

Minitrack: IT Adoption, Diffusion, and Evaluation in Healthcare

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The adoption, diffusion, and evaluation of IT in healthcare continue to present challenges to organizations and society, as well as to researchers. IT is seen as an enabler of change both nationally and locally in healthcare organizations. However, IT adoption decisions in healthcare are complex because of the uncertainty of benefits and the rate of change of technology.

The papers in this minitrack utilize numerous research approaches. Delphi studies, surveys, interviews, and longitudinal case studies all provide different methods to investigate the range of issues underlying the successful adoption, implementation, and evaluation of IT. These approaches are all represented in this minitrack. Overall, this minitrack contains a variety of interesting papers with some recurring themes.

Paper 1 examines the impact of patient characteristics on the use of an online patient portal. A logistic regression model analyzing 1M+ records shows the impacts of health problems, emergency department visits, urgent care center visits, and gender.

Paper 2 examines the effects of patient portals on the allocation of kidneys for transplantation. Analyses of national data from multiple sources show that the efficiency of allocation increases while disparities among sub-populations may be reinforced.

Paper 3 studies the personal health records adoption barriers, specifically the usability of pre-visit summary, in a mixed method study from the perspective of cognitive load. Specific areas of the intake for were identified as increased cognitive load on patients.

Paper 4 investigates the role of EMR in primary care, in the context of use in laboratory medicine. A survey of Canadian providers reveals that the extent of EMR use was a strong predictor of its impact on the providers' efficiency and quality of care.

Paper 5 explores the impact of electronic health record communication among primary care staff on quality of care and costs for patients with

cardiovascular disease. Social network analyses of internal communication patterns among 19 care teams demonstrates a link between fewer indirect messaging and improved patient outcomes.

Paper 6 discusses the limitations of the use of social media data in healthcare, specifically for the surveillance of communicable diseases, given the unique and intricate characteristics of this data source. Natural language processing of 7,062 flu related tweets provides context for highlighting potential pitfalls of utilizing such data, including data quality, accessibility, and privacy concerns.

Paper 7 investigates the complexity of benefits management in inter-organizational e-health. A qualitative case study in a Norwegian context discovers four central collaboration concepts: structure and strategy, culture, technologies, and management.

Paper 8 addresses the opioid substance use disorder in the United States. Content analysis of text from an online pain self-management program revealed several themes and how to improve the program experience.

Paper 9 addresses the problem of drug waste in China. It proposes an information infrastructure for systematically addressing the problem shared by consumers, pharmacists/doctors, recycling companies, and governments. A proposed platform integrates the stakeholders to improve information and service flows.

Paper 10 evaluates the role of individual characteristics that influence user behavior and their effect on the effective use of mobile healthcare applications. Structural equation modelling based on a sample of 178 students revealed a positive impact of user adaptation and learning behavior on the efficiency and effectiveness of application use.

The above 10 papers cover a wide range of challenges healthcare faces and they highlight possible solutions. We look forward to discussing these topics in this minitrack and encourage the authors to consider the feedback they receive advance their studies after the conference. Furthermore, we encourage submissions in the future addressing healthcare technology adoption, diffusion, and evaluation challenges using a variety of methods and research approaches.