June 6, 2011

Dr. Farzad Mostashari
National Coordinator for Health Information Technology
U.S. Department of Health and Human Services
200 Independence Avenue S.W., Suite 729-D
Washington, D.C. 20201

Dear Dr. Mostashari:

We are writing to bring to your attention an issue of importance related to the human-computer interface (usability) of electronic medical record (EMR) systems. Records systems must be designed to be usable for a broad range of stakeholders, including physicians, nurses, clinical staff, insurance and billing personnel, researchers, and patients themselves. Those systems also should be accessible to those stakeholders who may have disabilities or limitations. The usability of these systems for all of these people has a direct relationship to their overall utility, acceptance, portability, and accuracy. As representatives of the Association for Computing Machinery (ACM), a leading society for computer professionals, we recognize the technical challenges involved in achieving effective usability.

A summary slide[1] from the April 21, 2011 "Report of the Health IT Policy Committee Certification/Adoption Workgroup" presents a view of usability that is contrary to extensive research and experience with many other systems. Specifically, the conclusion that "Usability is in the eyes of the beholder" presents an inappropriate and inaccurate view of usability as a subjective and elusive concept. Years of successful, peer-reviewed research in human-computer interaction has led to a broad range of both general research techniques and specific findings that establish bases for empirical evaluation and improvement of usability and accessibility. The application of these techniques should play a crucial role in advancing EMR usability and accessibility, and we thus urge you to embrace a thoughtful, scientific approach to this topic.

Researchers in human-computer interaction acknowledge the important influence of contextual factors including work environments, organizational constraints, and differences among users as important themes in their work. Understanding the factors that influence the success or failure of a system is vitally important for successful deployments of that system to new environments. In that sense, we agree wholeheartedly with the April 21st report's conclusions that usability is a "community journey" involving a "combination of many factors." However, that does not mean that everything related to interface design is subjective.

Applying the lessons of many years of productive human-computer interaction research to the challenges of electronic medical record usability and accessibility will be an important component of achieving meaningful use. Many of the world's leading researchers and practitioners in information technology usability and accessibility are members of ACM, and are acutely aware of the many challenges posed in this field. We trust that you will embrace the use of sound, professional methods throughout medical informatics, and we will be happy to act as a resource in those efforts. Should you have questions or need additional information, please

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[1] http://healthit.hhs.gov/portal/server.pt/gateway/PTARGS_0_12811_954625_0_0_18/hitpc-cawg-usability-hearing-report-05-11-11.ppt

contact Cameron Wilson, our Director of Public Policy, at 202-659-9711 or Cameron.wilson@acm.org.

Sincerely,

Eugene Spafford, Ph.D.
Chair, U.S. Public Policy Council
Association for Computing Machinery

Harry Hochheiser, Ph.D.
Chair, USACM Accessibility Committee
Association for Computing Machinery

Andrew Sears, Ph.D.
Chair, Special Interest Group on
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Gerrit van der Veer, Ph.D.
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ABOUT ACM and USACM

With more than 100,000 members, the Association for Computing Machinery (ACM) is the world's oldest and largest educational and scientific computing society. The ACM U.S. Public Policy Council (USACM) serves as the focal point for ACM's interaction with U.S. government organizations, the computing community, and the U.S. public in all matters of U.S. public policy related to information technology.

ABOUT SIGACCESS

The ACM Special Interest Group on Accessible Computing - www.sigaccess.org - promotes the interests of professionals who research and develop computing and information technology to help persons with disabilities. SIGACCEESS also strives to educate the public to support careers for disabled persons. Members from academia and industry focus on applying technologies to assist people with vision, motor, hearing, and speech impairments as well as cognitive limitations like learning disabilities and aging issues. Advanced technologies, assistive technologies, and design form the core of research efforts.

ABOUT SIGCHI

The ACM Special Interest Group on Computer-Human Interaction - www.sigchi.org - is the world's largest association of professionals in the research and practice of computer-human interaction. SIGCHI serves as a forum for ideas on how people communicate and interact with computer systems. This interdisciplinary group of computer scientists, software engineers, psychologists, interaction designers, graphic designers, sociologists, and anthropologists is committed to designing useful, usable technology that has the potential to transform individual lives. SIGCHI has over 60 local chapters for HCI professionals across five continents, publishes the SIGCHI Bulletin quarterly, and co-sponsors conferences and workshops to advance the field of computer-human interaction.