

Scientific Dissemination in the Twitter Era[☆]

La divulgación científica en los tiempos de Twitter

David E. Barajas-Galindo^{a,*}, María Gemma Rodríguez Carnero^b

^a Department of Endocrinology and Nutrition, Complejo Asistencial Universitario de León, León, Spain

^b Department of Endocrinology and Nutrition, Complejo Hospitalario Universitario de Santiago, Santiago de Compostela, La Coruña, Spain

Received 5 March 2020; accepted 21 March 2020

Available online 25 July 2020



Social networks have become universal. Today, more than 2000 million people worldwide and 25 million in Spain alone - representing in practice 85% of all Spaniards between 16 and 65 years of age - use at least one social network.¹

This “democratization” in the use of networks has ended up directly affecting Medicine, and in this respect Twitter is undoubtedly the most influential social network in the field of healthcare, and that is where authors, scientific bodies, professionals and patients focus most of their attention. This social network, introduced barely 13 years ago, now has almost 400 million users. The way Twitter works is easy: it is based on the possibility of sharing short messages of up to 280 characters, called *tweets*. It also allows the use of tools to help search for messages referring to concrete topics, called *hashtags*. But Twitter particularly stands out above other communication systems because of its immediacy. News and other topics of interest are transmitted extremely rapidly, defining this network as a kind of “telex” of the 21st century, and obliging the traditional communica-

tion media to adapt to this new reality, and this includes the communication channels in healthcare. Lastly, there is the concept of the “follower”; this refers to user subscription to the messages or tweets of another user and represents the main way of measuring the impact and importance of a concrete Twitter account.

Last year, Janssen² commissioned a report to assess the global impact of healthcare issues on Twitter. Health was a trending topic in 42 of the 61 days analyzed, with the greatest impact made by subjects related to world days and scientific congresses and events, though the specific weight was much lower than that of sports events or politics. Previously, in 2014,³ the same company issued a report focusing on a topic of relevance in our specialty: diabetes. Despite the relevance of diabetes as a topic of conversation on Twitter (the second most frequent topic in health after tumors), the focus was on the lack of profiles of healthcare professionals and working groups belonging to scientific bodies serving as references for users of this social network. Since then the situation has changed dramatically, however, and the initial reluctances produced by the growth of this platform has been overcome by its suitability as a forum of opinion. Indeed, there are currently no scientific bodies or journals of prestige related to diabetes (and also to the other areas of our specialty) that have no official Twitter profile. But it is not only official organs which have joined this social network. Many individuals also take advantage of

[☆] Please cite this article as: Barajas-Galindo DE, Rodríguez Carnero MG. La divulgación científica en los tiempos de Twitter. *Endocrinol Diabetes Nutr.* 2020;67:295–296.

* Corresponding author.

E-mail address: dbarajas@saludcastillayleon.es (D.E. Barajas-Galindo).

the range of opportunities offered by Twitter in their professional practice, from a new way of communicating with patients or other professionals, to its constituting a research tool in itself.

Prior to the 60th Congress of the SEEN (Bilbao, October 2019), a survey on the use of Twitter was conducted via e-mail delivered to the members of this body. A total of 152 people answered the survey. A full 73.9% of the respondents regarded Twitter as a useful tool for scientific communication among healthcare professionals, and 65.8% claimed to have an account and be active users this social network. However, these Twitter user members were mainly observers (65.5%), with connection to this social network for less than 3 h a week on average in 68% of those surveyed, while 14.2% considered themselves to be "influencers". The perceived prestige of the user profile was considered to be the main factor in deciding to follow a Twitter account (77.1%).

Despite the multiple benefits of Twitter as a preferred social communication network in the medical field, it has its negative part. Twitter has become a source of fake news where any user (whether a physician or otherwise) can comment on health, making it difficult for anybody in the virtual society to discern between a reliable source and an unreliable one. On the other hand, Twitter offers healthcare professionals the ability to stay connected to their scientific community and to become instantly updated on recent publications or scientific events.

Today we transmit knowledge, establish contacts, or announce scientific events more widely than ever thanks to Twitter. But we face a major dilemma: a desire to communicate, debate and share knowledge on the one hand versus a selfish desire for self-promotion and the spreading of personal ideas and interests on the other. There clearly are cases of influencers in the healthcare scenario that generate a large group of followers thanks to their activity on Twitter, despite very few genuinely substantial contributions to science or to the topic at hand. Going one step further, we are in danger of confusing this success on Twitter with true scientific achievements. Indeed, although it now seems almost impossible to accept, it is very likely that in the near future different scientific bodies or even public institutions such as universities will place more value on the instant success of a professional on Twitter than on hard scientific work based on publications with a high impact factor.

Twitter undeniably allows for the promotion of scientific articles, generating fruitful debate in journal clubs and discussions among specialists, and can even lead to changes in clinical practice, with a faster dissemination of knowledge than ever before. However, many of these articles are presented on the social network with oversimplification and

an excessive use of emoticons to ensure the success of the tweet, since these visual summaries facilitate more visits to the articles and a greater number of impacts on the social network. We ought to ask ourselves: Is this oversimplification of Twitter detrimental to the delivery of more complex scientific content? Or is it a matter of shortening the attention times for physicians of the 21st century, in a digital era where the traditional focus on working with complex study designs and methodologies has become obsolete? In doing this, we run the risk of simplifying studies, eliminating our critical capacity, and retaining only a summarizing message without thoroughly analyzing the topic in question.

As healthcare professionals, we therefore need to verify the quality of the scientific information on Twitter, taking as a basis the following two aspects: firstly, we should assess the quality of the source (who reports), and secondly, we should seek to check the quality of the content offered by the tweets.

In conclusion, there are always two sides to the coin. The use of Twitter or of any other social network for healthcare discourse may involve certain risks, such as high rates of misinformation and difficulties in checking the credibility of sources. Despite these difficulties, however, the potentially positive aspects of the social networks far outweigh the negative ones, and we must assume that these networks have come to stay, bringing in a new form of learning and scientific communication.

Twitter as a professional medical social network challenges the limits. The paradox lies in the ability to rapidly communicate evidence-based medicine versus the risk of transmitting ideas with other purposes in mind, whether commercial or "self-promotional". On an individual basis, we should ask ourselves the following questions: What is our interest as Twitter users? What is the ultimate goal we are looking for when publishing scientific content on Twitter? Is it the diffusion of knowledge? Is it to make contacts? Is it to announce scientific events? Or are we really seeking to become influencers?

References

1. labspain.es. [accessed 26 Feb 2020]. Available from: https://iabspain.es/wp-content/uploads/2019/06/estudio-anual-redes-sociales-iab-spain-2019_vreducida.pdf.
2. Janssen.com. [accessed 26 Feb 2020]. Available from: https://www.janssen.com/spain/sites/www_janssen_com_spain/files/cuando-la-salud-es-tendencia.pdf.
3. Janssen.com. [accessed 26 Feb 2020]. Available from: https://www.janssen.com/spain/sites/www_janssen_com_spain/files/informe-janssen.2014.v2.pdf.