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Use of Facebook by Local Health Departments: Usage, Public Health Themes, and Maintenance

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Use of Facebook by Local Health Departments: Usage, Public Health Themes, and Maintenance

Abstract

Background: Recent research shows that social media offer unprecedented opportunities for communications with stakeholders in public health and other industries.

Purpose: This study examines the manner in which U.S. local health departments (LHDs) use Facebook. Public health program themes discussed on Facebook profiles of LHDs were analyzed and ranked by the frequency of mentions on Facebook.

Methods: LHDs included in the study were those indicating use of Facebook in the 2010 National Profile of Local Health Departments. Using the list from the profile study, the primary data from LHDs' public Facebook profiles were collected over a period of 4 months. A content analysis of the active Facebook profiles was performed; this identified themes that were discussed in the Facebook posts by LHDs and also determined the level of maintenance of LHDs' Facebook profile.

Results: Nineteen public health themes were identified that were being discussed by LHDs. Different levels of maintenance of Facebook profiles was also noted.

Implications: Social media can make a potential difference in providing the essential public health services of informing, educating, and empowering people about health issues, and mobilize community partnerships.

Keywords

Local health departments, social media, social network, Facebook, public health essential services

Cover Page Footnote

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INTRODUCTION

The general frameworks of ten essential public health services (EPHS), often used as a mandate for the local health departments (LHDs), necessitate public health systems to be able to inform, educate, and empower people about health issues (EPHS 3).¹ These frameworks also require public health systems to be able to mobilize community partnerships. Since social media applications like Facebook have the potential to reach a large population in real time, they can be used by LHDs to communicate efficiently and effectively with the communities they serve. Research studies have shown that Facebook is the largest social network known to humans.^{2,3} The most recent data show that there are 1.44 billion active Facebook users worldwide, with 210 million active users in North America alone.⁴ The Centers for Disease Control and Prevention (CDC) has been using Facebook for disseminating health communication messages since May 2009 and currently has 1.2 million Facebook followers. Currently, Facebook is being used variably by LHDs, and several studies have analyzed its adoption by LHDs but the qualitative studies on purpose of usage are rare. This study examined LHD's usage of Facebook, categorizing it by the public health focus areas and analyzed the level to which LHDs maintain their Facebook profile.

METHODS

Data for this study were collected from the publicly available Facebook profiles (NOTE: profile includes Pages and Groups) of LHDs. To identify the nationally representative sample of Facebook users among LHDs, the 2010 National Profile of Local Health Departments (Profile) was used (National Association of County and City Officials [<http://nacchoprofilestudy.org/>]). The Profile Survey questionnaire consisted of a module (Module 1) with questions related to the use of Web 2.0 technologies by LHDs. These Web 2.0 technologies include social networking websites like Facebook, Twitter, YouTube, Blogs, Myspace, and LinkedIn. The module was sent to a statistical sample of 624 LHDs to which 531 LHDs responded (response rate=85.1%). The LHDs were asked: *Does your LHD make use of any of the following Web 2.0 technologies*. They were given the option to select Facebook and other Web 2.0 technologies.

A list was created of all the LHDs that indicated they used Facebook (N=167) and their Facebook pages tracked. Only 141 LHDs' pages on Facebook were located. To conduct content analysis, those Facebook pages of LHDs were reviewed and the posted material scanned over a period of 4 months (January 2014 through April 2014). The data were imported into the qualitative analysis software ATLAS.ti (ATLAS.ti Scientific Software Development GmbH). The univariate frequencies of the 19 themes were then computed.

The level of maintenance of the LHDs' Facebook pages was analyzed by coding them on the basis of the number of posts within the period of 4 months, as follows: the profile *not updated* if no post were found; *rarely updated* if number of posts were from 1 to 10; *often updated* if number of posts were between 11 and 50; and *regularly updated* if posts were >50. IBM SPSS Statistics 21 (for frequencies) and Atlas.ti (for qualitative coding) were used.

RESULTS

Based on the content analysis, 19 public health themes were identified from LHDs Facebook pages (Table 1). Facebook posts were used to disseminate information to various stakeholders on

a variety of topics within the broader domains. Among all the posts, the most frequently covered topic included diet/nutrition/ obesity ($n= 237$, 13.04%). Chronic diseases were the second most frequent topic (diabetes, heart disease, stroke, cancer, obesity, and arthritis; $n= 198$, 10.90%). Communicable diseases ($n= 170$, 9.36%) was a category that included posts related to a wide range, including Ebola, mumps, influenza, and rabies. A separate *other* category was created that included posts by LHDs related to pet care, veterinary information, bed bugs, and movie-nights coordinated through LHDs. Other topics included, tobacco, maternal/child health, clinical care, LHD administration and operation, violence/ injury prevention, environmental health, substance abuse, and the Affordable Care Act.

Table 1. Public health themes identified on Facebook

Public health themes	n*	%
Diet/ Nutrition/ Obesity	237	13.04
Chronic diseases	198	10.90
Emergency Preparedness	181	9.96
Communicable Diseases	170	9.36
Others	160	8.81
Tobacco	150	8.26
Maternal/ Child Health	135	7.43
Clinical care	118	6.49
LHD Administration and operation	104	5.72
Violence/ Injury Prevention	100	5.50
Environmental Health	78	4.29
Substance Abuse	78	4.29
Affordable Care Act	41	2.26
Partners/ Collaborations	17	0.94
Public Health Laws/ Policies	14	0.77
Community Health Assessment	13	0.72
Mental Health	11	0.61
Accreditation	6	0.33
Health Equity	6	0.33
TOTALS	1817	100.00

*frequencies of mentions

Almost 15% of the total LHDs' Facebook profiles maintained more than 50 posts in the 4 months of the study (Table 2). On the contrary, 46.67% LHDs' Facebook pages were not able to post more than one post during the study period.

Table 2. Facebook page maintenance by LHDs

Facebook maintenance	%
No post	46.67
1–10 posts	16.36
11–50 posts	22.42
>50 posts	14.55

IMPLICATIONS

Local health departments use Facebook to disseminate health education materials and communicate with people in their jurisdictions on a variety of public health domains and topics. The results of this study indicate that diet, nutrition, and obesity were the most-discussed public health focus areas on Facebook, suggesting that LHDs are perhaps more concerned about the cardiovascular health and healthy weight management or they find Facebook to be a more appropriate platform for health education for such topics. Facebook was being used to share information about healthy dietary choices in the form of videos and pictures of visually appealing healthy food. Considering the huge population of active users in the age range of 18–29 years (i.e., 87% of Internet users of same age group),⁵ it appears that LHDs are being innovative in motivating people to adopt healthy dietary choices.

There are many other important areas that are targeted by LHDs. Allowing formation of disease-specific discussion groups, particularly for chronic conditions, can be instrumental as virtual support networks, much like peer support networks that help manage the psychological stress associated with these conditions.⁶ Another salient feature of Facebook that can be harnessed efficiently by LHDs is the speed and efficiency of information sharing. Facebook posts related to emergency preparedness seemed useful in informing about inclement weather and shelter areas during the emergency situations like heavy rainfall, thunderstorms, or blizzards. Facebook appeared to offer connectivity to support people during these hazardous situations. Health issues referred to as *Winnable battles* and *2015 targets* by the CDC, including tobacco; motor vehicle safety (coded within violence/injury prevention); teen pregnancy; and HIV (coded within communicable diseases) were also discussed on LHDs' Facebook pages with varying frequencies. A study of the use by LHDs of another form of social media (Twitter) had a slightly different focus. In that study, Niger et al.,⁷ focused on determining whether the flow of information was one-way or it was bidirectional.

These findings indicate that some LHDs can improve their use of Facebook. However, LHDs might consider making their own guidelines for what constitutes an optimum utilization, given their specific needs for information dissemination. The most significant aspect of this study is that it helps identify public health focus areas that might provide ideas for some LHDs in populating their content on Facebook. Identifying these areas also assists in recognizing gaps concerning focus areas not currently covered with adequate frequency in LHD Facebook profiles. The dynamic environment of Facebook and the short period of our study might make our computations of frequencies somewhat less representative of actual frequencies with which these themes are discussed over a longer period. Moreover, the use of relatively older dataset to identify LHDs that represent Facebook users might have made our findings relatively less representative of the current situation. However, this study presents a qualitative picture of the content being presented by LHDs on Facebook. Another limitation of the study is the somewhat arbitrary use of some nominal labels to quantify the regularity of Facebook use, which are used only for organizing the frequency of posts in some manner. The results should be interpreted with this context in mind. This study can also be considered as a foundation for the future studies that involve similar assessments, but in addition use qualitative data on LHD's perception and experience about uses of Facebook, so that optimum use guidelines for other LHDs can be

established. In spite of these limitations, this study provides important insights into the nature of Facebook use by LHDs.

SUMMARY BOX

What is already known about this topic? Facebook and social media are becoming an important means of communication. LHDs increasingly use these media.

What is added by this report? LHDs use Facebook to inform, and educate community partnerships on a number of important public health themes, listed in tables 1. The study categorized 19 public health themes highlighted in Facebook pages and analyzed the level to which each theme is discussed. The study also explored the level of maintenance of LHDs' Facebook profiles.

What are the implications for public health practice, policy, and research? LHDs not familiar with the focus area of Facebook usage might benefit from our findings. Given the potential of Facebook and other social media, LHDs not regularly updating their Facebook pages might want to harness the power of this valuable tool more efficiently. The pattern of use and regularity on which Facebook pages are updated will inform the use of Facebook by LHD currently not using it, and will also aid in expanding those LHD's outreach in online communities.

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