Use of Social Media Marketing in Healthcare

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Abstract
Social media is an umbrella term that defines online technology and practices used to share opinion, insights, experience and perspectives. Social media are low cost marketing tools that help in facilitating the building of networks, instant dissemination of information and thus encouraging trust and confidence of public. It can take many forms like text, images, audio and video. According to Kaplan and Haenlein, there are six different types of social media: collaborative projects (e.g., Wikipedia), blogs and micro blogs (e.g., Twitter), content communities (e.g., YouTube, Flicker), social networking sites (e.g., Facebook, MySpace), virtual game worlds (e.g., World of Warcraft, Whyville), and virtual social worlds (e.g., Second Life). Based on this classification, extensive literature search was done from a range of sources like journals, books and internet websites of relevant disciplines, including public health organizations, hospitals and case studies prepared on each type exploring the use of social media in health promotion. The objective of this paper is to explain the use of social media marketing in health promotion and education and discuss various interventions done, using social media marketing tools in promoting public health. Finally, it is discussed like every coin has two sides, social media provides large opportunity for health promotion in the public health community, enabling public health professionals to reach out far and wide and directly to the public on multiple public health issues and at the same time its cautious use is imperative to prevent colossal damage. Social media, a communication boon for the public health community has the potential to promote and change many health-related behaviours and issues particularly in times of crisis.

Keywords
social media, web 2.0, interactive health, health promotion, virtual world

Introduction
Web 2.0 is a concept that takes network as a platform for information sharing and inter-operability. A Web 2.0 site allows users to interact and collaborate with each other in a social media dialogue as creators and users of the generated content in a virtual community, in contrast to websites where users are limited to the passive viewing of content that was created for them. The term ‘social media’ thus is used to describe an array of new Web 2.0 platforms. It is an umbrella term that defines online technology and practices used to share opinion, insights, experience and perspectives. It can take many forms like text, images, audio and...
video. According to Kaplan and Haenlein (2009), there are six different types of social media: collaborative projects (e.g., Wikipedia), blogs and microblogs (e.g., Twitter), content communities (e.g., Youtube, Flicker), social networking sites (e.g., Facebook, MySpace), virtual game worlds (e.g., World of Warcraft, Whyville), and virtual social worlds (e.g., Second Life) (Kaplan and Haenlein 2009). Social media provides a large market for health promotion with 30 million social media users (Nielson Company May 2011) in India with average spending of three hours per month (Internet and Mobile association of India 2011). These statistics clearly depicts the wide scope of social media and its wide reach in public health. Social media can bring the whole health industry at one’s fingertips by networking with other industry leaders and showcasing potential customers their mission and greatest assets in a visual medium. Currently, 41 per cent of users read blogs, 60 hours of video are uploaded every minute or one hour of video is uploaded to YouTube every second, over 4 billion videos are viewed a day whereas over 800 million unique users visit YouTube each month (2). Also, over 3 billion hours of video are watched each month on YouTube, over 800 million users are on Facebook and at a recent press conference Dick Costolo the CEO of Twitter revealed there are 100 million active users every month, 50 Million users every day, 200 million registered users and Twitter receives 400 million visitors a month (3). These statistics show its time we use the power of wide reach of social media to share, connect, comment and engage.

**Objective**

- To explain the use of social media marketing in health promotion and education.
- To discuss various interventions done using social media marketing in promoting public health.

**Methodology**

Extensive literature search was done from a range of sources like journals, books and internet (websites of relevant disciplines, including public health organizations, hospitals, business/marketing and social sciences). A set of keywords identified to carry out the search were social media, social media marketing, Facebook, blog, YouTube and health. Case studies on each of six types of social media were prepared. These case studies explore the health promotion interventions done by various organizations using social media tool.

**Review of Literature**

The literature on use of social media marketing in healthcare though scanty yet provides various ways through which social media can be used for health promotion and education. Garven J.J. (2010) in his study emphasized that power of social networking is its immediate access to the word of mouth exchange of information, and the word of mouth avenue itself is recognized as the single most effective form of advertising. To tap into this social phenomenon, he says, begin by investing a small amount of time and effort to understand the basics of social networking. For this organizations have to first sign up for Facebook and Twitter. First-hand experience interacting in a social network is the vital first step. The bottom line is simply this: To begin to understand this new arena of communication, you first have to join the conversation (Ibid.). Paton et al. in their study emphasized on how five educators have used social media tools in medical

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and health education to attempt to add value to the education they provide. Each of the authors reported on the use of social media in their educational projects and collaborated on a discussion of the advantages and disadvantages of this approach to delivering educational projects. At the end of the research study, they concluded social media appears to have unique advantages over non-social educational tools. The learning experience appears to be enhanced by the ability of students to virtually build connections, make friends and find mentor (Paton et al. 2011). Previous research shows social media is a valuable (i.e., worthy investment of health promotion resources) and effective way to communicate health information to low-income parents in an effort to promote children’s health. It was found that health messages delivered to low-income parents must come from perceived experts and should be personalized, which may help establish a relationship between information provider and seeker and overcome the barrier of lack of credibility and trust in the minds of the families (Strover et al. 2011). A state-wide campaign evaluated the efficacy of high-intensity social norms media marketing campaign aimed at correcting normative misperceptions and reducing the prevalence of drinking and driving among 21- to 34-year-olds in Montana. A quasi-experimental design was used and results revealed that social norms media campaign was successful at exposing the targeted population to social norms messages in the counties within the intervention region. This research provides a model for utilizing social norms media marketing to address other behaviours related to public health. (Perkins et al. 2010). A study conducted in Turkey to promote condom use emphasized on the importance of social media in social marketing. Out of two condom brands launched at the same time the one with digital campaigning gained more customers as compared to the other. One of the recommendations made was that with the growing availability and use of the Internet and social media globally, family planning organizations should consider incorporating these technologies into their educational, outreach and marketing programmes (Purdy 2011). An article written by M.M. Sarringhaus in 2011 presented social media as an untapped innovative resource in healthcare. With the baby boomer generation retiring and new generation taking up the role adoption of social media can give an organization strategic and competitive advantage in connecting and retaining patient population. A search conducted of the entire Facebook to identify whether most prevalent diseases are represented among individual Facebook users and user groups. They found that patient group, supporter group and fund raising groups were quite common and concluded saying that this technology is providing an accessible portal for patient and healthcare professionals. It is being used for academics, research, education and fundraising (Farmer et al. 2009). An extensive research conducted on use of online social networking sites for sexual health promotion found social networking sites (SNS) were being used for almost 178 sexual health promotion activities that were primarily conducted by not-for-profit organizations, targeted for young people and involved information delivery. Facebook was the most commonly used SNS (used by 71 per cent of all health promotion activities identified), followed by MySpace and Twitter (Gold et al. 2011).

Case Studies

Case Study I: Content Community

Centres for Disease Control and Prevention: H1N1 Campaign

The Centres for Disease Control and Prevention (CDC) has risen like a star of the web 2.0 movement, as the centre has been wildly active and successful in utilizing social media to raise awareness of recent public health problems and crises. The examples of its wide response include the salmonella and the
recent swine flu outbreak. CDC effectively utilized this innovative approach to promote health communication. They developed a highly effective social media marketing strategy and described the rationale behind their strategy through their CDC slide deck. They utilized content communities (Flickr, YouTube) aggressively which helped them to share important information about the flu, answering to people’s query and concern and induced trust among the users. CDC and the U.S. Department of Health and Human Services (HHS) came together to provide consumers and partners with social media tools that can provide information about the ongoing novel H1N1 flu outbreak.

CDC in its rationale for using social media mentioned that this media allows one to customize messages, increases reach to diverse populations, improves two way interactions, build strong relationships with community and thus empower them.

CDC YouTube channel has over 50 different videos related to diverse public health issues and catering to diverse population (11). CDC Streaming health uploaded video titled ‘Symptoms of H1N1 (Swine flu)’ on 28 April 2009. In the video, Dr Joe Bresee, Chief epidemiology and prevention branch, Influenza Division, describes the symptoms of swine flu and warning signs to look for that indicate the need for urgent medical attention. You Tube statistics show that total views for the video till 31 October 2011 are 2,121,493 (12).

Another video (uploaded on 30 April 2009) on YouTube discusses about the actions and goals of the Centers for Disease Control and Prevention, related to the H1N1 flu (swine flu) outbreak. The video has got 90,986 viewers by 31 October 2011 (13).

About 8 million viewers visited CDC website on a single day during the outbreak as per the YouTube video uploaded by CDC Streaming Health on 30 April 2009 (14). The figures themselves tell about the success story of CDC’s social media strategy. In addition, CDC also reported data on increased hand washing during outbreak days (behaviour change communication) but the results achieved cannot be solely attributed to the social media. CDC improved health communication through other sites and platforms.

Image sharing was another tool used by CDC during swine flu outbreak for sharing information and making public health resources available to the public. The activities involve posting and sharing images to public web sites where they can be viewed, tagged and categorized (15). CDC has created its own image library which can be used by all stakeholders—public health professionals, public, students, and academicians etc to upgrade their knowledge and use this material for generating public health messages. CDC utilizes Flickr, a website designed for image sharing for increasing awareness on various public health topics. CDC’s photo stream on Flickr has 155 images and its H1N1 image set has 14 images which were uploaded on 24 September 2010 (16). Each image has been viewed on average 640 times and the set has attracted about 1110 views. The images mainly depict pathologic and preventive aspect of H1N1 flu (17).

**Case Study II: Collaborative Project/User Generated Content**

**Internet Sexuality Information Services**

User generated content (UGC)/Collaborative projects are used in healthcare to encourage joint effort of the public and professionals in health promotion. Wikis are one type of UGC and it allows users to edit content by means of addition, removal and change. Internet Sexuality Information Services (ISIS), a not-for-profit
organization is actively working in developing and using online technologies for sexual health promotion, education and prevention of disease transmission. They provide leadership, innovation, resources and research in internet-based sexual health promotion (18). On 3 April 2008 they launched a contest in collaboration with Brickfish marketing firm in which candidates or youth in age group 16–24 were asked to design intimate apparels and t-shirts containing messages, art and slogans about HIV and STD prevention. The contest (19) was launched online and used UGC social media technique. There were 500 plus entries for the competition and over 650,000 users got engaged in different forms through variety of activities. The activities involved voting for contestants, viewing, reviewing and content creation. The website allowed the entries to be seen at about 700 different online places. The winning entry promoted condom usage through its slogan and won $1,000 scholarship (or cash equivalent). The entry which attracted maximum attention across internet emphasized on the importance of having safe sex and won $250 (scholarship or cash equivalent. The posters and web distribution are available online since the contest closed. The competition posters can be downloaded easily free of cost.

Case Study III: Social Networking Sites

Mayo Clinic

Mayo Clinic—a renowned medical centre has innovated many of the practices that evolved into the modern medical practice. It became organized as a nonprofit in 1919 and, as the Mayo Foundation, it has played a lead role in supporting medical education at the University of Minnesota Graduate School.

The Mayo Clinic Facebook page includes links to its websites for patients, practitioners and educators, but the focus is on Facebook’s social features. Any other Facebook member can become a ‘friend’ or a ‘fan’ of Mayo Clinic. Mayo Clinic sees that Facebook can serve as a connection point for people to share stories about Mayo Clinic and the care they or their friends receive. Mayo Clinic’s Facebook page has links posted by patients apart from their own administration. Their wall has links ranging from risk factors of tuberculosis to various medical encyclopaedias that is shared by many which helps in spreading the word. Mayo Clinic believes when patients tell their stories, their friends see that and likelihood of spreading the message increases many-fold. The Facebook strategy also recognizes a truth that many organizations underestimate today. Employees are people, and people have high credibility with other people (customers). Some of the most active contributors on the Facebook page right now are employees, who communicate as people, not polished marketing or PR staff. Mayo Clinic’s Facebook page has 113,208 likes and 14,822 are talking about it (20).

Case Study IV: Blogs

Mayo Clinic

‘Blog’ is short for ‘web log’ and is simply the name for the activity of writing thoughts in an online diary or journal. While there may be some facts included, the most part blogs consist of opinions and experiences. Mayo Clinic a not-for-profit medical practice dedicated to the diagnosis and treatment of virtually every type of complex illness pioneered the way in enabling patient-to-patient communication with blogs, one of the most popular public Web 2.0 venues for many-to-many interaction in 2008 (21). Mayo

Clinic practitioners understand the power of word of mouth, which is embedded into its culture through its various News Blog, Podcast Blog, Sharing Mayo Clinic and MayoClinic.com and Mayo’s consumer health information site that hosts innumerable blogs on various topics ranging from Alzheimer’s to The Mayo Clinic Diet.

Mayo Clinic has been using podcasts to get the word out and offer education in bite-sized pieces since 2005, when it began listing podcasts on Apple’s iTunes Store, and its podcast once reached #29 in the Top 100 Healthcare Web 2.0 Innovators

The podcasts began as an outgrowth of Mayo Clinic’s educational TV programs that it had produced for local stations since 2000. They would interview physicians about certain conditions and treatments, and this offered small local stations the ability to offer medical and health content. In 2004, Mayo extended to a radio format. From there, it was a short hop to minute-long podcasts, which have a viral element because people can share podcasts very easily. In 2007, they began producing longer podcasts for niche audiences. The podcasts have been so successful that Mayo Clinic Communications includes podcast planning in the overall production process for multimedia content. Previously they would repurpose radio and TV content and edit it down to a podcast format.

In 2008, Mayo Clinic started using a blog to promote employee conversations relating to the organization’s strategic plan with innovative use of video and a hybrid ‘insider’ newsletter/blog. This employee engagement gave Mayo Clinic the recognition among Fortune magazine’s ‘Best Places to Work’. Currently, Mayo Clinic is the pioneer in hospital and health blogging with its interactive and innovative blogging channels (23), namely:

- Mayo Clinic News Blog—through this highly engaging channel one can see and hear video and audio excerpts featuring Mayo Clinic physicians and researchers providing context for stories about their research and other health and medical news.
- Sharing Mayo Clinic—a blog that enables patients and employees to tell their Mayo Clinic stories and experiences. It’s the online companion to the new newsletter for patients, also called Sharing Mayo Clinic, and is a hub that links to Mayo Clinic’s pages on social networking sites, such as Facebook and YouTube. This medium acts as a support system for patients on the web and at the same time provide quality research-backed information to consumers when they need it.
- Mayo Clinic Podcast Blog—Where you can hear, watch and download extended conversations and brief news stories on diseases and conditions that are important to you, and can subscribe to have updates sent to you automatically.
- Physician Update Blog—tailored to the needs of physicians throughout the world one can read or hear Mayo Clinic specialists discuss patient care innovations, new treatments and the latest research findings, and see videos, abstracts, summaries and comments.
- Advancing the Science—Mayo Clinic’s medical science blog, provides a virtual home for the diverse community interested in Mayo research and its impact on health care worldwide. One can see what’s going on, view videos or comment on posts.
- Diversity in Education Blog—a blog written by students in Mayo Clinic’s various education programmes, sharing their perspectives on life as a student and the opportunities available through Mayo Clinic.
- Mayo Clinic Health Policy Blog—the site for news and conversation relating to the work of the Mayo Clinic Health Policy Centre as it brings people together around a patient-centred vision for U.S. healthcare reform.

• Mayo Clinic Centre for Innovation Blog—focused on innovations that improve health and health care. This is the place to blog about the future of healthcare and wellness.
• Twitter—from their twitter account, the experts at Mayo clinic tweet (blog) links of discussions of various health-related issues, useful health tips and also links to useful sites giving health information which can be retweeted by their followers to reach a wider audience.

Thus, Mayo Clinic uses blogs to enlighten about symptoms, side effects, new treatments, alternative therapies, good doctors, other patients, useful equipment, treatment cost, current issues in health or medical care and dozens of other matters related to health. Through this work, Mayo Clinic looks to help improve health literacy, healthcare delivery and population health worldwide. From 180,000 followers in September’2010 to 389,898 ‘followers’ on Twitter as on August 2012, speaks volumes about Mayo Clinic’s success in blogging and creating much needed awareness in urban health(24).

Through these channels not only do fans and followers interact with one another but are frequently sharing items of use with each other. There are cases where someone finds a video helpful and shares that video with a patient support group and this draws another group of people to the community.

Case Study V: Virtual Social World

Second Life

Second Life an online virtual reality world where create their own virtual selves called avatars and interact within a simulated 3-D environment was launched in 2003. It gives opportunity to users to experience of living second life. Statistics from 18 December 2008 indicate that 1,437,910 resident had logged in to Second Life on within past 60 days (25). The average age of users is 32 years. Many health agencies and organizations have chosen Second Life as one of their web 2.0 communication strategies. It provides unique design features for disseminating health info, training health professional, patient education for academic and commercial health behaviour research.

There are many ways to promote health on Second Life. There are many sites which focused on primarily on education and awareness (American Cancer Society, Palomar West Hospital, Second Health (NHS), Diabetes UK, Faster Cures). According to a study, ‘A Survey on Health Related Activities on Second Life’, it is mentioned that of the 68 relevant health sites study surveyed in Second life, 34 focused on mainly on education and awareness through various channels. Prepared messages distribute through interactive information, Kiosks, poster and bulletin board. Broad media such as health video, slideshow, and presentation and links to web pages are also used.

CDC came up with new way called CDC Island. It is a 3D virtual representation of U.S. CDC. This island has many displays that link users to different users to different sites allow them to participate in discussion and focus group. The buildings are interactive and contained meeting rooms, reception areas and microbiology lab also where users can interact with microscope to examine different bacteria and diseases. Other than these, there are many ways such as ‘Health info island’, ‘University of Plymouth Sexual Sim, ‘Virtual Hallucinations’, that are being used.

Second Life shows that virtual world has significant potential to promote health communication and patient experience in the real world. It is being used to educate users about important public health issues. It also allows people to seek out individual or group support for diverse health issues.
Case Study VI: Virtual game world

Whyville

The virtual community is a graphical virtual world where children across the globe interact and learn together through educational activities that range from math and science to art and civics. They create graphical avatars to represent themselves and become citizens of a vibrant community. The virtual community (www.whyville.net) was launched in 1999 by scientists, researchers, and entrepreneurs interested in exploring new ways to creatively engage young learners over the internet. Whyville is free to use and supported by many organizations that are focused on education. NASA, Disney, the Center for Disease Control, and the National Science Foundation are all proud supporters of Whyville. The site is truly devoted to educating children through ‘communication and exploration’. The role playing opportunities and games definitely give children a broader education (26).

Virtual Eating: In November 2005, virtual eating was introduced to the citizens of Whyville, with support from the University of Texas Health Science Center at San Antonio (UTHSCSA). The programme, dubbed WhyEat, allows Whyvillians to plan their meals and eat breakfast, lunch, snack, and dinner, virtually. With the grand opening of the Whyville Cafeteria, they can sit down at a virtual dining table together to share and discuss their food choices. Just as they would in real life, Whyville citizens fill their trays at the cafeteria line choosing from such fare as taco salad, spaghetti, and fresh fruit. Nutritional information is shown with every food, and citizens are held responsible for their choices. If a citizen consumes insufficient calories, the avatar becomes pale. Over-consumption of calories turns the avatar ruddy. Lack of fruits could lead to unsightly scurvy sores.

Whyflu: For implementing an influenza education campaign in a virtual world for children, the Centers for Disease Control and Prevention collaborated with the creators of Whyville and developed an engaging activity to promote learning about seasonal flu prevention. Whyflu, a virtual infectious disease activity created for Whyville, launched in November 2006 and was repeated in a similar form for the 2007–2008 flu season. The 2009–2010 activity included the release of two flu strains, a vaccination station with two different vaccines, modelling of two key hygienic behaviours (hand washing and elbow covering of sneezes and coughs), a ‘Flu Report’ section on the Whyville Welcome Page, a Vaccination Celebration with live session with a CDC flu expert, and the WhyFlu Video Contest.

According to Whyville demographics, they have 5 million members. A study stated that Whyflu stated that in the 2008–2009 campaign, there were 8,965 virtual vaccines given, 77,363 virtual flu Infections, and Whyville participants issued the hand washing command 385,070 times (27). Whyvillians issued the hand washing command 214,772 times and the ‘cover’ command (to use elbows to cover coughs and sneezes) 184,716 times. Because of the success of Whyflu activity in engaging virtual world participants in a health activity, it can be a big channel for health promotion. Engaging children and teens through virtual worlds is particularly effective for this audience because it attracts and keeps attention, allows for behaviour modelling, and provides enhanced motivation for behaviour change.

Discussion

Social media is fast moving, what may be very interesting today can get redundant the very next day. One challenge public health agencies can face once they get started is getting attention of a vast audience. Social
media content can have very short memory in peoples mind as new and interesting opportunities keep coming up. So in order to make lasting impression, organizations should carefully choose from myriad social media options coming up every day. Organizations have to be up breast of latest additions on the social media circuit and which one of them is current favourite for optimum results. Along with this, organizations must also ensure that the activities planned are interesting and engaging. The medium should be regularly monitored and fresh content added at periodic intervals giving enough time for registering in peoples mind. This platform, as seen through case studies can be used for as many health conditions like promoting vaccination for children, ill effects of smoking and drinking in middle aged and unsafe sexual behaviour and healthy diet amongst youth. Thus, one medium caters to all age groups well-being. Another benefit of social media interventions are that they are extremely cost-effective for the audience it garners. With the advent of mobile based applications, people can now access these sites on the move, an innovation that has potentially increased the reach of even those without computers. Like every coin has two sides, social media provides large opportunity for health promotion in the public health community, enabling public health professionals to reach out far and wide and directly to the public on multiple public health issues and at the same time its cautious use is imperative to prevent colossal damage.

Conclusion

Technology is here to stay and social media has sprung up as a game changer. The digitization of human interactions and intimacy has brought the world closer at the click of a button. In this fast paced world, social media is a communication boon for the public health community and has the potential to promote and change many health-related behaviours and issues particularly in times of crisis. As it is characterized by interactivity, user generated content and multi directional communication flow, it makes for best choice for faster spread of public health messages and improves functional health literacy of general population. Social media unlike other media campaigns provides novel opportunities to integrate public health messages with daily online conversations and activities.

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