A.A.G. SPONSELEE, B.A.M. SCHOUTEN, D.G. BOUWHUIS. ***Telecare accessibility: technical, personal, and organisational issues.*** *Gerontechnology 2012;11(2):200;* doi:10.4017/gt.2012.11.02.302.00

Purpose According to various 'acceptance' models[1-3] usability is a major qualifying variable for technology acceptance. In order to increase the effectiveness and acceptance of telecare technology in home care, the use of a certain telecare system was tested. The results of the study did not only help to improve the system interface, they also showed the importance of other – less frequently mentioned – variables that determine accessibility, like communication and the quality of services. **Method** A total of 65 Dutch elderly households (32.8% male, mean age 76.7) were offered to use a telecare system for free for a period of one year. Participants were interviewed before technology installation (n=65), after six months (n=54) and 12 months (n=35) of use. The telecare system under study consisted of a multi-media player connected to a TV set, a remote control, a webcam, and an alarm pendant. Provided functionalities were: a personal alarm, video contact with a care centre, welfare and service organisations, family members and online information. After nine months the system was modified as a result of the first findings. In semi-structured interviews participants rated the functionalities on perceived ease of use (1=very easy, 5=very difficult), problems encountered, and accessibility. In post-test-2 participants were asked to perform several tasks, using the telecare technology. The number of successful completions of tasks was counted, while the difficulty of reaching completion was observed and labelled. **Results & Discussion** The personal alarm was rated as easiest (μ=1.40), while looking for online information was the least easy (μ=2.67). One in four participants reported problems in contacting the care centre, while more than half of the participants reported problems in contacting family members. In 17 cases (36.2%) family contact did not work properly, in 12 cases (25.5%) the functionality was not installed yet (post-test-1). Multiple remarks were made on ease of use, legibility, design, and appearance of the remote control, interface, and media centre. By observing the behaviour of the participants while using the technology we found additional 'accessibility' problems. More than half of the participants were not able to perform specified tasks on the telecare system by themselves. By combining the test results, the following telecare accessibility variables were identified: (communicating) technical requirements, technical design, interaction, comprehension (of system, functionalities, and services), and service (incl. help desk). Consequently, there appear to be major hurdles to accessibility in addition to usability. In accordance with the studies by Bouwhuis et al.[4], more variables than those included in TAM (Technology Acceptance Model) by Davis[1,2] determine the acceptance of telecare technology. The study shows that technology interaction research should employ both direct and indirect data collection; using interviews or questionnaires as well as observation methods.

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