

# The effectivity and feasibility of integrating nondispensing pharmacists into primary healthcare centres

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The integration of a pharmacist in the primary care, which has up to now not been studied in the Netherlands, could enable more efficient interventions to resolve drug therapy problems and help to build collaborative working relationships between...

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

## Samenvatting

### ID

NL-OMON20964

### Bron

Nationaal Trial Register

### Verkorte titel

POINT (Pharmacotherapy Optimization through Integration of Nondispensing pharmacist in a primary care Team)

### Aandoening

Medication Therapy Management - Farmacotherapie management

Medication errors - Medicatiefouten

Drug Utilization Review - Medicatiebeoordeling

Polypharmacy - Polyfarmacie

Aged - Ouderen

Primary Health Care - Eerste lijns zorg

Pharmacists - Apothekers

Hospitalization - Hospitalisatie

### Ondersteuning

**Primaire sponsor:** ZonMw

Achmea

**Overige ondersteuning:** ZonMw

## Onderzoeksproduct en/of interventie

### Uitkomstmaten

#### Primaire uitkomstmaten

medication-related hospital admissions in elderly patients with multimorbidity, cardiovascular disease and polypharmacy.

## Toelichting onderzoek

### Achtergrond van het onderzoek

The prevalence of suboptimal prescribing of medications is considerable. Patients are often undertreated or subjected to interacting drug treatments that are potentially harmful. This frequently results in medication related hospital admissions that are potentially preventable. Improvements to the healthcare system are needed in order to maximize the benefits of pharmacotherapy. It has been demonstrated that pharmacists can improve prescribing, reduce healthcare utilization and medication costs, thus contributing to clinical improvements in many chronic medical conditions. The integration of a pharmacist in the primary care team, as the key provider of pharmaceutical care to individual patients, has the potential to address many of the present barriers to effective pharmaceutical care, by improving access to patient information, addressing logistical communication challenges between pharmacists and GPs (general practitioners). The integration of a pharmacist in the primary care, which has up to now not been studied in the Netherlands, could enable more efficient interventions to resolve drug therapy problems and help to build collaborative working relationships between pharmacists and physicians. This project is designed to study the effect and the feasibility of integrating a nondispensing pharmacists into primary healthcare centres. In this project we intend to compare adverse medication related events and clinical parameters of the pharmaceutical care process in elderly patients with multimorbidity and polypharmacy, in three different models of pharmaceutical care delivery in the primary care setting:

A) a nondispensing pharmacist as an integral member of the primary healthcare team based

in the GP practice (nondispensing pharmacist group)

B) a pharmacist in a community pharmacy with a predefined training, performing structured medication reviews (education group)

C) a pharmacist in a community pharmacy (control group of usual care).

Medication related hospital admissions will be the primary outcome measured. The

secondary outcomes are changes in

prescription (number of drugs, number of prescriptions, discontinuation of drugs, starting a new drug, switch to a new type of

drugs, dose, strength, refill compliance), prescription indicators, monitoring of effective and safe pharmacotherapy,

bloodpressure, laboratory markers, number of medication reviews, cardiovascular events, number of referrals to specialists,

and number of documented falls.

As hospitalisations are often a cost driver, keeping patients out of the hospital is an important goals of the care provided by the

pharmacists and might be cost-effective. By improving pharmaceutical care within primary care the quality of the care might

improve and may lead to cost savings in secondary care. We will perform a cost analysis mainly based on resource utilisation

to provide more information on costs within different groups of this the study. The outcomes of interest in this economic

evaluation will be: hospitalisation costs, annual resource utilisation costs, annual medication costs and costs of the

nondispensing pharmacist.

## **Doel van het onderzoek**

The integration of a pharmacist in

the primary care, which has up to now not been studied in the Netherlands, could enable more efficient interventions to resolve drug therapy problems and help to build collaborative working relationships between pharmacists and physicians.

## **Onderzoeksopzet**

Routine healthcare data from primary care can be anonymously linked to the Achmea/Agis Health database. The extraction of patient data will be performed by the U-PRIM system, a software application that is installed in all participating general practices. Information will be available of the electronic medical records (EMRs) in each general practice, combined with SFK data from the community pharmacies including medication dispensing data and combined with the Achmea/Agis Health

database including reimbursement data. Outcomes will be extracted from the database during the intervention period of 12 months and 12 months prior to the intervention.

Outcomes will be extracted from the database from the 'care as usual' arm and from the 'pharmacist with

additional training' arm in the same period as the intervention of the nondispensing pharmacist will take place. As all required data are already routinely collected, all data collection is prospective, also in the pre-intervention period. No changes in this data collection routine are foreseen during the study period. Whether hospital admissions are related to medication will be assessed by two independent clinical pharmacists based on discharge information, medical history and medication history, according to the algorithm by Kramer et al.

## **Onderzoeksproduct en/of interventie**

In a prospective, non-randomised controlled intervention with pre/post comparison (quasi experimental design) the outcomes of three implementation strategies with three models of pharmaceutical care provision will be compared:

- A) In the nondispensing pharmacist arm, 10 GP practices with a total of 250000 patients will be involved with an integrated pharmacist as a member of the primary healthcare team;
- B) In the community pharmacists with additional training arm, 10 pharmacists and their collaborating GP practices will be involved. The pharmacists will attend the 'PIAF' or the 'Service Apotheek Farmacotherapie Expert' clinical pharmacy course and is therefore expected to work according to the guideline polypharmacy in the elderly.
- C) In the usual care arm, 10 pharmacists will be involved with their collaborating GP practices.

## **Contactpersonen**

### **Publiek**

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### **Wetenschappelijk**

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## Deelname eisen

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

- Patients  $\geq$  60 years;
- Polypharmacie ( $\geq$  5 different chronic medications);
- Use of cardiovasculair medication (ATC B/C);
- Multi-morbidity (Frailty index  $\geq$  0.20)

### Belangrijkste redenen om niet deel te kunnen nemen (Exclusiecriteria)

None

## Onderzoeksopzet

### Opzet

|                  |                         |
|------------------|-------------------------|
| Type:            | Interventie onderzoek   |
| Onderzoeksmodel: | Parallel                |
| Toewijzing:      | Niet-gerandomiseerd     |
| Blinding:        | Open / niet geblindeerd |
| Controle:        | Actieve controle groep  |

### Deelname

|                         |                 |
|-------------------------|-----------------|
| Nederland               |                 |
| Status:                 | Werving gestart |
| (Verwachte) startdatum: | 03-03-2014      |
| Aantal proefpersonen:   | 8550            |

Type:

Verwachte startdatum

## Ethische beoordeling

Positief advies

Datum:

07-01-2014

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        | NL4244  |
| NTR-old        | NTR4389   |
| Ander register | METC-protocolnumber and ZonMw dossier number : 13-432/C and 80-83600-98-10206 |

## Resultaten