

D.G. BOUWHUIS, A.A.G. SPONSELEE, L.M.J. MEESTERS. **Telecare adoption and technology acceptance.** *Gerontechnology* 2012;11(2):96; doi:10.4017/gt.2012.11.02.075.00 **Purpose** Telecare is expected to replace regular home care when an integrated set of health monitoring devices and a communication network enables nursing staff to provide appropriate care at distance. While cost considerations and scarcity of nursing staff are strong motivators for telecare, the actual effectiveness and acceptance of telecare systems still falls short of expectations. As standard models of technology acceptance are poor predictors of actual adoption of telecare systems we argue that the theoretical assumptions of models of technology acceptance are inadequate, and that the complexity of telecare implementation has many facets that are not appropriately factored into those models. The identification of relevant factors will benefit and improve the development and acceptance process of telecare systems. **Method** The study is based on a broad range of evaluation studies of telecare systems, under development or installed in the Netherlands, in which many variables could be observed from the earliest stages of conception up to the full operation of the systems. In addition the assumptions behind technology acceptance models<sup>1-3</sup> have been analyzed and new types of models have been developed that better reflect the actual adoption as well as rejection of telecare systems. **Results & Discussion** A main reason for poor acceptance level is that telecare does not materialize as a stand-alone product with a specific and clear functionality, like a TV set or an espresso machine. Telecare can have a surprising variety of instantiations and functions that easily obscure the functionality for the individual user. Another reason is that, even on somewhat longer trial periods, it is not evident to what extent it supersedes other and earlier functions and services that were available to the client. While many clients claim that their telecare system is easy to use, its inherent complexity often seriously reduces its actual effectiveness. A final and probably most important reason is that a telecare system is currently a transsectoral product, i.e. it is designed, installed, employed, maintained and exploited by members of different economic sectors that until now had no established links<sup>4</sup>. This implies, among other things, that accountability in telecare systems takes many forms, financial, technical, medical, social, legal, etc. Yet, the central issue in telecare is the individual client who should serve as the point of departure in design and deployment of such systems. In this paper a provisional model is proposed to predict telecare system adoption. It should come as no surprise that there is more evidence on factors that reduce the adoption rate, than on those that increase it. We also show that part of the poor predictive value of the technology acceptance models can be explained by an inadequate interpretation of the attitude and intention concepts<sup>5</sup>.

### References

1. Davis F. Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly* 1989;13(3):319-340; doi:10.2307/249008
2. Venkatesh V, Bala H. Technology Acceptance Model 3 and a Research Agenda on Interventions. *Decision Sciences* 2008;39(2):273-315; doi:10.1111/j.1540-5915.2008.00192.x
3. Venkatesh V, Morris MG, Davis FD, Davis GB. User Acceptance of Information Technology: Toward a Unified View. *MIS Quarterly* 2003;27(3):425-478; doi:10.2307/30036540
4. Baken NHG. Sector Transgressing Innovation: From My-Business case to Our-Value Case. Presentation at Point-One Network Event, 's-Hertogenbosch, Netherlands; 2010
5. Regan DT, Fazio R. On the consistency between attitudes and behavior: Look to the method of attitude formation. *Journal of Experimental Social Psychology* 1977;13(1):28-45; doi:10.1016/0022-1031(77)90011-7

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**Affiliation:** Eindhoven University of Technology, Eindhoven, Netherlands;

**E:** d.g.bouwhuis@tue.nl

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