Study on Doctor-patient Communication Based on the Hospital Microblogs

Chen Wang and Huiying Qi

ABSTRACT

Hospital microblog can be used as a platform for new media advertising health knowledge to public and do communication with patients. This study selects the influential 15 hospitals in medical industry. It analyses hospital microblogs as propagation characteristics of doctor-patient communication channel. The microblogs' behavioral was analyzed from multiple angles. The results show that microblog has become a new platform beyond traditional channels of communication between doctors and patients. This article suggests that blogs about the doctor-patient conflicts must have a clear mind and report the doctor-patient conflicts fairly and objectively, and then they will promote doctor-patient relationship sound development. Hospital microblog should analyze what is the common public’s most concerns about and the microblog platform should raise awareness of services the public and also help to promote the harmonious development of the doctor-patient relationship.

INTRODUCTION

In recent years, violent incident on doctor-patient relationship has occurred frequently in China, the contradiction in the doctor-patient relationship has a strong impact on the normal medical treatment [1-5]. Microblog and Wechat are represented for the new media which provide a new communication way for users in

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China, they gradually become important social networking platforms. These new media changes and affects people's access to get information potentially, also influences people's real life. Yu Fei and others researchers investigated on the situation of large public hospital official microblog and found that due to May 1, 2013, there were 140 large public hospitals in total using microblog around China. They analyzed the usage of the official microblog in 31 provincial hospitals and found these official microblog average usage rate is 21.44%. They thought it was necessary to promote the popularity of official microblog, increase the power of microblog’s widespread[6]. According to static data of SinaWeibo, He Jun and others analyzed for public hospital official microblog related data. The result shows that all of the top 30 influential hospital microblogs are third-grade class-A hospital and located in the provincial capitals of large cities. They consider that microblog has become an important tool for large hospitals to communicate outward[7]. Hospital’s social media is an essential part which is worth to pay more attention in global. In a longitudinal study, researchers explored the use of social media by hospitals in 12 Western European countries through an Internet search. From this research we can learn that social media awareness in Western European hospitals is growing, as well as its use[8]. Clara and others study usage of social media in Spain hospital. The study found that the importance of fully using the social media on the development of health care industry[9].

This study is to analyze spread behavior, law of hospital microblog spread and its behavior and content features in multi-angle from the perspective of doctor-patient communication. And it can provide beneficial reference to the health care industry microblog construction and improvement. Also it makes suggestions for improvement of doctor-patient communication.

METHODS

Research data must be obtained from the representative platforms. In following four platforms of microblog in China: Sina, Tencent, People's Daily Online and Xinhua. Sina Weibo is largest Internet market of microblog platform with the most users in China. The hospitals mostly official register in Sina Weibo. Therefore, we choose Sina Weibo’s data as the research object in this study.

Data Analysis Procedures

There are the main steps of the specific procedure of data analysis. First is to determine the object of study: select several influential hospital microblogs in the Sina Weibo as the object, then using Sina Weibo API to obtain the study data. Second, data’s process and analysis includes three steps: 1) Data cleaning, this step is mainly to remove duplicate data; 2) Feature extraction, is target to the extraction of keywords, named entities, such as location, following number, number of fans and blogs etc; 3) Standardization of data processing: it refers to the data needs to be
processed in uniform format according to the analysis. Finally, doing the calculation and display results.

**Determination of the Object of Study**

Currently, there are two institutions evaluating the user influence of Sina Weibo, one is Sina Billboard (http://top.weibo.com/), the other is Microblog Billboard (www.tfengyun.com). They release a microblog influence ranking of different industries every day. Because the Sina Billboard and Microblog Billboard differ from classification, the influence ranking is dynamic. This study selects the top hospitals in the both institutions’ influence ranking for a long period of time. Dynamic tracking from 2014.05.01 to 2017.5.1, the highest frequency of occurrence of the hospitals are closed in the Sina Billboard. The 15 hospitals were selected as study object. The objects are shown in Table 1. Data was obtained through interface users or provided by Sina Weibo API.

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Domain Name</th>
<th>Old Number</th>
<th>Opening Time</th>
<th>Number of followers</th>
<th>2017.10.20</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>West China Hospital of Sichuan University</td>
<td><a href="http://www.weibo.com/schxy">http://www.weibo.com/schxy</a></td>
<td>1726458667</td>
<td>2011</td>
<td>1076633</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Peking University People’s Hospital</td>
<td><a href="http://www.weibo.com/pkgh">http://www.weibo.com/pkgh</a></td>
<td>2042629455</td>
<td>2011</td>
<td>651527</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Peking Union Medical College Hospital</td>
<td><a href="http://weibo.com/pingxianghospital">http://weibo.com/pingxianghospital</a></td>
<td>1654601402</td>
<td>2010</td>
<td>82513</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Peking University First Hospital</td>
<td><a href="http://weibo.com/bddyys">http://weibo.com/bddyys</a></td>
<td>2171392531</td>
<td>2009</td>
<td>141396</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>The people’s Hospital of Sichuan Province official</td>
<td><a href="http://www.weibo.com/sesimmy">http://www.weibo.com/sesimmy</a></td>
<td>2256923854</td>
<td>2010</td>
<td>104010</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>The people’s Hospital of Liaoning Province</td>
<td><a href="http://www.weibo.com/lphb">http://www.weibo.com/lphb</a></td>
<td>18911959007</td>
<td>2011</td>
<td>269584</td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Shanghai Children’s Hospital</td>
<td><a href="http://weibo.com/shchldren">http://weibo.com/shchldren</a></td>
<td>2035275872</td>
<td>2010</td>
<td>387645</td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>Zhengzhou People’s Hospital</td>
<td><a href="http://weibo.com/zzmmyy">http://weibo.com/zzmmyy</a></td>
<td>1919096437</td>
<td>2011</td>
<td>183272</td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>Xiangya Hospital of Central South University</td>
<td><a href="http://www.weibo.com/190">http://www.weibo.com/190</a></td>
<td>1905961317</td>
<td>2010</td>
<td>26101</td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>Second Hospital of Zhejiang Medical</td>
<td><a href="http://weibo.com/u/202">http://weibo.com/u/202</a></td>
<td>2025503851</td>
<td>2010</td>
<td>78228</td>
<td></td>
</tr>
</tbody>
</table>
RESULTS

As can be seen from Table 1, most hospitals microblog is opened in 2011. Sina launched the first microblog service in August 2009, which marked the debut of the microblog in China. In 2010, microblog was accepted by the public, microblog has become a trend. In 2011, China's microblog users were fast growing, China microblog users has reached 195 million people, and China microblog market has gradually become mature.

Comments and Forward Analysis

The average number of comments and average number of forwards refer to the mean of the total numbers in terms of comments and forwards respectively. The value of microblog is reflected by large amounts of comments and forwards, which form a communication with freedom and equality. The more interaction online between a hospital and their fans, the more appealing a hospital is to the public. Microblog also plays an important role in the communication between doctors and patients. We can see that the average number of comments and forwards are not high for some influential hospitals due to their senseless content that doesn’t interest the fans. It is highly important that we revisit those contents and figure out the preferences of the fans. This will facilitate a hospital to attract more fans to its microblog and post meaningful messages.

Number of Posts and Originality Analysis

The daily average number of posts is derived by dividing the total number of microblog posts by the number of days. The originality rate refers to the number of original posts per 100. As we can see from the hospitals have 1 to 3 posts per day. This concludes that a few posts per day would suffice to keep influential. We can infer that originality of the posts plays an important role in the posts by the influential hospitals. Hospitals remain at least 50% originality. This concluded that originality of the microblog posts helps enhance the attraction and influence, which becomes a crucial prerequisite of remaining influential and interactive with patients online.

Attention Rate Analysis

Attention rate refers to the percentage of the active followers of hospital microblog. Table 1 indicates that 60% of the hospital has attention rate between 0.1% and 0.2%. This concludes that the attention rate doesn’t differ much from hospital to hospital. Overall the attention rate is not high for hospital microblog. On one hand, the fans only pay attention to a hospital microblog while under treatment. Once they are cured, they immediately unfollow it. This is mainly why hospital microblog have large number of fans but rare attention. On the other hand, there’s
large space for improvement for the contents posted by the hospitals’ official microblog accounts. Increasing the attention rate could help increasing the number of comments and forwards of microblog posts and therefore utilize microblog’s function as a communication channel.

The Characters of Posting Time

The analysis of the posting time by hospital microblog is depicted in Figure 2. As we can see, they posts mostly between 8 am and 11 am. The second most frequent posting period is between 2 pm and 5 pm. This is the same as hospitals’ working hours. In particular, hospitals barely post anything in the evening, which indicates that they don’t value the hours off work. But as a matter of fact, evening is the most active time of the day for microblog users. If hospitals assign people to take the responsibility of evening posts, the chance of interacting with the microblog followers will increase. By taking advantage of microblog as an open communication channel, the positive impact of interacting with patients can be improved.

CONCLUSIONS

A comprehensive evaluation and analysis of data by microblogs of influential hospitals, they found that microblog has become a new patient interaction platform beyond traditional channels of communication between doctors and patients. The use of hospital microblog is a beneficial exploration in patient-doctor’s communication in the today’s internet work. In the issues of how to make good use of new media’s unique characteristics and make microblog as a platform to maximize its effect in terms of doctor-patient communication, we propose the following:

First, blogs about the doctor-patient conflicts, as a hot issue, once it has been published, from publishing to forward, the whole process is a disclosure transfer. As
Everybody knows, during the transfer of information, there always have fans interpret or question it. However, fans are of good and bad qualities, so there will be some emotional and extreme expression. More than that, it is difficult to avoid causing trouble deliberately, and there also may have meaningless comments. Hospital Microblogging must have a clear mind, and it should not be influenced by negative emotions and bad environment on the network. Only by report the doctor-patient conflicts fairly and objectively, then will promote its sound development.

Secondly, the microblog platform should be the actual demand and release useful information to the public. However, the existing hospital blogs always focus on their own news releasing, such information does not catch the public interest, even dismissive. This kind of blogs not only did not play the role of promoting hospital’s influence, but also let the public lose interest in microblog. All in all, hospital microblog should analyze what is the common public most concerns about and release information in an actual demand-oriented way.

Finally, the use of micro-blog platform enables hospitals and the public communicate timely, and the microblog platform should raise awareness of services the public, quickly access valuable information from fans’ replies, take public actual demand as their goal, so that they can improve the quality of services, and also help to promote the harmonious development of the doctor-patient relationship.

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REFERENCES