Review Article

The use of social media in pharmacy practice and education

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Abstract

Background: Social media is becoming increasingly ubiquitous. It has significant potential as a health communication and educational tool, and may provide a medium for the delivery of health-related services.

Objectives: This systematic review aimed to investigate the use of social media in professional pharmacy practice and pharmacy education, and includes an evaluation of the research designs utilized.

Methods: Medline, Embase, PubMed, IPA, and CINAHL databases were broadly searched for peer-reviewed research studies about pharmacy and social media (SM). The search was restricted to years 2000 to June 2013, with no other restrictions applied. Key words used were within three concept areas: "social media" and "pharmacist or student" and "pharmacy."

Results: Twenty-four studies met the inclusion criteria. SM was broadly addressed as a general concept in 3 of the 24 studies. The other 21 studies investigated/used specific SM tools. Fourteen of those addressed social networking sites (SNS), four wikis, two blogs, and one Twitter. The studies' foci were to describe SM use ($n = 17$ studies) by pharmacist, pharmacy educators, and pharmacy students and investigate usage related topics (such as e-professionalism and student-educator boundary issues); or the use of SM as an educational tool in pharmacy education ($n = 7$). Pharmacy students were the subject of 12 studies, pharmacists of six, and faculty members and administrators of four. Survey methods were used in 17 studies, alone or with an additional method; focus groups were used in two; interviews in one; and direct observation of social media activity in seven. Results showed that SM in general and SNS in particular were used mainly for personal reasons. Wikis, Facebook, and Twitter were used as educational tools in pharmacy education with positive feedback from students.

Conclusion: Research investigating the use of SM in the practice of pharmacy is growing; however, it is predominantly descriptive in nature with no controlled studies identified. Although some studies have used SM to deliver and enhance pharmaceutical education, none have focused on the delivery of pharmacy services through SM.
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Keywords: Social media; Social networking; Pharmacy; Pharmacists; Pharmacy students; Pharmacy education

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Introduction

Internet use is expanding globally. From 2005 to 2013, its use by individuals increased more than 50% and 294% in developed and developing nations, respectively.[1] Consequently, both health care professionals[2] and patients[3–5] are increasingly using the Internet to obtain health and medicine information. In 2003, it was estimated that globally about 4.5% of all searches on the Internet were for health-related information.[6] A 2013 national report showed that almost 60% of the American adult population had gone online to search for health information in the previous year.[7]

Pharmacists have been using the Internet professionally for years, primarily to access reliable health information resources, such as from government-sponsored (e.g. PubMed), organization-specific (e.g. Cochrane Database of Systematic Reviews), or commercial (e.g. Medscape, RxList) resources.[2] The Internet has also been used in pharmacy to provide products and services to consumers.[8,9] Many pharmacies host websites to complement their traditional business, and some pharmacies are entirely virtual (exclusive pharmacy sites).[8] An interesting example of services provided through these types of websites is the "ask-the-pharmacist" service[10]; at the click of a button the consumer can e-mail questions about his/her medicine to a pharmacist.

The Internet has been changing and expanding as it incorporates new capabilities. A clear metamorphosis took place in the first half of the last decade when a new concept called Web 2.0 appeared. This term, coined in 2004 by Dale Dougherty[11] during a conference brainstorming session, described the new paradigm in the online environment as one which related to user-generated content and users' interactions. Despite efforts to refine the definition of the term Web 2.0, there has been little consensus about where Web 1.0 ends and 2.0 begins.[12] To illustrate the online environment changes, comparisons between Web 1.0 and Web 2.0 applications have been made. For example, personal websites (Web 1.0) compared to Blogs (Web 2.0), Encyclopedia Britannica compared to Wikipedia, publishing compared to participation.[11,13] The popular term "social media" emerged in the collaborative environment of Web 2.0. Social media (SM) can be defined as interactive platforms via which individuals and communities share, co-create, discuss, and modify user-generated content (e.g. texts, images, audios, videos, games) employing mobile and web-based technologies (Web 2.0).[14] Table 1 provides a glossary of Web 2.0 terms.

These technological improvements have changed the way health information is generated, retrieved and used. The Internet in its traditional format (Web 1.0) increasingly afforded consumers with health and medicines-related information, allowing them to shift from "passive" recipients to "active" consumers of health information[23]; where they search, find, and use health information by themselves. The Internet, has therefore been a

Table 1
Glossary of some common Web 2.0 terms

Web 2.0 is the broadest term. It was first explained as a "set of principles and practices that tie together a veritable solar system of sites that demonstrate some or all of those principles, at varying distance from that core".[11] It is a platform whereby content and applications are no longer created and published by individuals, but instead are continuously modified by all users in a participatory and collaborative fashion.[13] Simply put, Web 2.0 can be regarded as a new generation of the Internet where user-generated content and users' interactions are the main features.[15]

Social media (SM) is a group of interactive platforms via which individuals and communities share, co-create, discuss, and modify user-generated content (e.g. texts, images, audios, videos, games) employing mobile and web-based technologies (Web 2.0).[14] Social media can be roughly divided into two types of platforms/applications: Content-sharing applications (e.g. YouTube, Wikipedia, blogs, Twitter) and relationship-building applications (e.g. social networking sites).[16]

Blogs, originally called "web logs," are platforms where users (known as bloggers) create and post content about topics that interest them and the content can take many forms including diary-like text and commentary, as well as multi-media content for others to consume.[17]

Wiki, short for WikiWikiWeb,[18] is a website which allows people to add, modify, or delete the content via a web browser usually using a simplified Internet markup language[19] e.g. Wikipedia.

Twitter is a microblogging service in which users send and receive messages which are less than 140 characters called tweets.[20]

YouTube is a videosharing website created in early 2005.[21]

Second Life is the most popular 3-D virtual world. Virtual worlds are computer-based, simulated multimedia environments, usually running over the web (also on mobile phones), designed for users to "inhabit" and interact via their own graphical self-representations known as avatars.[22]