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IMPROVEMENT IN POSTOP PAIN OUTCOME- PATIENT PERSPECTIVE





DISCLOSURES

- ▶ Educational grants: Berlin-Chemie, Sanofi-Aventis, Pfizer
- ▶ Not related to the topic of this presentation

POSTOP PAIN OUTCOME

- ▶ What patients want to tell us?
- ▶ Can we really successfully deal with postoperative pain?

POST OP PAIN

The implementation of adequate postoperative pain management is of high significance in surgery, not solely from a **physiological and pathological perspective**, but also as an **ethical and financial** one.

Pogatzki-Zahn, 2017; Barbosa, 2017

More than half of patients undergoing surgical procedures report inadequate postoperative pain relief despite the increased scientific evidence and understanding in the area of postoperative analgesic care

Chou R, 2016; Hussain Khan, 2017

Causes for under-treatment may arise due to the inherently subjective perception of pain, the wide range of management options, but also the limited transfer of recent scientific findings into the clinical base

Pogatzki-Zahn, 2017; Hussain Khan, 2017

POST OP PAIN

- ▶ Postoperative pain physiology is complex but a vital protective feature that incorporate multiple interacting peripheral and central mechanisms
- ▶ Culture, personal beliefs, previous pain experience, expectations, and patient's ability to cope also are interfering factors of postoperative pain involvement
- ▶ Endorsing negative expectations is associated with lingering post surgical pain
- ▶ Recollection of severe postoperative pain

PAIN MEDICINE

ANESTHESIOLOGY

Factors Contributing to Lingering Pain after Surgery: The Role of Patient Expectations

Mark D. Willingham, M.D., Molly R. Vila, M.D.,
Arbi Ben Abdallah, D.E.S., Ph.D.,
Michael S. Avidan, M.B.B.Ch.,
Simon Haroutounian, M.Sc.Pharm., Ph.D.

ANESTHESIOLOGY 2021; 134:915–24

POST OP PAIN

- ▶ **Inadequate postoperative pain assessment or insufficient education of staff involved**
- ▶ Many believe that **pain simply is a symptom** that will resolve. This conviction leads to actual neglect and disregard of proper treatment and diminishes the priority of acute pain as a protective warning sign
- ▶ **Unrelieved acute pain** can consequently affect the central nervous system in such way that patient's pain can be difficult to control in forthcoming settings and **consequently lead to chronic pain**

Carr, 2007

ORIGINAL ARTICLE

Chronic postsurgical pain in Europe*An observational study*

Dominique Fletcher*, Ulrike M. Stamer*, Esther Pogatzki-Zahn, Ruth Zaslansky, Narcis Valentin Tanase, Christophe Perruchoud, Peter Kranke, Marcus Komann, Thomas Lehman, euCPSP group for the Clinical Trial Network group of the European Society of Anaesthesiology and Winfried Meissner

- ▶ Orthopaedic surgery clearly associated with a high incidence of CPSP
- ▶ Preoperative chronic pain proved to be an independent risk factor
- ▶ Spine surgery, knee arthroscopy and total hip and knee replacement-up to 39, 1%



PROM

> [J Pain](#). 2021 Jun;22(6):730-738. doi: 10.1016/j.jpain.2021.01.002. Epub 2021 Jan 20.

Desire to Receive More Pain Treatment – A Relevant Patient-Reported Outcome Measure to Assess Quality of Post-Operative Pain Management? Results From 79,996 Patients Enrolled in the Pain Registry QUIPS from 2016 to 2019

Marcus Komann ¹, Philipp Baumbach ², Ulrike M Stamer ³, Claudia Weinmann ²,
Christin Arnold ², Esther Pogatzki-Zahn ⁴, Winfried Meißner ²

- ▶ Patients PROM might be helpful to understand individual pain experience and quality of pain management
- ▶ QUIPS pain registry
- ▶ 79,996 patients, 10.7% reported D2RMPT max pain intensity >6
- ▶ Largest reduction in risk - if patients were "allowed to participate in pain treatment decisions» or received sufficient treatment information

[Sci Rep.](#) 2021; 11: 22148.

PMCID: PMC8590005

Published online 2021 Nov 12. doi: [10.1038/s41598-021-01597-5](https://doi.org/10.1038/s41598-021-01597-5)

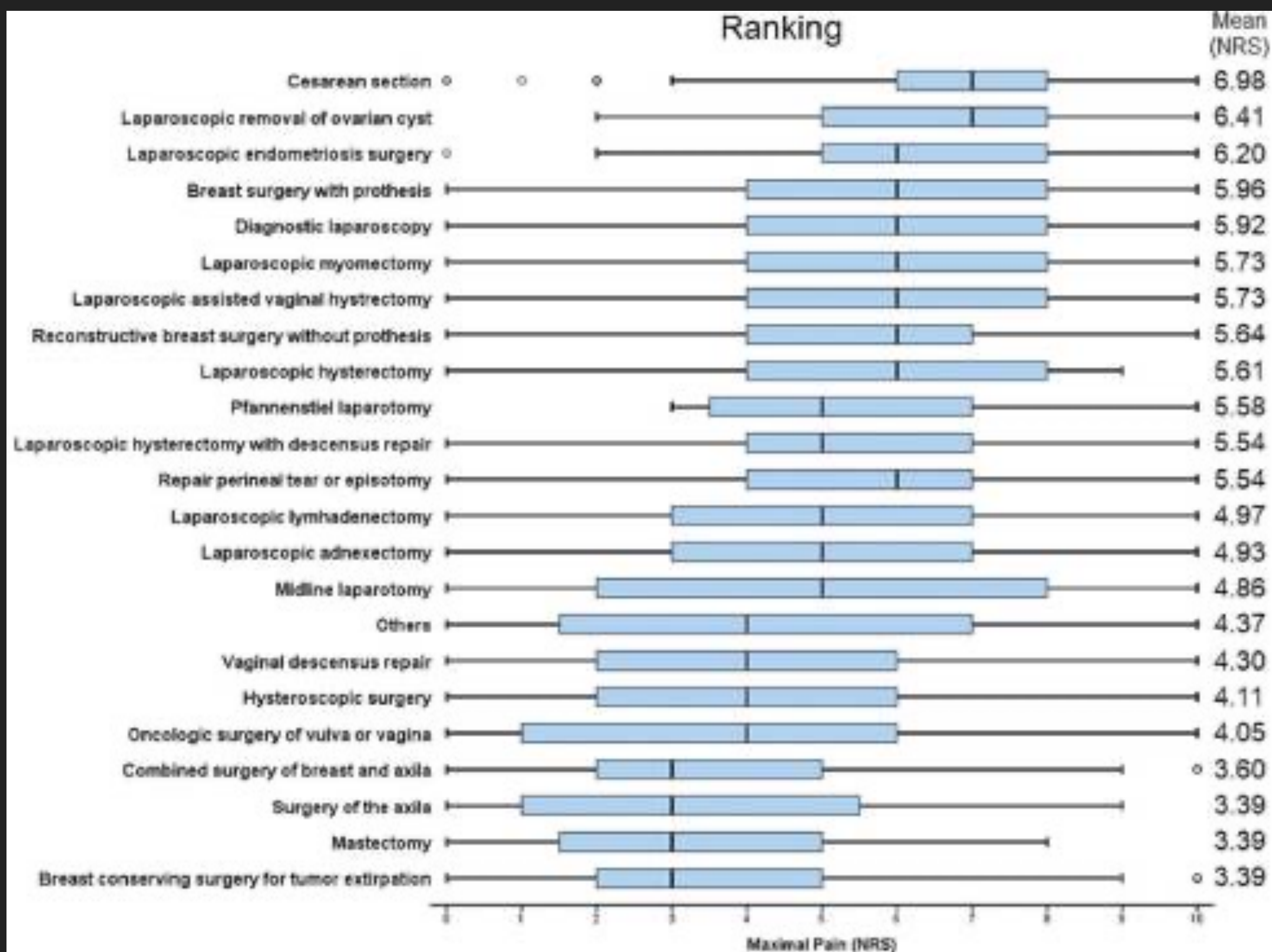
PMID: [34773057](https://pubmed.ncbi.nlm.nih.gov/34773057/)

Acute postoperative pain in 23 procedures of gynaecological surgery analysed in a prospective open registry study on risk factors and consequences for the patient

[Jorge Jiménez Cruz](#),^{1,4} [Angela Kather](#),¹ [Kristin Nicolaus](#),¹ [Matthias Rengsberger](#),^{1,6} [Anke R. Mothes](#),^{1,5}
[Ekkehard Schleussner](#),² [Winfried Meissner](#),³ and [Ingo B. Runnebaum](#)^{✉1}

- ▶ Prospective cross-sectional study based on the German registry for quality in postoperative pain (QUIPS)
- ▶ Factors associated with higher pain intensity were younger age, chronic pain and surgery performed outside the regular day shift .
- ▶ Shorter duration of surgery, peridural or local analgesic and preoperative sedation reduced postoperative pain.
- ▶ **Caesarean section and minimal invasive procedures** were associated with the highest pain scores in the present ranking. Pain management of these procedures has to be reconsidered

Ranking




PAIN OUT

ORIGINAL ARTICLE

[View journal PDF](#)

Status quo of pain-related patient-reported outcomes and perioperative pain management in 10,415 patients from 10 countries: Analysis of registry data

PAIN OUT Research Group Jena | Chinese PAIN OUT network |
Dutch PAIN OUT network | Mexican PAIN OUT network |
Serbian PAIN OUT network | Spanish PAIN OUT network |
French PAIN OUT network | Italian PAIN OUT network | Swiss PAIN OUT network |
Irish PAIN OUT network | Belgian PAIN OUT network | Ruth Zaslansky 

PAIN OUT

PAIN OUT quality improvement project

- ▶ 49% (15.3 -57.1) of patients in all wards (gen, orto, gyn) reported worst pain 7 >
- ▶ 24.3% (18.6-33.23) reported of being in severe pain over 50% in POD 1
- ▶ 57% of patients received 1 non-opioid
- ▶ 38% received 2 non -opioids (paracetamol most commonly used 65% (6-95%))
- ▶ NSAIDS administered to 57.5% (34.4-78.8)
- ▶ Median daily doses of the most frequently administered systemic opioids:
Oxycodone 10 mg, Tramadol 100 mg, Morphine 10 mg

PAIN OUT

An international quality improvement and registry project

Aim

To improve treatment of patients with post-operative pain

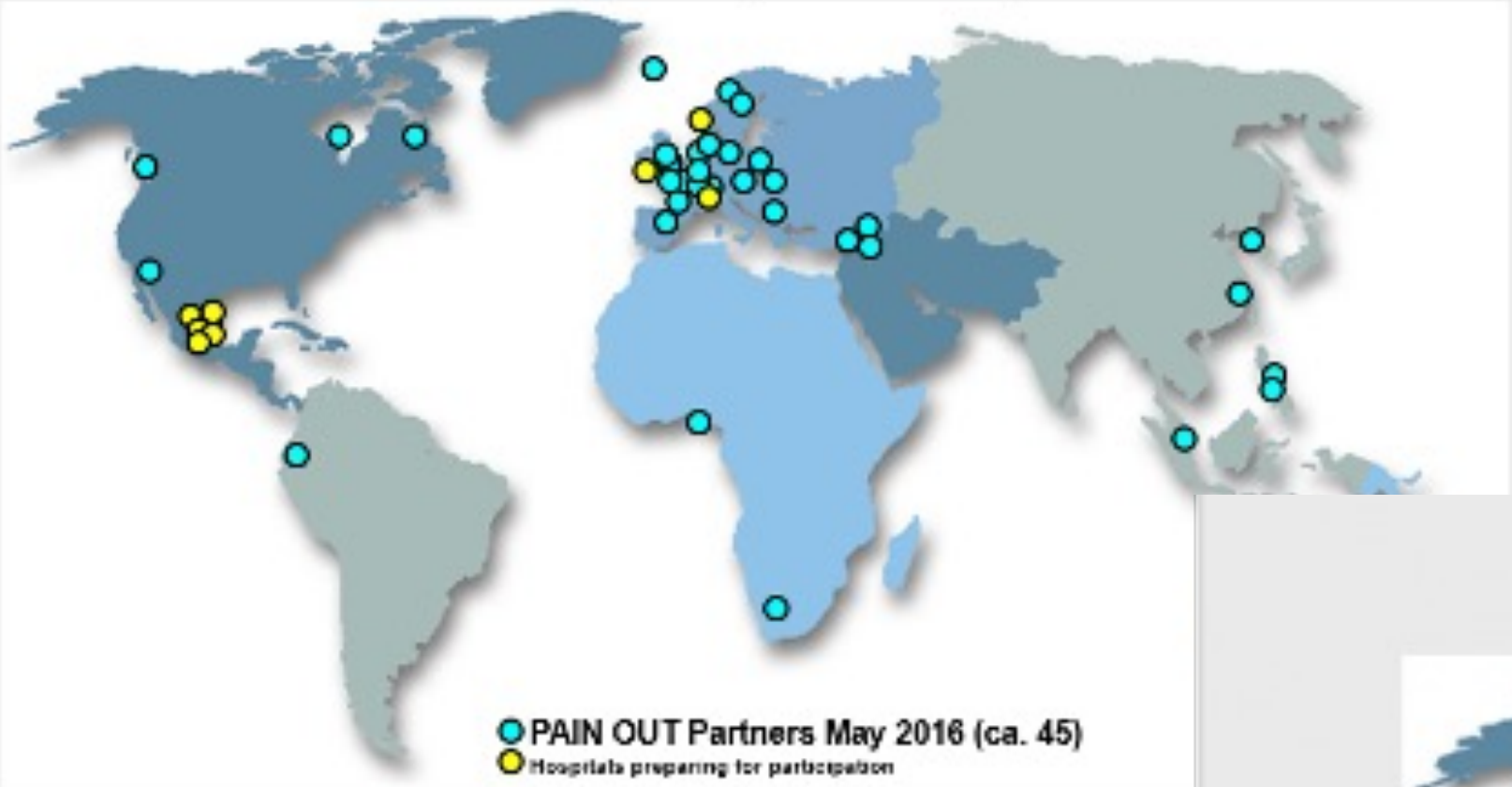
- ▶ Web-based information system
- ▶ More than 200 hospitals involved
- ▶ Largest network of clinicians involved in acute pain

PAIN OUT

- ▶ Postsurgical patients
- ▶ Postoperative day one (POD1)
- ▶ Minimum 6 hours in ward
- ▶ Patient consent age or over

PAIN OUT PARTNERS

PAIN OUT participants May 2016



PAIN OUT Partners up to 2021



PAIN OUT

- ▶ Patient Questionnaire
- ▶ Data from Patient Case
 - Demographics
 - Concomitant diseases
 - pre, intra and postoperative treatment: anxiolytics, analgesics, co-analgesics, type of anaesthesia
- ▶ Data basis

PATIENT QUESTIONNAIRE

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
---	---	---	---	---	---	---	---	---	---	----

did not interfere completely interfered

b. breathing deeply or coughing:

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

did not interfere completely interfered

c. sleeping:

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

did not interfere completely interfered

d. Have you been out of bed since your surgery?

Yes No

If yes, how much did pain interfere or prevent you from doing activities out of bed such as walking, sitting in a chair, standing at the sink:

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

did not interfere completely interfered

Version 0.8.17/0210

PATIENT OUTCOMES QUESTIONNAIRE

P5. Pain can affect our mood and emotions.
On this scale, please circle the one number that best shows how much, since your surgery, pain caused you to feel ...

a. anxious

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

not at all extremely

b. helpless

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

not at all extremely

P6. Have you had any of the following side effects since your surgery?
Please circle "0" if no; if yes, circle the one number that best shows the severity of each:

a. Nausea

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

none severe

b. Drowsiness

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

none severe

c. Itching

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

none severe

d. Dizziness

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

none severe

P7. Since your surgery, how much pain relief have you received?
Please circle the one percentage that best shows how much relief you have received from all of your pain treatments combined (medicine and non-medicine treatments):

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

no relief complete relief

P8. Would you have liked MORE pain treatment than you received?

Yes No

P9. Did you receive any information about your pain treatment options?

Yes No

Version 0.8.17/0210

PATIENT OUTCOMES QUESTIONNAIRE

P10. Were you allowed to participate in decisions about your pain treatment as much as you wanted to?

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

not at all very much so

P11. Circle the one number that best shows how satisfied you are with the results of your pain treatment since your surgery.

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

extremely dissatisfied extremely satisfied

P12. Did you use or receive any non-medicine methods to relieve your pain?

Yes No

If yes, check all that apply:

<input type="checkbox"/> cold pack	<input type="checkbox"/> meditation	<input type="checkbox"/> deep breathing
<input type="checkbox"/> heat	<input type="checkbox"/> acupuncture	<input type="checkbox"/> prayer
<input type="checkbox"/> talking to medical staff	<input type="checkbox"/> walking	<input type="checkbox"/> massage
<input type="checkbox"/> talking to friends or relatives	<input type="checkbox"/> relaxation	<input type="checkbox"/> imagery or visualization
<input type="checkbox"/> TENS (Transcutaneous Electrical Nerve Stimulation)		
<input type="checkbox"/> distraction (like watching TV, listening to music, reading)		
<input type="checkbox"/> other (please describe): _____		

P13. Did you have a persistent painful condition for 3 months or more before coming into hospital for this surgery?

Yes No

a. If yes, how severe was the pain most of the time?
Please circle the number that indicates this.

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

no pain worst pain possible

b. If yes, where was this persistent pain located?

site of surgery elsewhere both (site of surgery and elsewhere)

Thank you for your time and feedback

To be filled in by the research assistant Research assistant code: _____

Patient was interviewed: Yes No

If yes, please mark the reason(s):

<input type="checkbox"/> level of work	<input type="checkbox"/> too much pain	<input type="checkbox"/> disrupted routine	<input type="checkbox"/> did not understand scales
<input type="checkbox"/> technical issues (patient has no eyes/glasses / is blind, can not sit up, is illiterate and/or is deaf/mute)			

Version 0.8.17/0210

Demographic

Number of Patients

Year of birth

Weight

Gender

Pain severity

Least pain

Worst pain

Severe pain time (%)

Severe pain time (dgr)

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

Worst pain in the first 24 hours

Benchmark Group: traumatology and orthopaedy

Graphic Type: Bar

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

OP-Code: [] []

Age: no restriction

Gender: no restriction

Weight: no restriction

Display/View

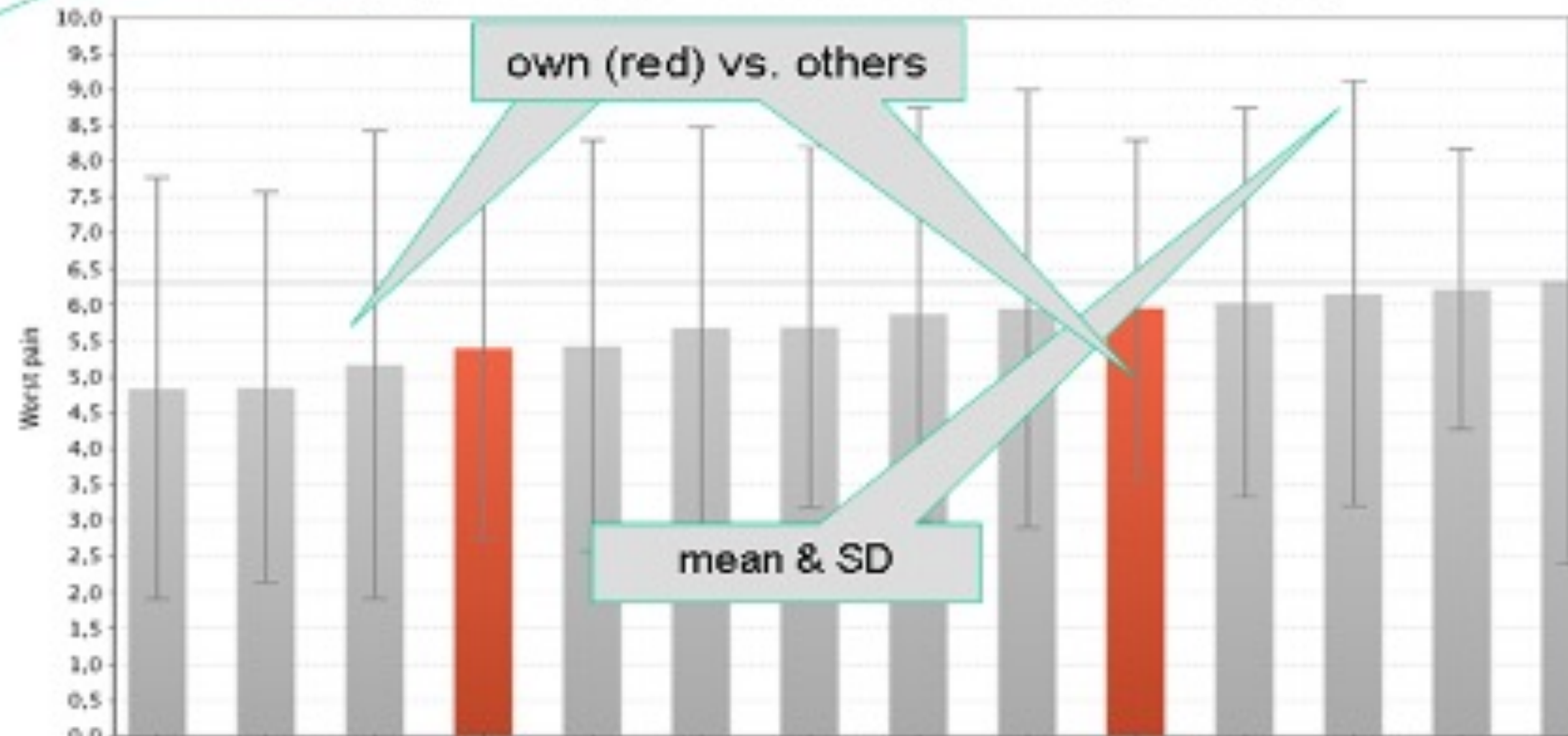
Items to view

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



PAIN OUT TOS

- ▶ Hospital of Traumatology and Orthopaedics
- ▶ Since November 2022
- ▶ 3 wards: 2 Orthopaedics, 1 Trauma
- ▶ Analysed 182 patients so far

PAIN TREATMENT TOS

- ▶ Using almost all possible modalities
- ▶ We have our pain treatment guidelines and follow - ups
- ▶ paracetamol, metamizol, COX-2 inhibitors, NSAIDS, combined medications as paracetamol/codeine, dexketoprophen/tramadol, dexametazone, gabapentin and opioids as rescue analgesics, midazolam as anxiolytic.
- ▶ RA in all possible ways according to PROSPECT recommendations: infiltration, fascia iliaca blockade, adductor canal blockade, pl brachialis blockade, epidural etc.

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:

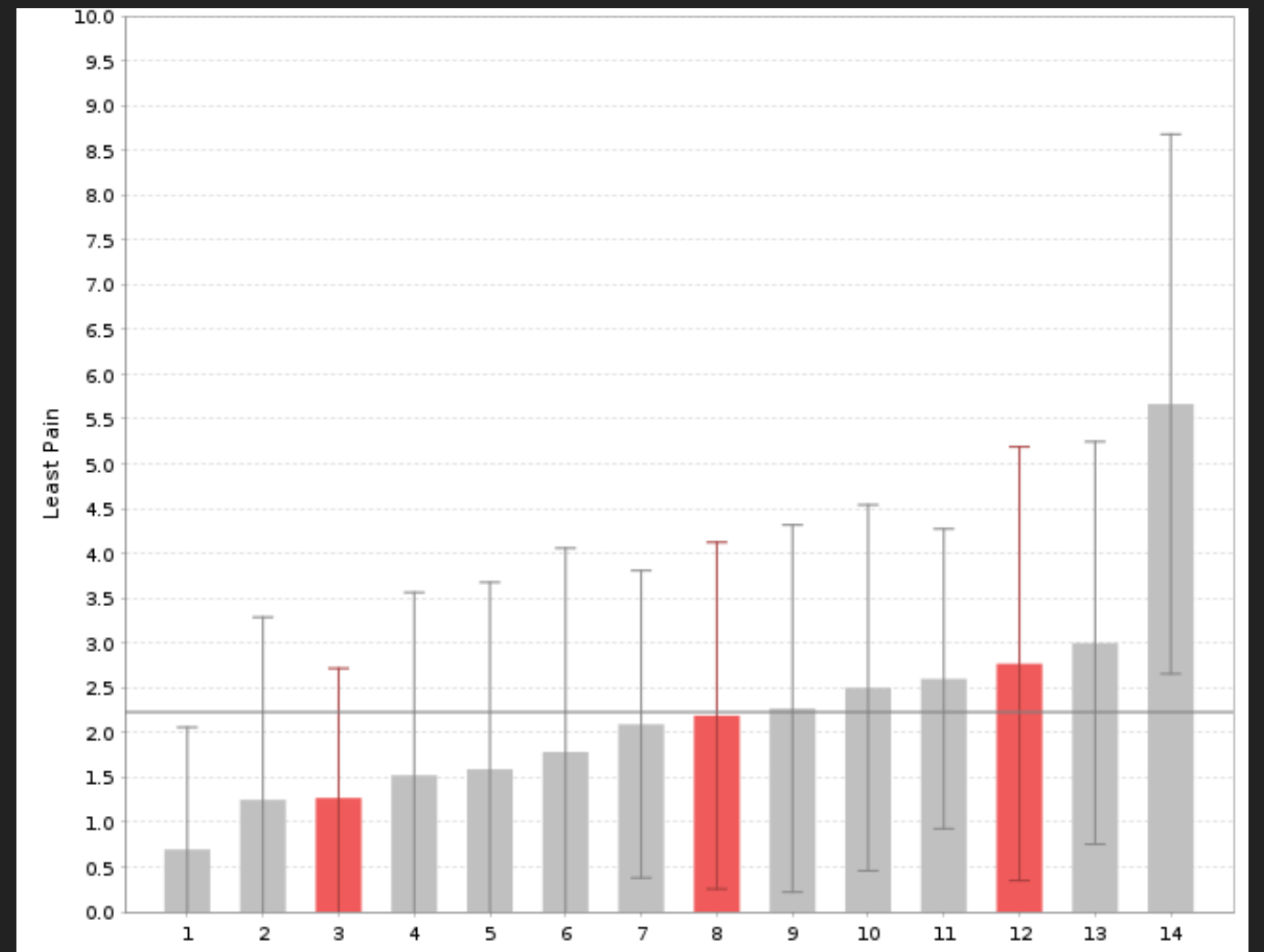
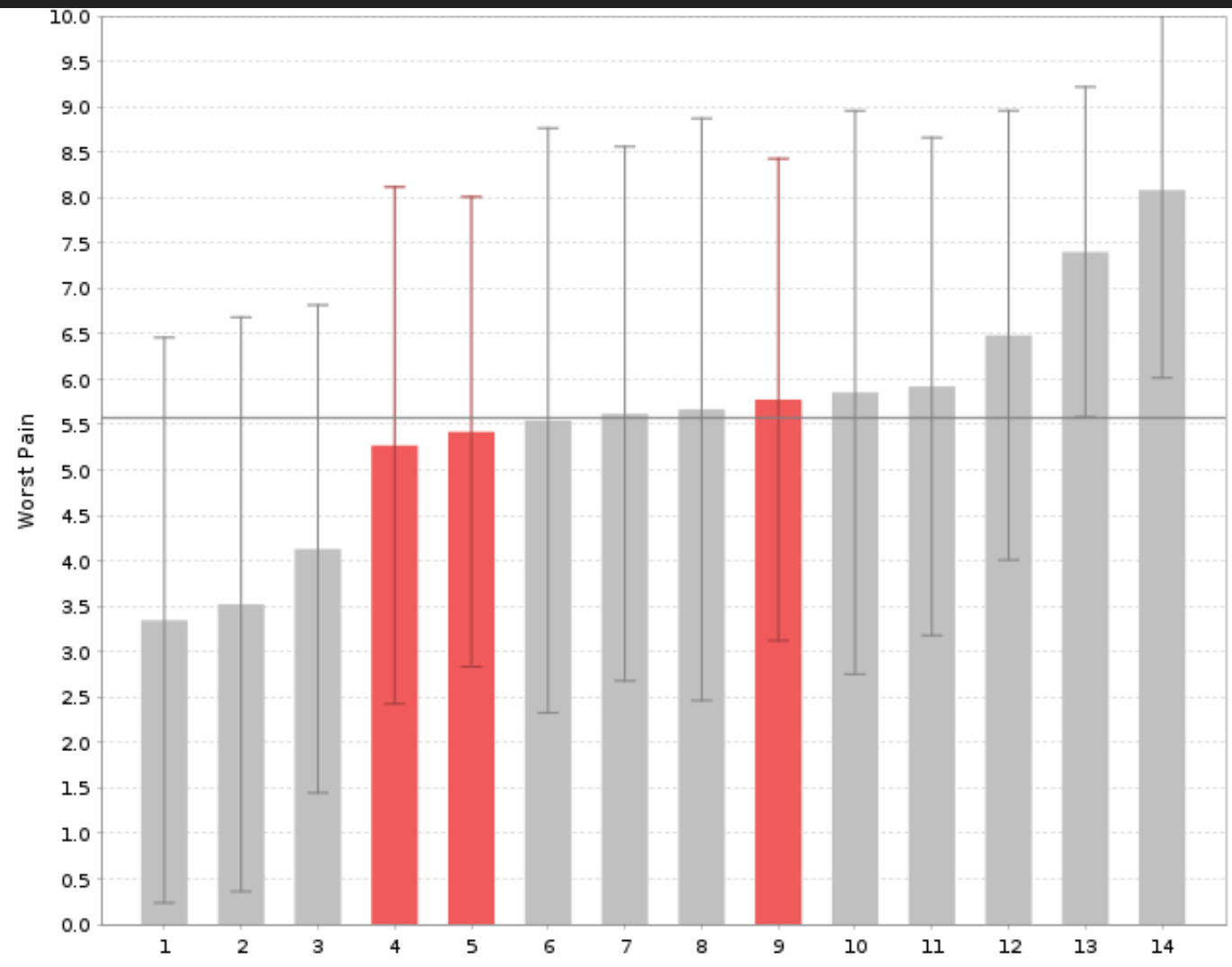
0	1	2	3	4	5	6	7	8	9	10
---	---	---	---	---	---	---	---	---	---	----

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



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:

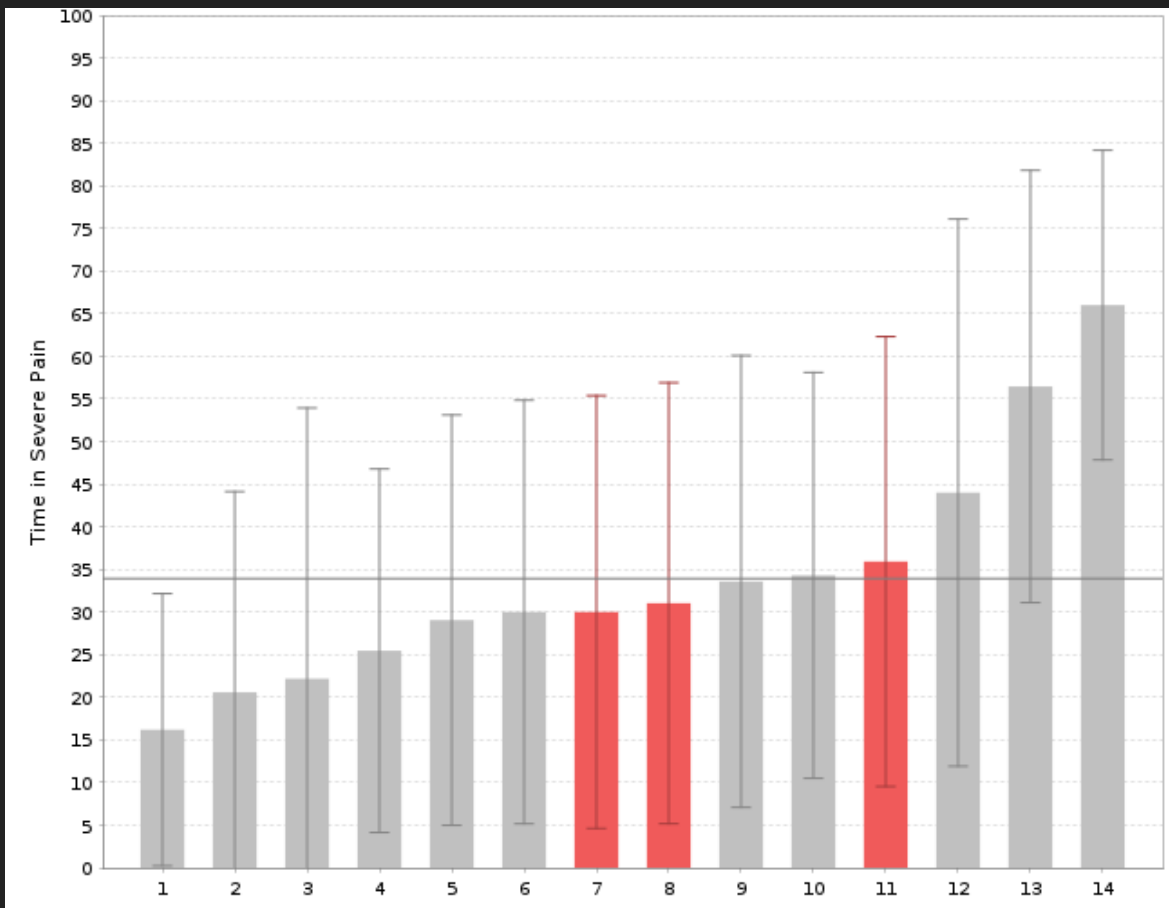
0	1	2	3	4	5	6	7	8	9	10	
no pain											worst pain possible

PAIN	3A	3B	5	TOS	P<0.05
WORST	5.77	5.42	5.27	5.53	ns
LEAST	2.77	2.19	1.27	2.22	0.003

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



3A	3B	5	TOS
36	31	30	32

P5. Pain can affect our mood and emotions.

On this scale, please circle the one number that best shows how much, since your surgery,
pain caused you to feel ...

a. anxious

0	1	2	3	4	5	6	7	8	9	10
not at all										extremely

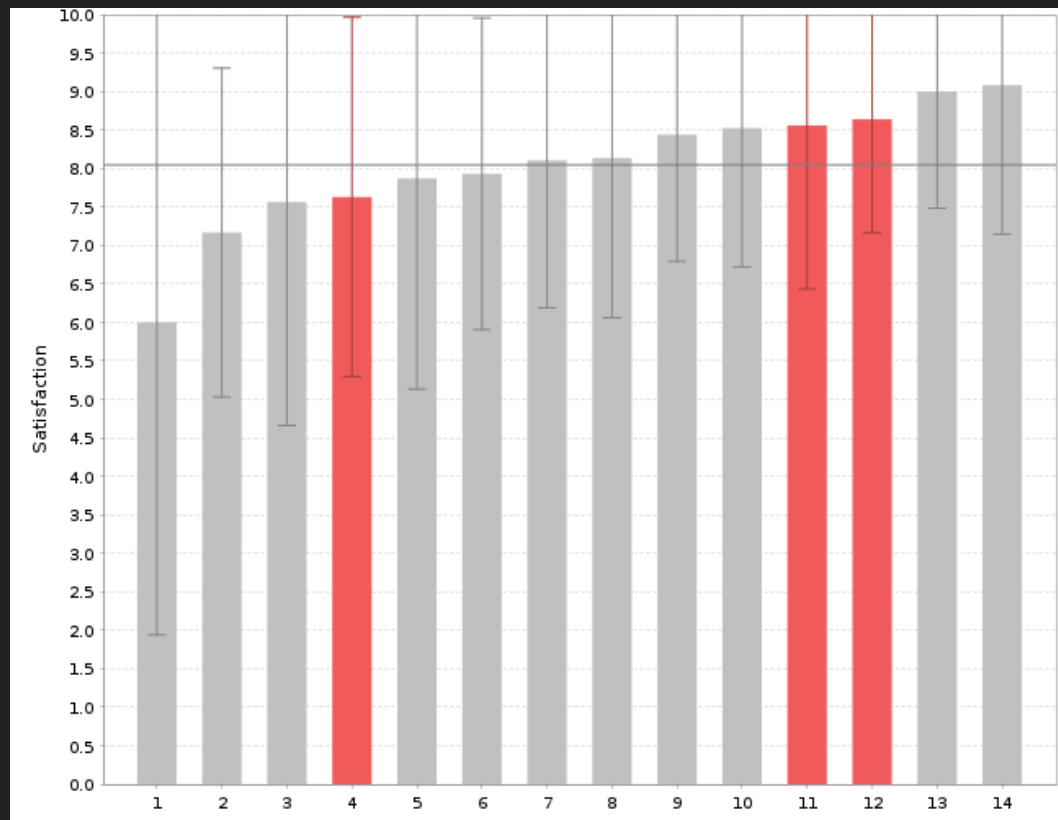
b. helpless

0	1	2	3	4	5	6	7	8	9	10
not at all										extremely

Measurement/ ward	3A	3B	5	TOS	P<0.05
Helplessness	3.63	2.25	2.00	3.22	0.006
Anxiety	3.87	2.83	2.69	2.75	ns

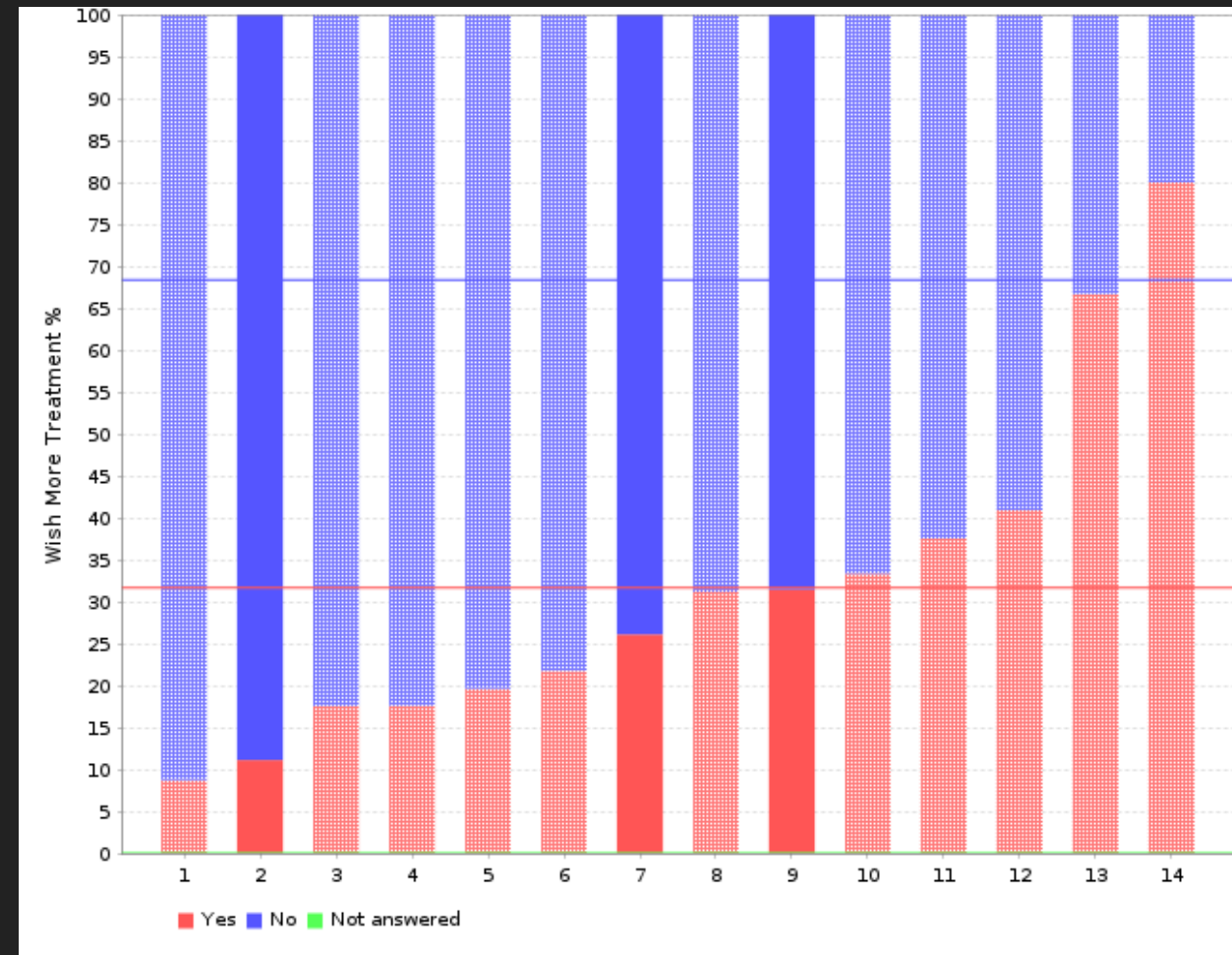
P11. Circle the one number that best shows how **satisfied** you are with the results of your **pain treatment** since your surgery:

0	1	2	3	4	5	6	7	8	9	10	
extremely dissatisfied											extremely satisfied



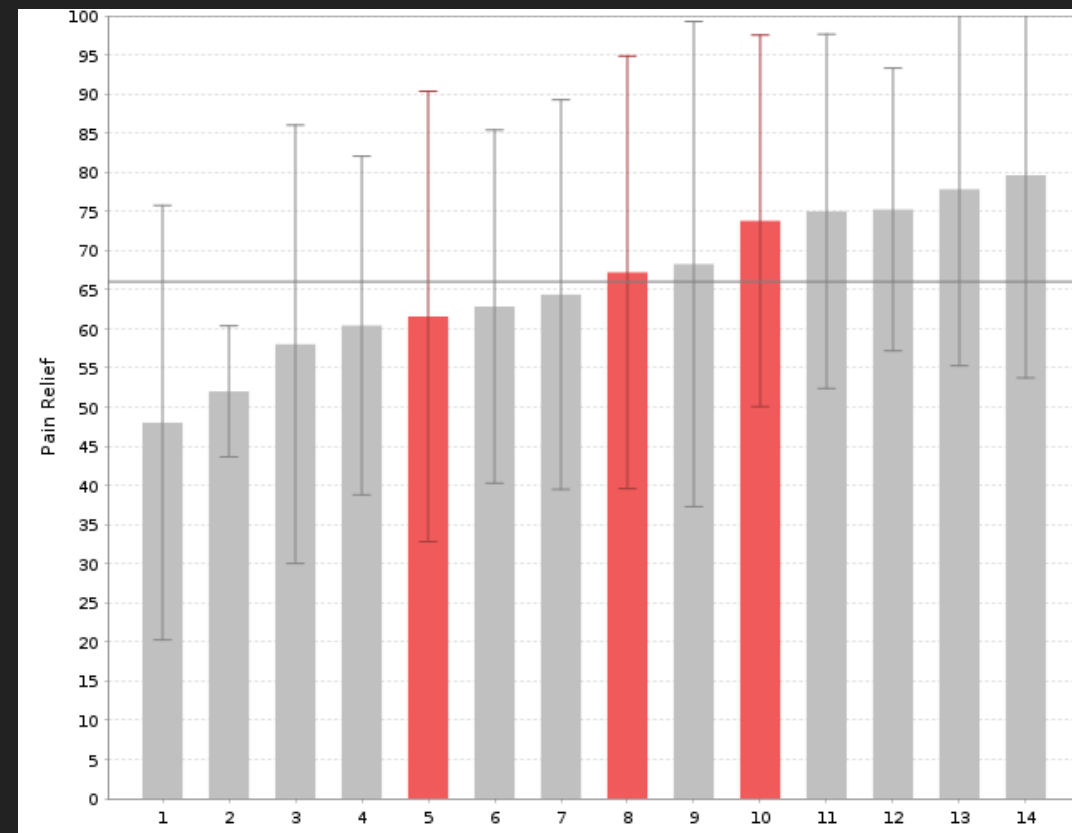
3A	3B	5	TOS	p<0.05
7.63	8.56	8.64	8.20	0.01

WOULD YOU LIKE TO RECEIVE MORE PAIN TREATMENT?%



3A	3B	5	TOS
31	26	11	25

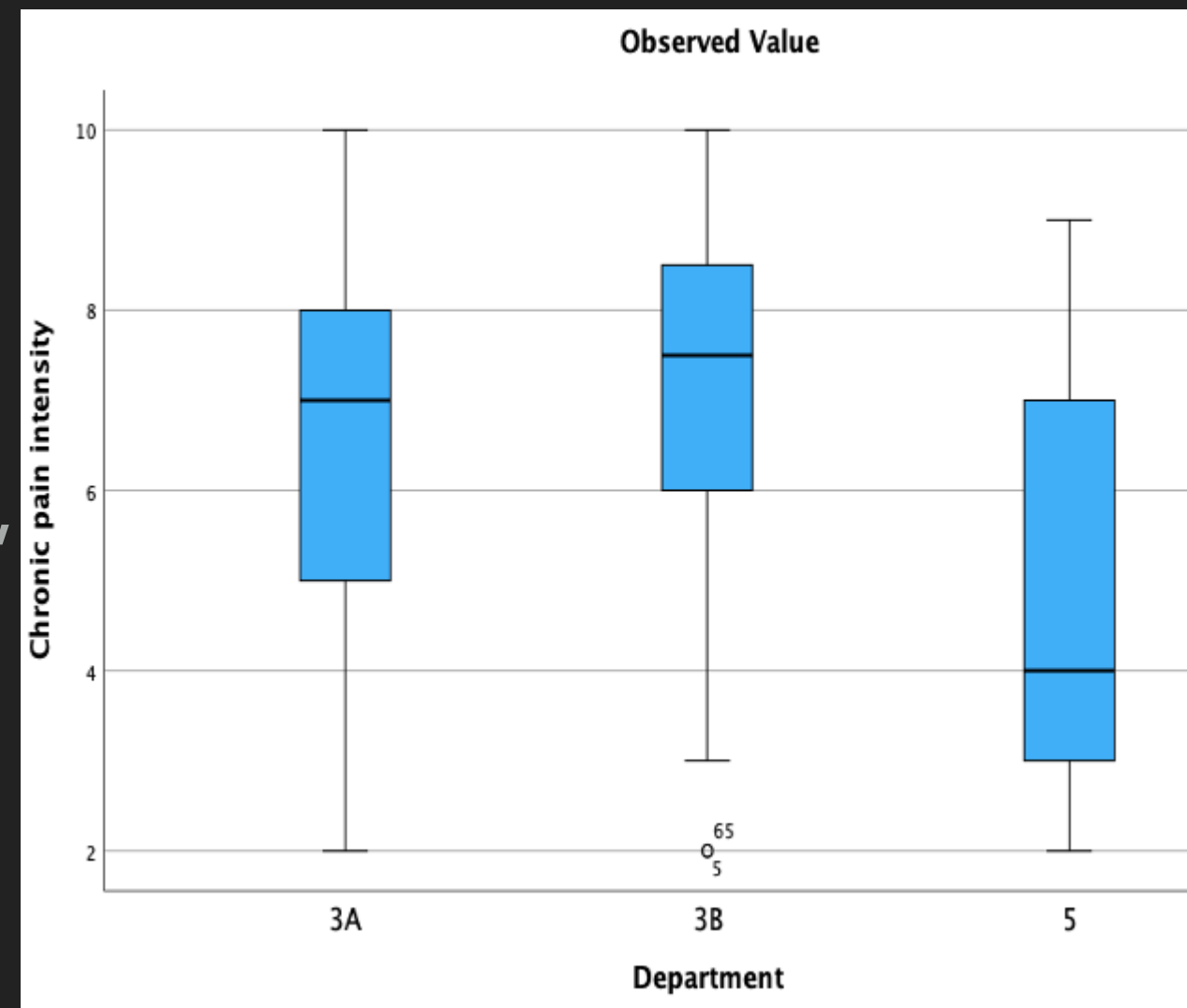
HOW MUCH PAIN RELIEF HAVE YOU RECEIVED? %



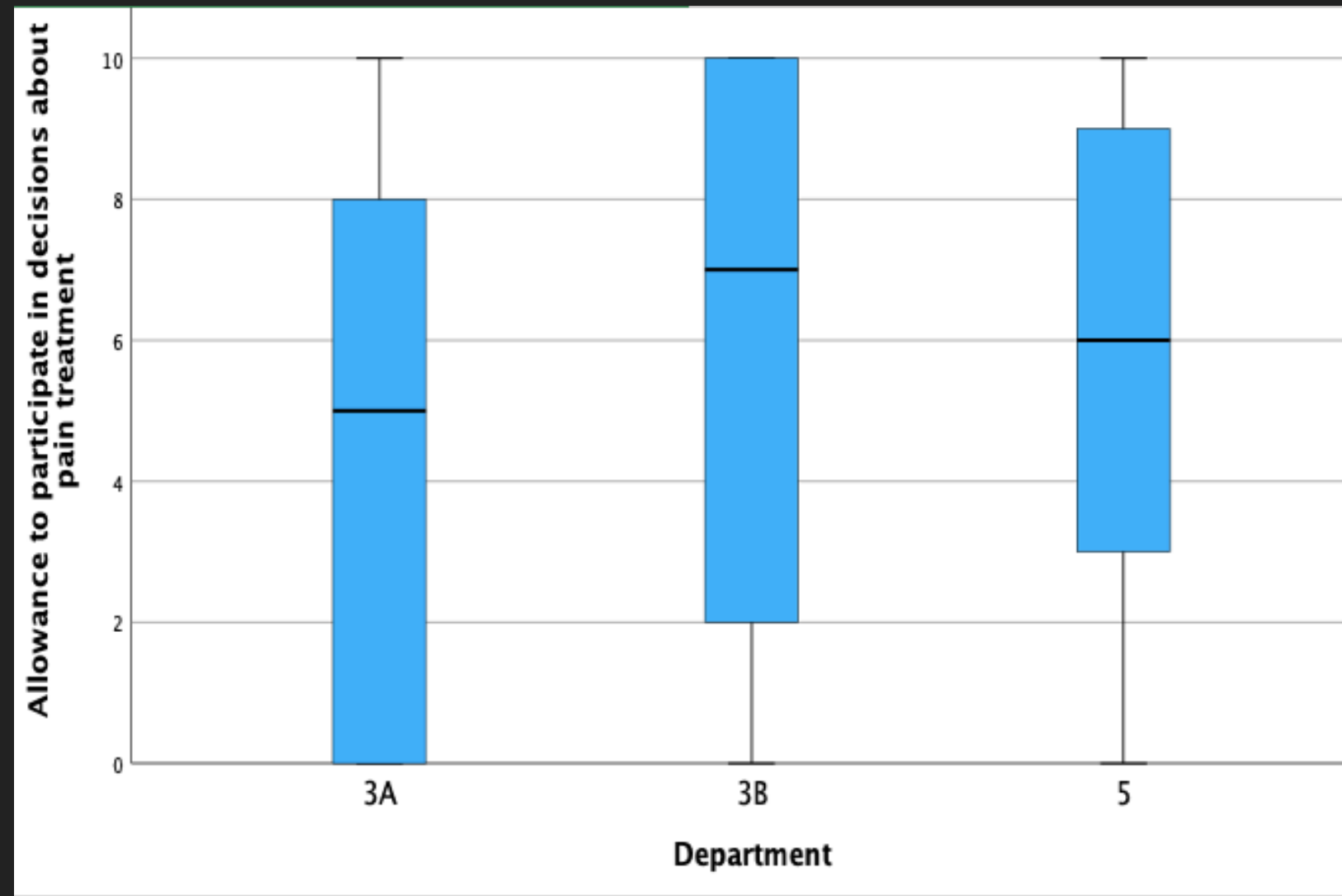
3A	3B	5	TOS
61	67	73	66

WHAT ELSE WAS INTERESTING

- ▶ 120 patients with chronic pain, 75%
- ▶ Mean Chronic pain intensity 6.7 NRS
- ▶ Worst pain hip replacement 5.05 NRS, chronic pain has 89%
- ▶ Worst pain knee replacement 6.91 NRS, chronic pain had 88%
- ▶ Correlation between worst pain and chronic pain intensity
 - hip $p < 0.05$, $r = 0.234$
 - knee $p < 0.05$, $r = 0.276$

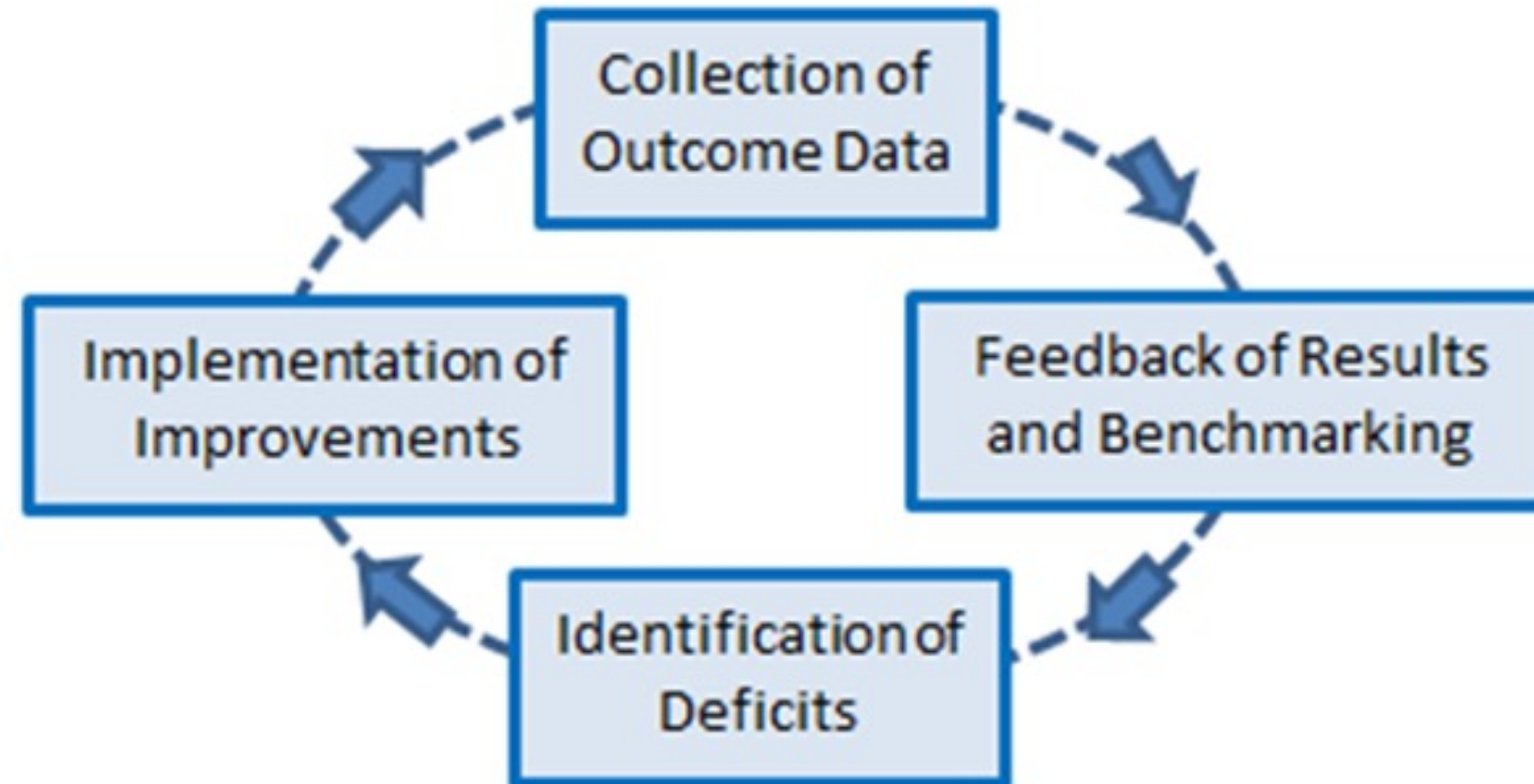


ALLOWANCE TO PARTICIPATE IN THE DECISIONS

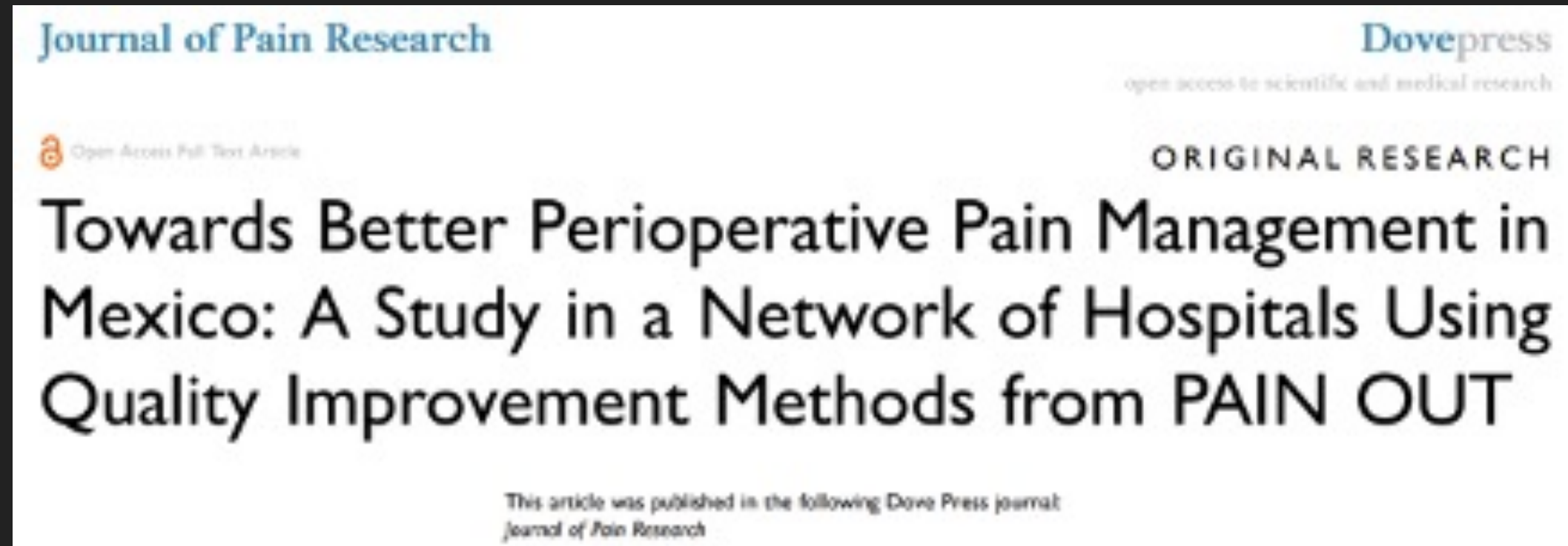


PAIN OUT

The PAIN OUT Process



PAIN OUT



- ▶ Medical literature in the native language
- ▶ Implementation of international guidelines
- ▶ Homepage about pain
- ▶ Algorithms, different types of operation
- ▶ Video about PCA pumps
- ▶ Video about regional anaesthesia methods
- ▶ Patient/relative education

PAIN OUT



Journal of
Clinical Medicine



Article

No Success without Effort: Follow-Up at Six Years after Implementing a Benchmarking and Feedback Concept for Postoperative Pain after Total Hip Arthroplasty

Jan Reinhard *¹, Loreto C. Pulido, Melanie Schindler, Amadeus Schraag², Felix Greimel³, Joachim Grifka and Achim Benditz⁴

- ▶ 2014 and 2015, implemented a standardized multidisciplinary pain management concept.. In 2016 implementation study stopped.
- ▶ The data showed a significant increase in maximum as well as activity-related pain (both $p < 0.001$) in 2021.
- ▶ Awareness of postoperative pain management seems to have decreased already six years after implementation.

CONCLUSIONS

Not all patients are receiving the best evidence-based care they deserve

We should ask the patients if they are satisfied with pain relief, we need a feedback and quality improvement

- ▶ We need pain service
- ▶ More detailed clinical guidance is needed for acute perioperative pain management in complex surgical patients



Thank You

