

Communication with the public in the health-care system: a descriptive study of the use of social media in Local Health Authorities and public hospitals in Italy

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Abstract

Introduction. In 2010 the Italian Ministry of Health set out recommendations for the use of social technology and Web 2.0, inviting organisations within the Italian national health service (Servizio Sanitario Nazionale, SSN) to equip themselves with instruments.

Objectives. 1. to ascertain how many local health authorities (Aziende Sanitarie Locali, ASL) and public hospitals have a presence on the most widely used social media websites in Italy: Facebook, Twitter and YouTube; 2. to find out how well the Facebook, Twitter and YouTube pages of ASLs and public hospitals are known among the general population; 3. to find out how ASLs and public hospitals engage with the general public on social media sites.

Materials and methods. The websites of all ASLs and public hospitals across the country were visited to look for the icons of the social media sites under examination. The data considered were publicly available upon access.

Results. A total of 245 websites were analysed. 7.34% ASLs and hospitals had social media accounts. 8 organisations had an account on all three of the social media sites considered in the study.

Conclusions. The results show a low presence of ASLs and hospitals on social media. Other studies are needed in this field.

Key words

- members of the public
- health-care information
- websites
- social media

INTRODUCTION

Web 2.0 is a virtual space accessible to anyone wanting to exchange information and collaborate on the creation of new knowledge. Users can benefit from information, but can also produce it [1, 2]. In this virtual space, people meet, exchange and talk. For new generations (the “born digital”), it is the primary source of information, along with television and the printed press. Every day, millions of people of all ages around the world take part in social media [3, 4]. The Internet is increasingly used to communicate, find information – including health information – and share experiences [4-12].

Many studies have shown that the web is used in the health-care sector to promote the sharing of experiences of illness – particularly in cases of chronic or degenerative disease [13-19] – and the adoption of

healthy lifestyles [20-24].

Growing numbers of public hospitals and health-care organisations are taking advantage of the communication and socialisation opportunities offered by social media, not only to present their services but also to promote loyalty [4, 25].

In 2010, as part of its online communication guidelines for the safeguard and promotion of health, the Italian Ministry of Health set out recommendations for the use of social technology and Web 2.0, emphasising the importance for organisations within the Italian national health service (Servizio Sanitario Nazionale, SSN) to equip themselves with instruments that increase public participation and provide access to reliable and authoritative information [3, 26].

There are several possible levels of relationship on social media sites and these are accompanied by in-

- cremental degrees of complexity and involvement [3]:
1. *listening*: the focus is on monitoring in order to find out what people are saying about the issues dealt with by the organisation and observing what happens on social media. Listening is considered the first stage of participation in social media. This level involves no risk, although it does require a change in culture and a willingness to listen;
 2. *public service*: here, the focus is on information and the aim is to give visibility to the organisations' activities as well as delivering a public service on a specific channel, providing information to the public and taking advantage of the instrument's viral potential. This level of activity, which is the next stage after listening, enables contact with the instrument that are familiar to users, thereby laying the foundations for a relationship and an understanding of the dynamics social media use. This level of presence requires a suitable language and response times. One possible risk is that of employing methods and idioms designed for other instruments;
 3. *interaction*: the focus here is on dialogue, with the aim of improving the level of service, building a relationship of trust with users and providing an effective channel of communication. Interaction serves to get a picture of the needs of the public and to simplify processes for service users. This level of presence requires time. The possible risks include disappointing the relational expectations of the public and failing to maintain the relationship over the long term;
 4. *participation*: here, the focus is on involving the public in the organisation's choices and developing e-participation systems where the public is no longer the mere target of services, but becomes an actual partner. This level of presence comes with a significant degree of complexity because it requires constant and systematic involvement [3].

On the basis of these observations, our study had the following three objectives: 1) to ascertain how many local health authorities (Aziende Sanitarie Locali, ASLs), and public hospitals have a presence on the most widely used social media websites in Italy: Facebook, Twitter and YouTube; 2) to find out how well known the Facebook, Twitter and YouTube pages of ASLs and public hospitals are among the general population; 3. to find out how ASLs and public hospitals engage with the general public on social media sites.

MATERIALS AND METHODS

Sample

A descriptive design was used for this study conducted in October 2012. All ASLs and public hospitals in the Italian SSN were included in the study.

Data collection

The study protocol included three phases based on the study objectives:

- ✓ to ascertain how many ASLs and public hospitals have a presence on Facebook, Twitter and YouTube:
 - by consulting the "useful addresses" section of the Italian Ministry of Health website to compile the list of ASLs and public hospitals and their official website addresses;
 - by dividing the country's regions into three macro-areas defined geographically and administratively: the North (Val d'Aosta, Piedmont, Lombardy, Trentino Alto Adige, Friuli Venezia Giulia, Veneto, Emilia Romagna, Liguria), the Centre (Tuscany, Marche, Abruzzo, Molise, Umbria, Lazio), the South and Islands (Campania, Basilicata, Calabria, Apulia, Sicily and Sardinia);
 - by searching within the social media sites under examination for ASLs and public hospitals, using the name and number (only for local health authorities) of each of the organisations as the search term;
 - ✓ to find out how well the Facebook, Twitter and YouTube pages of ASLs and public hospitals are known among the general population:
 - the data considered were publicly available upon access to the individual social media site and, for all three sites, were collected on the morning of 28 October:
 - for Facebook these were: the registration date, the most populous age group, *i.e.* the age group with the greatest number of people talking about the page of the organisation under examination and the number of "Likes";
 - for Twitter: the registration date, the number of tweets (text-based messages of up to 140 characters), the number of followers (people subscribing to the user's profile to receive all the tweets published by the user) and the number of followings (profiles subscribed to by a user in order to receive their messages in his or her personal area) [3];
 - for YouTube: the registration date, the number of videos uploaded, the overall number of views of all uploaded videos and the number of subscribers;
 - for the ASLs, publicly available data on the use of social media were compared with the specific user base, *i.e.* the population of the catchment area of a particular ASL. The records of the ASLs were consulted to identify their individual user bases. This comparison was only made for ASLs and not for public hospitals, as the former deliver primary care at community level and has a user base. Public hospitals, on the other hand, are over territorial and hence have no specific user base and have highly specialised functions;
 - ✓ to find out how ASLs and public hospitals engage with the general public on social media sites:
 - the social media pages were visited and a qualitative analysis was made of the content with respect to the four levels of engagement indicated in the Ministry of Public Administration's guidelines for public administration (PA) websites [3].
- All the data collected were organised and sorted on an Excel spreadsheet.

Table 1

Use of Facebook, Twitter and YouTube pages of ASLs and public hospitals

ASL/PH	ASL user base	Facebook		Twitter			Youtube		
		Registration date	"Likes"	Tweets	Followers	Followings	Registration date	Uploaded videos	No. Views
North									
Lombardy									
ASL	1 098 740	September 2012	61	No account			No account		
ASL	576 020	May 2011	291	No account			No account		
PH	/	April 2012	1001	47	12 489	10	January 2011	47	12 489
PH	/	March 2012	3	No account			No account		
PH	/	May 2012	120	No account			No account		
Friuli Venezia Giulia									
ASL	245 000	September 2012	89	301	149	53	No presence	9	331
Veneto									
ASL	470 877	April 2011	54	499	34	0	No presence	135	267
PH	/	October 2010	501	0	0	0	No account		
Emilia Romagna									
ASL	850 000	December 2010	394	904	1,214	242	August 2007	109	137 909
ASL	131 984	October 2011	112	104	76	0	September 2011	15	8627
ASL	325 265	March 2012	59	244	215	7	No account		
PH	/	October 2011	0	No account			No account		
Centre									
Tuscany									
ASL	227 202	December 2011	30	No account			No account		
PH	/	October 2008	64 155	No account			No account		
Marche									
ASL	340 000	February 2011	115	No account			No account		
Abruzzo									
ASL	400 000	November 2010	2742	669	142	26	August 2010	20	10184
Lazio									
ASL	417 979	September 2011	111	156	27	0	September 2011	3	1341
PH	/	April 2012	1833	283	780	234	March 2012	120	11523

Key: ASL = local health authority; PH = public hospital

Statistical analysis

A descriptive analysis was made of the data collected. Each element considered was analysed in quantitative terms and an analysis was made of absolute and percentage frequencies and of the mean. From the number of Facebook "Likes", Twitter followers, followings and tweets and views of uploaded YouTube videos, a percentage was calculated based on the number of people making up the user base of the ASLs.

RESULTS

A total of 245 official websites were analysed: 149 (61%) ASL websites and 96 (39%) public hospital websites. The ASLs were distributed geographically as follows: 75 (50.3%) in the North, 34 (22.8%) in the Centre and 40 (26.9%) in the South and Islands. The hospitals were distributed as follows: 54 (56.3%) in the North, 16 (16.7%) in the Centre and 26 (27%) in the South and Islands.

Number for ASLs and public hospitals with a presence on Facebook, Twitter and YouTube

18 out of 245 (7.34%) ASLs and public hospitals, all in the North or Centre, had a social media account; none of the organisations in the South and Islands had one (Figure 1). More specifically, 66.7% (7 ASLs and 5 hospitals) were in the North – in Lombardy, Veneto, Friuli Venezia Giulia and Emilia Romagna – and 33.3% (4 ASLs and 2 hospitals) were in the Centre – in Tuscany, Marche, Abruzzo and Lazio. 50% (9 out of 18) of the organisations with a social media presence were in two regions of the North: Lombardy and Emilia Romagna.

Overall, 18 out of 245 (7.34%) organisations had a Facebook account; of these, 11 were ASLs and 7 public hospitals. 10 out of 245 (4%) organisations had Twitter accounts: 7 ASLs and 3 hospitals, whereas the number of organisations with a YouTube channel was 8 out of 245 (3.3%): 6 were ASLs and 2 were public hospitals.

8 (44%) organisations (5 in the North and 3 in the Centre) had an account on all three social media sites considered (Facebook, Twitter and YouTube), 8 (44%) organisations (5 in the North and 3 in the Centre) were on Facebook alone and 2 (12%) organisations in the North were on both Facebook and Twitter.

Most organisations (14) had opened a Facebook account between 2011 (3 in the first half of the year, 4 in the second half) and 2012 (5 in the first half of the year, 2 in the second half), 3 in the second half of 2010 and 1 in the second half of 2008. Ratings for Fa-

cebook pages, expressed as “Likes”, ranged between 3 “Likes” for the organisation with the fewest ratings and 64155 “Likes” for the organisation with the most. The most populous age group, i.e. the age group with the greatest number of people talking about the page of the organisation under examination, was the 25-44 age group for all the health-care organisations.

On Twitter, the mean number of tweets (text messages of up to 140 characters) was 369. The mean number of followers (people subscribing to the user’s profile to receive tweets published by that user) was 296, while the mean number of followings (profiles subscribed to by a user in order to receive their messages in his or her personal area) was 57.

On YouTube, 1 organisation had opened a channel in the second half of 2007, 1 in the first half of 2010, 3 in 2011 (1 in the first half of the year, 2 in the second), 1 organisation in the first half of 2012, 2 organisations did not indicate the registration date. The mean number of videos uploaded was 59, and the mean number of views was 22 788.

Overall, the quantity of publicly available data was low. The percentage of these user data for the social media pages of each ASL (“Likes”, number of tweets, followers, followings, videos) compared with its respective user base was very low: less than 1% for most ASLs (8 out of 11).

How ASLs and public hospitals engage with the general public on social media sites

The content on the Facebook, Twitter and YouTube pages provided by each ASL and hospital showed that its presence there was to listen in order to gain an understanding of the general public’s point of view and its perception of the organisation and its activities, as well as to publicise the organisation’s activities and inform the public of news, events and available services.

In none of the organisations present on social media considered was interaction the key focus, hence dialogue with the public to gain a better understanding of its requirements and participation aimed at engaging the public and promoting systems of e-participation.

DISCUSSION

In Italy, there is no legal requirement for public administrations and hence, for local health authorities and for public hospitals, to have a presence on social media. There is, however, a strong recommendation from the Ministry for Public Administration and Simplification and the Ministry for Health to work towards greater use of social technology and Web 2.0 and instruments that increase public participation and provide access to reliable and authoritative information [3, 26].

Nevertheless, from the results of this study, it emerges that a low percentage (7%) of ASLs and public hospitals are active on social media sites. This is well below the figures recorded in other countries. A descriptive study conducted in the United Kingdom

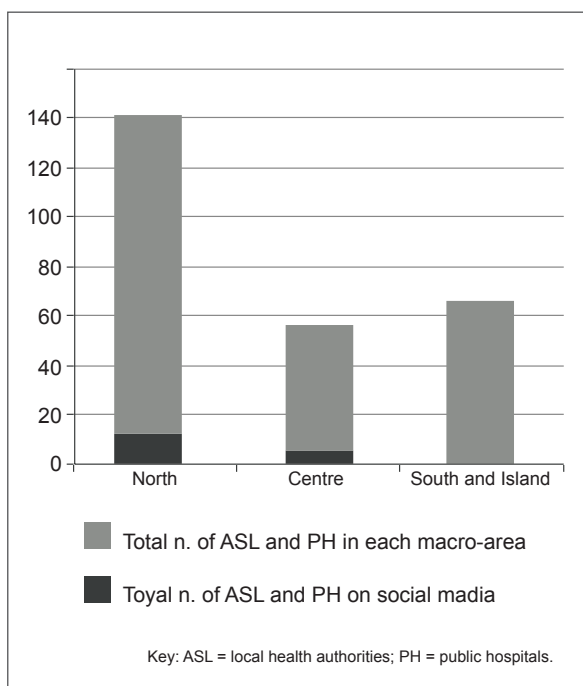


Figure 1 Geographical distribution of local health authorities and public hospitals and related presence on social media.

showed that 40% of health-care organisations used social media [7]. In the United States, the percentage of hospitals with social media accounts ranged between 10% and 20% [4]. Another longitudinal study conducted in 12 Western European countries (Netherlands, Belgium, Luxemburg, Germany, Austria, Switzerland, United Kingdom, Ireland, Norway, Sweden, Finland and Denmark) showed the use of social media by health-care organisations increasing over time [4]. The strongest presence of Italian ASLs and hospitals was seen on Facebook (7.34%), the weakest was on YouTube (3.3%); 4.1% of organisations were on Twitter.

These figures show, first and foremost, a significant divergence from the countries mentioned above. In the United States, 20.3% of hospitals were on Facebook, 15.7% on Twitter and 10.9% on YouTube [8].

In the 12 Western European countries observed in the study conducted by Van del Belt [4], it emerged that, albeit in different ways and with the predominance of one or other of the social media, all hospitals used them and that their use had increased significantly over time: between 2009 and 2011 the percentage rose from 10% to 67% on Facebook and from 1% to 18.1% on Twitter.

A second point concerns the gap between the percentage of Italian ASLs and public hospitals with a presence on social media and the widespread use of social networking in Italy, where Internet use in 2012 rose significantly from 2011. Indeed, while the percentage of the population using the Internet exceeded the 50% mark in 2011, in 2012 it increased to around 62.1%. This figure rose to 84.1% among the more educated (those with school-leaving diplomas or degrees), 74.4% among residents of cities with more than 500 000 inhabitants and 90.8% among young people. In 2012, 66.6% of people in Italy with access to the Internet (in 2010 this was 49% of the population) were registered on Facebook: this percentage corresponds to 41.3% of the total population and 79.7% of young people. At the end of 2010, there were more than one million three hundred thousand Twitter accounts; in 2012, 61.7% of people with access to the Internet went on YouTube (in 2011, the percentage was 54.5%) [27].

Figuring among the reasons for this gap between public health-care organisations in Italy and those in other countries, in terms of their presence on social media and the growing popularity of social networks with the public, may still be the high level of bureaucratisation of public administrations (PA) and the process of dematerialisation which PAs, and hence, ASLs and hospitals, have not yet completed.

This is a process involving considerable organisational and technical change and which is urged, not only by specific regulatory provisions, but also by the new technology available, which represents an important resource for the efficiency of PAs [28]. Communication with the public is part of this process and is inevitably affected by it in terms of procedures, instruments and venues.

Another reason might be the absence of regulatory obligations for an official presence on one or more social media sites and the fact that these instruments are complementary to traditional channels of communication rather than being a replacement for them. For this reason, maintaining complex communication channels, such as social media sites, has a significant organisational impact on PAs in general and health-care organisations in particular. Indeed, such channels are very dynamic and more difficult to run than traditional ones, because they are characterised by document-based output, but with a structured communication process [3].

The ASLs and hospitals that were active on social media were in the North and Centre: none of the organisations in the South and Islands had an active presence. This difference may be a result of the technology gap that still exists between the North and South of the country. Households in the North and Centre of Italy use more ICT (Information and Communication Technologies) products and services than those in the South and Islands. In 2011, 61% of households in the North and Centre had personal computers, whereas only 53% of households in the South and 54.2% on the Islands had one. The highest percentage of households with Internet access was in the Centre and North: more than 56% compared with 48.6% in the South. Similarly, around 49% of households in the Centre and North had a broadband connection, whereas in the South, the percentage was close to 37.5%. Households with limited access to technology-based services are working-class or have a main breadwinner who is unemployed [29].

Conversely, households where the main breadwinner is an executive, a businessman or self-employed are the most technological: 93.2% of these family have a computer, 91.4% have Internet access at home, 78.1% have mobile phone Internet access. Although over 90% of people possess mobile telephones, the percentage of those who have activated Internet drops to 54.6% in working class households and to 24.2% in households where the main breadwinner is unemployed [29].

Another reason for this difference can be found in the distress and restrictions linked to unemployment, which, although on the increase in all parts of the country, has charted different trajectories in the North and South of the country. Between 2011 and 2013, the unemployment rate was 7.4% in the North and 17.2% in the South [36]. The decision made by organisations in the South not to be active on social media and to prefer traditional channels of communication instead, might thus be driven by the greater suitability of the latter for reaching all members of the public.

A third point concerns how well the Facebook, Twitter and YouTube pages of ASLs and public hospitals are known among the general population. On the whole, the quantity of data available (Facebook "Likes" Twitter followers, followings and tweets and YouTube video videos) is low. This becomes even

more evident, when the user base of each ASL is taken into consideration (this comparison cannot be made with public hospitals, which have a more complex, regional or national referral system).

These data are marked by a number of limitations. “Likes” represent the opinion of those Facebook users who, having visited the page, have decided to express their approval and are not representative of all members of the public who have visited the page or who perhaps have a different opinion. The most populous age group might not be real, as some users do not indicate their date of birth on Facebook or use a false one. The number of video views on YouTube is not necessarily indicative of the number of members of the public who have seen them, as the same video may have been viewed several times by the same person.

Nevertheless, it is possible to make several considerations. The limited quantity of data considered may be due to the registration date on the social media which, for most organisations, was between 2011 and 2013. The change in communication methods is quite a significant one and takes time. The transition from a system of informing the public to a channel of communication with the public is not immediate and involves not only an organisational shift, but also a change in culture [3].

One other consideration is the process of creating loyalty through these channels of communication. This, clearly, is still in its initial stages, despite being an important opportunity for individual organisations to improve communication and interaction with their public, as well as being strongly recommended by the Ministry of Health [26].

A further point concerns the way the organisations engage with the public on social media sites. It was found that this relationship was based solely on listening and maintaining a public presence rather than being a means for interaction and participation. Perhaps at this initial stage, a prudent stance is important and preferable to a more interactive presence, which might not fully meet users' need for information and participation. Indeed, an active presence on social media is not simple: it is important to be familiar with the rules, understand their characteristics and dynamics and develop skills to handle their complexity [3]. Interaction and participation should thus be the direction to aim for. Concrete communication *with* the public, as opposed to *towards* the public cannot disregard the development of e-participation systems. Social media are the places where the information and communication technology behind e-participation are most effective, since they enhance the democratic involvement of the public and its participation at all stages of the processes affecting PAs in general and public health-care organisations in particular.

The study conducted provides much food for thought and analysis, but it has its limitations. One of these is the descriptive design, although it could

not have been otherwise, since there are no previous data available for Italy. As a consequence of this, another intrinsic limitation of the study is that it was impossible to make any kind of comparison, whether between different time periods or between different health-care organisations. This lack of data and comparability opens the way for temporal comparison studies in the near future.

CONCLUSIONS

The Internet cannot merely be seen as a means for providing the public with information. It is also and above all a means of communication with the public. The difference is substantive in terms of form and culture [3]. The evolution and transformation of communication methods occur regardless of the public information focus of health-care organisations.

The steady rise of the Internet across the world, the development of possible applications and the evolution of the web are reflected in all areas of everyday life. The “dematerialisation” of devices (tablets, computers, mobile telephones, consoles, palmtops), thanks to developments in technology, are becoming ever smaller and more portable, facilitates Internet use, fosters relations and extends their functions [27].

In this context, an active presence on social media is a necessity for health-care organisations, but is also an opportunity to improve communication between health-care operators, facilitate the benchmarking process and increase attractiveness and loyalty [30-32].

Members of the public are currently less inclined to look for information by trawling through official websites and portals, which continue to be indispensable but are inadequate when it comes to reaching people and, above all, communicating with them. Continuing in this direction alone would mean believing that it is possible to communicate with people as if they were all in one place, when, they can usually be found in several places: social media sites [3]. In view of the increasing numbers of people using social media, it is important to further investigate the most suitable ways for health-care organisations to be present on them and the most effective instruments for interacting and fostering public participation. Moreover, other studies are needed to understand how to build information content, taking into account the typical brevity and speed of exchanges on social media, so that communication can be effective and can orient – and not disorient – the choices of members of the public.

Conflict of interest statement

There are no potential conflicts of interest or any financial or personal relationships with other people or organizations that could inappropriately bias conduct and findings of this study.

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