Platforms for Sharing Health-related Information: A Preliminary Design Proposal

TREO Talk Paper

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Abstract

As life expectancy lengthens, the number of elderly on the planet is increasing, emphasizing the need to design solutions that will allow the elderly to manage their lives (Jansson and Kupiainen 2017). One aspect of this is the sharing of health-related information, such as information about meetings with healthcare providers, diet and exercise recommendations etc. that is not captured in existing platforms. This is particularly difficult for the elderly who must manage ongoing inputs from multiple healthcare providers, and share it with caregivers and family members while maintaining privacy and a sense of control (Schwartz 2005). Following a scenario-based technique (Carroll 2000) and borrowing from the design science approach (Hevner et al. 2011), we are designing a platform that can act as the intermediary for capturing and sharing this information across these stakeholders.

The design research effort follows a set of semi-structured interviews. Some of these interviews were conducted at a Council on Aging to surface the concerns and priorities of the elderly; others were conducted with family members and caregivers. The scale of the problem was apparent from simple indicators, e.g. some of the elderly had to coordinate with as many as 8 different doctors on a regular basis (average: 3 different doctors with varying but regular meetings). Analysis of data from these interviews revealed several issues such as the simple reliance on memory from the elderly (in spite of acknowledging problems), the need for functionality such as default options to minimize interaction, the willingness to share information with caregivers, and the desire to have some control over the behavior of the tool. As described above, scenario-based design followed after this, which resulted in the design a low-fidelity prototype, followed by the development of an interactive, web-based platform (see Figure 1).

The effort is part of a larger research project that investigates how the concerns and priorities of new communities (such as the elderly) can be surfaced, for the purpose of investigating how they may influence design decisions. Much prior work in this domain has either focused on participatory design (Kensing and Blomberg 1998), i.e., the process or an examination of unintended consequences (Ash et al. 2004), i.e., relegating investigation of the interaction between priorities and design to a later stage. Our work follows values-inspired design (Purao and Wu 2013; van den Hoven 2007; Schwartz 2005) to examine how these concerns may guide the design of technologies.

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References available on request