Society for Vascular Surgery (SVS) is committed to supporting appropriate and effective use of SoMe content that is honest, well-informed, and accurate. The Young Surgeons Committee of the SVS convened a diverse writing group of SVS members to help guide novice as well as veteran SoMe users on best practices for advancing medical knowledge-sharing in an online environment. These recommendations are presented here with the goal of elevating patient privacy and physician transparency, while also offering support and resources for infrequent SoMe users to increase their engagement with each other in new, virtual formats. (J Vasc Surg 2021;74:1783-91.)

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 both novice and advanced users 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, in all of its varied platforms, is an ever-changing landscape. While

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these recommendations reflect best practices in regard 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 the 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 outcomes. These platforms have developed into distinct networks and communities that 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, Linke-dln), media sharing sites (eg, YouTube, Slideshare, Tik-Tok), wikis (eg, Wikipedia), and more specialized thematic sites (eg, 23andMe, HealthMap), among others. The high penetration of SoMe into most aspects of society has been well described. 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, this figure had risen to 72%. 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 level. 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 shared.

SoMe has been a truly global phenomenon with no discernable geographical or collaborative barriers. 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 grown. 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. 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. 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. 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”. Reaching 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, adds to the complexity of this matter. While we must strive to serve our patients first and foremost, we also recognize that we exist as individuals. Although not all of us choose to share personal information online, SoMe is a platform where personal interests and viewpoints coexist with clinically relevant information. We recognize the importance of using our voices to advocate for those groups who may suffer from healthcare and societal inequity. At the same time, we acknowledge that differences in opinion will exist and may sometimes precipitate conflict in this space. SoMe users should do their best to differentiate between expression of their views and that of the institution for which they work. Some may choose to separate their personal and professional accounts and modulate the privacy settings between the two. Finally, 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 platforms in clinical settings. The codification of any recommendations regarding communication across these platforms 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. 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...
While SoMe can be a powerful forum for sharing, to be done solely through encrypted patient methods. Sharing of PHI 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 that has a patient in the background. Overt HIPAA violations include posting 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 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 seek medical information. 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 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

<table>
<thead>
<tr>
<th>Table I. Best practices for ethical and responsible use of SoMe</th>
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<tbody>
<tr>
<td><strong>Content credibility</strong></td>
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<tr>
<td>• Only share information from credible sources; cite source whenever possible</td>
</tr>
<tr>
<td>• Recognize potential impact of federal trade communication guidelines on industry-related posts</td>
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<tr>
<td>• Refute or report any inaccurate information you encounter</td>
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<tr>
<td><strong>Medical-legal concerns</strong></td>
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<tr>
<td>• Remember that the content you author may be discoverable</td>
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<tr>
<td>• Respect institutional guidelines on content sharing</td>
</tr>
<tr>
<td>• Comply with federal and state privacy laws</td>
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<tr>
<td>• Respect copyright laws</td>
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<tr>
<td><strong>Networking practices</strong></td>
</tr>
<tr>
<td>• Do not contact patients with requests to join your network</td>
</tr>
<tr>
<td>• Direct patients who want to join your personal network to a more secure means of communication or to your professional site</td>
</tr>
<tr>
<td><strong>Patient care</strong></td>
</tr>
<tr>
<td>• SoMe may be used to provide education to the lay-public, but should not be used for direct patient care</td>
</tr>
<tr>
<td>• Do not provide medical advice to specific individuals via SoMe</td>
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<tr>
<td><strong>Self-identification</strong></td>
</tr>
<tr>
<td>• Identify yourself on professional sites</td>
</tr>
<tr>
<td>• Make sure that your credentials are correctly stated</td>
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<tr>
<td>• Specify whether you are representing yourself or an employer</td>
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</table>

More 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 permit information to be posted with informed written consent. In these cases, a separate consent for use of photographs and SoMe is usually required (Appendix, online only). 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 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, as well as specific information they do not want shared (Appendix, online only). The consent should stipulate if photographs or videos are to be used and also the method by which the information is to be shared (print, radio, blog, social media platform: Facebook, Twitter, You Tube). The consent should be scanned into the patient’s record. 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
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.**

- **We recommend that any images of a patient case be posted only after informed consent to post such images to SoMe has been obtained. We recommend documenting patient consent in the SoMe post.**

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). However, there are significant ethical considerations about the appropriate use of images in an unregulated, open SoMe environment.

Posting of deidentified 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. Although deidentified data are not restricted according to HIPAA guidelines, 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 identification. 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 (Table II).

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 education. 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 media. 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 and discussing 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 any 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 disclosed.

Our recommendation is 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/physician. 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 author to relay a
bene

tant. While it is certainly appropriate to ask pointed ques-

ers to manage these con

ual regulations.

involving COI as well; individuals should always be aware

on the side of caution and include a disclosure. Each

company or technology. When in doubt, it is safer to err

sage to the author of the post rather than to the wider

on the accepted standard of care or contain errors, it may be

cases report treatment(s) which are thought to be outside

characteristics and philosophy, there are alternative

methods for treating vascular patients. When posted

cases report 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 mes-

age 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 endovascu-

lar surgery, and our unique ability to provide comprehen-

sive vascular care to the patient, it is never appropriate to

disparage another specialty and their treatment prac-

tices. 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 pub-

cic forum may serve as impetus or support for litigation.33

Cyberbulling in social media.

• We strongly condemn harassment, bullying or target-

ing of any kind on social media platforms.

We recognize anonymity within SoMe limits options to

tress will eventually result from these actions. An infor-

mation, and harassment. Harassment is also not only a risk from colleagues, but

from the general public. 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 expe-

rience 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 in-

teractions 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

Table II. Recommendations for posting HIPAA-compliant patient-related content to social media (SoMe)

<table>
<thead>
<tr>
<th>Type of content</th>
<th>• Post only images that serve to inform or educate</th>
<th>• Never post any patient-related images for entertainment or malicious purposes</th>
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</thead>
<tbody>
<tr>
<td>Appropriateness</td>
<td>• Ensure that your hospital, medical group, or university allow the posting of patient-related photos, regardless of HIPAA compliance or patient consent</td>
<td></td>
</tr>
<tr>
<td>Confidentiality</td>
<td>• Respect HIPAA tenets when posting</td>
<td>• If possible, post no clinical information</td>
</tr>
<tr>
<td>Timing of post</td>
<td>• Avoid posting on or around the time of index procedure or visit</td>
<td>• Consider timing post after follow-up or appropriate interval</td>
</tr>
<tr>
<td>Patient consent</td>
<td>• Obtain appropriate patient consent to share images or vignettes</td>
<td>• Include use of SoMe platforms in the consent process</td>
</tr>
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</table>
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 and interests, consider developing your SoMe presence

<table>
<thead>
<tr>
<th>Platform</th>
<th>Content format</th>
<th>Current use and type of content</th>
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</table>
| SVS Connect | Online forum hosted by the Society of Vascular Surgery intended for vascular surgeons, trainees, and medical students | • Discussion of topics and issues relevant to vascular surgeons  
• Announcement of vascular related events  
• Sharing of vascular related presentations and files  
• Structured peer support in collaboration with professional coaches  
• Community networking (ie: APDVS platform) |
| Doximity | Network of healthcare professionals with profiles to securely collaborate with other physicians, review career opportunities and stay current on the latest medical news | • Building a network with other healthcare professionals  
• Reaction and discussion on news, research, and articles  
• Also includes a dialer that can be used for anonymous, HIPAA-compliant telephone and video calls with patients (telemedicine adjunct) |
| Facebook | Can create a personal/group profile that can share video, photo, and word posts | • Networking tool for physician groups – includes option for closed groups for peer support  
• Sharing of medical news  
• Support (closed) groups for patients with certain conditions |
| Instagram | 2200 character limit posts that can be accompanied by pictures and videos | • Marketing to patients. Before and after photos  
• Recruitment of medical students with information about residency programs |
| LinkedIn | Professional profile that resembles one’s resume | Networking tool for medical and business professionals to connect based on:  
• Education history  
• Work history  
• Publications  
• Skills |
| Slack | Internet relay chat collaboration software | Searchable chat rooms that allow for real-time persistent communication among:  
• Workgroups  
• Employees |
| TikTok | Short-term mobile videos | Often used to share educational content in format of entertaining or catchy videos intended for the general public, ie a video on importance of vaccination |
| Twitter | 280 character limit posts that can be accompanied by pictures and videos | Networking and information sharing platform between medical professionals, public and potentially, patients  
• Case presentations (with attention to HIPAA compliance)  
• Conference presentations – amplify work  
• Residency program recruitment  
• Journal articles  
• Medical news  
• Branding tool (specialty) |
| YouTube | Videos | Wide use, ranging from presentations to technical videos (see Houston Methodist DeBakey Education Lecture series).  
• Surgery videos  
• Conference presentations  
• Journal article reviews |

APDVS, Association of Program Directors in Vascular Surgery.
Given the rapidly changing nature of the internet and social media, some content may be replaced or outdated within a short period of time.
across various available platforms. Adjust your content and approach accordingly (Table III). 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.35 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, “Tweetorials” 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.36 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 (Fig) 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 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 III). 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 gap.\(^{37}\) Historically, other specialties that treat vascular disease, including interventional radiology and interventional cardiology, have utilized SoMe platforms at a higher rate than vascular surgeons.\(^{38,39}\) 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 ties.\(^{40}\) 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. To protect 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 conflicts, 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 person.\(^{41}\) These interactions can lead to collaboration and sponsorship.

CONCLUSIONS

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 will have more opportunities to impact our colleagues within medicine, our patients, and the public at large. With these opportunities comes a responsibility to appropriately use 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.

REFERENCES

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Abstract

Objectives: To systematically compare the diagnostic performance of different CT imaging protocols in children with acute head injury.

Methods: A literature search for studies examining pediatric head trauma was performed. The published data were extracted and evaluated using a predesigned protocol. Studies were included if they met certain criteria, such as using a standard injury detection protocol.

Results: A total of 25 studies were included in the analysis. Of these, 15 studies used a standard protocol. The highest sensitivity was found in the group using the standard protocol, with a mean sensitivity of 93.5% (range: 88.4%–99.9%). The specificity was also the highest in this group, with a mean specificity of 96.7% (range: 83.6%–99.9%). The area under the curve (AUC) for the standard protocol was the highest, with a mean AUC of 0.97 (range: 0.89–0.99).

Conclusions: Standard protocols for pediatric head trauma imaging provide excellent diagnostic performance, with high sensitivity and specificity. The use of standard protocols is recommended to ensure the most accurate and efficient diagnostic imaging in children with acute head injury.

Introduction

Pediatric head trauma is a common medical emergency that requires rapid and accurate diagnosis to prevent complications and improve outcomes. CT imaging is a crucial tool in the initial assessment of pediatric head injuries, providing critical information to guide clinical decision-making. The diagnostic performance of CT imaging protocols in children with acute head injury has been a subject of interest in recent years.

Previous studies have explored the diagnostic accuracy of various CT imaging protocols in pediatric head trauma. However, a systematic review and meta-analysis of these studies have not been performed. The purpose of this study was to systematically compare the diagnostic performance of different CT imaging protocols in children with acute head injury.

Materials and Methods

A literature search for studies examining pediatric head trauma was performed. The search was conducted using the Medline and Scopus databases with the following terms: “pediatric head trauma,” “CT imaging,” “diagnostic performance,” and “protocol.” The search included articles published from 2010 to 2020. Only studies that met certain criteria were included in the analysis.

Results

A total of 25 studies were included in the analysis. Of these, 15 studies used a standard protocol. The highest sensitivity was found in the group using the standard protocol, with a mean sensitivity of 93.5% (range: 88.4%–99.9%). The specificity was also the highest in this group, with a mean specificity of 96.7% (range: 83.6%–99.9%). The area under the curve (AUC) for the standard protocol was the highest, with a mean AUC of 0.97 (range: 0.89–0.99).

Discussion

The results of this study demonstrate the importance of standard protocols in pediatric head trauma imaging. By using standardized protocols, clinicians can achieve the highest levels of diagnostic performance, ensuring the most accurate and efficient diagnostic imaging in children with acute head injury.

Conclusion

Standard protocols for pediatric head trauma imaging provide excellent diagnostic performance, with high sensitivity and specificity. The use of standard protocols is recommended to ensure the most accurate and efficient diagnostic imaging in children with acute head injury.
APPENDIX (online only).

Patient Name:_______________________
Date of birth:_______________________
MRN:______________________

Authorization for use of patient-related images and content for training, public communication, or marketing purposes

I, _____(patient name)_______ authorize _____(institution/physician name)______ to use or disclose the following health information, including personal health information, photographs, videos or other images for the following purposes:

__ News story (including: TV, radio, newspapers, magazines). Topic: __________________

__ Health care communications including social media posts

__ Fundraising activities for the purpose of: __________________

__ Marketing activities that may include disclosure or use of your images or narrative by third parties.

__ Other

I consent to the use of the following for the purposes listed above:

__ My name and/or likeness

__ Operative photos or video from surgical or other invasive procedures

__ Care details including diagnosis, treatment provided, and other health-related details

__ Potentially sensitive information including:
  __ AIDS/HIV test results
  __ Mental health diagnosis/treatment
  __ Genetic testing information
  __ Drug and alcohol diagnosis and treatment information
  __ Other

I acknowledge that release of my information is voluntary. I have been informed that use of images or content on social media involves sharing of information on internet platforms. Refusing to release information in no way affects treatment, payment, enrollment or eligibility for future benefits. I agree to forfeit any claim to payments to the physician or medical institution as a result my case or care being used for the purposes of marketing, as indicated above.

Unless noted above, medical professionals will make every attempt to preserve my confidentiality. However, I understand that once I have authorized disclosure of information into the public domain, I may be unable to remove this information in the future, and subsequently this may compromise the confidential nature of my treatment.

This authorization will expire on ____(date)______. If no date is indicated, this authorization will expire 12 months after the date of the signature noted below. My authorization can be revoked at any time by contacting ____(office phone)____ or submitting written to ____(office address)____

Signature

__________________________ Date:____________
____________(Printed Name)_______