

IT-Enabled Healthcare Coordination

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Healthcare coordination involves organizing and sharing information among all participants involved in patient care in order to provide safer and more effective care. It has been identified as a key strategy to improve effectiveness, safety, and efficiency of healthcare. While the need for healthcare coordination is clear, there are many obstacles, including technical, behavioral, and organizational.

Information technology (IT) has played a role in enhancing productivity through coordination in many industries, both manufacturing and services. However, nowhere is this role more critical than in healthcare, where IT has the potential to improve patient health and, in many cases, save lives, through improved coordination between various parties such as hospitals, providers, and patients. However, use of IT in healthcare presents some unique challenges and issues. This mini-track will focus on the design and use of technology as well as non-IT assets such as process changes, innovative IT artefacts, and interoperability standards to address these challenges to achieve and enable efficient coordination in healthcare.

We have several case studies that focus on the role of technology to achieve coordination through horizontal process innovation and support of handoffs. The first two papers focus on the coordinative role of lightweight technologies. In the first paper, “Creating Coordinative Paths from admission to discharge: The role of lightweight IT in hospital digital process innovation”, the authors focus on the use of IT to support coordinated patient flow from ER through discharge. The paper discusses how lightweight IT such as electronic whiteboards can lead to process innovation through linking of digital processes. They discuss the innovative capacity of lightweight IT which is flexible and dynamic and provides distributed management. They outline both positive and negative outcomes of coupling this lightweight technology with existing heavyweight technology (e.g. patient records system) that is resilient, secure, and stable. The second paper, “Horizontal Affordances for Patient Centered Care in Hospitals”, furthers the study of the coordinative role

of lightweight technology, loosely coupled to heavy weight systems, for enabling horizontal process innovation. In this paper, the authors use a comparative case study of two hospitals that had ongoing process improvement projects, one focused on value based care, and the other on value configuration. The authors utilize the affordance construct and an analytical lens to identify six affordances for patient centered care - resource optimization, visual resource planning, patient flow simulation, visual patient coordination, clinical learning, and process learning. The third paper “An Exploratory Study on how to Improve Bedside Change-of-Shift Process: Evidence from One Hospital Using Technology to Support Verbal Reporting” focuses on coordination during change of shift reporting in inpatient settings. Through a qualitative study, the authors identify a variety of themes that affect this reporting, including content and quality of information, process related inadequacies, and issues related to technology. They recommend more standardization of change of shift processes with technology that facilitates the pulling of tailored real time information.

This mini track provides several different perspectives on the role of information technology in enabling healthcare coordination, as well as identifying some challenges.