

Co-constructing IT and Healthcare

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Abstract. The CITH project (Co-constructing IT and Healthcare) is an ongoing 4-year interdisciplinary research project, which investigates while intervenes in the collaborative practices involved in disease management of chronic heart patients with an ICD (Implantable Cardioverter Defibrillator).

CITH project

Chronic disease management is one of the major areas within healthcare which is highly dependent upon continuous collaboration across professional boundaries, institutions, and geographical locations. Successful chronic disease interventions usually involve coordinated, multidisciplinary care teams (Wagner 2000). The aim of the CITH project is to analyze existing collaborative practices amongst heterogeneous actors who manage ICD patients, with the aim of designing, developing, and evaluating IT applications and services supporting the work of both healthcare professionals and patients.

Based on workplace studies (Luff, Hindmarch et al. 2000), we have conducted observations, artefact analyses, and interviews with healthcare professionals from the Heart Centre at the Copenhagen University Hospital as well as at two local hospitals. Moreover, we have conducted interviews with patients in their homes and participated in educational sessions for ICD patients. As a result, we have

produced observations notes, interview transcripts, documents, video, and pictures of relevant artefacts and activities. Although this analysis of the existing work practices is still on-going, the design perspective of the project has also been initiated, i.e. through workshops with healthcare professionals and patient groups. These workshops seek to interpret practices and reflect on possible relevant design solutions for supporting chronic disease management in general and ICD patients in particular.

As described below CITH follows two paths for analysis and design.

Healthcare professionals' Collaboration

The healthcare professional path focuses on communication and coordination practices. One key finding is that while there are established practices for communication and coordination within each hospital (e.g. among lab technicians, device representatives, and consulting cardiologists), collaborative activities across sites (e.g. among GPs, the Heart Centre, and local hospitals) are sparse and primarily ad hoc. This is, indeed, puzzling in light of the healthcare professionals' clear acknowledgement that collaboration across sites beneficially would improve their work. Currently, we are investigating new opportunities for collaborations through shared workshops with participants from multiple sites.

ICD Patients

The patient path explores design opportunities to support chronic ICD patients and their relatives in their homes, as well as strengthening their communication with various healthcare professionals on two perspectives. They are to understand and improve communication needs between and at the follow-up consultations.

Key themes grounded in fieldwork studies are; e.g. optimizing asynchronous dialogue between ICD patients and healthcare professionals, supporting systematic collection of events and experiences, improving overview of individual treatment plan including prescribed medication and side effects, and automated feedback on patient condition leveraging data provided by the ICD.

References

- Luff, P., J. Hindmarch, et al., Eds. (2000). *Workplace studies: Recovering work practice and informing system design*. Cambridge, Cambridge University Press.
- Wagner, E. (2000). "The role of patient care teams in chronic disease management." *British Medical Journal* 320(7234): 569-572.