PAPER

Technology for Health

S. GIRAUD, C. CONSEL, A. CARTERON, N. VOLANSCHI. Towards empowering caregivers to customizing home assistive support for older adults – A preliminary study of an end-user language for assistive services. Gerontechnology 2018;17(Suppl):130s; https://doi.org/10.4017/gt.2018.17.s.126.00 **Purpose** Aging and its societal challenges have been extensively argued. The rapidly growing older population creates a compelling need to rethink how to support independent living. Assistive technologies (AT) play a key role in this process as they hold the promise of delivering a range of services, spanning health management (*e.g.*, chronic diseases), user safety (*e.g.*, stove monitoring), task assistance of daily activities (*e.g.*, prompting systems), and social participation (*e.g.*, collaborative game applications). These systems have the potential 1) to inform an older adult or their clinician about their status, 2) to detect significant changes, and 3) to trigger an intervention to address a situation. However, the variability in the older adult population in terms of needs, abilities and preferences is a major impediment to the effectiveness of ATs. Existing ATs provide limited configurability, constrained by their silo-based nature (*e.g.*, unconditional reminders for taking pills). To overcome this obstacle, a promising approach consists of empowering caregivers to customizing the assistive support of older adults, making it more effective and relevant to them. Our research goal is to investigate and evaluate an approach to empowering caregivers by enabling them to understand the definition of assistive services. **Method** We conducted a study involving professional caregivers to assess the comprehensibility of an end-user language, dedicated to defining assistive services for the home. This language has been developed in the context of *HomeAssist*, an assisted living platform deployed in the home of 120 single, community-dwelling, older adults[1]. We presented the caregivers of HomeAssist-equipped older adults with ten different scripts of assistive services written in our subject language; they spanned daily activities, home security, user safety, and monitoring information (*e.g.*, meal preparation, waking-up routine, entrance door monitoring). Each participant had to determine whether a script allowed detecting specific scenarios. Participants were individually tested. The preliminary phase of this study involved four participants; four additional professionals are being recruited. **Results & Discussion** The preliminary phase of our study has revealed that the end-user language was comprehensible by caregivers (93% of correct answers). If additional participants confirm these first results, the comprehensibility of this language would already empower caregivers to match assistive services with user's needs. Furthermore, this work is a key stepping-stone to develop an authoring environment for caregivers to define services for their care receivers. This environment could use a textual and/or graphical representation to facilitate usability. Ensuring that caregivers can easily use assistive technologies will be critical to their successful widespread deployment in homes.

References
1. Consel C, Dupuy L, Sauzéon H. HomeAssist: An assisted living platform for aging in place based on an interdisciplinary approach. Advances in Human Factors and Ergonomics in Healthcare and Medical Devices. 2017 Jul 17;129-140