

Establishing and Demonstrating US Hospital Brands Through Facebook

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Abstract

Medical treatment, patient satisfaction, and hospital brand equity are positively related to three communication contexts: interpersonal, internal, and corporate. To integrate those contexts and expand that line of research, visceral analysis suggests that social media are transforming the impact of institutional communications conducted by hospitals. Specifically, questions continue to need answered to fill gaps in, clarify and reinforce previous research. To that end, this article analyzes the strategic impact of social media networks in spreading the brand architecture of hospitals. To this end, the Facebook profiles of 400 hospitals in the United States were analyzed. Each profile was examined to determine whether it utilized 10 indicators related to brand architecture. The results indicate that regarding the leading hospitals in the United States 94% of the surveyed hospitals have an active profile on Facebook but one that only utilized 3 to 5 of the recommended indicators. The professional management of this social media, the more widespread use of corporate video and a strategic orientation toward results have become cornerstones for the effective dissemination of hospital brands through Facebook.

Keywords: Hospital, Corporate communication, Brand Architecture, Social Media, Facebook

Introduction

Due to the development of private healthcare, the creation of large –even multinational- hospital groups in several countries, the patients' active role and the consolidation of Web 2.0 hospitals have led to investments in increased resources to the professional management of corporate communication (Medina, 2011). However, these organizations face a number of contextual factors that hinder the implementation of such communications, including the legal framework, the poor communicative tradition of hospitals and the difficulty of disseminating scientific content. This article discusses the strategic importance of spreading a hospital's brand architecture through social media. Thus, first, a review of literature is offered on hospital branding, brand architecture and brand dissemination through social media. Second, our method is introduced, and third, the results of a quantitative study on brand communication conducted on Facebook by 400 hospitals in the United States are presented. Fourth, the results of the study, its limitations and the business implications of this analysis are discussed. This paper shows those strategies of corporate communication 2.0 that hospitals should use to ensure a unique brand awareness by its stakeholders.

Corporate Communication in Hospitals

The Hospital Brand

Hospital communications can be divided into three categories: interpersonal, internal, and corporate. Each type has a specific role and myriad challenges. It involves the presentation of quality medical treatment, patient satisfaction, and brand equity. The quality of the interpersonal communication between the health professional and the patient determines patient satisfaction (Cléber, Jin, Levinson, & Meltzer, 2008), influences the patient's physical and psychological results of medical treatment (Wright, Sparks, & O'Hair, 2008) and, therefore, affects the success of the medical consultation (Berry, 2007). The doctor-patient communicative relationship is affected by the existing information asymmetry between the two (McKee & Healy, 2002), the social support that the patient receives from friends and family members (Wright et al., 2008) and cultural factors, such as language or religion (Angelelli & Geist-Martin, 2005).

The importance of effective interpersonal communication has fostered the development of the professional management of hospital internal communications. This relationship building activity creates social ties among employees, helps avoid conflicts (Decaudin, Igalens, & Waller, 2006; Ongallo, 2007) and enhances employee identification with the brand for which they work (Sharma & Kamalanabhan, 2012).

Development of internal and external communications offers many relationship and brand opportunities, but has compelled an increasing number of hospitals to rely on professional management of corporate communication. Van Riel and Fombrun (2007, p. 25) defined this professional role as "the set of activities involved in managing and orchestrating all internal and external communications aimed at creating favorable starting points with stakeholders on which the company depends". Professional communications management is a strategic management function that concerns the entire organization (Balmer, 2012), seeks to increase shareholder confidence (Goodman, 2006; Luecke, 2007) and has as its ultimate goal the conversion of these stakeholders into "company evangelists" (Argenti, 2009). The primary measures for effective corporate communications are corporate identity, image and reputation, the integration of verbal and behavioral activities and the relationship building between the organization and its stakeholders (Frandsen & Johansen, 2013). Such corporate communication, given the potentialities of social media, can gain impact through effective use of brand architecture (identity, mission, vision, values, culture, and image). Thus, this research project is aware of the need for high quality communication in three dimensions: interpersonal, internal, and corporate as a means for strategically creating, reinforcing, and changing hospitals' brands.

These theoretical groundings suggest that brand concerns the entire organization (Balmer, 2012; Dacin & Brown, 2006) and is translated into emotional affects and functional values that help organizations realize their potential (De Chernatony, 2010). Brand refers to the visual, verbal and behavioral expression of an organization's unique business model (Knox & Bickerton, 2003) and has as its primary objective the creation of a unique corporate identity (Abratt & Kleyn, 2011).

Communication managers shoulder the primary function of positioning the brand in the minds of stakeholders (Brown, Dacin, Pratt, & Whetten, 2006) which included increasing its credibility (Hyun & Whitehill, 2011). Brand promotion among employees is critical to any organization (Abratt&Kleyn, 2012; Vallaster & Lindgreen, 2011; Webster & Keller, 2004). Of special importance in the hospital setting, where the employee is the primary communicator, it is necessary for corporate communication managers to make the brand active and use it to unite all of a hospital's employees with respect to the hospital's culture and mission (Naveen, Anil, & Smruthi, 2014). The brand helps the employee commit to the organization (Argenti, 2003). For that reason, corporate communication managers need means by which to help employees communicate effectively and build identifications with one another and with patients.

Patients are becoming more selective in choosing their health products (Sparer, 2011); it is essential that hospitals communicate their brand to patients, establish an emotional connection between the employees and patients (Kemp, Jillapalli, & Becerra, 2014) and be capable of building trust with them (Naveen et al., 2004). In sum, as brand reflects customer satisfaction (Anisimova, 2013), corporate communication needs a means by which to communicate effectively to help employees deliver excellent care and build lasting relationships with patients. Thus, interpersonal, internal, and corporate communication are inherently interconnected and interdependent.

Hospitals' Brand Architecture

Like those for any organization, the corporate communicators for hospitals must understand and strategically employ brand architecture, which, according to Nieto (2005), consists of five elements: identity, values, mission, vision, and culture. These architectures are part of the foundation for the strategic formation of corporate identity. Define precisely these five elements is essential to ensure a unique brand perception. This is a strategic work that hospitals do before spreading their brand among its stakeholders, hence the need to fully understand each element.

Corporate identity refers to the personality of the organization, i.e., its history, ethics, philosophy, behavior, and standards (Capriotti, 1999). This identity is a source of competitive advantage (Atakan & Eker, 2007; He & Balmer, 2008) that also influences the organization's reputation (Abratt & Kleyn, 2012). The identity is related to the image and vision of the company (Van Riel & Fombrun, 2007) and its strategy. In fact, strategy and identity are interdependent (Balmer, Stuart, & Greyser, 2009; He & Balmer, 2013). The objective of corporate identity is to strategically differentiate the company's positioning and its services in the eyes of stakeholders (Cornelissen, 2004) and to persuasively transmit the brand's potential to these stakeholders (Balmer, 2012).

In addition to identity, hospitals must define their corporate values. These values guide the organization in its policies, planning, and communications (Morel, 2005) and help it build community among employees (Barret, 2003). Values are reflected in worker behavior (Cornelissen, 2004; Jaakson, 2010) and are a key to an organization's success (Sheehan & Isaac, 2014). For those reasons, companies devote substantial effort to informing employees about the importance of knowing and respecting corporate values (Aggerholm, Andersen, Asmuß, & Thomsen, 2009). To help create brand equity, corporate values should add unique

value to an organization's brand that no competitor can imitate (Urde, 2003). Therefore, it is critical that these values be rooted in the worldviews of the company's directors, other employees and stakeholders (Thomsen, 2005).

In addition to identity and values, the third element of a hospital's brand architecture is its mission. "Mission" refers to the organization's economic, social, or community objectives (Nieto, 2005). Mission guides the organization's employees toward a common goal (Cochran, David, & Gibson, 2008) and defines their work practices and work quality (Blair-Loy, Wharton, & Goodstein, 2011). The mission enables company stakeholders to learn the company's intentions (Bartkus & Glassman, 2008), its unique goals. Adding meaning to the organization's goals improves communication with the stakeholders (Desmidt, Prinzie, & Decramer, 2011) because it shapes the rationale for communication as well as its message content.

Once the hospital has defined its identity, values, and mission, the element vision, which, according to Barret (2003), consists of a compelling statement of the goal that the organization intends to achieve in the long-term. In addition to its long-term nature (Nieto, 2005), each vision should be concise, clear and capable of inspiring employees (Kantabutra, 2008). Above all, it should encompass all of the interests of the organization and be viewed by employees as desirable (Kantabutra & Avery, 2010). Additionally, the vision must define an objective for the brand and integrate corporate values with the objective (De Chernatony, 2010). Companies should define the vision and mission so that stakeholders can understand an organization's objectives and the strategies used to achieve them (Toftoy & Chatterjee, 2004).

As they combine to express an organization's brand, identity, values, mission and vision express the organization's functionality, the perspectives of how it works – its corporate culture—to differentiate each hospital from others. The corporate culture embodies an organization's identity (Mora, 2009), is a source of behavioral inspiration for employees (Marshall & Adamic, 2010) and helps the organization implement a unique way of working that contributes to its brand personality (Salzer-Mörling & Strannegard, 2004). In hospitals, corporate culture expresses the organization's ability to align its mission, values and professional practices every day so that, in this way, the hospital can strategically provide a health service with value added brand equity (Nelson, Taylor, & Walsh, 2014). Corporate culture supports employee engagement and encourages them to perform their jobs well (Pinho, Rodrigues, & Dibb, 2014; Whiteley, Price, & Palmer, 2013). Based on what and how an organization communicates (Wright et al., 2008), its corporate culture should be consistent with its brand and corporate values (De Chernatony & Cottam, 2008).

Once the hospital has defined its brand architecture (i.e., identity, values, mission, vision and culture), it needs to use these elements to express the hospital's brand image to its stakeholders. Effectively accomplished, brand shapes how stakeholders perceive the organization and relate to it (Balmer & Greyser, 2002; He & Balmer, 2008). As the outcome of the organization's communication, stakeholders should perceive the attributes and values that form the brand image (Costa, 2006).

This image must be aligned with identity elements, especially those of vision and corporate culture (Gregory, 2007). Otherwise, an inconsistency between image and corporate identity may result in an organizational crisis (Chun, 2005). Managing the brand image is a strategic issue for any company (Morel, 2005) because it determines the success of organizational marketing (Balmer & Greyser, 2006) and the value that the organization can add to its products/services and employees (Van Riel & Fombrun, 2007). Brand image, efficiently used, can become an indispensable means for building an organization's corporate reputation (Capriotti, 1999).

Diffusion of Hospital Brand Architecture Through Facebook

As a result of their participatory nature and the user's prominent role in the communication process (Adams, 2010; Eysenbach, 2008), social media have become fundamental to generating brand value and corporate recognition (Fanion, 2011; Jensen, Muñiz, & Arnould, 2009). Thus, hospitals are increasingly turning to social media not only because they help patients better understand diseases and treatments (Kamel & Wheeler, 2007) but also because they enable hospitals to improve the services offered (Van de Belt, Berben, Samson, Engelen, & Schoonhoven, 2012) and to establish a more fluid communicative relationship between the health professional and the patient (Rozenal, George, & Chacko, 2010; The Change Foundation, 2011). "Moreover, patients are increasingly active in social media: the most popular social media for patients, Patientslikeme, has more than 400,000 members; 41% of patients are using social media to choose a specific hospital or medical facility, and 55% of patients trust information via social media from hospitals (Expio, 2015)".

To gain full impact of such communication, organizations use brand architecture to shape their image and create their brand, hospitals utilize various media, among which the Internet and social media are prominent. Disseminating the brand over the Internet is key to reaching external stakeholders (Okazaki, 2006) and helping employees establish an image of their organization (Heilmann, 2010).

Facebook is a prominent social media, perhaps the most important such network worldwide. As of June 2014, the service has 829 million active daily users, of whom 654 million access the service on mobile communication devices (Facebook Newsroom, 2014). The communicative impact of this social media led Gómez and Soto (2011) to argue that corporate use of such social media should be managed by public relations professionals. The strategic management of Facebook involves developing basic structures with the latitudes and confinements of regulatory frameworks (Linke & Zerfass, 2013). Only by being professionally managed can the communicative potential of this network be exploited (Wright & Hinson, 2009).

Facebook is a means to implement institutional communication strategies (Waters, Burnett, Lamm, & Lucas, 2009) because of the several advantages that the social media provides: it promotes corporate identity (Booth & Matic, 2011) through the diffusion of elements such as mission and vision (McCorkindale, 2010), helps generate brand recognition (Tsimonis & Dimitriadis, 2014), creates a sense of community between the user and the brand (Hays, Page, & Buhalis, 2013), and positively affects the organization's brand image (Bruhn, Schoenmueller, & Schäfer, 2012).

It has become well established in users communication protocols. Consumers tend to spend more time on Facebook pages than corporate business pages (Levy & Birkner, 2011). In fact, 80% of users or social media prefer Facebook as the means through which branded entities contact them (Business2Community, 2013). Because of its capabilities and wide adoption, Facebook has become a decisive platform to generate commitment from consumers and strengthen consumer relationships with companies (Brodie, Ilic, Biljana, & Hollebeek, 2011). For a brand, it is risky not be present in a communication channel as powerful as Facebook (Divol, Edelman, & Sarrazin, 2012). Thus, Facebook has become a fundamental instrument for the branding activities of any company (Hutter, Hautz, Dennhardt, & Füller, 2013).

Given these communication challenges and potentialities, ones that grow in number and depth each year, this study asked four questions that may help understand the use of Facebook as a tool US hospitals use because its ability to help them put their brand architecture (identity, mission, vision, values, culture, and image) into play. This analysis rests on 10 indicators. The research methods, which are explained in the next section, were used to seek to answer the following questions:

RQ1: For US hospitals, is Facebook a useful tool to disseminate brand architecture?

RQ2: Do these organizations take advantage of the visibility afforded by Facebook to spread their brand architecture, i.e., their identity, mission, vision, values and culture?

RQ3: Is Facebook viewed as a platform to enhance the hospital's brand image?

RQ4: Does the use of Facebook in these ways and to these ends differentiate the top ranked US hospitals from the ones on the bottom ranked?

Method

To better understand the type of strategies used in brand communication by hospitals in the United States, we analyzed the Facebook profiles of 400 hospitals in that country. The selection of the 400 hospitals was based on the World Hospitals Ranking Web of Spain's Superior Council of Scientific Research (Consejo Superior de Investigaciones Científicas de España - CSIC), which is one of the most renowned scientific organizations in Europe.¹ In July 2014, the list of the Top US Hospitals included a total of 3.619 hospitals. In this article, the first 300 hospitals on this list are analyzed, that is, the 300 US hospitals that have an independent Web domain and relatively more Internet visibility; and the results obtained are compared with the analysis done about the 100 hospitals on the bottom in order to make a stronger study about the use of brand communication in social media.²

To study the brand communications of each hospital, we analyzed the official corporate page that each hospital has on Facebook. That is, the Facebook profiles of individual hospital departments or unofficial profiles were not considered. On each hospital's official Facebook page, three sections were examined (Information, Events and Videos), and a total of 10 indicators were used to determine the richness of corporate communications (view Table 1. Indicators analyzed).³

Table 1. Indicators Analyzed

Section	Subject	Indicators
Information Section	Corporate Identity	1) description of the hospital
		2) links to other corporate pages for the hospital
	Values	3) enumeration of hospital values

¹ To produce this ranking, the CSIC uses various indicators that assess the professional and research activity of each hospital. To measure a hospital's Web impact factor, four indicators are used: page size, visibility, rich files and academic nature. Official website: <http://hospitals.webometrics.info/es/metodologia>.

² The complete list of analyzed hospitals is provided in the Appendix 1 and Appendix 2.

³ The analysis was conducted from November 26, 2014, to March 26, 2015.

	Mission	4) description of this corporate item
	Vision	5) description of the hospital's culture
		6) list of the awards received by the hospital
Image	7) explanation of the hospital's history	
	8) presence of the corporate logo in the profile picture	
Events Section	Image	9) description of corporate events
Videos Section	Corporate Culture	10) existence of corporate videos in which a health professional played a leading role

Results

Our investigation of the strategic communication of brand architecture was based on three principles: order, clarity, and internationality. Order implies that only information presented in an orderly manner in the different sections analyzed on Facebook was considered. Information that appeared in a dispersed manner in other sections was not analyzed. Clarity implies that only the corporate items that are clearly identified as such by the hospital itself (e.g., mission and values) were considered. Texts and images that describe aspects of the hospital in an unclear manner were not analyzed. Internationality implies that only the hospital profiles that are in English were analyzed. Those that were written in other local or foreign languages (e.g., Spanish) were not considered.

The first finding is that, in relation with the first 300 hospitals, 94% of the analyzed hospitals have an active Facebook profile that is used as the hospital's official page in this network. That is, of the 300 analyzed hospitals, only 18 did not have a Facebook profile or had a profile that was not activated or did not contain any information. The 10 indicators considered in this analysis were used to assess how the top 300 US hospitals disseminate their brand architecture. In the following, the results are presented for each of the elements of this architecture (i.e., identity, values, mission, vision, and corporate culture) and for corporate image.

Identity

To identify this element, two indicators were used: a) a description of the hospital and b) links to the hospital's other corporate websites. According to the data, 92.20% of the hospitals provided a description of their organization, and 99.30% of hospitals provided links to other corporate websites in which their organization is present (e.g., affiliated universities or research centers).

Values

This indicator was used to assess whether each hospital stated its corporate values. According to our analysis, 2.13% of the hospitals describe their values.

Mission

This indicator was examined by examining whether each hospital described its corporate mission. The results indicate that 18.80% of the hospitals provided this description.

Vision

Similarly, this indicator was used to determine whether each hospital described its vision. It was found that 6.02% of the analyzed hospitals describe their vision.

Corporate Culture

To study this element, two indicators were used: a) a description of awards and recognition received by the hospital and b) corporate videos in which hospital medical personnel prominently appeared. Analysis revealed that 18.80% of the hospitals advertised their awards and recognitions, and 18.09% provided corporate videos in which the prominent figures were health professionals who were employed by the hospital.

Corporate Image

To assess this element, three indicators were used: a) a description of historical milestones, b) the presence of the corporate logo in the profile picture and c) a description of corporate events in which the hospital participated. According to the results, 43.97% of the hospitals cite the milestones that have played a leading role in the organizations’ history (i.e., organizational expansion or research findings), 87.59% use a corporate logo as the main image on their Facebook profile, and 32.27% describe a corporate event in which the hospital participated (e.g., conferences or seminars on health prevention).

As shown in Table 2, 80.5% of the 300 hospitals utilize three to five of the 10 indicators. Additionally, no hospital with an active Facebook profile failed to utilize at least one of the 10 indicators. The four hospitals that utilized the most indicators (a total of eight indicators each) were the University of Pittsburgh Medical Center, the Carolinas Healthcare System, the Palo Alto Medical Foundation and NCH Healthcare System, Naples Hospital (Table 3). Finally, the three most frequently appearing indicators were links to the hospital’s other corporate websites, the description of the hospital organization and the presence of the hospital’s corporate logo in the profile picture (Table 4).

Table 2. Percentage of Utilized Indicators

Number of indicators	Number of hospitals	Percentage
10	0	0%
9	0	0%
8	4	1.42%
7	9	3.19%
6	24	8.51%
5	72	25.53%
4	86	30.50%
3	69	24.47%
2	14	4.96%
1	4	1.42%
0	0	0%

Total	282	100%
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Table 3. Hospitals That Utilize at Least 70% of the Indicators

Hospital	Number of indicators
University of Pittsburgh Medical Center	8
Carolinas Healthcare System	8
Palo Alto Medical Foundation	8
NCH Healthcare System, Naples Hospital	8
Texas Health Resources, Inc.	7
Mount Sinai Medical Center New York	7
Henry Ford Hospital	7
Baylor Health Care System	7
BayHealth Medical Center	7
Broward Health	7
National Institutes of Health Clinical Center in Bethesda, Maryland	7
Fletcher Allen Health Care	7
Arthur G. James Cancer Hospital and Richard J. Solove Research Institute	7

Table 4. Most-Utilized Indicators

Indicator	Percentage of hospitals that use this indicator
1. Links to the hospital's other corporate websites	99.30%
2. Description of the company	92.20%
3. Hospital logo in the profile picture	87.59%
4. Description of historical milestones	43.97%
5. Description of corporate events	32.27%
6. List of awards and recognitions	18.80%
7. Description of mission	18.80%
8. Videos on doctors from the hospital	18.09%
9. Description of vision	6.02%
10. Description of values	2.13%

Based on these and other findings, each of the research questions can be answered:

Regarding RQ1, results suggest that US hospitals believe Facebook is a strategic tool for disseminate brand architecture. How useful was not determined, but 94% of the surveyed hospitals have an active profile in this social media. But if the number of elements of architecture indicate either commitment to full utilization or knowledge of what would constitute full utilization, then results suggest that Facebook is under utilized to disseminate hospitals' brand equity. For noting, 80.5% of hospitals only use three to five of the studied indicators; no hospital uses all 10 indicators.

That is, Facebook seems to be perceived to be a useful tool for corporate communications, but it is under utilized according to the method applied in this study The interactivity options that Facebook offers enable organizations to encourage "virality" and improve the attitude of stakeholders toward their brands (Thackeray, Hanson, & McKenzie, 2008).

Regarding RQ2, according to the data obtained, only a small number of hospitals disseminate their brand architecture on Facebook in a complete and orderly manner: 18.80% of hospitals describe their mission,

6.02% describe their vision, and 2.13% describe their corporate values. Other aspects of corporate identity are more consistently addressed, such as the provision of links to the hospital's other corporate pages (99.30%) and the description of the hospital (92.20%). The links to other pages are of particular interest because, as noted by McCarroll et al. (2014), the success of a hospital in social media is determined by its ability to report accurately which other networks it is present in.

Regarding RQ3, most hospitals believe that thanks to Facebook, their organization's brand image can improve. In fact, 87.59% of the analyzed hospitals provide their corporate logo in their profile picture, 43.97% explain the hospital's major historical milestones (e.g., opening new offices or clinical findings), and 32.27% describe events in which the hospital participates, such as conferences, scientific meetings and other events for the dissemination of scientific information. As Park et al. (2011) note, healthcare organizations strategically use Facebook for branding and promoting their brand image. However, these organizations still must improve their use of the many tools applied to promote consumer-generated advertising and viral marketing. In social media, a hospital's brand identity is created through the profile. Therefore, it is important that photographs of the organization and information on the organization's history appear in this profile (Scott, 2010).

Regarding RQ4, according to the data obtained, Facebook allows hospital to differentiate their brand from the competition. According to the data obtained by analyzing the last 100 hospitals (World Hospitals Ranking Web of Spain's Superior Council of Scientific Research (Consejo Superior de Investigaciones Científicas de España - CSIC), only 31% of those hospitals have an active Facebook profile. However, hospitals that have a Facebook profile use only a few communications indicators, as it is shown in Table 5. At the same time, none of the bottom hospitals use links to other corporate websites, nor do they describe their vision and corporate values. Only 6.45% describe their mission. In relation to these hospitals, 58.05% use as corporate image their logo in the Facebook profile. Thus, the bottom ranked hospitals appear to use Facebook less strategically and comprehensively to create their brand identity.

Table 5. 300 first hospitals vs. 100 last hospitals

Indicator	300 first	100 last
1. Links to the hospital's other corporate websites	99.30%	0%
2. Description of the company	92.20%	29,03%
3. Hospital logo in the profile picture	87.59%	58,06%
4. Description of historical milestones	43.97%	3,23%
5. Description of corporate events	32.27%	16,13%
6. List of awards and recognitions	18.80%	0%
7. Description of mission	18.80%	6,45%
8. Videos on doctors from the hospital	18.09%	6,45%
9. Description of vision	6.02%	0%
10. Description of values	2.13%	0%

Discussion

Our results enable us to affirmatively answer the four questions on which this article is based, but with some reservation:

RQ1: For US hospitals, is Facebook a useful tool to disseminate brand architecture?

RQ2: Do these organizations take advantage of the visibility afforded by Facebook to spread their brand architecture, i.e., their identity, mission, vision, values and culture?

RQ3: Is Facebook viewed as a platform to enhance the hospital's brand image?

RQ4: Does the use of Facebook in these ways and to these ends differentiate the top ranked US hospitals from the bottom ranked ones?

This article analyzed the usefulness and completeness of social media as a means for hospitals to disseminate their brand architecture. For such organizations, social media pose radical challenges that require hospitals to modify their communications strategies (Ratzan, 2011) if they are to properly manage the corporate image that is transmitted (Park, Rodgers, & Stemmler, 2011). Among social media, Facebook is prominent. Organizations that project an attractive brand identity through this social media can attract many visitors to their professional community (Tuten, 2008) and thereby more efficiently achieve their organizational goals (Park et al., 2011). These goals include reaching key publics and establishing the organizations' brand architecture. However, and this is crucial, even the highest ranked hospitals seem to underutilize Facebook because they do not use all of the elements of brand architecture. This is even more the case for the lower ranked hospitals.

The results presented in this study provide a solid basis for future research. Topics that could lead to future studies include the integration of Facebook with other social media and its impact on the construction of hospital branding, the role of social media in the hospital's overall corporate communications strategy and the impact of social media as a tool for internal communications. Such research would contribute positively to overcoming the limitations of this study, such as the neglect of the global strategies of institutional communication of the analyzed hospitals or the presence of the hospitals on other social media, such as Twitter, MySpace, LinkedIn and Patientslikeme.com.

Conclusions

Social media networks are substantially transforming the institutional communications conducted by hospitals. There are several cornerstones in which hospital communications participate in social media. Among them are the active role of the patient, the increased presence of health professionals, the content integration and the need to constantly disseminate scientific content. As networks make for information about hospitals available to patients, those patients become seemingly insatiable in their search for information. This spiral effect suggests that the best hospitals, the ones with the most to say about their identity, mission, vision, values, culture, and image can and are taking advantage of the potential offered by Facebook.

In conclusion, three final ideas are worth noting. First, to properly integrate social media into a hospital's overall institutional communications plan, professional management of social media use is necessary. According to the study about the first 300 hospitals, only 37 hospitals utilize six or more indicators, and most hospitals do not describe transcendent corporate issues, such as the hospital's mission, vision, and values. According to the 100 bottom ranked hospitals, none hospitals describe its vision, values and only 6.45%

explain its corporate mission. Second, the use of video as a tool for corporate communications on Facebook is not wide spread. In fact, only 18.09% of the leading 300 hospitals analyzed provide videos in which the leading figures are health professionals. Video represents an interesting opportunity for those hospitals that wish to reach all audiences, particularly young audiences and journalists. Third, beyond the concrete results of this study, it should be noted that before activating their Facebook profile, hospitals should reflect strategically on the communicative goals they wish to achieve through Facebook, the indicators they will use to measure their progress and the mechanisms that will enable continuous improvement in the pursuit of their objectives.

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Appendix

Appendix 1: List of Analyzed 300 Hospitals of the top

In July 2014, according to the CSIC (Superior Council of Scientific Research (Consejo Superior de Investigaciones Científicas de España - CSIC), which is one of the most renowned scientific organizations in Europe, the 300 best hospitals in the United States were: 1) Cleveland Clinic Cleveland Ohio, 2) Johns Hopkins Medicine, 3) St Jude Children's Research Hospital, 4) Mayo Clinic Scottsdale AZ, 5) M D Anderson Cancer Center, 6) Massachusetts General Hospital, 7) Memorial Sloan Kettering Cancer Center, 8) Deer's Head Hospital Center, 9) Hartford Hospital, 10) Beth Israel Deaconess Medical Center Needham, 11) Brigham and Women's Hospital, 12) Aurora Health Care, 13) Providence Health & Services, 14) Kaiser Permanente CA, 15) Tricare Military Health System, 16) University of Pittsburgh Medical Center, 17) Navy Medicine, 18) Advocate Health Care, 19) University of North Carolina Healthcare, 20) University of Wisconsin Health, 21) Arizona State Hospital, 22) Children's Hospital of Philadelphia, 23) Seattle Children's Hospital and Medical Center, 24) NewYork-Presbyterian / Lower Manhattan Hospital, 25) Children's Hospital Boston, 26) Children's Mercy Hospitals and Clinics, 27) University of Virginia Health System, 28) Cincinnati Children's Hospital Medical Center, 29) Ochsner Health System, 30) Long Island Jewish Medical Center, 31) H Lee Moffitt Cancer Center & Research Institute, 32) Scripps Health System San Diego, 33) Sutter Health Hospitals, 34) Group Health Cooperative Health Care System Seattle, 35) Texas Health Resources Inc., 36) University of Maryland

Medical Center, 37) Carolinas Healthcare System, 38) Mount Sinai Medical Center New York, 39) Lahey Clinic, 40) Henry Ford Hospital, 41) University of Chicago Hospitals, 42) Partners Healthcare System, 43) Intermountain Healthcare ID, 44) Children's Healthcare of Atlanta Pediatric Hospital, 45) St David's Health Care, 46) UCLA University of California Los Angeles Health System CA, 47) Sanford Health (Union Hospital Mayville North Dakota), 48) Mercy, 49) Society of Cardiovascular and Interventional Radiology, 50) Peacehealth, 51) University of Iowa Hospitals and Clinics, 52) University of Michigan Health System, 53) University of Utah Health Care, 54) Nemours Healthcare for Children, 55) Children's National Medical Center Washington D.C, 56) Banner Health, 57) Indiana University Health Bloomington, 58) Kennedy Krieger Institute, 59) Baptist Health System San Antonio Texas, 60) Hospital for Special Surgery, 61) Allina Health, 62) Cedars Sinai Medical Center, 63) Fox Chase Cancer Center, 64) Ohio State University Medical Center Columbus Ohio, 65) Maine Medical Center, 66) Georgia Regents Health System, 67) Dana Farber Cancer Institute Boston MA, 68) Inova Health System Northern Virginia, 69) Lifebridge Health, 70) Community Health Network Indianapolis, 71) Scott and White Memorial Hospital, 72) Dartmouth Hitchcock Medical Center Lebanon NH, 73) University Hospitals of Cleveland Ohio, 74) Sherman Health Hospital, 75) California Pacific Medical Center, 76) NorthShore University HealthSystem, 77) University of Missouri Health Care, 78) Virginia Mason Medical Center WA, 79) Rex Healthcare, 80) Fort Healthcare, 81) City of Hope Duarte – California, 82) St Louis Children's Hospital, 83) HealthPartners, 84) Medical University of South Carolina, 85) Stanford Hospital & Clinics CA, 86) National Jewish Medical and Research Center, 87) Baylor Health Care System, 88) Palo Alto Medical Foundation, 89) Fairview Health Services, 90) Gwinnett Medical Center Lawrenceville Georgia, 91) Northwestern Memorial Hospital Chicago IL, 92) Jane & Terry Semel Institute for Neuroscience & Human Behavior at UCLA, 93) Sharp Healthcare San Diego CA, 94) Duke University Health System, 95) Lifespan Health System, 96) Froedtert Hospital and Medical College of Wisconsin, 97) University of California San Diego Medical Center, 98) Centura Health, 99) Willis Knighton Health System, 100) Nationwide Children's Hospital, 101) Edmond Medical Center, 102) Christiana Care Health System, 103) Boston Medical Center, 104) Catholic Healthcare West, 105) Franciscan Health System, 106) BayHealth Medical Center, 107) Texas Children's Hospital, 108) Riverside Health System, 109) SoutheastHealth, 110) University of Kentucky Healthcare Good Samaritan Hospital Lexington, 111) Seton Healthcare Family, 112) Emory Healthcare, 113) Children's Hospital Los Angeles, 114) Nebraska Medical Center, 115) Catholic Health Services Lauderdale Lakes FL, 116) University of Pennsylvania Health System, 117) Marshfield Clinic, 118) St Luke's Idaho Health System, 119) Lurie Children's Hospital of Chicago (Children's Memorial Hospital), 120) Contra Costa Regional Medical Center, 121) Resurrection Health Care, 122) Florida Hospital Memorial System Ormond Beach FL, 123) Crouse Hospital Syracuse, 124) Weiss Memorial Hospital, 125) Methodist Health System North Texas Dallas Hospitals, 126) Cancer Treatment Centers of America, 127) Munson Healthcare (Mercy Hospital Cadillac), 128) Coxhealth, 129) Children's Hospital of Wisconsin, 130) Swedish Medical Center WA, 131) Norton Health Care, 132) Provena Health, 133) Temple University Children's Medical Center, 134) Memorial Hermann Northeast Hospital, 135) Phoebe Putney Memorial Hospital (Dorminy Medical Center), 136) Orlando Health, 137) University of Washington Medicine, 138) Avera Health, 139) Lee Memorial Health System, 140) Tenet Healthsystem Medical, 141) Anne Arundel Medical Center, 142) Greater Baltimore Medical Center, 143) Broward Health, 144) Greenville Health System, 145) National Institutes of Health Clinical Center in Bethesda Maryland, 146) Sarasota Memorial Hospital, 147) Children's Hospital of Pittsburgh, 148) Mclean Hospital Psychiatric Hospital, 149) Fletcher Allen Health Care, 150) Arthur

G James Cancer Hospital and Richard J Solove Research Institute, 151) Oroville Hospital, 152) Baptist Health South Florida, 153) Hoag Hospital, 154) Winchester Hospital, 155) Penn State Milton S Hershey Medical Center, 156) Palmetto Health, 157) Christus Santa Rosa Health Care, 158) Mission Health, 159) Children's Hospital Denver, 160) Long Island IVF (East Coast Fertility), 161) Children's Hospitals & Clinics of Minnesota, 162) St John Health System Warren Michigan, 163) Sentara Healthcare, 164) Saint Luke's Health System, 165) Rady Children's Hospital San Diego, 166) National Cancer Institute Center for Cancer Research, 167) Vanderbilt Children's Hospital, 168) Adventist Midwest Health, 169) Geisinger Medical System, 170) Children's Medical Center of Dayton, 171) Mainehealth, 172) Oakwood Healthcare System, 173) Abrazo Health Care, 174) Edward Hospital & Health Services, 175) Montefiore Medical Center, 176) OhioHealth, 177) Texas Heart Institute at St Luke's Episcopal Hospital, 178) Loma Linda University Adventist Health Sciences Center, 179) Seattle Cancer Care Alliance WA, 180) Wellspan Health, 181) Legacy Health System Oregon, 182) Integris Health, 183) Kaleida Health Facility, 184) Piedmont Healthcare, 185) Meridian Health, 186) McLaren Health Care, 187) Cook Children's Health Care, 188) University of California San Francisco Medical Center CA, 189) Roswell Park Cancer Institute (Western New York Neuro Oncology Center), 190) William Beaumont Hospital, 191) St.Vincent Dunn Memorial Hospital, 192) Cooper University Hospital, 193) Johns Hopkins Children's Center, 194) Scottsdale Healthcare, 195) Health First Care Florida, 196) Robert Wood Johnson University Hospital New Brunswick New Jersey, 197) Vail Valley Medical Center, 198) Detroit Medical Center MI, 199) Yale New Haven Hospital, 200) Hospital Corporation of America, 201) Children's Hospital of The King's Daughters, 202) Greenwich Hospital Connecticut, 203) Novant Health, 204) Park Nicollet Health Services, 205) Dana Farber/Harvard Cancer Center Boston MA, 206) Akron Children's Hospital, 207) Spectrum Health, 208) New York Eye and Ear Infirmary, 209) St Joseph's Baptist Healthcare, 210) Bjc Healthcare, 211) Kindred Healthcare, 212) Miami Children's Hospital, 213) Barnes Jewish Hospital, 214) Valley Health System Ridgewood NJ, 215) MaineGeneral Health, 216) Wellstar Health System, 217) Metrohealth System, 218) Children's Hospital Central California, 219) Healtheast Care System, 220) Multicare Health System WA, 221) Humana Military Healthcare Services, 222) KidspaceChildrens Hospital, 223) Virginia Commonwealth University Health System, 224) Children's Medical Center of Dallas, 225) Dartmouth-Hitchcock Norris Cotton Cancer Center, 226) Via Christi Health System, 227) Memorial Healthcare System South Florida Hospital, 228) Reid Hospital & Health Care Services, 229) Promedica Health System, 230) UnityPoint Health, 231) Wakemed Health & Hospitals Raleigh, 232) Children's Hospital of Orange County, 233) South Carolina Hospital Association, 234) University Health System Hospital San Antonio, 235) J C Blair Memorial Hospital, 236) Somerset Medical Center, 237) Genesis Health System Davenport IA, 238) Chatham Hospital, 239) Maimonides Medical Center Brooklyn New York, 240) Metrowest Medical Center, 241) University of Pittsburgh Cancer Institute, 242) All Children's Hospital, 243) Springfield Hospital, 244) Bascom Palmer Eye Institute, 245) Mercy Hospital Medical Center des Moines, 246) Hunterdon Healthcare, 247) Middlesex Hospital, 248) Genesis Healthcare, 249) Saint Barnabas Health Care System, 250) Atlantic Health System, 251) John Muir Health Surgery Center Hospital and Medical Center, 252) University of Kansas Hospital, 253) University of Florida Health, 254) Community Medical Center MT, 255) NCH Healthcare System Naples Hospital, 256) Brandon Regional Hospital, 257) Mississippi Baptist Health Systems Inc., 258) Lancaster General, 259) EyeCare America, 260) Keesler Afb Medical Care, 261) Albert Einstein Healthcare Network, 262) Penrose St Francis Health Services, 263) Frederick Memorial Healthcare System, 264) Thomas Jefferson University Hospital, 265) Main Line Health, 266) Tufts New England Medical Center & Floating

Hospital for Children, 267) El Camino Hospital Mountain View CA, 268) Covenant Health Knoxville TN, 269) University of Arkansas for Medical Sciences UAMS Medical Center , 270) Louisiana State University Health Sciences Center Shreveport, 271) Valley Health Winchester VA, 272) University of Tennessee Medical Center, 273) New Hanover Health Network, 274) Adventist Healthcare Rockville MD, 275) Massachusetts Eye and Ear Infirmary, 276) Denver Health, 277) St Marys of Evansville, 278) Fort Walton Beach Medical Center, 279) Ministry Health Care, 280) Marquette General Health System Regional Medical Center, 281) Macneal Hospital, 282) Cleveland Clinic Lerner Research Institute Cleveland Ohio, 283) Centra Health, 284) Morton Plant Mease Health Care, 285) University of Colorado Hospital, 286) University of Arizona Health Network, 287) Trident Health System, 288) West Penn Allegheny Health System, 289) North Florida Regional Medical Center, 290) Children's Hospital of Michigan, 291) Dell Children's Medical Center of Central Texas, 292) Affinity Health System, 293) Arkansas Children's Hospital Heart Center, 294) Houston Methodist, 295) UMass Memorial Health Care, 296) Lucile Packard Children's Hospital At Stanford CA, 297) Unity Health System, 298) Columbia University Medical Center Department of Surgery, 299) University Health Care System y 300) St Anthony Hospital Denver CO.

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Appendix 2. List of last 100 Hospitals

In July 2014, according to the CSIC, the 100 last hospitals in the United States were as follows: 1) E J Noble Hospital of Gouverneur, 2) McCall Memorial Hospital, 3) Columbus Community Hospital, 4) Northridge Medical Center, 5) Oneida County Hospital Id, 6) Decatur County General Hospital Parsons Tennessee, 7) Riverside Medical Center Franklinton Louisiana, 8) Bethesda Center for Reproductive Health and Fertility, 9) Shifa Community Clinic, 10) River Point Behavioral Health Jacksonville Florida, 11) Bamberg County Hospital & Nursin Center, 12) William Bee Ririe Hospital, 13) Women's Health Clinic Shreveport Obgyn, 14) Little Rock Eye Clinic, 15) St John's Lutheran Hospital Libby Montana, 16) Uconn Health Center Clinical Research Center, 17) Appleton Area Health Services, 18) JFK Health System (Solaris Health Systems), 19) Kindred Hospital Pittsburgh, 20) Saunders County Health Services, 21) Cardiac Study Center, 22) Sequoyah Memorial Hospital, 23) Lake Area Medical Center, 24) Patient's Hospital of Redding, 25) Woman's Center for Reproductive Medicine Louisiana Fertility Clinic, 26) Keokuk Health Systems, 27) Greenwich Fertility & Ivf Center P.C., 28) Lincoln Center Obstetrics & Gynecology P.A., 29) Dr Bills Clinic Inc., 30) Mcnairy Regional Hospital, 31) Mckenzie Regional Hospital McKenzie TN, 32) Kindred Hospital Fort Worth, 33) Eye Clinic Inc. Massillon, 34) Towner County Medical Center, 35) Santamaria Eye Center, 36) Santiam Memorial Hospital OR, 37) Shapiro Laser Eye Center, 38) DeSoto Regional Health System Mansfield Louisiana, 39) Brownfield Regional Medical Center, 40) Nelson County Health System Care Center, 41) Wyandot Memorial Hospital, 42) Pioneer Community Hospital of Aberdeen, 43) Sanford Tracy Medical Center, 44) West Coast Infertility Medical Clinic Inc., 45) Midtown Urology and Midtown Urology Surgical Center, 46) Massac Memorial Hospital, 47) North General Hospital, 48) Visalia Medical Clinic, 49) Winn Parish Medical Center, 50) Kindred Hospital Central Tampa, 51) Kindred Hospital Cleveland Gateway, 52) Franklin County Memorial Hospital &

Rural Health Clinics Franklin Nebraska, 53) Kindred Hospital Chattanooga, 54) Vibra Hospital of Denver, 55) Piedmont Ear, Nose, Throat & Related Allergy, 56) Swisher Memorial Hospital District, 57) Mciver Urological Clinic, 58) Kindred Hospital Santa Ana, 59) Kindred Hospital La Mirada, 60) Janesville Psychiatric Clinic Wisconsin, 61) Kindred Hospital Houston Northwest, 62) Intermedical Hospital of Sc, 63) Wilkes Regional Medical Center North Wilkesboro NC, 64) Livingston Hospital and Health Services Inc Cha, 65) Diagnostic Imaging P.C., 66) Lasercare Eye Center P.A., 67) Braxton County Memorial Hospital, 68) Radiation Oncology Department University of Arizona, 69) Rye Psychiatric Hospital Center, 70) Shoshone Medical Center ID, 71) Adult and Pediatric Urology Sartell Minnesota, 72) Memorial Health Center Hospital Medford WI, 73) Denver Eye Clinic, 74) Conrad Pearson Clinic Urology Center, 75) Center for Urologic Care of Berks County, 76) Kula Hospital, 77) Morrill County Community Hospital, 78) Wayne General Hospital, 79) Brenart Eye Clinic, 80) Union Community Health Center, 81) North Mississippi State Hospital, 82) Aurora Eye Clinic, 83) Cardinal Health System Ball Memorial Hospital Healthcare In Muncie Indiana Ball Hospital, 84) Oncology Center of Central Baltimore, 85) Faith Community Hospital, 86) Eagle Vision & Eye Clinic, 87) Rice County District Hospital, 88) Urology Clinic Physicians & Surgeons, 89) Westview Hospital, 90) Johnson County Healthcare Center WY, 91) UR Medicine University of Rochester, 92) Sandhills Regional Medical Center, 93) Huron Medical Center, 94) Kindred Hospital Dayton, 95) San Diego Cardiac Center, 96) Medical Oncology and Hematology Associates The Cancer Center of Iowa, 97) Pershing General Hospital/Nursing Home NV, 98) Kansas City Eye Clinic, 99) Doctors Memorial Hospital Perry Florida and 100) Avoyelles Hospital.

Official website:

http://hospitals.webometrics.info/es/North_america_es/Estados%20Unidos%20de%20Am%C3%A9rica