

# Study into the effect of domotics in small-scale groupliving facilities on people with dementia and their professional carers.

Published: 08-12-2006

Last updated: 20-05-2024

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<b>Ethical review</b>	Approved WMO
<b>Status</b>	Pending
<b>Health condition type</b>	Dementia and amnestic conditions
<b>Study type</b>	Interventional

## Summary

### ID

NL-OMON30423

### Source

ToetsingOnline

### Brief title

domotics-project for people with dementia

### Condition

- Dementia and amnestic conditions

### Synonym

Alzheimer's disease, dementia syndrome

### Research involving

Human

### Sponsors and support

**Primary sponsor:** Vrije Universiteit Medisch Centrum

**Source(s) of monetary or material Support:** Het Ministerie van VWS stelt financiële middelen ter beschikking voor het onderzoek.

## **Intervention**

**Keyword:** dementia, domotics, quality of life, small-scale care

## **Outcome measures**

### **Primary outcome**

The following primary outcome measures will be used for the persons with dementia: quality of life in terms of self-worth, autonomy, and feelings of safety; the experienced need of residents for support and care in domains such as wandering, memory, mobility, and psychic distress; the number of fall incidents; the number of times people feel lost at night and the applied interventions; the use of preventive means and measures of restraints; the daily functioning of persons with dementia as a consequence of the implementation of domotics. Outcome measures for the carers will be: job satisfaction, mental health, illness days, number of required staff. Themes of the semi-structured interviews with the professional carers are: burden, job satisfaction, experiences with the application of domotics, daily functioning of the persons with dementia, (changing) role of the carers, attitude towards means and measures of restraint.

### **Secondary outcome**

Secondary outcome measures are cognitive functioning of the person with dementia; (change in) medicine use; life events during the research period (for example illness and death of a loved one) and demographic data. In order to evaluate the impeding factors on implementation of domotics, relevant

legislation will be studied, such as legislation on privacy and electronic data exchange.

Also, data will be collected on the implementation costs and structural costs of domotics.

## Study description

### Background summary

According to the Netherlands Health Council six new nursing homes would have to be build every year to cope with the growing need for care of people with dementia. However, to live in large institutions is not what the majority of the elderly want. We therefore see a growing number of small-scale living facilities for people with dementia. It is expected that there will be a shortage of these facilities in the future due to a lack of sufficient qualified personnel and the constant pressure on health care organisations to reduce costs. New solutions are necessary to help address these problems with respect to quality of care. Technology in the home, also known as domotics, is one of the possible measures that can help improve quality of care and/or cost effectiveness. As the application of domotics has never been investigated in small-scale living facilities for people with dementia, an evaluation study into the effect of domotics is proposed.

### Study objective

The aim of the study is to assess the effects of domotics on people with dementia living in small-scale living facilities and their professional carers. Also, we will investigate whether domotics can be used as an alternative for traditional preventive means and measures of restraints. Furthermore, the study will be carried out to evaluate legislation and financial means as potentially impeding factors in the implementation of domotics. Finally, the study will provide insight in the (change of) labour productivity as a consequence of the implementation of domotics.

### Study design

In this study a randomised controlled trial will be conducted (RCT). Based on their number on the waiting list for a small-scale living facility and need of care, people will be assigned in groups of six people, with a similar variation in need of care, to the small-scale living facilities. Next, the facilities are assigned by drawing of lots either to the experimental

(domotics) or the control condition (without domotics). Data are collected one month after people start living in the small-scale living facilities and two months later. At the end of the intervention period the people with dementia and their professional carers will be interviewed (semi-structured interviews) to evaluate the quality of life and functioning of the persons with dementia.

## **Intervention**

The intervention in this study consists of the application of domotics in small-scale living facilities for people with dementia. The domotics encompass the following elements:

- Environment control: movement sensors, light control, sun shade, cookery safety devices, orientation lights;
- Monitoring devices: wandering detection, time control, camera control, intercom function at the entrance;
- Alarm systems: acoustic monitoring, passive alarm and heat control.

So-called \*life circles\* (leefcirkels) will be used where residents can go independently. Within this space a person with dementia is able to walk freely without the risk of getting lost. By means of a customized profile that can be implemented in the monitoring-system elements of domotics, such as light, heat, alarm system, sun shade, independent toilet use, and the space of life circles or a combination of these, can be adapted to the individual needs of the person with dementia.

## **Study burden and risks**

The burden for patients and professional carers of participation in the project (two questionnaires of one hour and an interview of 30 minutes in a research period of four months) is minimal and without risk for the persons with dementia and carers in our opinion. Trained interviewers will carry out the questionnaires.

## **Contacts**

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## Trial sites

### Listed location countries

Netherlands

## Eligibility criteria

### Age

Adults (18-64 years)

Elderly (65 years and older)

### Inclusion criteria

people with mild to severe dementia

living in small-scale living arrangements

### Exclusion criteria

people with severe behavioral problems

people without dementia syndrome

## Study design

### Design

Study type: Interventional

Intervention model: Parallel

Allocation: Randomized controlled trial

Masking: Open (masking not used)

**Primary purpose:** Health services research

## Recruitment

NL  
Recruitment status: Pending  
Start date (anticipated): 01-10-2006  
Enrollment: 84  
Type: Anticipated

## Ethics review

Approved WMO  
Application type: First submission  
Review commission: METC Amsterdam UMC

## Study registrations

### Followed up by the following (possibly more current) registration

No registrations found.

### Other (possibly less up-to-date) registrations in this register

No registrations found.

## In other registers

Register	ID
CCMO	NL14443.029.06