

# PallPen - IT support for home healthcare: reporting of symptoms and messages with a digital pen

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<b>Registration date</b> 16/05/2012	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input type="checkbox"/> Results
<b>Last Edited</b> 12/06/2017	<b>Condition category</b> Cancer	<input type="checkbox"/> Individual participant data <input type="checkbox"/> Record updated in last year

## Plain English summary of protocol

### Background and study aims

This aim of this study is to find out whether the use of Information Technology (IT), specifically a digital pen, can improve symptom control in patients with end-stage cancer who are receiving advanced palliative home care.

### Who can participate?

Patients with end-stage cancer receiving advanced palliative home care, who are experiencing at least moderate pain or decreased well-being

### What does the study involve?

Participants are randomly allocated into two groups. One group receives an IT system to be used for symptom reporting while the other group uses traditional ways of symptom reporting. The IT system consists of a Symptom Diary form together with digital pen technology to capture symptom assessments in the home of the patient. The Symptom Diary includes assessment of pain intensity and well-being, a question about consumed extra doses of analgesics (painkillers), and the possibility to write free text messages to the care providers. Participants use a digital pen to fill in the diary and data is transmitted using the cell phone network to a server system. The server system includes possibilities for visualizing data and for sending text messages to care providers when symptoms increase.

### What are the possible benefits and risks of participating?

Participants may benefit from a richer participation in their own care and an increased sense of security. Every piece of information stored in the information system is protected from unauthorized access. Participants using the IT system shall use traditional routines if the IT system fails.

### Where is the study run from?

The study is run from Linköping University, with participating home healthcare clinics from Östergötland, Sörmland and Kalmar counties (Sweden).

When is the study starting and how long is it expected to run for?  
February 2008 to December 2009

Who is funding the study?

1. VINNOVA, the Swedish Governmental Agency for Innovation Systems
2. Santa Anna IT Research Institute AB/Swedish ICT Research

Who is the main contact?

Dr Leili Lind  
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## Contact information

### Type(s)

Scientific

### Contact name

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## Additional identifiers

### Protocol serial number

n/a

## Study information

### Scientific Title

PallPen - IT support for home healthcare: reporting of symptoms and messages with a digital pen - a randomized controlled trial

### Acronym

PallPen

### Study objectives

The use of Information Technology (IT) in palliative home healthcare has the ability to reduce the time span of the patients assessed and reported symptoms until these reports were received by the professional caregiver.

### Ethics approval required

Old ethics approval format

**Ethics approval(s)**

Regional Ethical Review Board in Linköping, Sweden, 20/06/2007, ref: M101-07

**Study design**

Randomized controlled trial

**Primary study design**

Interventional

**Study type(s)**

Quality of life

**Health condition(s) or problem(s) studied**

Patients with end-stage cancer receiving advanced palliative home care

**Interventions**

One group receives an IT system to be used for symptom reporting while the other group uses traditional ways of symptom reporting.

The intervention consisted of a Symptom Diary form together with digital pen technology to capture symptom assessments in the home of the patient. The Symptom Diary included the assessment of pain intensity and well-being using 10 cm visual-analogue scales (VAS). Further, the diary included a question about consumed extra doses of analgesics and the possibility to write free text messages to the care providers. Participants in the intervention arm used a digital pen to fill in the diary and data was transmitted using the cell phone network to a server system. The server system included possibilities for visualizing data and for sending text messages to care providers when the symptom level increased.

**Intervention Type**

Device

**Primary outcome(s)**

The time span of the patients assessed and reported symptoms until these reports were received by the professional caregiver

**Key secondary outcome(s)**

No secondary outcome measures

**Completion date**

31/12/2009

**Eligibility****Key inclusion criteria**

1. Patients assessing their pain to Visual Analogue Scale (VAS) 3 (VAS 1-10 cm) or higher, or well-being to VAS 4 or higher
2. Participants were required to be mentally clear
3. Swedish-speaking to the level of understanding the study form and to be able to perform symptom assessments

**Participant type(s)**

Patient

**Healthy volunteers allowed**

No

**Age group**

Adult

**Sex**

All

**Key exclusion criteria**

Does not meet inclusion criteria

**Date of first enrolment**

16/02/2008

**Date of final enrolment**

31/12/2009

**Locations****Countries of recruitment**

Sweden

**Study participating centre**

Linköpings Universitet

Linköping

Sweden

58185

**Sponsor information****Organisation**

Department of Biomedical Engineering (Sweden)

**ROR**

<https://ror.org/05ynxx418>

**Funder(s)****Funder type**

Government

**Funder Name**

Vinnova (Sweden)

**Alternative Name(s)**

Swedish Governmental Agency for Innovation Systems, Vinnovase

**Funding Body Type**

Government organisation

**Funding Body Subtype**

National government

**Location**

Sweden

**Funder Name**

Santa Anna IT Research Institute AB/Swedish ICT Research (Sweden)

## Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary