

## ICT-Enabled Self-Management of Chronic Diseases and Conditions Minitrack

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This minitrack focuses on the work related to patients with chronic disease who engage in self-managed health through information and communication technologies (ICT), such as mobile technologies and machine learning. Chronic diseases are those that last for more than three months [4] and generally cannot be prevented by vaccines or cured by medication [1]. Self-management refers to a care management approach in which patients actively take responsibility for treating their chronic diseases [2]. It is a self-regulating, dynamic, continuous, interactive process [3].

The scope of the mini-track gives opportunities for researchers to highlight their work that focus on the technology-enabled self-management of chronic diseases and conditions. It encourages researchers to take a variety of approaches answering research questions related to the design, development, and use of ICTs on patient-centered care.

The best paper in this minitrack will be reviewed for fast track publication in the journal of Information Technology and People.

The papers of this minitrack fall under new and ongoing areas of research such as mobile health technologies and applications, design science research, and health data analysis.

The first paper, “Crowdsourcing Users’ Comments for Clinical and Operational Features Analysis of Diabetes Mobile Apps”, utilizes the fit viability model to determine the effects of different diabetes self-management indicators on the functionalities of diabetes mobile apps. Negative users’ comments were analyzed, and the results show that many of these apps are operationally inefficient and have limited functionalities to facilitate self-management of diabetes due to relatively poor design which can hinder intelligent decision support and limit inclusion and performance of wellness support features.

The second paper, “DIL - A Conversational Agent for Heart Failure Patients”, uses a design science research framework to provide the hospital with an information system that could bridge the

current gap in care that occurs when heart failure patients transition from hospital to home. A conversational agent is designed as a software program that interprets and responds to statements made in ordinary natural language. The technology can also self-monitor vital health data and provide timely interventions like reminders and motivations for the patients. The pilot study shows that the designed technology was a success and managed to assist patients with heart failure in improving their self-care.

The third paper, “Designing an Artifact to Support Incentives for Medication Adherence”, is another design science research that proposes a design prototype for a mobile app that can positively influence patient behavior through incentives to improve patients’ medication adherence. Authors aim to motivate the development of technology that provides medication adherence incentives to a variety of patient groups.

The fourth paper, “Invisible Work Meets Visible Work: Infrastructuring from the Perspective of Patients and Healthcare Professionals”, provides insights and analysis to how the work of patients can support healthcare professionals, and how infrastructuring processes are interconnected within and outside of healthcare. The study provides an analysis of how patients that have had cancer, and healthcare professionals working with chronically ill patients on regular basis perceive their work, and how these two groups perceive their collaboration with the other group through the theoretical lens of infrastructuring.

### References

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