Assessing the Practical Impact of Healthcare Research

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ABSTRACT
This wildcard session aims to open discussion and sharing around experiences and outcomes of healthcare studies concerning large-scale, socio-technical systems such as hospitals.

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Healthcare, socio-technical systems, impact

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K.4.3 Organizational Impacts: computer-supported collaborative work

OBJECTIVE
Past research on healthcare in CSCW and HCI fields has contributed to the growing body of empirical and conceptual knowledge about coordination, collaboration, communication, sensemaking, information seeking and information use in healthcare settings, e.g., [1-8]. Traditionally, these studies have also offered a plethora of design implications and design principles, with the goal of achieving improved coordination and communication among healthcare personnel, and thus improving the overall quality of patient care. Still, as researchers, we have little understanding of the practical impact of such studies.

In the information fields, we frequently study phenomena with the goal of deriving both theoretical and practical implications. For example, information retrieval researchers study users’ online behaviors not only to advance theoretical models of information seeking but also to support users’ online activities. Thus, the challenge of addressing both theoretical and practical concerns at the same time may not be unique to studies in the domain of healthcare. Nevertheless, we believe that assessing the practical impact of healthcare research is especially important since outcomes of such research can often be measured in terms of suffering alleviated and lives saved.

We have gathered a panel of four emerging scholars in the socio-technical arena who have studied work in hospital settings from a variety of perspectives. Though the work of all four panelists focuses on similar medical settings, the approaches and issues studied are diverse. Between them, panelists have used a wide array of techniques such as surveys, interviews, observations, and discourse analysis to study issues of collaboration, coordination, and information sharing in different hospital units such as surgical wards, trauma and emergency departments, and internal medicine services. The four panelists will share experiences from their research and discuss the implications of their studies and the ways in which practical outcomes can or cannot be assessed. These individual stories will then serve as the material for an open discussion.

Our focus on the hospital as a medical setting in this wildcard session is intentional for two reasons. First, hospitals are complex socio-technical systems, and as such have increasingly become an area of interest on the iSchools’ research agendas. Second, compared to studying interactions between a patient and a medical device, studies of hospital work take into account interactions among wide variety of factors and agents, including people, technologies and organizational routines. Thus, assessing the practical impact of such research is more challenging.

STRUCTURE
The session will begin with a five-minute presentation by the moderator to describe the purpose and format of the panel, and to introduce the panelists. This will be followed by 10-minute presentations by panelists detailing experiences, approaches and outcomes of their exemplar studies. We will then open the floor to discussion among panelists and with the audience.
The goal of this session is to open discussion and sharing around experiences and outcomes of research in large-scale, socio-technical systems such as hospitals. Though we expect that topics will emerge through the discussion, some of the questions that may help structure the conversation are as follows:

- Why do we care about the practical impact of healthcare research? (As academics, aren’t we primarily concerned with advancing theoretical knowledge?)
- What are the approaches to studying hospital work and technology design that we might use in order to improve patient care in hospitals?
- How can we apply the findings and implications of healthcare research to real-world healthcare settings given the challenges in technology use in healthcare?
- How can we assess the practical impact of healthcare research given the slow pace of transferring research results into technology and deploying it in real world?

**PANELISTS**

**Sharoda A. Paul** is a Computing Innovation Postdoctoral Fellow at the Palo Alto Research Center (PARC) in Palo Alto, CA. She recently received her Ph.D. in Information Sciences and Technology from the Penn State University where her dissertation focused on collaborative information seeking and sensemaking among healthcare providers in the emergency department. Through ethnographic techniques, Sharoda examined the challenges emergency care providers face in sharing and understanding information under time and resource constraints. She has been studying issues of collaboration around information in healthcare settings for the past four years through her involvement in multiple research projects at the Penn State Hershey Medical Center. Sharoda’s research interests broadly lie in the areas of HCI, CSCW, and healthcare informatics.

**Brian Hilligoss** is a doctoral candidate in the School of Information at The University of Michigan. His research explores both the applied and theoretical aspects of problems pertaining to communication and coordination within complex organizations. Brian’s dissertation examines handoffs of information and responsibility that occur between physicians when patients are admitted to a hospital from an emergency department. His work has been awarded a ProQuest Dissertation Writing Award and a Health Services Research Dissertation Grant from the Agency for Healthcare Research and Quality (AHRQ).

**Peter G. Scupelli** is a visiting instructor in the Human-Computer Interaction Institute at Carnegie Mellon University. His research links human computer interaction to the architecture of the build environment. Peter is a certified accredited evidence-based design researcher for healthcare (EDAC). Through fieldwork, he studied how the configuration of the physical environment (i.e., placement of walls, hallways, and furniture) and the placement and formatting of large schedule displays support multi-group coordination (i.e., between anesthesiologists, nurses, and surgeons). To generalize beyond the four sites studied, he conducted a survey of 135 surgical suite directors across the US. He developed design guidelines for the configuration of the physical environment and placement of large schedule displays in surgical suites.

**Aleksandra Sarcevic** is a Postdoctoral Research Associate at the School of Communication and Information (SC&I) at Rutgers University, New Brunswick, NJ. Over the past five years, she conducted a series of field studies at two US Level 1 trauma centers to gain deeper insight into the complex work of trauma teams. In particular, her research examines collaborative work of trauma resuscitation teams as they treat severely injured patients. Through the analysis of communication, collaboration, decision making, and information seeking, Aleksandra aims to identify inefficiencies in the resuscitation process and opportunities for technology support. She recently joined CU-Boulder and the ConnectivIT Lab directed by Dr. Leysia Palen, where she will spend a year as a Visiting Assistant Professor.

**REFERENCES**


