Facebook for Health: Opportunities and Challenges for Driving Behavior Change

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Abstract

Obesity, mood, and associated behaviors spread within social networks [1]. Facebook, the primary representation of these networks, shapes our perceptions of social norms and the expectations we set for ourselves. As such, Facebook holds potential to influence health behaviors of individuals and improve public health. This panel explores that potential from a variety of perspectives including psychology, public health, privacy, and design innovation. Panelists include: Margie Morris and Sunny Consolvo, researchers at Intel who have created novel mobile health and Facebook applications; Sean Munson, a social computing researcher at University of Michigan; Kevin Patrick, of UCSD, who is investigating social media for preventing weight gain in young adults; Janice Tsai, from Microsoft, who focuses on privacy and social networking; and Adam Kramer from Facebook. This panel will identify opportunities for health interventions on Facebook to have a broad social impact, challenges to implementing effective interventions on this dynamic platform, appropriate research methods, and considerations related to privacy and ethics.

Keywords

Health, Goal setting, Social networks, Wellness

ACM Classification Keywords
H5.m. Miscellaneous

General Terms
Design, Human Factors

Introduction
There is general consensus that behavioral shifts, such as increased physical activity, are essential to address the epidemic of obesity and chronic disease. To motivate behavioral change, health messaging needs to be both persuasive and pervasive. It needs to be part of the rituals and environments – social as well as technological – that define daily life. For many, Facebook is a defining environment. Like the mobile phone, which because of its ubiquity has become a compelling vehicle for persuasive messaging, so too may Facebook prove an environment in which we can effectively nudge individuals and their friends to initiate and sustain lifestyle changes.

Recent epidemiological research has highlighted the viral nature of health such as the spread of obesity and related behaviors in social networks [1]. We've learned that "our friends are making us fat" [10] and that this viral effect extends to our friends' friends. A large body of research has demonstrated that the right social network can also support positive health changes [3], [7], [11]. Without changing an individual's social environment, the benefits of individually focused efforts may be short lived. To increase the impact of health interventions, public health researchers are now starting to target the network rather than the individual. Network approaches have been examined to encourage flu vaccinations and exercise [2], [4]. Among other findings, this research is determining the most influential members of networks to target for health interventions. It has been found, for example, that individuals on the edges of overweight and normal weight clusters may be the most effective in influencing sustained weight loss across the network [4].

Facebook is an obvious tool to explore social network approaches to behavioral change. Facebook offers a communication channel and a broad lens onto our social networks. As such, it is a dominant way in which we form perceptions about the behavior of peers. These perceptions of social norms have been shown to powerfully shape behavior [9]. Furthermore, Facebook is itself an environment that exerts influence. The representation on our screens of its vast membership – 500 million users, 50% of whom log in on any given day, with an average of 130 friends per user [4] – creates a sense of possibility for both connectedness and change. The power of social media, now actively used to market products, provides equally compelling opportunities to promote health and wellness.

Panel Description
This panel will explore the potential of Facebook for personal health improvement. Panelists will share diverse perspectives on technology innovation and its social consequences. We will draw upon research about how people currently use Facebook and other technology to share personal information and seek inspiration from others. Several new health research projects and associated Facebook apps will be introduced. Perils of delivering health interventions on Facebook will also be discussed. We will address risks such as the inadvertent broadcasting of personal health data to one's network as well as Facebook and associated companies.

Panel themes

Broadcasting personal health: We will discuss ethnographic research on how people broadcast health status and health goals on Facebook and the social consequences of such sharing [6]. We will describe the challenges and strategies of people who combine Facebook with specialized online communities to improve their health.

Applications as research probes: We will describe Facebook applications that may illuminate social influences on goal setting and adherence. These include a goal setting application by Sean Munson and Sunny Consolvo, a positive psychology exercise that Munson and colleagues developed into an app [5], the Social/Mobile Approach to Reduce WeighT (SMART) project led by Kevin Patrick, and the "With a Little Help from my Friends" app that Margie Morris and colleagues developed to examine the loss of social capital to motivate behavior change (See Figure 1).

Privacy: We will examine the tensions associated with using social network applications for personal health and health research. Facebook and other applications hold potential for effecting broad and sustained behavior change but pose risk of exposing health data. Personal health information may be inadvertently exposed not only to members of one's social network but, through Facebook, to countless other individuals and companies.

Integration: How much should Facebook be integrated with the rest of our devices? Should my Sonicare or seatbelt link to my goal setting tools on Facebook? Will my insurer know? We will explore the tradeoffs and implications of such intelligence. Seamless integration

may decrease burden and the biases of self-report, but miss opportunities to invite self-reflection and agency.
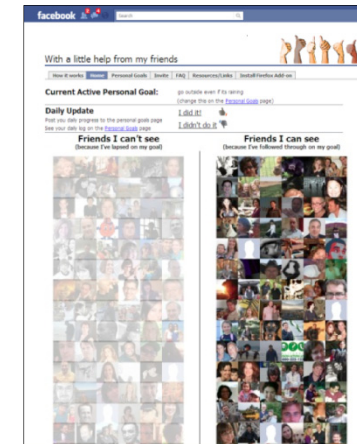

Figure 1. "With a Little Help from my Friends" depicts loss of social capital to motivate adherence to health goals. Friends fade after lapses but can be redeemed by getting back on track: http://apps.facebook.com/helpfrommyfriends/.

Summary

This panel will explore the potential for Facebook to influence health and associated challenges. Panelists will draw upon expertise in psychology, social computing, public health, privacy and design. We will discuss current practices for sharing health information on Facebook, features that might facilitate health improvement, and several new Facebook applications created to illuminate social influence on goal setting and adherence. In addition, the panel will explore controversial issues related to privacy and integration of Facebook with personal devices. Audience members will be encouraged to share insights, experiences and

questions. Even at this nascent stage, the use of Facebook for health promotion merits discussion within the CHI community.

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