The past, the present and the future of #UroSoMe: a narrative review

Daniele Castellani¹⁴, Rodrigo Donalisio da Silva², Marcela Pelayo-Nieto³⁴, Edgar Linden-Castro⁴, William Lay Keat Ong⁵, Zainal Adwin⁶, Yiloren Tanidir⁷, Emanuele Rubilotta⁸, Marilena Gubbiotti⁹, Giacomo Maria Pirola⁹, Marcelo Langer Wroclawski⁴⁰, Vineet Gauhar¹², Jon Mikel Íñarritu¹³, Jeffrey J. Leow¹⁴,¹⁵, Hegel Trujillo Santamaria¹⁶, Jeremy Yuen-Chun Teoh¹⁷; on behalf of the #UroSoMe Working Group

¹Department of Urology, IRCCS INRCA, Ancona, Italy; ²Division of Urology, Denver Health Medical Center, University of Colorado School of Medicine, Aurora, CO, USA; ³Department of Urology, Hospital Puerta de Hierro, Zaropan Jalisco, Mexico; ⁴Department of Urology, Hospital De Alta Especialidad 450, Durango, Mexico; ⁵Department of Urology, Penang General Hospital, Penang, Malaysia; ⁶Department of Urology, Universiti Teknologi MARA, Kuala Lumpur, Malaysia; ⁷Department of Urology, Marmara University, Istanbul, Turkey; ⁸Department of Urology, A.O.U. Verona University, Verona, Italy; ⁹Department of Urology, San Donato Hospital, Arezzo, Italy; ¹⁰Department of Urology, Hospital Israelita Albert Einstein, São Paulo, Brazil; ¹¹Department of Urology, Beneficência Portuguesa de Sào Paulo, São Paulo, Brazil; ¹²Department of Urology, Ng Teng Fong General Hospital, Singapore, Singapore; ¹³Department of Urology, The American British Cowdray Medical Center, Mexico City, Mexico; ¹⁴Department of Urology, Tan Tock Seng Hospital, Singapore, Singapore; ¹⁵Lee Kong Chian School of Medicine, Nanyang Technological University, Singapore, Singapore; ¹⁶Instituto Mexicano del Seguro Social, Centro Medico Nacional, Unidad Medica De Alta Especialidade No. 14 “Lic. Adolfo Ruiz Cortines”, Veracruz, Mexico; ¹⁷S.H. Ho Urology Centre, Department of Surgery, The Chinese University of Hong Kong, Hong Kong, China

Contributions: (I) Conception and design: JYC Teoh, D Castellani, V Gauhar; (II) Administrative support: None; (III) Provision of study materials: RD da Silva, M Pelayo-Nieto, E Linden-Castro, WLK Ong; (IV) Collection and assembly of data: Z Adwin, Y Tanidir, E Rubilotta, M Gubbiotti, GM Pirola, ML Wroclawski, JM Íñarritu, JJ Leow, HT Santamaria; (V) Data analysis and interpretation: All authors; (VI) Manuscript writing: All authors; (VII) Final approval of manuscript: All authors.

Correspondence to: Daniele Castellani. Department of Urology, IRCCS INRCA, via Della Montagnole 83, 60127 Ancona, Italy. Email: d.castellani@inrca.it.

Abstract: The professional use of Social Media (SoMe) in medicine has dramatically increased in the last decade, particularly in urology. SoMe platforms permit medical education, facilitate provider network, and promote scientific knowledge and multi-institution collaborations. However, their inappropriate use may lead to ethical and privacy conflicts. In 2018, Jeremy Y. C. Teoh (@jteoh_hk) created a hashtag specific to urology: #UroSoMe. The first official invitation to engage in #UroSoMe was sent out in Twitter in December 2018 and this is considered the birth of the #UroSoMe community. In the present paper, we reviewed several and important aspects of the use of SoMe in urology. The pro and cons of SoMe, the history and achievements of the #UroSoMe group, the guidelines in SoMe in urology and the future development of professional use of SoMe were deeply covered.

Keywords: Social Media (SoMe); urology; internet; Twitter messaging; #UroSoMe

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^ Daniele Castellani, ORCID: 0000-0001-7354-9190; Marcela Pelayo-Nieto, ORCID: 0000-0001-9782-6420; Edgar Linden-Castro, ORCID: 0000-0003-3042-320X; William Lay Keat Ong, ORCID: 0000-0002-3048-1170; Zainal Adwin, ORCID: 0000-0002-3685-4142; Yiloren Tanidir, ORCID: 0000-0003-1607-5819; Emanuele Rubilotta, ORCID: 0000-0002-3490-947X; Marilena Gubbiotti, ORCID: 0000-0002-3486-1226; Giacomo Maria Pirola, ORCID: 0000-0002-4209-8670; Marcelo Langer Wroclawski, ORCID: 0000-0003-4195-3652; Vineet Gauhar, ORCID: 0000-0002-3740-7141; Jon Mikel Íñarritu, ORCID: 0000-0001-5832-9907; Jeffrey J. Leow, ORCID: 0000-0002-6216-1913; Hegel Trujillo Santamaria, ORCID: 0000-0001-5165-3616; Jeremy Yuen-Chun Teoh, ORCID: 0000-0002-9361-2342.
**The use of Social Media (SoMe) in urology: pro and cons**

The use of SoMe by the urology community is increasing drastically in the last few years. SoMe platforms are now facilitating provider network, medical education, promote scientific knowledge, and multi-institution collaborations (1,2). The use of SoMe in urology has been a global experience, facilitating the interaction between urologists worldwide. Urology journals embraced the idea and created SoMe editors roles to improve the visibility of journals at different SoMe platforms (3). Major conferences also start to stimulate participant interactions with the use of SoMe by promoting the use of hashtags such as #AUA2019, #EAU19, #WCE2013, and others. Groups and initiatives like #UroSoMe, and #SoMe4surgery, started to form and the social medial content of medical information increased significantly.

The use of SoME by healthcare professionals brought several benefits such as facilitating collaboration, viral spread of information, sharing of knowledge, instant publication of interesting videos and images, etc. However, inappropriate use of SoMe may lead to ethical and privacy conflicts (1). SoMe usage also comes with some disadvantages such as the lack of editorial review and peer review, potentially biased information, and conflict of interests (2). This could lead to dangerous misinformation not only for health care workers but also for the general population. Nevertheless, #UroSoMe is a great platform for interaction amongst the urological community which is valuable for all key stakeholders in the urological community. It is of paramount importance for urologists to understand the fundamentals to have significant impact on the dissemination of urological knowledge and information (4). We present the following article in accordance with the NARRATIVE REVIEW reporting checklist. (available at http://dx.doi.org/10.21037/amj-20-141)

**The history and achievement of the UroSoMe group**

In August 2018, Jeremy Y. C. Teoh (@jteoh_hk) came across a hashtag #SoMe4surgery on Twitter and noted great engagements, reaches and interactions while using that hashtag. This detonated the creation of a hashtag specific to Urology (#UroSoMe) and a dedicated Twitter account (@so_uro). On November 22nd, 2018, during the 27th Malaysian Urological Conference which took place in Kuala Lumpur, Teoh announced the beginning of #UroSoMe as a platform for engaging urologists around the world while using SoMe, to raise public awareness of urological conditions and to start academic discussions (5).

The first official invitation to engage in #UroSoMe was sent out on 14th December 2018. This is considered the birth of the #UroSoMe community (3). Urologists around the world were very interested in this project and Teoh invited others to create a worldwide working group in order to make this project grow. The members communicate on a regular basis and organize activities of this platform such as journal clubs and case discussions, manuscripts, multi-institutional studies, and others. (3). Since its introduction in Twitter, @so_uro has now grown to a large group of 3,334 followers as of today. The members have been always encouraged to use hashtag #UroSoMe when posting any urology-related contents, leading to a strong growing urology community. A simple analysis was done on Symplur.com and it showed that the #UroSoMe hashtag use from 22nd May 2020 to 20th June 2020 led to a total of more than 4.7 million impressions, 3,925 tweets by 1,617 participants. Symplur has over 50,000 #UroSoMe tweets since December 2018 (6). In order to break the conventional norm of practice and turn into virtual urology discussion forum, the UroSoMe working group has been regularly conducting fascinating live events. So far, three live events were organized under the influence of SoMe, which include #LiveCaseDiscussions on ‘Stone’ (https://twitter.com/jteoh_hk/status/1081562241093128193), #LiveForum on ‘BPH Surgery’ (https://twitter.com/jteoh_hk/status/108701646135237376) and #LiveJournalClub on ‘Bladder Cancer Research Priorities’ (https://twitter.com/jteoh_hk/status/109748294126936069). The #LiveCaseDiscussions was on air on 5th January 2019. A total of nine cases had been presented and discussed with overwhelming support from all the participants. A network of 515 Twitter users whose tweets contained the hashtag #UroSoMe. The 6,692 mentions, 1,044 retweets and 617 replies were recorded within a 10-day period from 27th December 2018 to 6th January 2019. Another interesting event #LiveForum on BPH surgery came into live on 20th January 2019, capturing a spike of 650 tweets and a potential reach of 2,020,461 as shown by using Twitonomy application. It opened eyes of many on how amazing the BPH cases were discussed among the urologists worldwide in Twitter. Besides, the #LiveJournalClub on Bladder Cancer was eventually conducted on 17th February 2019 and the topic was Bessa et al. research paper on consensus
in Bladder Cancer Research Priorities between Patients and Healthcare Professionals (7). It has brought up the need for a more extensive public awareness level, involvement of government and pharmaceutical companies to fund and promote more research toward bladder malignancy. On 28th February 2019, a detailed data analysis in Symplur was performed using the official hashtag (#UroSoMe) as the keyword and limited the Twitter analysis to a period of 12 hours. It was found that 1,200 tweets had been written during that period. These Twitter engagements by 180 users accounted for an astonishing 1.9 million impressions. Of these 180 users, 86 were physicians, 9 were international organizations including the British Association of Urological Nurses, and 85 were not identified to have particular Twitter user accounts (8). Thus, from a social science point of view, there were many highly interconnected people around to participate in journal club productively.

With the resourceful technology with contemporary information, UroSoMe has helped its members from different geographical backgrounds to participate in scientific and social discussion. The UroSoMe team has provided an excellent platform for members to collaborate and publish in various renowned, high indexed and peer-reviewed journals (1-4,8-12). The string collaboration of this group already delivered several key papers using a unique format of actively online brainstorming and effectively dedicated work among the team members. The enthusiastic engagement has ultimately led to excellent projects, research collaborations to produce multi-institutional high-quality clinical studies and trials, and to organize several webinars, particularly during COVID-19 pandemic. The most recent publication was on “A global survey of the impact of COVID-19 on urological services” (10). This study had a significant impact in the urology community at a time when a disaster stroke people apart. The UroSoMe helped to get all Urologists together to capture the big picture. The #UroSoMe had the unique platform to discuss COVID-19 urology related issues around the globe, most important with different perspectives and feedback from urologists of different countries. This methodology reduced significantly the time to project completion and the challenges of a multi-institutional study involving different urologists at different countries. The very first draft of the questionnaire was developed by the steering committee after reviewing the literature of COVID-19 effects on health care services. The survey was sent out primarily via the UroSoMe Twitter account and website, and then disseminated to urology health care professionals around the world via official mailing lists and SoMe attributed to the effort of UroSoMe committee members. We managed to get tremendously good responses from 1,004 participants based in Asia, Europe, America, Africa and Australia & New Zealand (10). This survey is a great example of how #UroSoMe can achieve a fruitful collaboration outcome among urologists globally and provide timely and high-quality scientific content to the urological community.

The effort and campaign to bring the global uro-twitter community together was recognized by the community, and UroSoMe received the Innovation Award during the 7th British Journal of Urology International (BJUI) SoMe awards in 2019 (13). In order to further increase the collaboration among the urological community, the #UroSoMe working group created another platform to share our activity on SoMe. In August 2019, the UroSoMe website was built by Daniel A. González-Padilla (@daniel_urologia) and it is available at https://urosome.com, where the core members of the #UroSoMe working group can be found. Everyone who is interested in joining the group is welcome and can make inscription online at https://urosome.com/join-urosome/.

**Guidelines in SoMe in urology**

Since SoMe became a widespread modality of knowledge-sharing among urological community, the main urological Associations have issued substantial user guidelines to maintain scientific rigor and to set communication policy behavior for their members. The main guidelines available are those of the European Association of Urology (EAU), American Urological Association (AU), and BJUI (14-16). These guidelines have many similar “keywords”. Privacy and confidentiality are crucial principles in all documents. A strong recommendation is to be aware that all the contents posted will remain permanently and will be available to everyone (17). It also highlighted the importance of clearly digitally identifying yourself, disclosing conflicts of interest, and stating whether your views are your own or in compliance with your institution rules (17). All guidelines underline that users should be professional, thoughtful, appropriate, and respectful in posting comments and opinions. It is also important to reach out colleagues with inappropriate behavior. Taylor et al. published a review about the three major SoMe recommendations in urology, concluding that these societies are in line about “respectful”, “patient privacy” and “assuming that your actions online are permanent” (18).
EUA guidelines (@Uroweb)

In 2014, the EAU has originally published guidelines for appropriate use of SoMe (14). An update was then published in 2018 by a group of SoMe users and stakeholders (17). This latter paper represents the last EAU update, and it is based on ten recommendations for the responsible, ethical, and constructive use of SoMe and communication tools (Table 1).

AUA guidelines (@AmerUrological)

To our knowledge, AUA has not published any specific article related to SoMe policy. However, the AUA website provides a dedicate page which clearly states recommendations for the correct use of SoMe (16). Statements are reported in Table 1.

BJUI (@BJUIjournal)

In 2014, a dedicated paper about SoMe guidelines in urology has been published in the BJUI (18). It provided 10 key points which are in line with the EAU and AUA recommendations (Table 1).

An appropriate and professional use of SoMe is critical for to harness the benefits of the media while avoiding pitfalls. Deep knowledge of these ethics’ guidelines about the use of SoMe is also essential for increase the links among professionals around the world and, hence, the scientific research. Finally, a failure in SoMe guideline’s compliance can have severe legal consequences.

Future development

The hashtag #UroSoMe is probably the cornerstone to connect urologists from worldwide in real time. As described above, the great interaction we reached among #UroSoMe group participants has led to a surge of scientific ideas, surveys and webinars. We expect that, in the near future, the #UroSoMe community will be able to build a more robust collaboration, and initiatives that can translate from virtual context into clinical trials that shall comprise participants from all over the globe. SoMe have already been used for this purpose. For example, the British Urology Researchers in Surgical Training (@BURSTUrology) was built to produce multi-centre audit and research for patient care improving. They have already launched three research projects on Twitter. The first two are closed [The Investigation and DEtection of urological Neoplasia in paTIents reFeRed with suspected urinary tract cancer: A multi-centre analYsis (IDENTIFY) and A Multi-centre Cohort Study Evaluating the role of Inflammatory Markers in Patient’s Presenting with Acute Ureteric Colic (MIMIC)] (19). The last one is ongoing [Transurethral REsection and Single instillation intra-vesical chemotherapy Evaluation in bladder Cancer Treatment (RESECT) Improving quality in TURBT surgery] (19). The importance of a multicenter collaboration relies in higher patient enrollment rates than single center studies, thus generating larger and shorter studies. #UroSoMe group had the opportunity to carry out a multicenter research on emphysematous pyelonephritis, a rare condition that deserves solid research to redirect each patient’s ideal treatment and thus avoid complications, sequelae, and death. Hegel T. Santamaria (@HegelTS) from Mexico led this trial and this has been possible thanks to the correct and responsible use of SoMe (Twitter) by making an open invitation and sending interested parties formal invitation letters via email detailing the important points of the research. A good response was obtained by bringing together committed and enthusiastic colleagues with similar concerns, collaborating selflessly in favor of knowledge. The research is ongoing and centers continue to be added worldwide. The preliminary results of the study were presented during the 2019 SIU congress in Athens (20). SoMe has some advantages in multicenter trials such as shortening distances and time, allowing international contact of researchers, the exchange of experiences, achieving productive discussions to organize large studies, and facilitating the exchange of information in a click away. We believe that the future has reached us and deserves to give SoMe the opportunity to be used as an auxiliary tool for the development of research and contact of new collaborators.

Stepping into the future: foray into virtual

SoMe are used as tools for professional interaction. With a plethora of easily accessible online interactive platforms, we can expand and diversify communication via channels like Webinars/YouTube/LinkedIn/Instagram. Of these, webinars suit best for performing seminars, virtual live interaction and learning over the World Wide Web (21). Numerous hosting platforms like Zoom and Microsoft teams have simplified online meetings, allowing audience to interact, and providing different tools for these interactions according to the need of the host. Several meeting formats are being conceptualized
with the focus of scientific discussions such as, virtual journal clubs, and didactic case discussions. As technology and online connectivity improves, virtual events may even replace face to face events as the preferred choice purely for the ease for interaction and convenience or at least take on a central role in scientific dissemination (22). Virtual outreach programs will be useful to trainee urologists or residents with mentorship attachments, distance integrated learning, research collaboration and multicenter trials. The #UroSoMe working group is now planning a mentorship model for trainees and resident to benefit of worldwide leaders in urology. This will facilitate and unable opportunities beyond their institutions (23). As we progress, we hope that urologists consider #UroSoMe as the premiere to go group for collaborative international virtual interaction and learning.

**Connecting with patients**

Patients usually employ SoMe and internet websites to meet the unfilled need and to gather information regarding their disease. Patients who are newly diagnosed with certain conditions, especially cancer, need information about their health status and available treatment options (24). Moreover, patients and their families use SoMe for social, emotional and esteem support that helps them to meet their emotional or affective needs, to share experience, and to get assistance from other patient’s encouragement (24). In this contest, SoMe play an essential role (1). For example, several Twitter accounts of charity and advocacy groups are very active in supporting and informing people affected by bladder cancer and in raising awareness (e.g., @BladderCancerUK, @WorldBladderCan, @BladderCancerUS, @BladderCancerCA). Their activity is of utmost importance because bladder cancer has a much lower level of awareness than other urological malignancies (7). This trend was also confirmed in SoMe. Leveridge showed that overall #bladdercancer tweets had the lowest-volume activity among all urological cancers in 2015 (25). In this context, the interaction between

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**Table 1** The guidelines of SoMe in urology

<table>
<thead>
<tr>
<th>European Association of Urology (@Uroweb)</th>
<th>American Urological Association (@AmerUrological)</th>
<th>British Journal of Urology International (@BJUIjournal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Never undermine your patients’ privacy and confidentiality</td>
<td>1. Be professional</td>
<td>1. Always consider that your content will exist forever and be available to everyone</td>
</tr>
<tr>
<td>2. Understand how other users behave online before interacting on social networks</td>
<td>2. Protect confidentiality</td>
<td>2. If you are posting as a doctor, you should identify yourself</td>
</tr>
<tr>
<td>3. Establish a professional digital identity that is in line with your professional practice and goals</td>
<td>3. Allow for Interaction</td>
<td>3. State that your views are your own if your institutions are identifiable</td>
</tr>
<tr>
<td>4. Avoid providing medical advice and maintain limits between yourself and patients</td>
<td>4. Be courteous</td>
<td>4. Your digital profile and behavior online must align with the standards of your profession</td>
</tr>
<tr>
<td>5. Assume that anything and everything you post is permanent</td>
<td>5. Exercise discretion</td>
<td>5. Avoid impropriety—always disclose potential conflicts of interest</td>
</tr>
<tr>
<td>6. Use instant messaging services with care</td>
<td>6. Support our identity</td>
<td>6. Maintain a professional boundary between you and your patient</td>
</tr>
<tr>
<td>7. Exercise professionalism</td>
<td>7. Be thoughtful</td>
<td>7. Do not post content in anger and always be respectful</td>
</tr>
<tr>
<td>8. Beware of SoMe policies set by employers</td>
<td></td>
<td>8. Protect patient privacy and confidentiality at all times</td>
</tr>
<tr>
<td>9. Beware of how advertisement and self-promotion is perceived by others</td>
<td></td>
<td>9. Alert colleagues if you feel they have posted content which may be deemed inappropriate for a doctor</td>
</tr>
<tr>
<td>10. Use disease-specific ontology hashtags for structured online communication</td>
<td></td>
<td>10. Always be truthful and strive for accuracy</td>
</tr>
</tbody>
</table>

SoMe, Social Media.
urologists, patients and stakeholders is an important aspect that should be improved in the future, and SoMe might play an important role in doing that. The UroSoMe group has been involved in drawing more attention towards bladder cancer in the #LiveJournalClub on February 17, 2019 (26). A detailed data analysis to a period of 12 hours showed that 180 users wrote 1,200 tweets, and the engagement accounted for 1.9 million impressions (8). That astonishing result involved not only 86 physicians but also 9 international organizations (including the British Association of Urological Nurses) and 85 other user accounts and confirmed that Twitter is an important platform with great potential to initiate a discussion with a multitude of individuals and groups (8). #LiveJournalClub should probably be incorporated in future planning of scientific societies, healthcare professionals and advocacy groups to engage patients to disseminate health information, “promote and support active patient and public involvement in health and health care and to strengthen their influence on health care decisions” (27). Indeed, SoMe could improve patients engagement because websites have been found to fail meeting a satisfactory standard of information delivery (average points scored per website 3.2 out of 10) (28). Conversely, SoMe platforms, such as Twitter and Facebook, have the benefit of fast interactivity that is, no doubt, a priceless tool for patients. Moreover, it will also be important to evaluate if the impact of using SoMe on patient engagement would translate into improved outcomes. SoMe seems to have the potential of doing that, as demonstrated by Lelutiu-Weinberger et al. They showed that a live-chat SoMe intervention program reduced the HIV risk in young homosexual men (29). Finally, SoMe could be used to recruit and manage patients in clinical trials. Its feasibility was demonstrated in the REMOTE trial for overactive bladder therapy, where online forums improved efficiency, lowered costs and achieved higher follow-up rate (30).

Conclusions

SoMe enables several opportunities for the urology community to contribute to patient care and information. The speed of communication, knowledge dissemination, access to those who are interested, are the key factors for the success of UroSoMe. The worldwide members of UroSoMe brings a new perspective to research, teaching, and patient care due to its access and readiness. UroSoMe is looking forward to the future in leveraging the urology community.

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References


20. Santamaria HT. Emphysematous pyelonephritis: nephrectomy versus minimally invasive management, a multicentre study. Available online: https://academic.sciu-urology.org/siu/2019/athens/276410/hegel.trujillo.santamara.emphysematous.pyelonephritis.nephrectomy.versus.html?f=menu%3D6%2Abrowsesy%3D8%2Asor tby%3D2%2Amedia%3D2%2Ace_id%3D1543%2Aot_ id%3D21521%2Afeatured%3D16552

21. White A. Reflections on the Use of Webinar Technology for Teaching. 2019. hal-01976364. Available online: https://hal.archives-ouvertes.fr/hal-01976364/document


26. Teoh J. The first #UroSoME #Livejournalclub on #bladdercancer. Available online: https://twitter.com/jteoh_hk/status/1097171908045398016

