

# Nursing Care

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## **Elisabeth Haslinger-Baumann**

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### **Application of an intelligent drinking system to prevent dehydration in old age**

For older people, reduced thirst is a major problem in daily life (Bigorio, 2009; Hodgkinson et al, 2003; Bunn et al, 2015). To prevent dehydration, a functional prototype for an intelligent drinking system was developed within an experimental research project "Drink Smart" (2016-2018), which measures daily fluid consumption, visually displays it on the cup itself and also transfers the data to electronic care documentation. The aim of the evaluation study was to test the drinking system for suitability in home nursing practice. The individual measurements of system stability, acceptance and effects were collected by means of individual interviews with elderly people in need of care and group interviews with nursing personnel of mobile home nursing. The evaluation of usability took place by means of usage diaries and in final interviews and group discussions. The suitability of the system for practical use was also determined by the mobile nursing staff. Furthermore, a heuristic evaluation was carried out by an expert.

The intelligent drinking cup "Drink Smart" achieved technical performance and stability suitable for practical use in a three-

week test phase per person with 21 test participants (a total of 441 days). In principle, the use of the system was described as simple, but due to cognitive and physical limitations there may be barriers to use. The drinking system was described as motivating and meaningful and helped the elderly to drink more. For caregivers, the drinking system is perceived as an optimal aid when it comes to carrying out fluid balances and recording the amount of fluid and drinking events. The future use of the drinking system is aimed at by the elderly, and by the caregivers, when it comes to supporting sufficient hydration and calculating drinking quantities.

#### **Speaker Biography**

Elisabeth Haslinger-Baumann is Professor and Research Coordinator for Nursing Research in the Department of Applied Nursing Science at University of Applied Sciences in Vienna. She is registered nurse and graduated in Philosophy and Political Sciences at the University of Vienna. She is PhD in Nursing Science and graduated from the Health and Life Sciences University in Hall in Tyrol, Austria. She leads experimental research projects in the Research Fields Active and Assisting Living, Evidence based Practice Health Care and Nursing and Evaluation Research in Health Care and Nursing.

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