

2. to evaluate feasibility, acceptability, tolerability informed by VR-CORE Framework and Hybrid development-implementation design, and to explore issues around implementation of the VR simulation training platform; and
3. to conduct pilot testing to examine a) initial clinical efficacy of VR-based CG training in improving quality of relationship with PWD, competence, resilience, and reducing depression and stress in dementia CGs and its b) readiness for implementation in the community.

Anticipated Outcomes: VR-SIMS CARERS innovation is intended to be an accessible, scalable and sustainable VR simulation training platform that will support CGs in the practice and acquisition of essential dementia caregiving skills, enhancing their caregiving competence and resilience. Training CGs to recognize and manage stressors can lower their risk of overall mental health decline.

S14: The use of advanced data and sensortechnology in dementia: innovation and implementation

Chair: Sarah Janus, Department of General Practice and Elderly Care Medicine, Alzheimer Center Groningen, University of Groningen, University Medical Center Groningen;

Main Abstract

The use of health care technology to support informal and formal caregivers in decision making for proper guidance of care for people with dementia, is rising over the last decade. For example, (tools within) electronic health records systems, technological devices such as wearables and devices using sensor technology (domotics) are more and more available in health care. Recent developments of artificial intelligence (e.g. machine learning, deep-learning, text mining) can be useful to provide a more advanced use of sensor and other data, and contribute to a better guidance of (person)centered care. However, the use of health care technology (and the data it accumulates) could – when used appropriately and meeting the needs of (in)formal care workers who use this technology- help to relieve the burden of care (in times of lack of staff resources), delay nursing home admission and reduce corresponding costs. Unfortunately, some of these developments, not always meet the needs of care workers and informal caregivers caring for people with dementia.

For health care technology to be able to contribute to personalized dementia care, a combination of innovation (novel technology) and implementation is necessary. A wider use of novel technology on a broader scale is necessary to generate impact. For a proper implementation, several factors such as staff opinions that may be reluctant to using novel technology, data safety and ethical issues have to be taken into account. In addition, a proper training guiding the process of implementation is crucial.

In this workshop, we will provide several examples of applications in health care based on data usage and sensor technology: (1) the use of (the combination of) qualitative and quantitative data for personalized health care, (2) wearable sensors to measure stress, a phenomenon that is regarded as an early warning for the onset of challenging behavior in people with dementia, (3) combination of ambient and body mounted sensors to monitor challenging behavior and to prevent further deterioration, (4) the practical use of communication, tracking and sensor technology to support welfare to people with dementia and caregivers in the community.

In conclusion, this symposium will give insight in the challenges of designing novel technology and its implementation into daily practice, to assist informal and formal cares to be able to deliver person-centered care.

Towards data-informed shared decision making: what do we need?

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Background: The increasing availability of data offers new possibilities for supporting quality of care in long-term care (LTC) for older adults, also for dementia care units in nursing homes. Examples are quantitative data in electronic health records (i.e. medication), data collected by technological devices such as sensors and wearables (i.e. data related to psychical and mental health including for example heart rate and sleeping patterns), but also qualitative data stored in texts (e.g. transcribed conversations about perceived quality of life). LTC organisations currently lack tools to interpret and integrate the data in the shared decision-making (SDM) process. This project investigates the necessities for data-informed SDM.

Methods: The study was conducted in co-design with the knowledge group 'Data Science' residing in the Living Lab in Ageing and Long-Term Care, Maastricht. A focus group-setting, in which a diverse set of stakeholders, including data/ICT-specialists, care managers and client representatives, took place to discuss bottlenecks, possibilities and solutions related to data-informed SDM.

Results: In total, representatives (n=18) from 7 care organisations participated in three separated focus groups. This resulted in several themes that were deemed necessary for data-informed SDM: 1) an organisational vision on data and data-informed SDM, 2) investment in data-driven care SDM, 3) the instalment of multidisciplinary teams, including clients, informal and formal caregivers, 4) a planned implementation process is needed, and 5) the use of living lab constructions.

Conclusion: A well-thought-out, integral learning process, including a vision statement on data and the installation of multidisciplinary teams working on data-problems, is deemed necessary in order for LTC organisations to accomplish data-informed SDM. A concrete step-by-step plan, which can provide LTC organizations with tools to embed data in the current SDM process, is suggested to help organisations in their quest to data-informed personal care.

Developing a system for measuring stress in the care for nursing home residents with dementia

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Background: Measuring and monitoring stress has potential benefits for the care and self-management of stressors for people with dementia. Early identification of stressors may help to cope with challenging behaviours (CB), occurring in up to 80% of nursing home residents with dementia. The identification of stressors causing CB is difficult (as often