

Towards a Research Agenda for Social Media in Healthcare and Academia

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Abstract. The use of social media (also termed 'Web 2.0') is growing in healthcare and academia, but there has been little research of many important issues. The workshop will discuss the development of a research agenda around several issues, including investigating the ways in which social media are currently being used in healthcare and academia and how their use might be further developed in the future. Participants will also explore ways in which social media might provide novel research tools or methods. Brief presentations will set the context for active discussion, and will be supported before and after the workshop by online discussions and other use of social media to develop the research agenda deliverables. The research agenda will support work by IMIA and its members. The workshop will also discuss possible formation of a new EFMI Social Media Working Group.

Keywords. Social media, research, Web 2.0, health informatics, education

1. Background

While the use of social media (also termed 'Web 2.0') is growing in healthcare and academia, there has been, to date, little research into their use. Panel members, all of whom are active users of social media, have identified the relative lack of research, although note the existence of good case studies to demonstrate some of what can be achieved [1]. Other authors, academics and researchers from the health domain have also noted the potential for using social media (e.g. [2], [3], [4]), and how it might change both education and healthcare. Some results of studies of the use of social media and new technologies in academic healthcare environments are emerging (e.g. [5], [6], [7], [8]), but there is, to date, no coherent research agenda.

This is an appropriate time to initiate debate of the issues and begin the process of developing suitable research agendas. The panel members will present introductions to key topic areas, which will then be opened up for discussion with attendees. We recognise that there are many other potential issues to explore, and the discussion will also

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offer opportunities to identify these. This workshop is supported by the IMIA Social Media Working Group (SMWG), and all presenters are active members of the SMWG.

2. Goal of the workshop

The main objective of the workshop is to stimulate discussion and lead to the development of a research agenda on issues in the use of social media in healthcare, health informatics, and in related academic disciplines. The twin issues of (1) research into the use of social media within healthcare and academia, and (2) the use of social media as research tools will be explored. The presentations and discussion will explore, but not be limited to, issues such as:

- Conducting evaluations of social media application use in healthcare;
- Data-mining social media healthcare applications for academic research;
- Using social media (e.g. blogs, video) and technologies (e.g. mobile devices such as video iPod, iPad) for education and for enabling academic research;
- Developing collaboration tools and virtual organisations for researchers, and leveraging social tools for data collection;
- Exploring the implications (e.g. in human factors engineering, or open source software) of the intersection of health informatics with social media;
- Discussing what are the next steps for social media and academic research.

3. Format and speakers

The main purpose of the workshop is to stimulate discussion of the issues as a first step towards identifying the major issues that will need to be explored further as the research agenda is developed. A series of short presentations (8-10 minutes each), accompanied by a small number of slides, will set the scene; the remainder of the workshop will involve facilitated and structured discussion based in the presentations, and in other issues that might be identified by workshop participants.

Peter Murray (IMIA CEO) will introduce the workshop context and format. He will introduce examples of the use of social media, including blogs to provide virtual interaction and informal professional development activities around health informatics events. Peter will also moderate the discussions following the brief presentations.

Chris Paton (Chair, IMIA Social Media Working Group) will introduce two examples of the use of social media to develop professional discussion forums: New Zealand's Health InnoVation Exchange (HIVE - <http://www.hive.org.nz>) and the 4,000-member Health Informatics Forum (<http://www.healthinformaticsforum.com>).

Margaret Hansen (Nurse Researcher) will outline practical examples of the use of new technologies and social media approaches based in her experiences with nursing students in the USA and internationally.

Peter Elkin (Chair, IMIA Human Factors Engineering for Healthcare Informatics Working Group) will introduce issues from human factors engineering and their importance in the context of researching and using social media.

Luis Fernandez-Luque (Researcher; Secretary, IMIA Social Media Working Group) will outline research issues in the use of online health videos, including challenges of trustworthiness and information retrieval approaches.

4. Expected achievements and outcomes

The workshop has several expected outcomes. Presenters' materials will be made available via the IMIA SMWG website. The content of the discussions will be captured, and participants will be invited, through ongoing online discussion, to validate key points, contributing to the development of the research agenda. The initial outputs of the workshop discussions will be further explored at the Medicine 2.0'11 conference (Stanford CA, USA; Sept. 16-18, 2011) and additional contributions sought to the development of the research agenda. A White Paper, based in the workshop outputs and related further discussions, will be developed to inform the strategic direction in the development of research in these areas, by IMIA, EFMI, HIVE and other interested organisations. The possible formation of an EFMI Social Media Working group will be explored.

Statement of participation: All speakers have given a commitment to participate in this workshop. In the event of unforeseen circumstances, an alternative speaker will be substituted, or a pre-recorded presentation or form of virtual participation sought, e.g. by web-conferencing.

References

- [1] Paton C, Bamidis P, Eysenbach G, Hansen M, Cabrer M. Five Case Studies of Social Media Use in Medical and Health Education. *IMIA Yearbook of Medical Informatics* 2011 (in press).
- [2] Eysenbach G. Medicine 2.0: social networking, collaboration, participation, apomediation, and openness. *Journal of Medical Internet Research*. 2008;10(3).
- [3] Giustini D. How Web 2.0 is changing medicine. *British Medical Journal*. 2006;333(7582):1283.
- [4] Kamel Boulos MN, Wheeler S. The emerging Web 2.0 social software: an enabling suite of sociable technologies in health and health care education. *Health Information & Libraries Journal*. 2007;24(1):2-23.
- [5] Bamidis P, Constantinidis S, Kaldoudi E, Maglaveras N, Pappas C. The use of Web 2.0 in teaching Medical Informatics to postgraduate medical students: first experiences. Published as Multimedia Appendix in: Eysenbach G. *Medicine*. 2008;2:1022-23.
- [6] Hansen M, Oosthuizen G, Windsor J, Doherty I, Greig S, McHardy K, McCann L. Enhancement of Medical Interns' Levels of Clinical Skills Competence and Self-Confidence Levels via Video iPods: Pilot Randomized Controlled Trial. *Journal of Medical Internet Research*. 2011 (Mar 01); 13(1):e29
- [7] Maag M. Podcasting and MP3 players: Emerging education technologies. *Computers Informatics Nursing*. 2006;24(1):9.
- [8] Sandars J, Homer M, Pell G, Crocker T. Web 2.0 and social software: the medical student way of e-learning. *Medical Teacher*. 2010;1-5.