

# The prevention and Reactivation Care Programme: A personalized, integrated intervention for prevention of functional decline after hospital stay.

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The Prevention and Reactivation Care Programme uses an integral, multidisciplinary, and goal oriented approach that will lead to: 1. Early detection of elderly with an increased risk for loss of functional capacity during hospital stay; 2....

<b>Ethische beoordeling</b>	Positief advies
<b>Status</b>	Werving gestopt
<b>Type aandoening</b>	-
<b>Onderzoekstype</b>	Interventie onderzoek

## Samenvatting

### ID

NL-OMON26198

### Bron

Nationaal Trial Register

### Verkorte titel

ZPH

### Aandoening

Frailty, Elderly, Older persons, Function, Quality of Life, Cost-effectiveness, Hospitalization, Prevention, Independence, Physical function, Quality of Care, Informal care, Self-management

### Ondersteuning

**Primaire sponsor:** Erasmus MC, University Medical Center Rotterdam  
Department of Public Health  
Rotterdam, The Netherlands

**Overige ondersteuning:** ZonMw, The Netherlands Organization for Health Research

## Onderzoeksproduct en/of interventie

### Uitkomstmaten

#### Primaire uitkomstmaten

Regarding the effect of ZPH:<br>

1. Functional status of the elderly patient;<br>
2. Duration of hospital stay.

<br><br>

Regarding the process evaluation:<br>

1. Registration of care process;<br>
2. Quality of care.

<br><br>

Regarding the cost-effectiveness:<br>

1. The costs per quality-adjusted life-year (QALY).

## Toelichting onderzoek

#### Achtergrond van het onderzoek

Of the 65 year-olds admitted to hospital, approximately 35% function worse after discharge than before admission. This percentage increases with age. It is remarkable, that a large number of these problems are not related to the primary reason for admission. In many cases hospitalization itself leads to functional decline, for example, by lack of physical activity or feelings of depression. Functional problems play an important role in the perception of quality of life, in the need for permanent intramural admission of the elderly person (at times in the 'wrong bed'), and the burden experienced by the informal carer. The Prevention and Reactivation Care Programme (ZPH) is a programme developed to reduce this hospital-related function loss. The aim of the ZPH is the early recognition of the risk factors for unnecessary functional decline in the elderly who are admitted into hospital, and to prevent further functional decline by preventive interventions to promote a quick return to independent living. The ZPH also aims to reduce the burden on the informal carer and to improve the quality of care with respect to content and processes. The ZPH has three distinctive parts:

1. Timely start: Treatment focused on starting reactivation within 48 hours after admission;
2. Intensive follow-up treatment (via stay in the Prevention and Reactivation Centre for part of the vulnerable elderly);
3. Intensive follow-up in primary care by means of a casemanager with geriatric expertise.

The ZPH uses an integral, multidisciplinary, and goal-oriented approach (with the aid of Goal Attainment Scaling). With this approach the ZPH contains all the elements currently considered necessary by scientists and care providers for the successful rehabilitation of the elderly. The advantage of the ZPH is subject to a combination of effective components and a cohesive programme.

For the evaluation the ZPH as a whole, a quasi-experimental research design is used, where the impact on functional status and quality of life of the elderly is measured in a prospective cohort study and within which one specific care component - CPH- is evaluated using a RCT. The central question is whether the ZPH qualitatively and cost effectively improves the care of the vulnerable elderly, admitted to hospital, when compared to normal geriatric care in the Netherlands. When evaluating the ZPH combined qualitative and quantitative research methods are used. Three types of hospitals with various levels of geriatric care will be compared:

1. A hospital without clinical geriatrics, without hospital replacement care, and no follow-up in primary care;
2. A hospital with coordinated discharge, hospital replacement care/care hotel, and no follow-up in primary care;
3. A hospital with clinical geriatrics, and ZPH with follow-up in primary care.

For one year, using a triage with the ISAR, vulnerable elderly (n=4500 per location) will be identified from the total intake of people over 65 (n=7000 per location). From this group a random sample of 900 vulnerable elderly per location will be taken. In addition, at the test location, using objective assessment methods, 400 vulnerable elderly who qualify for a stay in the CPH will be identified. This latter group will be assigned randomly to ZPH in- or exclusive accommodation in the CPH. At the three locations, data regarding the primary outcome results for the elderly and the informal carer will be collected on admission, at three and twelve months after admission (viz. physical function (self report and objective tests), quality of life, burden experienced). In addition, data on risk factors of functional decline, and indicators of the care process will be collected. For a fair assessment of the impact that the ZPH has, it is important that the differences in the care processes between the locations are documented using a set of quantitative process indicators related to the treatment integrity of the ZPH (e.g. which disciplines were involved in the treatment). Comparable data is also collected in the control hospitals. The care provided to a selection of patients will be audited to assess and outline the details of the quality of the care and the care process in the test and in the control hospitals. The change in results between the three locations will be compared at three and twelve months. Differences in case mix and treatment regimes, independent of the ZPH, between locations at baseline which could explain a difference in functional status or quality of life, will be corrected for.

The ZPH experiment is expected to lead to, among other things, improvements in structure and process quality of care for the vulnerable elderly during and after hospitalization; better functional status and better quality of life for the vulnerable elderly for twelve months after

hospitalization; reduced burden for the informal carers; a shorter duration of intramural care after hospitalization, reduction of re-admissions, reduction of nursing home admissions and reduction of the 'wrong-bed' problem; and improved cost effectiveness of care for the vulnerable elderly during and after hospitalization.

Based on extensive information of the care process in the three different settings of geriatric care and on the successful and restrictive factors made evident from the qualitative analysis, a programme that prevents functional decline will be designed for the control locations, using the evaluation results from the test location after completion of the experiment.

## **Doel van het onderzoek**

The Prevention and Reactivation Care Programme uses an integral, multidisciplinary, and goal oriented approach that will lead to:

1. Early detection of elderly with an increased risk for loss of functional capacity during hospital stay;
2. Improved functioning and quality of life of vulnerable elderly persons 12 months after hospital admission;
3. Lower burden on informal carers of vulnerable elderly persons who have undergone hospital admission;
4. Improvements in structure- and process quality of care for elderly with complex problems during and after hospital admission;
5. Reduced intramural residence of vulnerable elderly after hospital admission, reduction of readmissions in the hospital, reduction of admission to nursing homes, and reduction of wrong-bed problems;
6. Improved cost-effectiveness of care for vulnerable elderly during and after hospital admission.

## **Onderzoeksopzet**

In all three hospital sites the assessment will take place at the following times:

1. T0: Day one or two in hospital: triage, and first assessment of risk factors and outcome indicators;
2. T1: Three months after admission;
3. T2: Twelve months.

Measurements will be performed through:

1. Structured interviews with older patients and informal care givers;
2. Questionnaires for older patients, informal care givers and health care professionals;
3. Physical performance test for older patients;
4. Structured extraction of data from patients' medical files.

### **Onderzoeksproduct en/of interventie**

The ZPH-programme [ZPH: Zorgprogramma voor Preventie en Herstel = Prevention and Reactivation Care Programme] deploys a package of interventions for the retention of function, with the aid of a treatment plan that is both integral and personal (focusing on the physical, mental and social domains of loss of function). This programme starts within 48 hours after admission to hospital and for some of the vulnerable elderly, subsequent to hospitalisation, intensive reactivating care will be given in the Prevention and Reactivation Centre (Centrum voor Preventie en Herstel, CPH). After this intensive period, further treatment and support take place in primary care, so that the benefits are not lost.

One of the ways in which this takes place is via a case manager who coordinates the multidisciplinary care plan for primary care (in cooperation with G.P.s and district nurses), supports the elderly and motivates them to cooperate in this care plan, and who monitors the risk factors for loss of function in the home situation (e.g., polymedication).

The ZPH has three distinctive parts:

1. Timely start: Treatment focused on starting reactivation within 48 hours after admission;
2. Intensive follow-up treatment (via stay in the Prevention and Reactivation Centre for part of the vulnerable elderly);
3. Intensive follow-up in primary care by means of a casemanager with geriatric expertise.

The ZPH uses an integral, multidisciplinary, and goal-oriented approach (with the aid of Goal Attainment Scaling). With this approach the ZPH contains all the elements currently considered necessary by scientists and care providers for the successful rehabilitation of the elderly. The advantage of the ZPH is subject to a combination of effective components and a cohesive programme.

The ZPH intervention is compared to different levels of geriatric care:

1. A hospital without clinical geriatrics, without hospital-replacement care, and no follow-up in primary care;
2. A hospital without clinical geriatrics, with coordinated discharge and hospital-replacement care/care hotel, and no follow-up in primary care;
3. A hospital with clinical geriatrics, with coordinated discharge and hospital-replacement care and no follow-up in primary care.

## Contactpersonen

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## Deelname eisen

### Belangrijkste voorwaarden om deel te mogen nemen (Inclusiecriteria)

The study population consists of elderly persons (65 years and older) who are admitted to a hospital and - during admission - have a high risk of loss in function.

### Belangrijkste redenen om niet deel te kunnen nemen

## (Exclusiecriteria)

1. Severe cognitive problems (MMSE < 12);
2. Life expectancy shorter than 3 months;
3. Not able to complete the baseline measurements within 5 days after admission.

## Onderzoeksopzet

### Opzet

Type:	Interventie onderzoek
Onderzoeksmodel:	Parallel
Toewijzing:	Niet-gerandomiseerd
Blinding:	Enkelblind
Controle:	Actieve controle groep

### Deelname

Nederland	
Status:	Werving gestopt
(Verwachte) startdatum:	10-05-2010
Aantal proefpersonen:	3100
Type:	Werkelijke startdatum

## Ethische beoordeling

Positief advies	
Datum:	07-05-2010
Soort:	Eerste indiening

## Registraties

## Opgevolgd door onderstaande (mogelijk meer actuele) registratie

Geen registraties gevonden.

## Andere (mogelijk minder actuele) registraties in dit register

Geen registraties gevonden.

## In overige registers

Register	ID
NTR-new	NL2193
NTR-old	NTR2317
Ander register	ZonMw : 60-61900-98-130
ISRCTN	ISRCTN wordt niet meer aangevraagd.

## Resultaten

### Samenvatting resultaten

N/A