

C.C. CORNELISSE, H.H. NAP, D. LUKKIEN, S. VAN DER WEEGEN. **Lifestyle monitoring: Smart sensors at home for people with dementia.** *Gerontechnology* 2016;15(suppl):121s; doi:10.4017/gt.2016.15.s.801.00

Purpose In The Netherlands, the organization of long-term care changed in 2015 by a reformation of care and support. To reduce health care costs, stimulate self-management, and increase the involvement of family and friends in care, people with dementia need to live in the community as long as possible. Caring for a person with dementia can be a burdensome task and a significant personal, emotional and physical challenge. The burden becomes heavier as the disease progresses, since the increase of cognitive disorders and the resulting reduction of independence in daily life, together with the onset of behavioral symptoms, heighten the caregiver's distress, anxiety, depression and may cause impaired physical health^{1,2}. Lifestyle monitoring systems could support informal carers, which are networks of sensors that monitor patterns of motion in different places within the home. The information about the activity or 'lifestyle' can be monitored by informal and/or formal caregivers. This paper discusses the relation between lifestyle monitoring and the subjective stress experience of informal care givers and an exploration of the effectiveness of lifestyle monitoring to support independent living for people with dementia, as well as the impact on the quality of care. **Method** The use of a lifestyle monitoring system was evaluated in a pilot in The Netherlands. Both questionnaires and interviews were used to study the impact of lifestyle monitoring on people who care for people with dementia who live alone. Through web based questionnaires for informal caregivers, the effects on caregiver strain (CSI³ & EDIZ⁴), quality of life (CareQol⁵) and subjective stress of informal caregivers were evaluated (Pre, Post1 & Post2 measurements). Furthermore, interviews were performed in the study with both informal caregivers (n=63, 41 female; M_{age}=54.9±7.5 years;) and case managers (n=14, 12 female; M_{age}=48.2±8.5 years) for people with dementia to gather an insight in the added value of lifestyle monitoring for care professionals in the care process. **Results & Discussion** Preliminary results show a positive trend of lifestyle monitoring on CSI, EDIZ, CareQol, and subjective stress measurements. We discuss the results of the interviews on the topics; expectations of the system, experience of use, subjective stress, privacy, trust, safety and reassurance. Finally we discuss the experiences of formal and informal carers to which extent lifestyle monitoring can increase the time a person can live at home and whether early detection of health problems can support a necessary admission to a nursing home. Overall, the results show that informal carers experience lifestyle monitoring to reduce stress and burden in the care for people with dementia.

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Address: Vilans, Utrecht, Netherlands;

E: l.cornelisse@vilans.nl