# Privacy and Security Concerns in Adopting Social Media for Personal Health Management:
## A Health Plan Case Study

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## EXECUTIVE SUMMARY

*The use of social media for health and wellness promotion is gathering significant momentum. Several early adopting health plans and provider organizations have begun to design and pilot social and mobile media platforms to empower members to enhance self-management of health and wellness goals. However, there is considerable concern among the general population regarding the privacy, security and reliability of health-related information obtained or collected through online and social media channels. In this teaching case of members of a large health plan in Pennsylvania, the authors examine these concerns in the context of several factors such as demographic, clinical conditions including the presence of chronic conditions, level of computer and social media usage, and frequency of engagement in specific online activities. Furthermore, they also examine the role of privacy, security and confidentiality concerns in members' interest in adopting such technology platforms for health-related information and services, if offered by the health plan. Analysis of relevant data from more than 4,000 survey responses does not indicate significant differences among important segments of the member population. There is remarkable uniformity regarding privacy and security concerns expressed by members. The authors anticipate that these insights can assist health plans to develop and deploy services and tools for health and wellness management keeping in mind the relevant risk considerations.*

*Keywords:      Confidentiality, Demographic Factors, Health and Wellness, Online Engagement, Relevance, Security, Social Media, Statistical Analysis*

## INTRODUCTION

The convergence of health reform regulation, consumer demand, market realities and technology developments are driving healthcare organizations to explore new models of care delivery and payment across the delivery spectrum (IOM, 2011, Healthcare.gov). With increasing focus on consumers, there is a growing demand for outcome-based health management (DeNicola, 2012, Sarasohn-Kahn, 2009a). The explosion of social media, in particular, is creating new

opportunities for insurers to not only market themselves using innovative tools, but to also engage their customers in highly accessible and customized ways (Sarasohn-Kahn, 2009b). Health insurance plans are thus exploring new and creative methods to reach out to members to offer health information, provide support, encourage healthy behaviors, and leverage the emerging trend among consumers to play a more active role in self health management.

The explosion of Internet technologies has opened up new platforms to connect key stakeholders such as patients, providers, and insurers. Consumption of online media is widespread among the adult population who are active online users and is correlated with the growing penetration of broadband Internet access in the US (Estabrook et al., 2007). Whether it is Facebook, LinkedIn or Twitter, social media is a big part of people's lives today. Social media uses the Internet and web technologies to facilitate social interactions by allowing for the exchange of user-generated content to share information, communicate, and collaborate (Elkin & Noah, 2008). The explosive growth of social networking sites – Facebook (over 1 billion active users as of September 2012), Twitter (over 500 million registered users as of 2012), to name a few has given users the ability to easily share information online by connecting individuals and groups (Twitter page on Wikipedia.com, Munnariz, 2012). These users are able to communicate their moods, opinions, thoughts, ideas and actions through multimedia platforms such as networking sites, blogs, social forums, and wikis, allowing conversations to spread across these platforms reaching users with similar interests for particular topics, creating communities for knowledge sharing and interaction.

Recent studies have shown that consumers are increasingly turning to different forms of social media enabled communities for healthcare-related information (Thackeray et al., 2013, Hawn, 2009). A PwC consumer survey (PwC Health Research Institute, 2012) showed that more people now turn to the Internet (48%) to make decisions about their healthcare than to doctors (43%). Additionally, with the advancement of mobile technology and the growing popularity of smartphones (iPhones, Android, Blackberry), many users are constantly connected to the Internet. People want to find health information fast, on-the-go, and in the cheapest possible way. As of August-September 2102, 85% of Americans owned a cell phone or a smartphone and 55% of all adult phone users use it to access the Internet. As of April 2012, there were 13,600 health, medical, and fitness applications within the Apple AppStore, the official source for downloadable applications for iPhones, with the majority intended for use by patients. A popular example of mobile applications is Text4baby (Text4Baby, 2010), a free mobile information service which was designed to promote maternal and child health. Another example is where the state of California utilized cellular texting in order to maximize the spread of knowledge about the 2009-2010 pandemic flu crisis (Calvan, 2010).

Despite the widespread use of social media in different aspects of life including health, there is a significant level of concern among the population regarding issues of privacy, security, reliability and confidentiality in utilizing online sources for health and wellness information (Madden, 2012). Patients are unlikely to share sensitive information pertaining to their health in an online environment unless there is a guarantee of confidentiality. People who trust that their health information will be kept private and secure will be more willing to discuss symptoms, conditions and potential risk behaviors. In this paper, we investigate this in context of a case study based on a survey conducted among the members of a large health plan in Pennsylvania.

## ORGANIZATIONAL BACKGROUND

This case study is associated with a large health plan in western Pennsylvania. For confidentiality reasons, we cannot disclose the name of the health plan and will refer to it just as "health plan" in the rest of paper. Due to same reasons,

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