



Improvement in  
postoperative PAIN OUTcome

# The PAIN OUT project

## - an overview





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# What is PAIN OUT?

A research project that aims at improving postoperative pain treatment outcomes by use of a toolkit consisting of

- 1. a benchmark module that feeds back outcomes
- 2. an electronic knowledge library

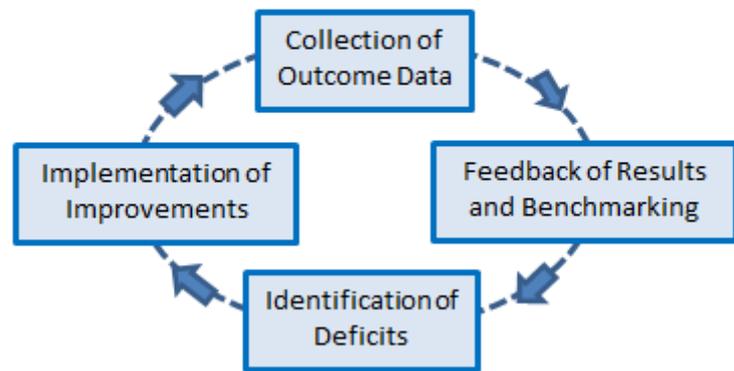
**From 2009 to 2012, PAIN OUT was funded by the EC.**





# Improvement in postoperative PAIN OUTcome

## The PAIN OUT Process





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## What are the advantages of joining PAIN OUT?

- Continuous feedback and analyses of own quality of care (quality assessment tool)
- Possibility of change management concepts by evaluating own results
- Research opportunities
- Better patient care if results lead to improvements
- Being part of the world's largest network of clinicians involved in acute pain treatment





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## Which patients can be included?

Currently, there are 3 PAIN OUT modules:

- PAIN OUT standard (post-op adult patients)
- PAIN OUT follow-up (after 6 and 12 months)
- PAIN OUT infant (post-op pediatric patients)

Additional modules in preparation: PAIN OUT outpatient, PAIN OUT obstetrics





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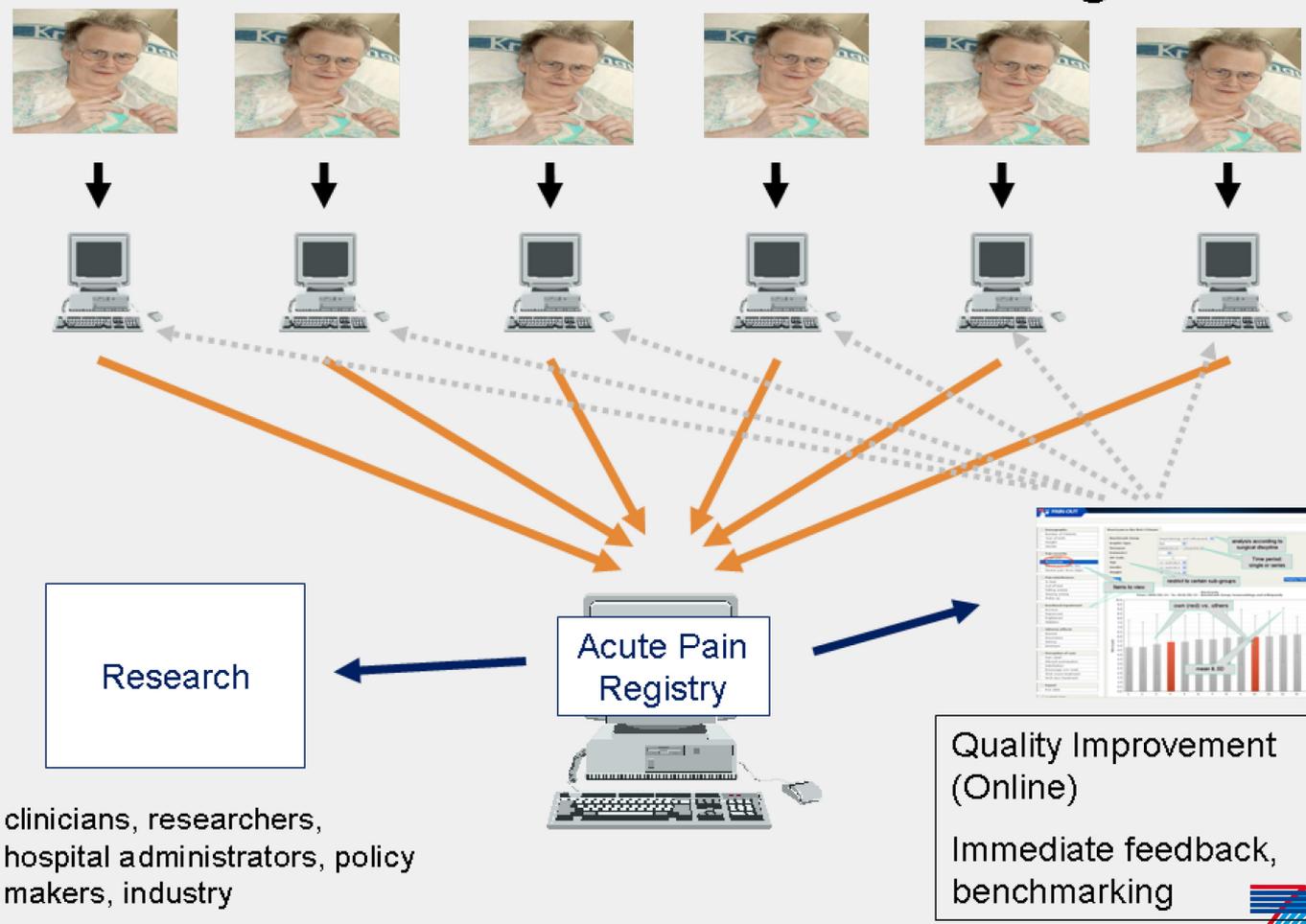
# How is it done?

- 1 a) Collection of patient outcome data (based on the APS-POQ-R questionnaire)
- 1 b) Collection of process data (demographics, medical history, pre-, intra- and postoperative medical treatment)
- 2) Input of data into web-based data entry mask
- 3) Feedback of results via the benchmarkserver



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## Feedback & Benchmarking



clinicians, researchers,  
hospital administrators, policy  
makers, industry

Quality Improvement  
(Online)  
Immediate feedback,  
benchmarking





# Improvement in postoperative PAIN OUTcome

## 1. Collection of data

Patient outcome questionnaire and process questionnaire collected on paper form

**PAIN OUT Outcome: English\_26.pdf - Adobe Acrobat Standard**

PATIENT CODE: \_\_\_\_\_

### PATIENT OUTCOMES QUESTIONNAIRE

The following questions are about pain you experienced since your surgery.

**P1.** On this scale, please indicate the **worst pain** you had since your surgery:

0	1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	---	----

no pain worst pain possible

**P2.** On this scale, please indicate the **least pain** you had since your surgery:

0	1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	---	----

no pain worst pain possible

**P3.** How often were you in **severe pain** since your surgery?  
Please circle your best estimate of the percentage of time you experienced **severe pain**:

0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
----	-----	-----	-----	-----	-----	-----	-----	-----	-----	------

never in severe pain always in severe pain

**P4.** Circle the one number below that best describes how much, since your surgery, **pain interfered with or prevented you from ...**

a. doing **activities in bed** such as turning, sitting up, changing position:

0	1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	---	----

**PAIN OUT Process\_26.pdf - Adobe Acrobat Standard**

Page 2

Mark medications given to patient; record cumulative doses. PATIENT CODE: \_\_\_\_\_

### MEDICAL HISTORY

**H1 Comorbidities**

yes  no  not possible to obtain the information

If yes, which (check all that apply):

Cancer	<input type="checkbox"/> Cancer
Renal	<input type="checkbox"/> Renal insufficiency or disease without dialysis <input type="checkbox"/> Renal disease requiring dialysis
Psychiatric	<input type="checkbox"/> Affective disorders (depression, anxiety, phobia, PTSD, bipolar disorder) <input type="checkbox"/> Schizophrenia
	<input type="checkbox"/> Alcohol use disorder <input type="checkbox"/> Current smoker <input type="checkbox"/> Substance abuse of drugs (legal and illegal)
Cardiovascular	<input type="checkbox"/> Hypertension <input type="checkbox"/> Coronary artery disease or myocardial infarction or cerebral vascular accident
Hematology	<input type="checkbox"/> Sickle cell disease
GI disease	<input type="checkbox"/> Liver Cirrhosis <input type="checkbox"/> History or current upper or lower GI ulcer (peptic or duodenal ulcer disease)
	<input type="checkbox"/> Irritable bowel disease (Crohn's disease, ulcerative colitis)
Pulmonary disease	<input type="checkbox"/> Asthma <input type="checkbox"/> Sleep apnea <input type="checkbox"/> Chronic Obstructive Pulmonary Disease (COPD)
Neurologic	<input type="checkbox"/> Fibromyalgia
Steroid use	<input type="checkbox"/> Regular administration of oral or parenteral corticosteroid medications
Multiple trauma	<input type="checkbox"/> At least 1 fracture(s) / laceration(s) / tissue damage in addition to the current reason for surgery
Other surgery	<input type="checkbox"/> Patient has already undergone another surgery during current hospitalization
	<input type="checkbox"/> Other, specify: _____

**H2 Existing condition (check medical record)**

Pregnancy, Week: \_\_\_\_\_  not relevant  not possible to obtain the information

Lactation  not relevant  not possible to obtain the information

**H3 Did the patient receive any opioid(s) before the current admission?**

yes  no  not possible to obtain the information





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## 2. Inputting of data into webmask

The screenshot shows the PAIN-OUT webmask interface. At the top left, there is a navigation menu with 'Pain Out' and 'Base Module' options. Below it, a 'Current User' dropdown shows 'JenaUni Operator'. The main content area is titled 'Screening' and contains a 'DATA COLLECTION' section. This section includes fields for 'DATE OF DATA COLLECTION' (2010/09/14), 'TIME OF DATA COLLECTION' (14:25 [hh:mm]), and 'SITE WHERE DATA IS COLLECTED' (110). Below these are 'PATIENT CODE' (5ARVSVUPWQ) and 'S1 INCLUSION CRITERIA' with six items, each with 'YES' and 'NO' radio buttons. A 'Save' button is located in the top right corner of the form area.

**Site code (access by password)**

**Patient code (anonymous)**

**Items from questionnaire**

**DATA COLLECTION**

**A DATE OF DATA COLLECTION:** 2010/09/14

**B TIME OF DATA COLLECTION:** 14:25 [hh:mm]

**C SITE WHERE DATA IS COLLECTED:** 110

**PATIENT CODE:** 5ARVSVUPWQ

**S1 INCLUSION CRITERIA**

1. Time of data collection is POD1 AND patient is 6 hrs (minimum) in the ward.  YES  NO
2. Patient is consenting age or over.  YES  NO
3. Patient has not undergone repeat surgery (same organ) during current hospitalization.  YES  NO
4. Patient is in ward, available for interview.  YES  NO
5. Patient has given his assent (or consent) to participate.  YES  NO
6. Patient is able to fill in questionnaire on his\her own, unaided (include also patients who need help filling in the questionnaire for technical reasons).  YES  NO

Reason why patient is unable to fill in the questionnaire on his \ her own (select):





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## 3. Online feedback of results

**PAIN-OUT**

Demographic  
Number of Patients  
Year of birth  
Weight  
Gender

Pain severity  
Least pain  
**Worst pain**  
Severe pain time (%)  
Severe pain time (ctgr)

Pain interference  
In bed  
Out of bed  
Falling asleep  
Staying asleep  
Wake up

Emotional impairment  
Anxious  
Depressed  
Frightened  
Helpless

Adverse effects  
Nausea  
Drowsiness  
Itching  
Dizziness

Perception of care  
Pain relief  
Allowed participation  
Satisfaction  
Encourage non med.  
Wish more treatment  
Wish less treatment

Export  
Raw data

Current User

**Worst pain in the first 24 hours**

Benchmark Group: traumatology and orthopaedy

Graphic Type: Bar

Timespan: 2009/09/14 - 2010/09/15

Datasets: -

OP-Code:

Age: no restriction

Gender: no restriction

Weight: no restriction

Display / View

Items to view

restrict to certain sub-groups

analysis according to surgical discipline

Time period: single or series

Worst pain  
From: 2009/09/14 - To: 2010/09/15 - Benchmark Group: traumatology and orthopaedy

own (red) vs. others

mean & SD

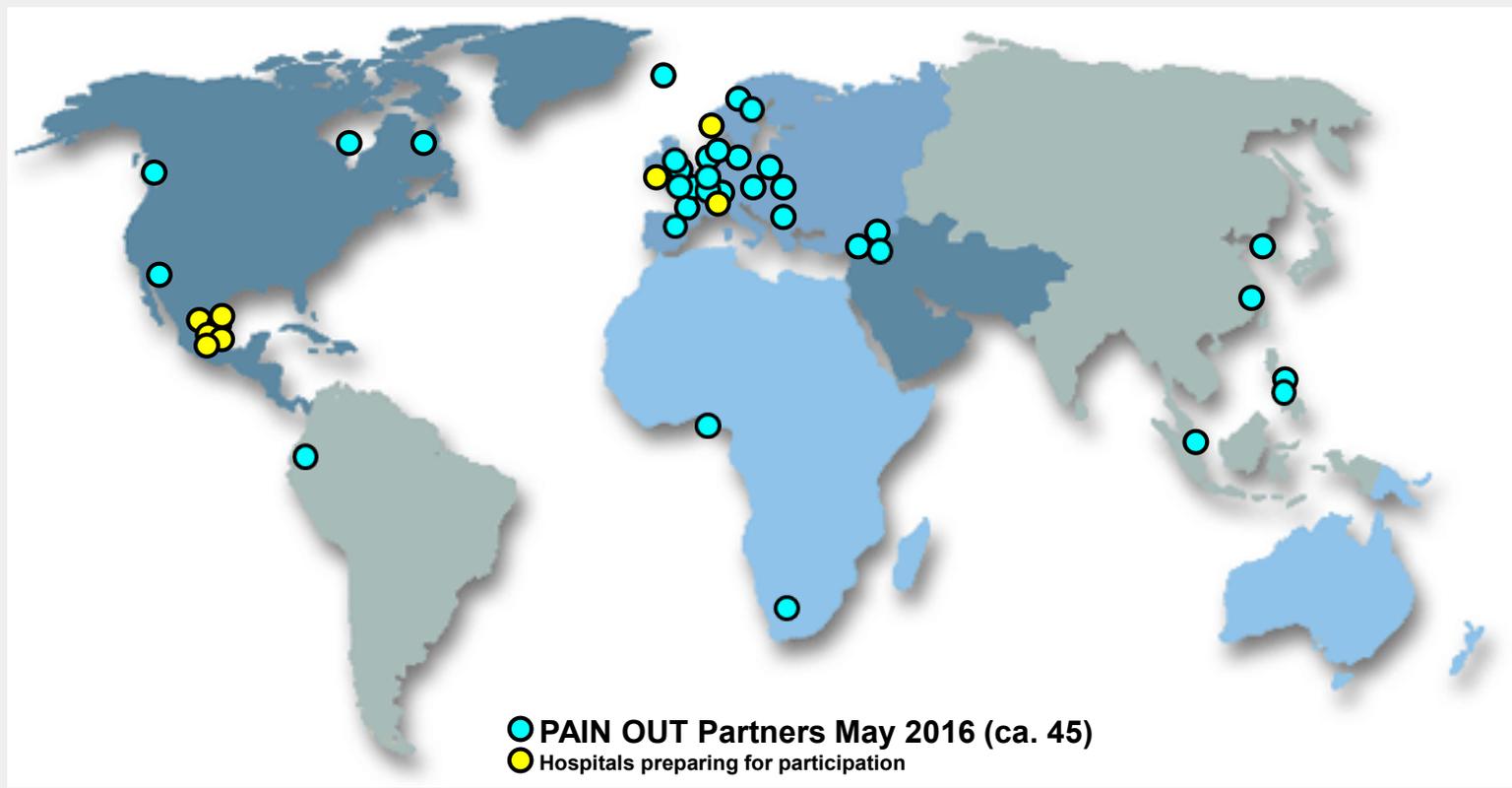
Category	Worst Pain (Mean & SD)
1	4.8 (2.0, 7.8)
2	4.8 (2.0, 7.8)
3	5.2 (2.0, 8.5)
4	5.4 (2.8, 8.0)
5	5.4 (2.0, 8.5)
6	5.6 (2.0, 8.5)
7	5.6 (2.0, 8.5)
8	5.8 (2.0, 8.5)
9	5.8 (2.0, 8.5)
10	6.0 (3.5, 8.5)
11	6.0 (2.0, 8.5)
12	6.1 (2.0, 8.5)
13	6.2 (2.0, 8.5)
14	6.3 (2.5, 8.8)





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## PAIN OUT participants May 2016





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# Requirements for participation

- Data collectors must be able to read English
- Staff resources: to get meaningful results, you should be able to collect a minimum of 20 datasets/month/ward; one dataset takes around 20 minutes
- Technical requirements: computer with internet access
- Application at local ethics committee
- Signature of PAIN OUT contract (annual fee: 1,500 €)





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# How to join the network?

[www.pain-out.eu](http://www.pain-out.eu)

or

e-mail to: [painout@med.uni-jena.de](mailto:painout@med.uni-jena.de)

