

# Epidemiology of Postoperative Pain

Gepubliceerd: 12-10-2017 Laatste bijgewerkt: 13-12-2022

1) Epidemiology of postoperative pain What is the correlation between pain intensity scores and type of surgical procedure in relation to patient characteristics and analgesia? Is it possible to specify surgical procedures indicating its pain...

<b>Ethische beoordeling</b>	Niet van toepassing
<b>Status</b>	Werving gestart
<b>Type aandoening</b>	-
<b>Onderzoekstype</b>	Observationeel onderzoek, zonder invasieve metingen

## Samenvatting

### ID

NL-OMON20021

### Bron

Nationaal Trial Register

### Aandoening

Postoperative Pain  
Pain Management  
Anaesthesia  
Surgery

### Ondersteuning

**Primaire sponsor:** OLVG Hospital

Oosterpark 9  
1091 AC Amsterdam  
The Netherlands

Attention: prof. dr. M.A.A.J. van den Bosch

**Overige ondersteuning:** Departmental funding

### Onderzoeksproduct en/of interventie

### Uitkomstmaten

### Primaire uitkomstmaten

### 1) Epidemiology of postoperative pain<br>

To establish the epidemiology of postoperative pain versus surgical procedures and type of analgesia; pain scores vs. different procedures, location surgery, patient characteristics and combinations of aforementioned. To be able to identify procedures and patients with a high risk of severe postoperative pain and to be able to identify surgical indicator procedures that can be used as a correction model for differences in surgical case mix between hospitals.<br><br>

### 2) Risk and prediction<br>

To identify patient- and surgical procedure characteristics correlating with severe postoperative pain

<br><br>

### 3) Best practice advice<br>

Drafting a best practice advice for procedure specific postoperative pain treatment.

## **Toelichting onderzoek**

### **Achtergrond van het onderzoek**

Introduction:

Pain intensity registration after surgery remains a major challenge due to poor compliance and outdated unidimensional assessment using VAS or NRS. No study has yet explored the epidemiology and quality of pain registration following many types of surgery in everyday day clinical practice amongst different Dutch general and academic hospitals. We want to conduct a retrospective observational study using patient data from 5 different hospitals with OLVG as primary centre. The goal is to improve postoperative pain management, predict severe postoperative pain and develop procedure specific, optimized pain-treatment protocols with automated reminders and decision support build in PDMS. Furthermore to identify standardized surgical indicator procedures that can be used as a correction model for differences in surgical case mix between hospitals.

Objectives:

#### 1) Epidemiology of postoperative pain

Primary Objective: To establish the epidemiology of postoperative pain versus surgical procedures and type of analgesia; pain scores vs. different procedures, location surgery, patient characteristics and combinations of aforementioned. To be able to identify procedures and patients with a high risk of severe postoperative pain and to be able to identify surgical indicator procedures that can be used as a correction model for differences

in surgical case mix between hospitals.

Secondary Objective: To provide a ranking of surgical procedures in relationship to severe postoperative pain, administered analgesics and locoregional techniques.

Secondary objective: To identify indicator surgical procedures with high risk of postoperative pain

Secondary objective: To determine the quality and quantity of VAS and NRS registration for post operative pain intensity measurement

## 2) Risk and prediction

Primary Objective: To Identify patient- and surgical procedure characteristics correlating with severe postoperative pain

Secondary Objective: To design a model predicting postoperative and form the basis of a decision support application customizing pain treatment for specific groups of patients and to the individual patient's needs.

## 3) Best practice advice

Primary Objective: Drafting a best practice advise for procedure specific postoperative pain treatment.

Secondary Objective: build an algorithm advising for the best (procedure specific) post operative pain treatment build in the PDMS or an independent application to tailor pain treatment to the patients needs and facilitate early intervention.

Study Population:

All adult non-cardiac non-day care surgical patients who had surgery between October 1st 2015 and April 1st 2017 in OLVG, AMC, UMCU, WFG and LUMC. We estimate that between 80,000 and 120,000 patient files will be eligible for data analysis.

Inclusion: patients aged 18y or older, elective non day care surgery and surgical emergency procedures with an admission of at least 24hr

Exclusion: Day care surgery, palliative surgery, re-do surgical procedures, repeated surgery within the same hospital stay or 72 hours after the first surgery. Sequential surgeries during the same stay, rare surgical procedures performed less than 5 times a year.

#### Methods:

Research data will be collected by querying the patient data management system of each hospital for the period between October 1st 2015 and April 1st 2017- by an information specialist. Information on pain management protocols will be obtained by checking site specific protocol data warehouse.

Data analysis will be carried out in 3 phases. Phase 1: evaluating the epidemiology of postoperative pain. Phase 2: identifying risk factors for severe postoperative pain and building a prediction model. Phase 3: comparing pain intensity scores in relation tot administered analgesic and pain protocols amongst the participating hospitals for a best practice recommendation.

#### **Doel van het onderzoek**

##### 1) Epidemiology of postoperative pain

What is the correlation between pain intensity scores and type of surgical procedure in relation to patient characteristics and analgesia? Is it possible to specify surgical procedures indicating its pain intensity ranking from severe to no pain using pain intensity data from PDMS up to 72 hr in relationship with the type of postoperative analgesia technique and variation in surgical case mix amongst the cooperating hospitals?

##### 2) Risk and prediction

Which patient characteristics and surgical procedures are predictors for severe postoperative pain? Is it possible to develop a postoperative pain prediction rule?

### 3) Best practice advice

Is it possible to compose a best practice advice for (procedure specific) treatment of post operative pain based on the epidemiology of postoperative pain in relation to postoperative analgesia technique using data from different hospitals?

#### **Onderzoeksopzet**

Start study: October 1st 2017

End study: March 1st 2018

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

not applicable

## **Contactpersonen**

### **Publiek**

OLVG Hospital, Department of anesthesiology

B. Thiel  
Oosterparkstraat 9

Amsterdam 1091 AC  
The Netherlands  
+31 (0)20 59992512 (dect: 4773)

### **Wetenschappelijk**

OLVG Hospital, Department of anesthesiology

B. Thiel  
Oosterparkstraat 9

Amsterdam 1091 AC  
The Netherlands  
+31 (0)20 59992512 (dect: 4773)

## **Deelname eisen**

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

Patients aged 18y or older, elective non day care surgery and surgical emergency procedures with an admission of at least 24hr

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

Day care surgery, palliative surgery, , repeated surgery within the same hospital stay or 72 hours after the first surgery. rare surgical procedures performed less than 5 times a year.

## Onderzoeksopzet

### Opzet

Type:	Observationeel onderzoek, zonder invasieve metingen
Onderzoeksmodel:	Anders
Blinding:	Open / niet geblindeerd
Controle:	N.v.t. / onbekend

### Deelname

Nederland	
Status:	Werving gestart
(Verwachte) startdatum:	01-10-2015
Aantal proefpersonen:	120000
Type:	Verwachte startdatum

## Ethische beoordeling

Niet van toepassing	
Soort:	Niet van toepassing

## 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	NL7030
NTR-old	NTR7235
Ander register	OLVG : WO17.051

## Resultaten