Telemedicine Needs to Blur Towards Connected Health

Josep Vidal-Alaball[1,2], Luís Fernandez-Luque[3]

[1]Gerència Territorial de la Catalunya Central, Catalan Health Institute, Sant Fruitós de Bages, Barcelona, Spain.

[2]Mental Health and Social Innovation Research Group, University of Vic-Central University of Catalonia, Vic, Barcelona, Spain.

[3]Qatar Computing Research Institute, HBKU, Qatar Foundation, Ar-Rayyan, Qatar

Abstract

Despite telemedicine programmes have been widely implemented globally and millions of dollars spent on them, the future of telemedicine may lay in a more affordable and sustainable one. To assess the actual state of telemedicine we conducted Twitter polls using questions from previously used questionnaires. In a population where telemedicine was expected to enjoy big support, a significant number of twitter users responding to the poll found that telemedicine was not as good as traditional care.

Introduction

Telemedicine has been enjoying a golden era with numerous and often expensive programmes implemented widely. A World Health Organization survey found that 38% of the countries had some kind of telemedicine systems and 30% had agencies that managed telemedicine services (1). But what kind of telemedicine will we have in the future? A traditional and often expensive telemedicine or one far more informal and cheaper? Mars and Scott in their article ‘‘Being Spontaneous: The Future of Telehealth implementation?” explained two unplanned but very successful services of telemedicine in South Africa (2). We wanted to assess the actual state of telemedicine using a novel approach; anonymised Twitter polls.

Twitter has been used previously as a platform to disseminate guidelines and perform polls by the European Association of Urology (3,4). With Twitter polls it is possible to reach big audiences very quickly and very efficiently. Moreover, the fact that Twitter polls do not allow knowing the identity of respondents and only one answer is allowed give additional robustness to these polls.

Methodology

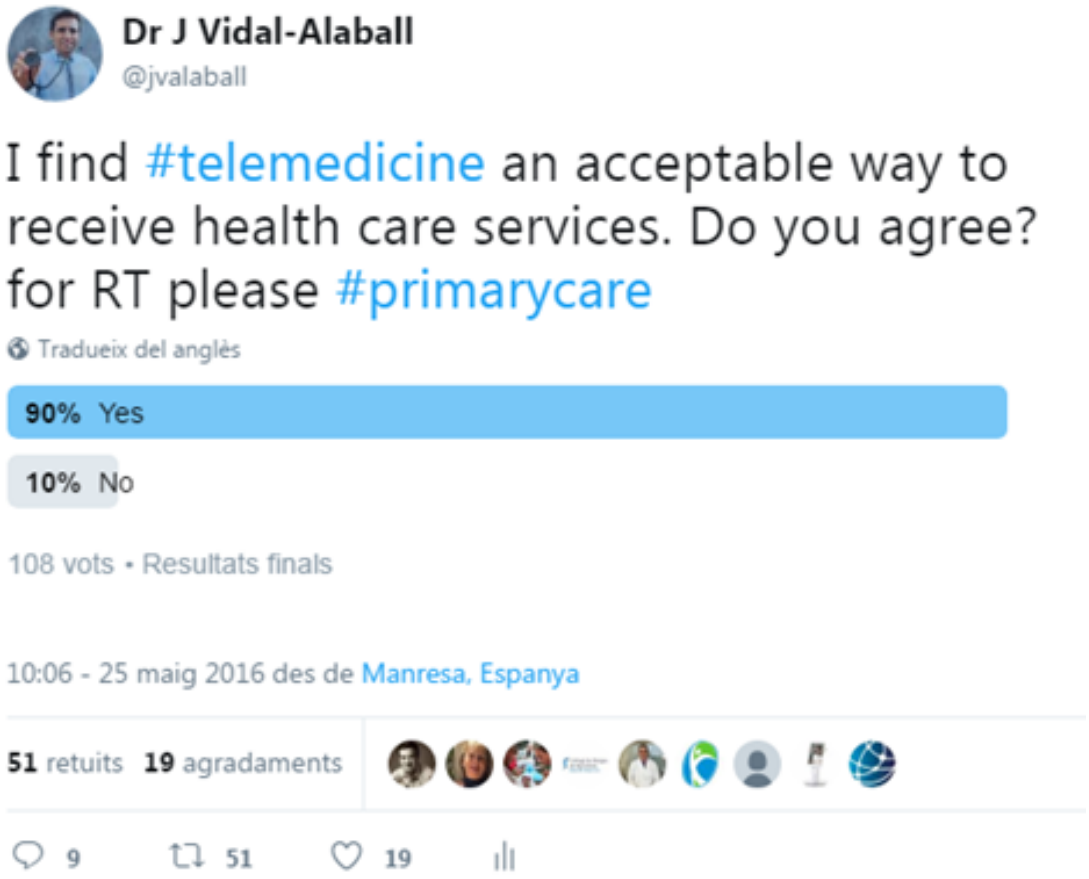
We conducted two twitter polls using questions from previously used questionnaires to explore acceptance of telemedicine among twitter users. We posted the polls on one of the author's twitter timeline https://twitter.com/jvalaball and asked his followers to answer the poll and retweet it to reach a bigger audience. @jvalaball has more than 8,600 followers worldwide, mainly from Spain (37.5%), United States (30%) and United Kingdom (11%).

Figure 1: followers map

Results

The first poll was posted in May 2016 and was pinned in the top of one of the author's timeline for 7 days. We used a question from the Telemedicine satisfaction questionnaire, a validated questionnaire developed by Yip *et al.* in 2002 (5). The question posted was "I find telemedicine an acceptable way to receive health care services. Do you agree?" There were only allowed two answers, "yes" or "no". The poll was retweeted 51 times and had 6.698 impressions. It received a total of 108 votes, 90% of which were positive and 10% negative.

Figure 2: first Twitter poll



The second poll was posted during November 2017 and pinned in the top of the timeline for 7 days. We used a question from the Physician questionnaire in the EU project Health Optimum (6). The question posted was "How do you rate the quality of care delivered by telemedicine when compared to the quality of traditional care?" Four answers were allowed: "better", "about the same", "not as good" and "not sure". The poll was retweeted 49 times and had 4.364 impressions. The poll received a total of 113 votes. 39% of the respondents stated that they rated the quality of care delivered by telemedicine not as good as the traditional care, 19% found the quality of care about the same, 22% rated the quality of care as better and 20% were not sure.

Figure 3: second Twitter poll

Discussion

This is a novel experiment of using targeted twitter polls to assess acceptance of telemedicine amongst Twitter users. In our opinion, this tool could be used to quickly perform surveys to assess the opinion of users regarding acceptance of telemedicine and to obtain a swift feedback of new questionnaires before validating them.

The first poll showed an overwhelming support towards telemedicine as an acceptable way to receive health care services, but we found significant that 10% of respondents were resistant to accept telemedicine. In the second poll, when asked Twitter users to rate the quality of care delivered by telemedicine when compared to the quality of traditional care, a majority of users found that telemedicine was not as good as traditional care.

We are aware that twitter users are not representative of the general population in terms of demographics (7) but it is remarkable that in a population where telemedicine was expected to enjoy big support, as the author is an expert and often twits about this topic, a majority of respondents expressed concerns about the quality of care provided by telemedicine. Maybe "traditional" telemedicine needs to be more spontaneous, more informal and to blur towards connected health as a model than includes not just the technology to provide health services remotely but also the patient and professional experience to empower them to better accept eHealth technologies.

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Conflicts of interest: none

Corresponding author: Josep Vidal-Alaball jvidal.cc.ics@gencat.cat