To the Lighthouse: Navigating Nephrology through the World of Social Media

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Introduction - #Nephrology

Back in 2009, two articles in NDT plus, the predecessor of CKJ, described opportunities for using the internet (1) (2). A decade and a half later, this practice has gone viral. We live and work in an ever-expanding “socialverse”; with over 5 billion people globally using social media (SoMe) platforms, partly as professional and educational tools. However, adoption remains low in some low and middle income countries (LMIC) (3) with some studies suggesting that higher tweet numbers can be a proxy for gross domestic product (GDP) (4). Risks also exist and regulations vary from non-existent to minutely prescriptive, with serious...
sanctions if guidance is breached (5). So, in an age of instant information, with a multiverse of options available at a single touch, how best to navigate through this world of opportunity and risk? Here, we provide a brief primer on SoMe in nephrology, focusing on advantages, pitfalls, and tips for maximising utility for clinicians. Finally, we highlight a list of challenges for the next decade, which will undoubtedly take us on a journey to an entirely new realm of connectivity.
X-citing prospects - What are the benefits of SoMe?

From vlogs, posts, podcasts to blogs, live-streams, and content platforms – there is huge variety in not only in terms of content and format but also with regards to the target audience. Widespread availability of SoMe means that information can be disseminated globally, quickly, and freely. This was particularly evident by the COVID-19 pandemic with an unprecedented trend towards sharing and disseminating research immediately and globally via SoMe (6). This development has paved the way for a changed research landscape where medical information is in theory universally accessible not only for health care providers but also for patients, lay people, students, and those without economic means.

Social media has incredible power to engage and connect users and thereby foster intra- or cross- speciality networking and collaboration amongst researchers, patient partnerships, charities, invested stakeholders and global organisations. For example in solid organ transplantation where SoMe has offered broad outreach potential; a meta-analysis from 2009 showed there was a 5% increase in registry sign ups across 23 studies that used SoMe. However, this is not without concerns around coercion, organ trading and significant ethical implications (7).

SoMe also helps with recruitment and institutions such as Yale and Johns Hopkins University have used social media to promote fellowship applications, job and research opportunities. Overall SoMe has been shown to accelerate recruitment, and enhance diversity in the workforce, as well as facilitate remote mentorship and role-modelling, which would be much less feasible without virtual connections.

The educational potential of SoMe in nephrology is equally impressive. Free open-access medical education (FOAMed) has seen exponential growth in recent years (8). For example, the international Glomerular Disease Study & Trial Consortium (GlomCon) has over 8,700 YouTube subscribers and an impressive 519,600 YouTube channel views across
various nephrology related topics. A recent study described how almost ¾ of responding ASN fellows utilised Twitter (now X), blogs, and podcasts for up-to-date information (9).

Since 2009 over 19 new nephrology related podcasts have become available with the most recent ‘A pinch of salt’ from the European Renal Association (ERA). There podcasts relate to several aspects of nephrology such as career advice, general nephrology, nephro-pathology and demonstrate the way SoMe users can customise their individual learning and development needs.

Accessing bite sized content to facilitate ‘microlearning’ offers a broader range of relevant information compared to bulkier resources such as books or journals. Multiple sources of information can be aggregated into one SoMe thread or post, so that users can curate information on a topic from multiple perspectives. Educational SoMe can also be more timely and portable, and may appeal to different learning styles when compared to educational events such as congresses or workshops.

The very recent ERA congress in Stockholm also demonstrated the power of SoMe during a congress with nearly 9,000 tweets and posts with the hashtag #ERA24 and over 380 virtual views of one of the late breaking clinical trials symposia. It highlights the flexibility and far-reaching impact that SoMe has for learners who may otherwise not be able to attend due to geography or funding. The environmental impact of avoiding face-to-face interaction or artefacts is also noteworthy (10). Virtual attendance and SoMe delivery of such events however may limit interactions between speakers and attenders, preclude networking and also create challenges in keeping participants engaged. Technical glitches and cybersecurity threats are other downsides of virtual attendance at conferences.

The ability of SoMe to stimulate instant discussion is unrivalled by any of the traditional resources. What would previously have relied on letters to the editor now occurs contemporaneously and with a diverse, enthusiastic, and knowledgeable audience. The timing of engagement is also more flexible, and users can choose between asynchronous platforms such as blogs or podcasts, and synchronous active participation such as live
streaming or posting from a conference. In addition, journals now offer altimetrics on published articles which creates an attention score derived from the impact that publications have on social media and news outlets etc. For example, one of CKJs most successful published articles was ‘Who killed Bruce Lee? The hyponatremia hypothesis’. Whilst this paper has had few citations it has been covered by over 190 news outlets, and it was mentioned in nearly 400 tweets (11). Overall this publication was therefore in the top 5% of research outputs scored by Altimetric (11). The value of these post-publication metrics allows nephrology journals to track what is engaging users and stimulating debate, with further published research focusing on controversial topics or those requiring clarification. The impact of these newer methods is not yet known, with the ‘number needed to tweet’ for meaningful effect still up for debate.
Get the ‘gram - How can a nephrologist get the most out of SoMe?

Keeping professional and personal accounts separate is a good way of avoiding some of the common online pitfalls. Establishing a professional profile allows you to share research and professional opinion freely and for colleagues to follow your updates. By liking and following professionals or organisations, your algorithms become tailored to the renal specialty, enhancing the relevance of your content and also increases your visibility, making it easier for others to discover and connect with you as well. However, it is important to remember that your intended audience cannot be guaranteed and that all posts can be seen by patients and their families.

By diversifying SoMe platforms, you can access varied and unique content depending on specific learning needs and preferences. YouTube has great lectures and revision resources, whilst X can keep you up to date with recently published papers and clinical trials for example. Using the relevant save, like, or bookmark options are helpful to catalogue interesting content to come back to for further reading or referencing and can save a lot of unnecessary scrolling time.

E-seminars, podcasts and webinars are typically free and often represent excellent educational resources with the added opportunity to contact expert clinicians and ask questions. Following relevant hashtags, such as #CKD or #Dialysis can help access a broad range of content and increase visibility of relevant information. Engagement by contributing to online discussions, posts or comments can be a great way to learn and participate in critical thinking. Interactive activities such as online polls or quizzes can promote active engagement and participation and make the learning process more enjoyable. #NephMadness is an educational initiative which uses gamification to facilitate discussion and learning around hot topics in nephrology whilst using a tournament format to facilitate competition. Look for other SoMe platforms which reward users with badges, points, or leadership boards to make learning more entertaining.
Discussion and networking through SoMe with peers, experts, and organisations is an excellent method for developing collaborative relationships and knowledge sharing. Using your name in posts aids transparency and we would recommend declaring any conflicts of interest where relevant as well. It is crucial to prioritize privacy, respect professional boundaries, and uphold patient confidentiality. As a guide, one should apply the same standards online that one might use in face-to-face interactions. This includes respectful engagement, even amidst differing viewpoints (12). Suggestions on how to use SoMe for professional development and learning are summarised in Figure 1.
Feeling Twitch-y? Potential risks and challenges with SoMe use in nephrology

One concern about SoMe content is the lack of quality control. Without the formality of traditional peer review, there is a risk that the information may be based on anecdotal evidence or opinion rather than robust data. Going forward, adding some form of quality control will be key for educational SoMe material, including content generated by artificial intelligence (AI). In addition, the integration of virtual reality into SoMe platforms in the coming decade requires careful consideration of opportunities and challenges, including that of virtual impostors.

Different SoMe platforms can provide variety but the scattering of information can make it difficult to obtain a comprehensive understanding of a topic. Some form of registry or link between related content would be very useful, where content can be collated from different SoMe sources. Algorithms can be beneficial for suggesting new areas of discovery based on past-preferences but overly targeted suggestions can miss important information and create echo chambers, leading to bias and skewed perspectives. The lack of diversity in traditional publications is already documented, and similar concerns may apply to SoMe.

Formal author recognition for content on SoMe is also lacking at present even though already some content reaches a bigger audience than a comparable article in medical journals. It is likely that in the near future some form of SoMe altimetric will be formally recognised to measure output. With the formalisation of SoMe content, bias and conflict of interest are also concerns. Authors should perhaps be required to publish conflict-of-interest declarations akin to those used by journals and other online content. Similar concerns apply to commercial interest with some believing contemporary SoMe platforms are less about community and more about connecting brands with customers (13).

Whilst most users are aware of issues around patient consent and confidentiality and know to avoid posting patient identifiable content or seek formal consent, more subtle risks exist. For example, describing anonymised case vignettes may still identify the patient where
the condition is very rare, or the presentation is very unusual. Such unintentional breach of confidentiality can erode trust in healthcare institutions and lead to disciplinary action and legal consequences. This aspect of SoMe is increasingly regulated by national institutions and employers and is often now taught in undergraduate medical studies. Social media guidelines are still far from universal and often focus on the risks of social media use. Most guidance documents encourage the use of social media overall (12) but there is often very little practical guidance. On the other hand, some guidelines are very detailed and prescriptive (5).

Copyright issues can also be raised, and whilst referencing guidelines provide recommendations on how to formally cite tweets and other SoMe content, it should be noted that some permission requests may be required. Moreover, issues can occur such as when individuals share copyrighted content material without attribution. Users should use/share open access resources whenever possible, respect formal guidelines, obtain permission from copyright holders and provide proper attribution.

Professional boundaries are also important during interaction with both peers and patients. Many physicians value patient engagement but most institutions now advise caution. Potential issues typically include patients seeking medical advice or voicing criticism via SoMe. Although less common, harassment and fraud do also occur and ensuring safe and enjoyable interactions is a key challenge going forward. Persistent online criticism can tarnish physician reputation, erode patient trust and lead to post-traumatic stress disorder (PTSD). It is key to remain courteous and avoid making insensitive remarks, and most SoMe platforms provide tools to manage interactions or raise concerns.

Mental health is not only affected by inter-user interactions, but work-life balance and burnout are also relevant concerns. Endless scrolling can feel overwhelming, affect sleep and relationships, and risks ‘bringing work home’ by blurring personal and professional time. Fear of missing out (FOMO) can also be generated by SoMe, or propagation of feelings of imposter syndrome. It is therefore essential to remain conscious of the time spent in the “socialverse”. Finally, we should consider barriers to social media use in LMICs although it
is equally important to emphasize that this is not a universal problem. According to recent World Bank data internet use in LMICs varies between 6% of the population in Burundi and 91% in Kazakhstan (14). It is difficult to formulate a workable solution for increasing access to social media in low-uptake countries but initiatives by national renal societies and larger hospitals may be able to provide access to larger numbers of nephrologists in these countries.

Table 1 highlights the key challenges around SoMe that the renal community should address soon.
Conclusion – the end of the thread?

Virginia Woolf’s 1927 novel “To the Lighthouse” describes the complexities during a period of profound and lasting change and with strong societal currents. A century later, the SoMe landscape in 2024 is evolving just as rapidly and our specialty is part of this ongoing change. Navigating these opportunities and challenges will be a key skill for future generations of nephrologists. In 2024, rapid dissemination of research, recruiting an enthusiastic co-author or finding help with a complex patient online is just as easy as jeopardizing a career through a mis-represented statement. Figure 2 summarises advantages and disadvantages of navigating the SoMe world. Among the many symbols in Woolf’s novel, the lighthouse relates to good and bad happening to its characters – mirroring both the opportunities and risks with use of SoMe.
Figure 1: All in the cloud: The A to K of making the most of social media. Background obtained commercially from Vectorstock Ltd. in April 2024 by AW
Figure 2: Opportunities (left) and pitfalls (right) when navigating the social media landscape. Background obtained from Vectorstock Ltd.™ under standard license (purchased April 2024). Background obtained commercially from Vectorstock in April 2024 by AW
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<th>Challenge</th>
<th>How can we address the issue?</th>
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<td>Quality control of educational content</td>
<td>Work within the specialty and with others on mechanisms for quality control. Standardised formats (e.g. tweetorial, visual abstract) with minimum requirements. Referencing and copyright acknowledgement need to be considered and things such as Quick Response (QR) codes may facilitate the rapid accessibility and tracking of research data and publications.</td>
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<td>Educational activities on social media not formally recognised for career development</td>
<td>Recognition and indexing in databases such as Researchgate™, Orcid™, Pubmed™</td>
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<td>Bias and conflict of interest (COI)</td>
<td>Publish COI declarations; aim for a repository of conflict of interest for regular provides of content on social media. COI statements can also be included in the bio of social media profiles for full transparency</td>
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<td>Commercial interest</td>
<td>Vigilance, transparency, incorporation in social media guidelines</td>
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<td>Lack of accepted social media governance</td>
<td>Cooperation with institutions (e.g. the International Committee of Medical Journal Editors (ICMJE))</td>
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<tr>
<td>Content generated by artificial intelligence (AI)</td>
<td>Content generated by AI could be identified as such; guidelines should cover this issue</td>
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<tr>
<td>Social media will likely include virtual reality within the next decade</td>
<td>Conscious reflection on risks and challenges with this technology</td>
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| Content is often scattered across platforms                              | Coordinate social media platforms and link similar
content. Apps to consolidate content from across different platforms in one place can help to co-ordinate learning.

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<th>Should we interact with our patients via social media and if so, how can the interaction be made more productive</th>
<th>Dialogue with patients and patient interest groups and formal guidance</th>
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<td>The renal community should aim to actively shape the future of its social media</td>
<td>Provide room for discussion at congresses and other meetings both in person but in the virtual format. Develop social media committee and leadership</td>
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Table 1: Social media in nephrology: Ten challenges for the renal community
REFERENCES


CONFLICT OF INTEREST STATEMENT

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