

## **SOCIAL NETWORK SCIENCE AND SOCIAL MEDIA TOOLS: HOW MIGHT THEY CONNECT?**

### **Think Tank Summary**

Leader: Elaine Morrato, DrPH  
Jim Dearing, PhD  
Danny Kirkland  
Mark Marosits, MHA  
Jonathan Richman  
Jenn Barrow, MSPH

#### **Key Challenges Addressed in the Think Tank**

Social media, including blogging, Facebook, Twitter and mobile texting, have been embraced in the public and private sectors as means to reach new and existing audiences, foster communication, and promote behavior change and community activation. A key challenge faced by health Dissemination and Implementation (D&I) researchers is that social media innovation is evolving so rapidly, particularly in the private sector, that social science research on social media and its effects on health knowledge and behaviors is lagging behind the application.

Health-related applications of social media also have additional challenges when compared to the general business market. First, healthcare systems and manufacturers operate in a more regulated environment (e.g., controls for Protected Health Information, FDA oversight of drug marketing and advertising). Second, there is a need for greater control of message fidelity in order to minimize personal and public health risks associated with misinformation.

#### **Knowledge Needed to Address Challenges**

We believe that more frequent and deliberate cross-sharing of case lessons between social media practitioners and social scientists are needed to help address the widening gap between practice, theory, and measurement. To facilitate learning between disciplines, three social media experts from the private health care sector joined the Think Tank faculty to share their experiences and to stimulate discussion with D&I participants at the Conference. The social media experts were: Danny Kirkland (Global Digital Marketing Manager, Procter & Gamble Health Care), Mark Marosits (Co-founder, Worldways Social Marketing), and Jonathan Richman (Director of Social Media, Possible Worldwide).

Danny Kirkland presented a case study of “Social Media in the Commercial Practice” using examples from the experience of Procter & Gamble Health Care and the Pepto-Bismol® brand team. Key learning included: regulatory-compliant brand presence in social media is manageable in the health sector with the right resources and commitment; and clearly defined roles and responsibilities and areas of collaboration are a must to conduct social media in “real time” on a large scale. In addition, managing two-way communication and listening to patient-consumers is more complex than managing one-way communication using organization-controlled Facebook and Twitter pages. For some organizations, phasing in the listening and social engagement slowly and conservatively may be appropriate.

Following this presentation, Think Tank participants were divided into three small groups for focused in-depth conversation on: (1) Use of social media within the framework of behavior change theory; (2) Measuring the impact of social media; and (3) Trends in the use of social media and their effect on D&I research.

#### **Questions for Future Research**

This think tank discussed current and anticipated D&I knowledge gaps to inform a national agenda for health-based social media research and practice. The following summarizes key questions from each of the three focused conversations. To a large extent, there was significant overlap in themes and questions between the three groups. We are now working on synthesizing the information into a single report with specific recommendations for a national social media D&I research agenda. During the synthesis process, we will be continuing the dialogue with our Think Tank participants using an on-line discussion forum sponsored by the Colorado Center for Public Health Practice. If you are interested in participating, please contact Elaine Morrato at [Elaine.Morrato@ucdenver.edu](mailto:Elaine.Morrato@ucdenver.edu).

### ***Use of social media within the framework of behavior change theory***

Topics of Most Interest to Think Tank Participants when prompted by “What are the key points that should be communicated to the dissemination and implementation research community about social media and its relationship to social science theory?”

#### Topics related to Communication

1. Social media can communicate a sense of urgency to users merely by the format (media) involved.
2. Media and health literacy and numeracy as topics to be concerned about in designing for D&I (with obvious implications for formative testing).
3. One of the great promises and ways in which social media use can lead to generation of new theory is in interactive message tailoring as is done at Washington University in St. Louis and the University of Michigan. Is there a possibility of integrating for the consumer publically-available information/protocols/programs with those that may be proprietary?
4. Communication push vs. pull distinctions need to be specified for social media interventions; how much is the right amount of each? Is the motivation of pull more easily perceived by users of social media? Are push and pull strategies really a dichotomy in the context of interactive social media?
5. Social media are enabling disruptive forms of innovation (i.e., Patients Like Me) that are perceived by some as threatening to established health care organizations but that embody real attributes of patient-centered communication and efficacy.

#### Topics related to Behavior Change

1. The role of change agents in D&I, including the ability to more easily identify change agents through use of social media
2. Game dynamics (both entertaining formats for information, and the processual steps that one goes through in an intervention) could be used to integrate theories of behavior change
3. The means by which we design and communicate cues to action as in the Health Belief Model may have to be rethought regarding social media
4. There may be interesting ways to create and test behavioral economics (the logics of choice) ideas in social media

### ***Measuring the Impact of Social Media***

Topics of Most Interest to Discussion Participants when prompted by “What are the key points that should be communicated to the dissemination and implementation research community about measuring social media implementation and its effects?”

#### Topics related to the Audience

1. Know your audience and make an evidence-based decision as to how you will (or won't) pursue them online and through social media
2. Who is not participating in the social media campaign and why? How do we measure and understand casual observers, those who get information from posts, but never write? What factors convert people from non-participation to participation?
3. Assess who is and is not being reached in order to understand potential unintended consequences (i.e., less web literate groups left behind)
4. Does an increase in the use of social media equate to a decrease in direct interfacing between individuals via traditional communication? Does this lead to increased isolation of some groups (e.g., by age or socioeconomic status)?
5. How to measure “reach” – what is the denominator?

### Topics related to Implementation

1. Develop metrics for how social media interventions can support and work synergistically with other initiatives to promote healthier environments and behavior
2. Identify best practices for health researchers to launch their own social media campaigns. Identify ethical concerns, resource requirements/costs and monitoring approaches
3. Have a research strategy that includes a management plan, dedicated staff time (for management, content development, evaluation) and measurable goals
4. Identify recruitment methods for consumer-patients and health professionals
5. Manage expectations; team members should understand that going viral is either serendipitous or the product of concerted outreach and strong and compelling content

### Topics related to Measuring Outcomes

1. Determine what social media can do and cannot do with regard to health communication and behavior change outcomes (e.g., raising awareness and changing attitudes versus instilling hardcore and lasting behavior change)
2. Currently, there is a lack of evidence-based metrics for near- and long-term “impact” of social media on health behavior change (validation studies are needed).
3. With regard to the use of Facebook and other private sites— we need more quantitative data beyond the “number of fans”?
4. Transparency and reliability of measurement is a concern and is dependent upon the integrity of users and the potential for data manipulation (e.g., raving reviews of a new company product – true product experience or initiated by company employee?)
5. Need guidance regarding whole-population measurement vs. sampling and how to determine sites or what to measure given a limited budget

### ***Trends in the Use of Social Media and Anticipated New Technologies***

Topics of Most Interest to Discussion Participants when prompted by “What are the key points that should be communicated to the dissemination and implementation research community about trends in the use of social media?”

### Topics related to Evaluation and Effectiveness

1. We need longitudinal studies to understand how people use different social media platforms for health and whether it results in positive health behavior change.
  - How do individuals react to health websites?
  - What is the process of how behavior change occurs as a result of social media?
  - Are there proven social media models in health? What works best in which health situations?
  - How should social media efforts be best measured – Communication efficiency? Level of participant engagement? Health behavior change?
2. The NIH, FDA and other agencies sponsoring social media for disseminating health information, promoting research findings, and for risk communication (such as product recalls) should evaluate the quality, timing, use and impact of their information.
3. What can be learned about social media effectiveness from nonprofit patient advocacy groups who use and engage in social media?
4. We should vet information overload for the health consumer and its impact on D&I effectiveness.

### Topics related to Conceptual Frameworks

1. Measurement should flow from an accepted conceptual model. Key questions included:
  - Social media is 3-dimensional: top down, bottom up and horizontal communication. How do we engender and measure this phenomenon?
  - Why do people choose to engage in certain social media platforms and others do not?
  - To what extent do people “learn” health information and behaviors from these platforms and/or from their friends? Do they adopt changes as a result?
  - What are the most appropriate uses for social media in health? (i.e., health education vs. personal behavior change vs. community engagement and mobilization)
  - How does the use of social media affect the structure, tasks and organization of healthcare provider organizations?
2. Determine the critical aspects/factors responsible for “virally” spreading information successfully.
3. Determine the role of virtual community environments and engagement in D&I.
4. Determine how to integrate social media into interprofessional health education training

### ***Health-Related Social Media Application***

Common “practice of social media” questions across the three discussion groups included:

1. How to best disseminate health interventions with fidelity in social media
2. How to reach various audiences through different social media channels, e.g., adolescents, minority populations, elders.
3. What can be learned from the adaptation and use of social media in other countries?
4. What incentives are recommended for participating in research using social media?
5. How can we foster people involvement/engagement in D&I research using social media?
6. How does the commercialization of the social media space affect trust and use of social media? And how can this be managed to maintain its effectiveness?
7. What are the privacy issues when considering using the data within social media for research? (how do we reduce barriers?)