

L. CORRADO, T. KAMPEL, K. TOFFEL, A. ANCHISI. **Identifying needs of innovative technologies in relationship with home healthcare among home-dwelling older adults, informal caregivers and their healthcare providers: a mixed method study.** *Gerontechnology* 2016;15(suppl):33s; doi:10.4017/gt.2016.15.s.697.00 **Background** In 2013 WHO estimated that in 2030 almost one third of the world's population could be composed of older adults of 65 years and more. The majority of the home-dwelled older adults wish to live in their own homes, for as long as possible, even when they need intensive healthcare^{1,2}. Healthcare providers and policy makers are exploring alternative ways to offer and to improve the quality of care of declining home-dwelling older adults³. This creates a growing interest in technologies to enable older people to live independently at home. Aim and population: Needs and perceptions of potential useful technologies allowing home-dwelling older adults to remain at home were explored, including the perceptions of informal caregivers and healthcare providers. **Method** A mixed method study in an explanatory sequential design. A hierarchical cluster analysis of 6,000 older clients' RAI-HC® (Resident Assessment Instrument–Home Care)⁴ assessments resulted in four discriminating health status profiles (physical and cognitive impairment, chronic condition and loneliness). For each profile an aleatory sample of 24 home-dwelling older adults were selected for the interviews. For the interviews, participants were included if (i) they were aged more than 65 years, (ii) they received home healthcare, (iii) they were previously assessed with RAI-HC and presenting a Cognitive Performance Scale (CPS) score <4, and (iv) they were able to understand and to answers to questions in French. After written consent obtained from the older adult, semi-structured interviews were conducted in their living place during the period of October 2015 to March 2016. At the end, 64 interviews were conducted with older adults (mean age=80; 38 women, 26 men). Interviews were completed with data of 27 informal caregivers (mean age=60; 14 men, 13 women) and 20 healthcare providers (mean years of experience=15; 18 women). The recorded interviews were analyzed using a qualitative latent content analysis. The study was approved by the ethical committees of the state of Vaud and Geneva (Switzerland). **Results & Discussion** Older adults with 'functional impairment', 'chronic condition' and 'loneliness' profiles, evoked balance and fall risks as their principal need for help. Older clients with the 'cognitive impairment' profile mentioned medication management as the principal need for help. Simple technologies are used in daily life contrary to innovative and recent developed technologies with advanced functionalities which are seldom used. Lack of knowledge how to use a device or achieving a goal with another strategy are reasons mentioned by older adults for not using innovative technologies. The advice of relatives and healthcare professionals influence their use of technologies. Devices with a simple use (one or two functions and easy handling) are also privileged by informal caregivers and home healthcare providers. Home healthcare services should reinforce the use of technologies already employed by older adults. In the case a new device is needed or introduced, a specific support strategy should be integrated. Adapted education of healthcare providers concerning innovative technologies and their use should be developed. It allows guaranteeing an ethic questioning before the introduction of a device and specific support to older adults and their informal caregivers.

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