

# Social Media in Urology: opportunities, applications, appropriate use and new horizons

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**Introduction** Social Media (SoMe) includes a broad spectrum of public use platforms like Twitter, YouTube or Facebook that have changed the way humans interact and communicate. Considering the high usage rates for various SoMe platforms among urologists, we aimed to perform a review regarding opportunities, applications, appropriate use and new horizons of SoMe in urology.

**Material and methods** Literature review.

**Results** We are currently experiencing an explosion in the use of SoMe in healthcare and urology due to the clear offer of advantages in communication, information sharing, enhanced experience of meetings and conferences, as well as, for networking. However, SoMe is an open environment and recommendations should be implemented on the appropriate use in order to respect ethical considerations and not break the harmony of the doctor-patient relationship. SoMe activity has become an important part of our participation in scientific meetings.

**Conclusions** SoMe represents a vibrant area of opportunities for the communication of knowledge in health care and so their potential applications today are unquestionable; however, its development in the urological community is still in its infancy.

At present the benefits include communication between associations, urologists, residents, other health care professionals and patients.

Further efforts are focusing on standardizing the language used through SoMe and finding out how we can objectively quantify the impact of the information published in SoMe.

**Key Words:** social media ↔ Twitter ↔ oncology tag ↔ urology

## INTRODUCTION

Social Media (SoMe) is changing the way people live, communicate and interact globally. The applications of SoMe in healthcare and its role in scientific communication represents a growing area of interest, providing great opportunities in the urological community [1].

In recent years, we have witnessed an explosion in the development and dissemination of information. We live in a connected world where news, events and information crosses the borders of any country

in a matter of a seconds. Millions of people from children to elderly use tablets, laptops and mobiles which are connected to the internet and SoMe [2].

Twitter is perhaps the SoMe platform with the most dissemination in healthcare consisting of the broadest possible opportunities for interesting news, knowledge sharing and networking amongst health professionals [3, 4].

SoMe usage and applications becomes a great responsibility in the area of healthcare and urology, obviously for the reasons of privacy, scientific rigor, ethics and the nature of the medical – legal content.

Considering the high usage rates for various SoMe platforms among urologists, we aimed to perform a review regarding opportunities, applications, appropriate use and new horizons of SoMe in urology.

## Evidence synthesis

### What is SoMe?

SoMe are communication platforms or online applications based on Web 2.0 where the content is created, edited, exchanged and disseminated by the users themselves.

SoMe can take many different forms, including internet forums, personal blogs, social blogs, wikis, podcasts, photos and videos. Examples of SoMe applications are: Wikipedia, Facebook, Google+, YouTube, Twitter, Tumblr, Swarm, Foursquare, ResearchGate, LinkedIn, Instagram, Pinterest, and others [5].

SoMe was initially developed as a communication way between people with personal content; they are widespread throughout the planet and travel at high speed. Not much time has elapsed and already there have been found clear cut advantages of SoMe in various professional areas. In healthcare, SoMe has already shown their applicability and clear advantages over traditional communication ways like 'industrial media' (e.g TV, movies, newspapers and magazines) especially in the care of patients and communication amongst health professionals [6].

### SoMe history

Communication is part of human nature; the need for faster communication has allowed developing methods that have changed human history: mail, printing, phones, mobiles, computers and internet are some examples of this phenomenon.

Advances in communication have always allowed the evolution of cultures, with the better communicating societies evolving faster. In this way, the beginning of the internet and SoMe undoubtedly changed the world's history and their contribution to the human development today.

The birth of SoMe is linked with the development of Web 2.0. The term Web 2.0 was first used in 1999; it comprises of those web sites that facilitate information sharing, interoperability, user-centered design and collaboration on the web. A Web 2.0 site allows users to interact and collaborate with each other as creators of user-generated content in a virtual community. Web 2.0 is the evolution of the web or internet in which users are no longer passive and they become active members, who participate and contribute to the content of the network, being able

to support and be part of a society that informs, communicates and generates knowledge [6, 7].

History of SoMe is shown in Figure 1. In 1971: The first e-mail was sent between two computers located in the same room; 1994: GeoCities was launched as a service that allowed users to create their own websites and host them in certain places ('neighborhoods') according to the content; 1997: is a big year, the launch of AOL Instant Messenger and Google; 2003: MySpace, LinkedIn and Facebook; 2005: YouTube; 2006: launch of Twitter and in 2010 it reached 65 million daily tweets; 2015: Facebook reached 1.65 billion users and Twitter 316 million users, 500M tweets send per day.

### SoMe and emerging applications in urology

Currently thanks to SoMe, urologists, oncologists, radiotherapists and other specialities may converge in a common space, provide comments or opinions from any meeting and expand the experience, e.g sharing slides. Through SoMe, a urologist may influence thousands of colleagues or patients (Table 1).

Loeb and cols, reported that 74% of urologists use some form of the SoMe platform. Facebook is the most used by 89% of urologists, probably due to its personal applications, but we believe that nowadays Twitter is the most appealing platform with more applications for use in a professional way, especially in the field of urology. [8].

### Advantages of using social media

1. Education to patients: SoMe is a great platform where doctors can influence or send messages to their patients. Every day it is becoming more and

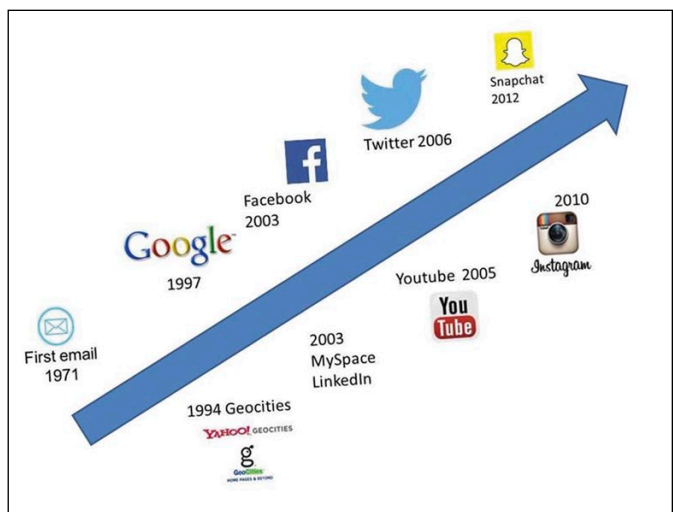


Figure 1. History of SoMe.

- more common to have doctors with 1,000, 5,000 or 10,000 followers on Twitter, sending messages daily about lifestyle and other medical advances in simple language, understandable to the general public. Do not forget that it is also common to access doctors, clinics or hospital blogs to publish patient education about screening or treatment options [9, 10].
- Promote scientific events and expanding the experience: Promoting events on SoMe is a good strategy that captures a greater diffusion. In addition to following events, conferences and meetings that are officially registered with an official hashtag '#'. The assistants of the event may simultaneously be informed and be involved in different conferences and also may interact with other participants, although physically not being in the same place. Another application regarding Twitter, is SlideShare or the ability to participate in small debates with urologists from around the world on issues of interest meanwhile having the presentation of a conference ongoing [11, 12]. Statistics of SoMe usage during urological meetings are presented in Table 2.
  - Dissemination of scientific articles and study results: Nowadays, leading journals in urology and various specialties share through SoMe results, abstracts, even complete articles that are considered of great interest especially *via* Twitter and for free. Thanks to SoMe, journals and Urology experts can select the information they consider most relevant and thus facilitate learning and updating of urologists and residents more quickly and conveniently [13]. A list of journals with Twitter accounts is provided on Table 3.
  - Surgery videos: Undoubtedly, learning surgeries has been easier since the arrival of videos. Surgical videos on YouTube and other platforms, channels and websites of urological associations are available [14, 15]. Through Twitter you may share messages with links to the videos and new surgical techniques facilitating the viewing from anywhere and anytime.
  - Professional online presence: Urology residents can interact with others in similar areas of interest contributing in their views and positions. Although SoMe offers the opportunity to create a professional presence, we should follow the guidelines for its proper use and avoid personal egos and self-promotion [16, 17].

**Table 1.** Social Media platforms

Platform	Users/ Activity	Applications
Twitter	316 million users, 400 million tweets per day	Opinions, News, Videos, Photos, Congress, topics
YouTube	1 billion users	Share videos Channels
Facebook	1.65 billion users	Share photos, videos Contacts
Linkedin	332 million	Professional profile. Professionals of the same sector
ResearchGate	3 million	Platform for scientists. Search and download of scientific articles Personal impact factor
Foursquare	3 millions. 75 millions places	Location Check in

**Table 2.** Activity on Twitter of Urology Congresses and Meetings in 2014–2015. Data from [www.Simplur.com](http://www.Simplur.com) (Hashtag – Healthcare project)

Meeting /Congress	#hashtag	participants	Tweets	Impressions
EAU annual congress 2015	#eau15	1406	9.042	9.680.465
EAU annual congress 2014	#eau14	907	6.338	8.991.247
AUA Annual meeting 2014	#aua14	1746	13.895	18.382.116
AUA Annual meeting 2015	#aua15	2760	20.202	34.619.280
USANZ 2015	#usanz15	403	2.727	4.941.009
Annual Congress of the Societe Internationale d'Urologie (SIU) 2015	#siu15	244	1,013	1,140,526

**Table 3.** Urology Journals on Twitter

Actas Urológicas Españolas	@actasurologicas
Archivos Españoles de Urología	@ArchEspUrologia
European Urology Journal	@EUplatinum
BJU International	@BJUjournal
Central European Journal of Urology	@cejurology
JAMA	@JAMA_current
Journal of Endourology	@Jendourology
Journal of Urology	@Jurology
Journal Sexual Medicine	@jsexmed
New England Journal of Medicine	@NEJM
Urology Gold Journal	@urogoldjournal
Urology Times	@UrologyTimes
UrologyMatch	@UrologyMatch
UroToday	@urotoday

### Twitter is the platform that delivers vibrant opportunities in urology

Twitter is a microblogging platform launched in 2006 with a record of 560 million users noted in 2015, where you can type text of <40 characters, which can be associated with images and links from web pages or videos [www.Twitter.com].

It is necessary to create a user and edit a profile with a personal or professional brief description. Accounts or users are preceded by '@' e.g @cejurology while topics, forums or events are initiated by a hashtag '#' e.g #bladdercancer, #prostatecancer. Scientific conferences usually define an official hashtag, e.g European Association of Urology Annual Congress in Munich 2016 used the hashtag #EAU16.

Twitter is growing at extraordinary levels in urology; unquestionable advantages are: to follow publications, journals, renowned urologists, create discussion groups and forums on topics of interest in urology for example, #AUA urochat or the international urological journal club #iurojc. When Twitter was in its 6<sup>th</sup> year, there were 189 unique participants around the globe contributing with 2,345 tweets to the scientific discussion during the initial 12-month period. The concept was then transferred to other specialties and a systematic review concluded that Twitter-based journal clubs were free, time-efficient, publicly accessible and facilitative to the international discussions regarding clinically important evidence-based research [16, 18].

### Healthcare Hashtags Project – Symplur

Founded by Thomas M. Lee (@tmlfox) launched in 2010, the Healthcare Hashtags Project – Sym-

plur (www.symplur.com) is a project that aims to link Twitter talks worldwide on health care issues by tracking and analyzing trends in hashtags # of diseases, conferences and chats .

Currently it represents a great community and the database has more than 1.200.000.000 tweets, 15.600 Topics, 8.200 hashtags and 3.200 contributors.

Symplur allows evaluating the activity of a '#' for a certain period of time, e.g during an event or congress. Symplur estimates the 'impressions' by multiplying the number of tweets by participants, by the number of followers for that participant and adding those numbers across all participants during the assessment period. It has been used and cited to evaluate the activity of international meetings in urology e.g #AUA16, #USANZ16 and, #EAU16.

### Risk and Recommendation on the appropriate use of SoMe

The first important thing to remember is that SoMe is an open environment where everything you post is public domain, meaning that patients and general public can follow your posts and comments. In this way, please remember the risks of using SoMe and think about the appropriate limits of the content in health professional discussions and the information shared with public character in order to avoid legal medical problems [19].

For these reasons several professional organizations such as the European Association of Urology (EAU), Spanish Association of Urology (AEU) and others have developed guidelines or recommendations on the appropriate use of SoMe for their members [20, 21]. Every urologist who is now active in SoMe in a professional way should read and follow these guidelines in order to ensure an appropriate use and to avoid professional conflicts.

### SoMe new horizons

There is a whole field growing with a need for studies and scientific evidence about the benefits and the way that SoMe contributes to research and dissemination of information concerning healthcare. Nowadays, there are a few studies published in urology regarding SoMe. Although the application of SoMe in urology is still in its infancy, there are potential areas where it can be expanded soon.

New efforts are being made to standardize the language on SoMe, a number of stakeholders are developing an official list of the oncology tag list '#'; regarding urology hashtags of interest including bladder cancer (#bladdercancer, #blcsm), prostate cancer (#ProstateCancer) and Urology (#Urology) [20].

SoMe is raising the networking to levels not seen before: using SoMe, you can contact a person in any country and start working and publishing without physically ever getting to know them. Nowadays, a person from a small hospital with a small area of influence who comes up with an idea can contact a renowned urologist through SoMe for free and share their ideas to thousands of people in seconds. SoMe offers us the possibility to contact a professional considered expert in a particular area and start a direct dialogue.

Potential of SoMe in education and academic training: There is no doubt of the benefits of SoMe for transmitting information. Gomez et al. data presented during EAU Annual Congress 2016, assessed for the first time the perceived role of SoMe in urologic knowledge acquisition among young urologists across Europe. Usage rates for SoMe were very high (99%) and rates for following urologic organizations, events, journals, experts were moderate to high (39–61%). Close to half of the responders follow guidelines/recommendations on the appropriate use of SoMe. SoMe was ranked in first place as source for seeing/understanding surgical videos and in third place as an information source for urological news/updates. Overall, 63% of young urologists rated the influence of SoMe on urologic knowledge acquisition as moderate-to-high [21].

Altmetrics ‘Twitter impact factor’ and ‘twitter metrics’: The ‘altmetrics’ or metric alternatives are proposed as an alternative to more traditional metrics of citation impact (such as impact factor). Altmetrics may be applied also to people, books, data sets, presentations, videos, web pages, etc. Concerning urology, Nason et al. first described an association between a journal’s Twitter presence and its impact factor [13]. Recently, the Twitter impact factor (defined as number of retweets / number of relevant tweets) has been proposed as a useful tool to measure the academic reach and impact of a journal on Twitter. [22].

Currently, many people have professional profiles on SoMe such as Facebook, Twitter, LinkedIn and ResearchGate.

ResearchGate is a platform for research professionals, where its users are awarded with a personal impact factor according to their publications, citations and downloads of articles [www.researchgate.net].

It is not excluded that in the future the activity in SoMe quantified by ‘altmetrics’ (Twitter metric)

will have a curricular value as today are articles, book chapters or communications in congress. However, the use of Twitter or SoMe activity as a journal impact factor or personal impact factor remains controversial and difficult to quantify objectively.

Age gap: Studies shows an age gap between responders’ users of SoMe vs. respondents who do not use SoMe. This can be simply interpreted as logical, that most users of SoMe professionals in the area of healthcare and Urology are young people under 45 years of age [23].

There no definitive data on this issue in the literature, however, internal data on Twitter user’s age shows that this trend could be similar. This clearly represents a barrier to communication and dissemination of information through SoMe; obviously it is necessary that we accept the challenge and add efforts to overcome this ‘age’ barrier in order to obtain a line of communication between urological associations and urologists/residents. This is a key point in the development and acceptance of SoMe in the urological community [24].

## CONCLUSIONS

SoMe represents a vibrant area of opportunities for communication of knowledge in health care and their potential applications which today are unquestionable; however, its development in the urological community is still in its infancy. At present the benefits include communication between associations, urologists, residents, other health care professionals and patients. SoMe facilitates networking, dissemination of study results, as well as, extensive experience of events, conferences and meetings.

However, the public nature of the information shared in SoMe raises concerns in health associations by the legal character and the potential risk of harming confidentiality and the doctor – patient relationship. To avoid this potential risk, the guidelines and recommendations published in BJUI and European Urology should be followed.

There is still much research on how people use SoMe in an academic way and how it can be quantified objectively through the activity on SoMe using altmetrics of journals or persons from a curricular point of view.

## CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

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