

## Use of Institutional Social Media for Information Management and Communication in Healthcare in a National Health System

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### Abstract

Social media has a growing presence in the eHealth research agenda. This research aims to characterize the use of social media in the Cuban National Health System for health information management and communication in healthcare. We specifically examine the strategy developed by Infomed and its main results.

### Keywords:

Social Media, Health, Information Management

### Introduction

According to the 2018 Global Digital report, published by We Are Social and Hootsuite, more than 3196 billion people use social media in the world (42%), representing a 13% growth compared to 2017 [1]. In Cuba, the number reaches 38% of the population [2].

One of the main expected trends regarding the use of Internet is the increased use of social media in the field of information search, Google search engine direct competition.

Social media has a growing presence in the eHealth research agenda. To date, their use in healthcare have been identified as a resource efficient approach to information and knowledge management and specialized communication, that could be used in many settings, and particularly where care providers and patients do not have the opportunity to have personal contact.

As part of the analysis of this new digital environment, some studies have examined social media impact on health knowledge management. In this sense, it has been pointed out the need to adapt the communication between health professionals and patients to the new scenario of the so-called electronic health, in a process that leads to the expansion of the possibilities of social interaction and the consequent empowerment of citizens for healthcare, as well as the best use of the potential of ICT [3].

In the context of public health, social media favor information sharing, autonomous and networked learning, teamwork, communication, feedback, access to other related networks and contact with different experts, everything which contributes to management and collective construction of knowledge. In addition, they allow to detect patterns and behaviors associated with the search and supply of health information. The potential of these applications for surveillance, planning of services, development of intervention programs and health promotion are evident.

In the Cuban context, characterized by the particular importance of the health issue in government public policies and, at the same time, one of the lowest rates of Internet

penetration in the region -40 users per 100 inhabitants in 2017- the use of the social media for health information management is a topic of particular relevance.

Infomed is the Cuban National Health System network that coordinates all the health institutions of the country in terms of communication and information management [4]. One of its goal is that social media became channels for health information management and communication in healthcare for the entire country. Each health institution in the country is expected to develop a social media strategy that relates to its particular purpose, as well as to the goals of the Cuban national health system.

This research aims to characterize the use of social media in the Cuban National Health System for health information management and communication in healthcare. We specifically examine the strategy developed by Infomed and its main results.

### Methods

A descriptive study was conducted, including all the social media profiles of Cuban health institutions, from January 2017 to October 2018. The variables used were: presence on Facebook and/or Twitter, update frequency, type of resources, topics, Facebook ranking according to LikeAlyzer [5], Twitter impact according to Twitonomy [6].

Infomed's strategy for social media was described and its main results were examined with specialized analytics tools.

### Results

Ninety-seven institutional profiles were studied (including Facebook fan pages and Twitter accounts). There has been an annual increment of more than 1000 Facebook followers and about 600 in Twitter since January 2017. However, most of Cuban healthcare institutions have presence only on Facebook (64%), only 38% have also a Twitter account and 64% of them maintain a systematic update (at least once daily).

The most used types of resources were articles and pictures, mainly about news, information resources (scientific articles and books), courses and events promotion, all of this related to health. The main topics covered include hypertension, cancer, obesity, diabetes, Zika, dementia, aging, pregnancy and HIV/AIDS. 53% of Facebook profiles obtained a ranking lower than the average value for any type of page (53/100) according to LikeAlyzer. On average, 28 out of 100 tweets are redistributed, according to Twitonomy.

Infomed profiles shows a growing trend, with more than 11000 Facebook followers and 2291 in Twitter, until November 11, 2018. To date, the National Center for Medical Sciences

Information has five fan pages on Facebook and five users in Twitter.

The average daily range on Facebook is 86528 people. Infomed fan page rank in Facebook is 75/100, higher than the average value for any type of page (53/100), for pages of the same type -health / medicine / pharmaceutical products- (51/100) and even with respect to similar brands. (70/100).

Also, 48 out of 100 tweets are redistributed, indicating a high level of impact, committed audience and favorable impact on web statistics. According to Alexa [7], Infomed users spend about five minutes per day navigating and review four pages on average. In 2017, Infomed main website (<http://www.sld.cu/>) was located as the Cuban web portal with the best positioning in Alexa's ranking. Throughout the year, it remained among the 6000 most visited portals among all Internet sites and among the top 10 most visited websites in Cuba.

The main components of Infomed social media strategy included: goals; strengths, weaknesses, threats and opportunities; audience; actions for each channel; guidelines for the design of the visual identity, formal elements and content management; interaction framework with the community; material and human resources; technological means and evaluation method.

## Discussion

Social media is changing the nature of interactions in the field of health. Simple qualitative methods were used that showed increased social media use, but suboptimal use of Facebook profiles and insufficient use of Twitter within the Cuban National Health Service Network.

The analysis of the social media profiles of Cuban health institutions showed that the main difficulties were the low frequency of content updating, the scarce use of hypermedia resources, the inadequate selection of images, low interaction with users and the absence of a web content linked to the publications.

Among the studied profiles highlight the Infomed ones. Our results show that the strategy implemented by the Cuban National Center of Medical Sciences Information, which integrates the social participation spaces of Infomed with Facebook and Twitter, is a good practice. It strengthens cooperation through the structuring of information services and resources around knowledge networks and develops spaces for interaction, training, advice and discussion that favor permanent exchange among the people involved in the processes, motivating new knowledge generation and facilitating access to it.

Interaction between peers in social media is shaping a new model of knowledge management and learning, a different way of obtaining training and information, updating and developing necessary skills for professionals in healthcare sector.

Additional research is needed to further characterize the social media strategies of our health institutions and evaluate their results. Such information can be used to design interventions that improve use within a health system.

## Conclusions

In the context of the Cuban National Health System, the consolidation of social media use for information management and communication in healthcare would increase access to information as a pillar of knowledge production. It would also contributed to the development of digital skills in human resources, which support the integral approach to health.

Digital social networks are considered today as the main standard of the new digital communication environment. However, this study suggests that their use in the Cuban National Health System is still incipient. The definition of institutional policies and strategies constitute the greatest challenge. The results of the implementation of Infomed's strategy is a good example.

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