UNIVERSITÄTSKLINIKUM jena

Improving AcutePain Services – what are the challenges?

Winfried Meissner
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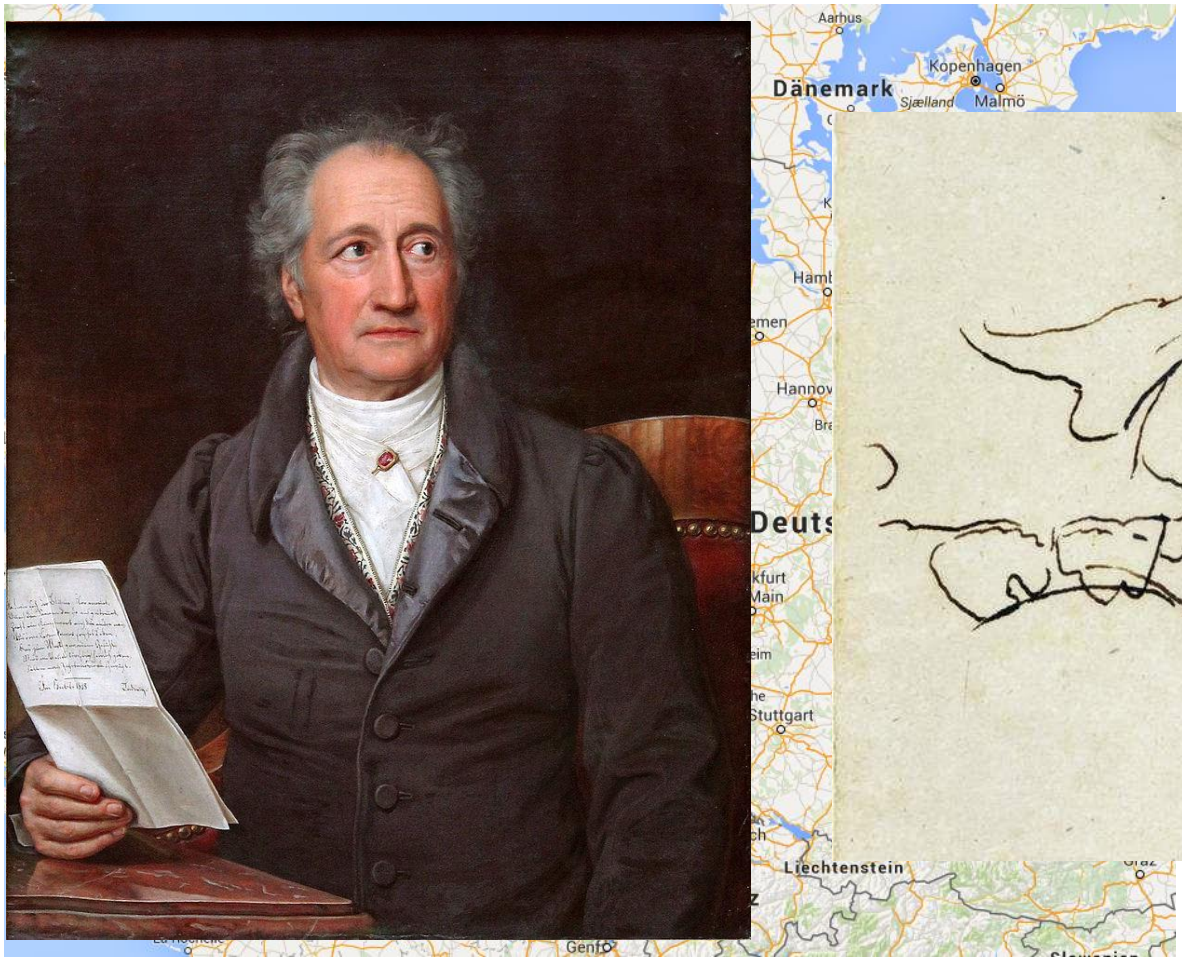
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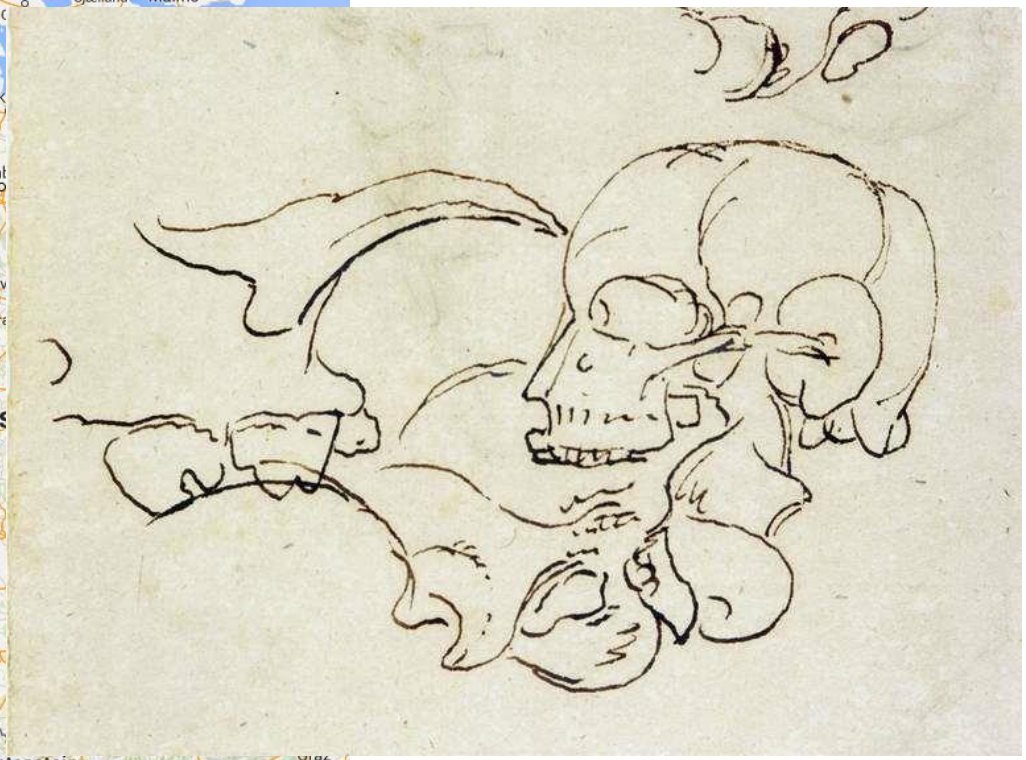


Conflicts of interest

- Research: EU, Pfizer
- Speaker: Grünenthal, Menarini, Mundipharma, BioQ Pharma
- Advise: Menarini, AcelRx Pharma, Grünenthal, BioQ Pharma, Medicines Company, Mundipharma

Postoperative pain management

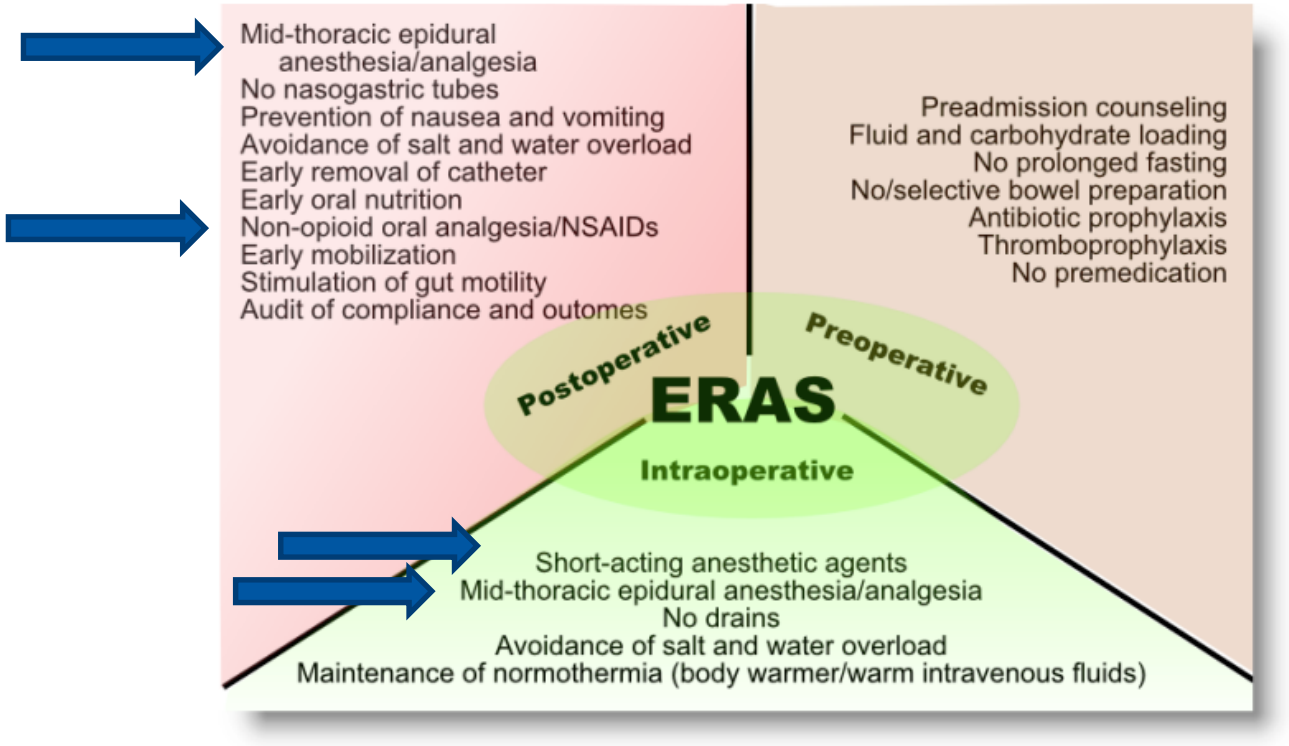
- Importance and clinical reality
- Challenges and solutions

Impact of postoperative pain management

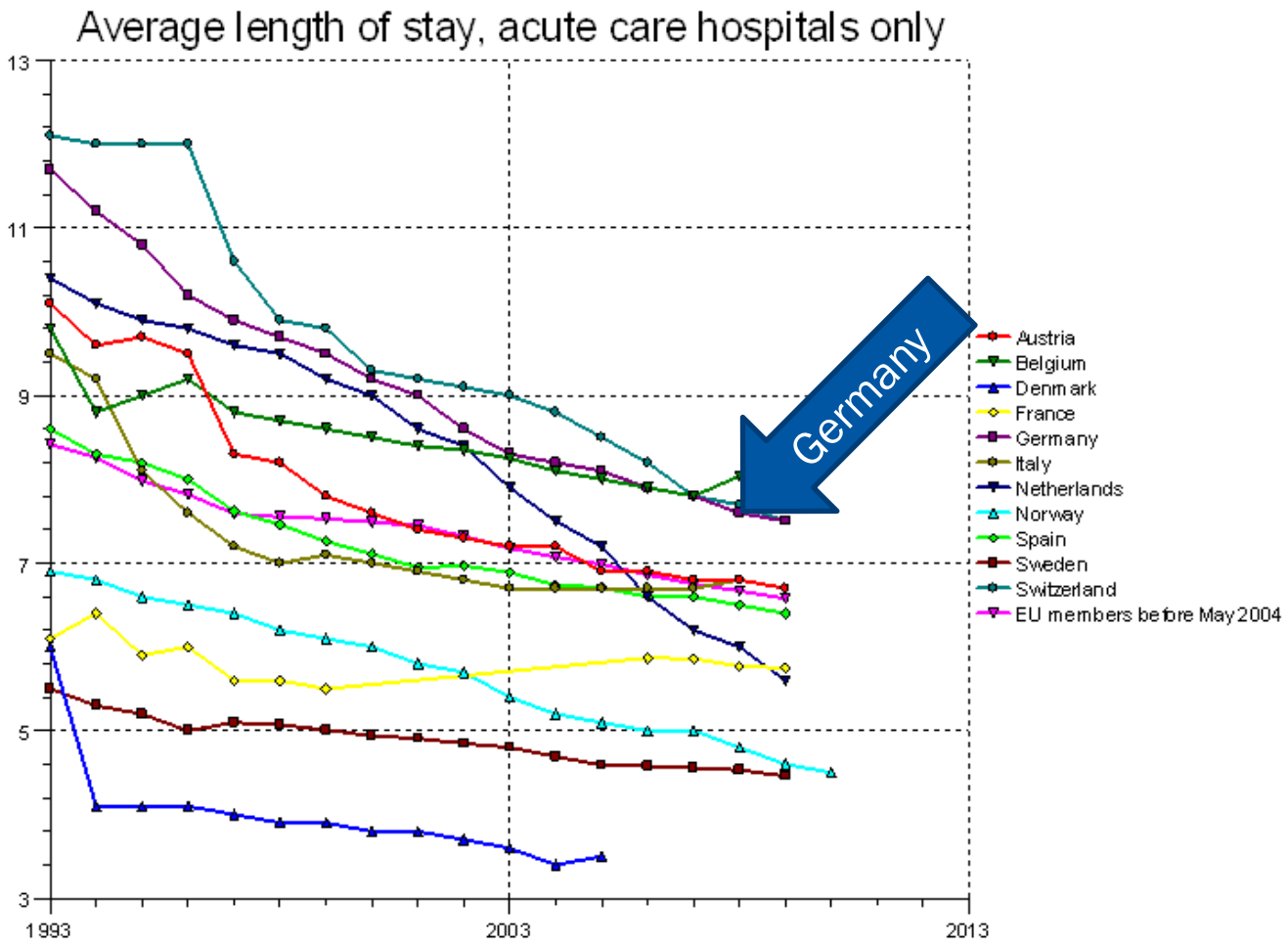
- Early recovery / ERAS
- Postoperative complications
- Chronic postsurgical pain (CPSP)

ERAS Protocol (EP)

The **ERAS Protocol** is the evidence-based care protocol developed by the ERAS Society. The protocol describes the perioperative care pathway with recommendations for patient care at various steps in the perioperative process. There are around 20 care elements that have been shown to influence care time and postoperative complications. The following graph illustrates the components of the ERAS multimodal care pathway:



Enhanced recovery (ERAS)



Continuous intravenous perioperative lidocaine infusion for postoperative pain and recovery

- 45 RCTs, 2802 patients
- Lidocaine decreases pain up to 24 h postop
- Most obvious in abdominal surgery
- Improved GI motility
- Less nausea
- ~~Less opioids~~
- Reduced hospital stay

Kranke P et al. Cochrane Database Syst Rev. 2015

Impact of Epidural Analgesia on Mortality and Morbidity After Surgery:..

Popping D et al. Annals of Surgery 2014, 259:1056-1067

- 125 randomized studies with 9044 patients
- Epidural analgesia (EA) vs control (no EA)

- Mortality: EA 3,1%, no EA 4,9%
- Cadiovascular complications far less in EA

Postoperative complications

„Epidural analgesia significantly decreased the risk of atrial fibrillation, supraventricular tachycardia, deep vein thrombosis, respiratory depression, atelectasis, pneumonia, ileus, and postoperative nausea and vomiting, and also improved recovery of bowel function.“

Popping D et al. Annals of Surgery 2014, 259: 1056-1067

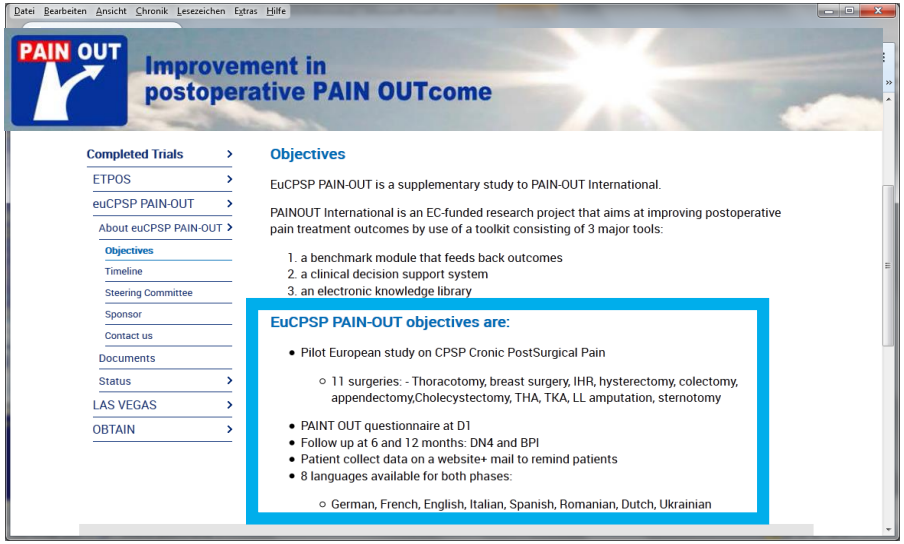
Chronic postsurgical pain in Europe (euCPSP Study)

Fletcher at al. Eur J Anaesthesiol 2015; 32:1–10

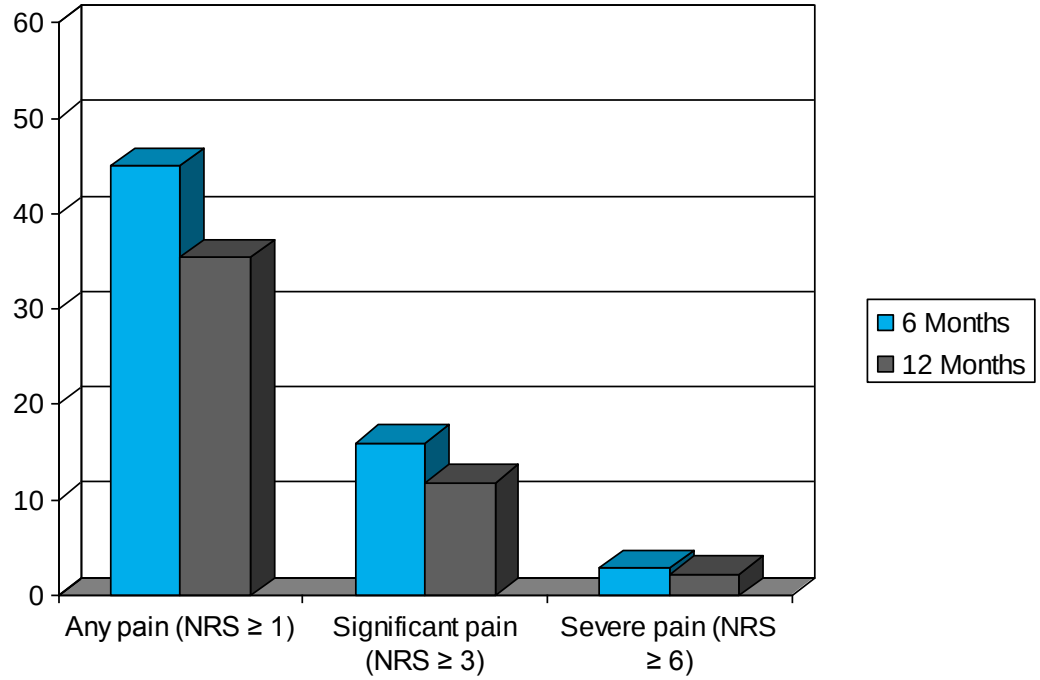
- 21 hospitals in 11 countries
- 3120 patients at POD1

Follow up:

- 1570 patients (50,3%) at M6
- 1328 patients (42,6%) at M12
  - *2/3 per e-mail, 1/3 per Tel!*



Chronic postsurgical pain



Moderate CPSP in ca. 10%; severe CPSP in 2%

Fletcher at al. Eur J Anaesthesiol 2015; 32:1–10

Prevention of CPSP

- Ketamine, (gabapentin, pregabalin?):
  Chaparro LE et al. The Cochrane Library 2013, Issue 7

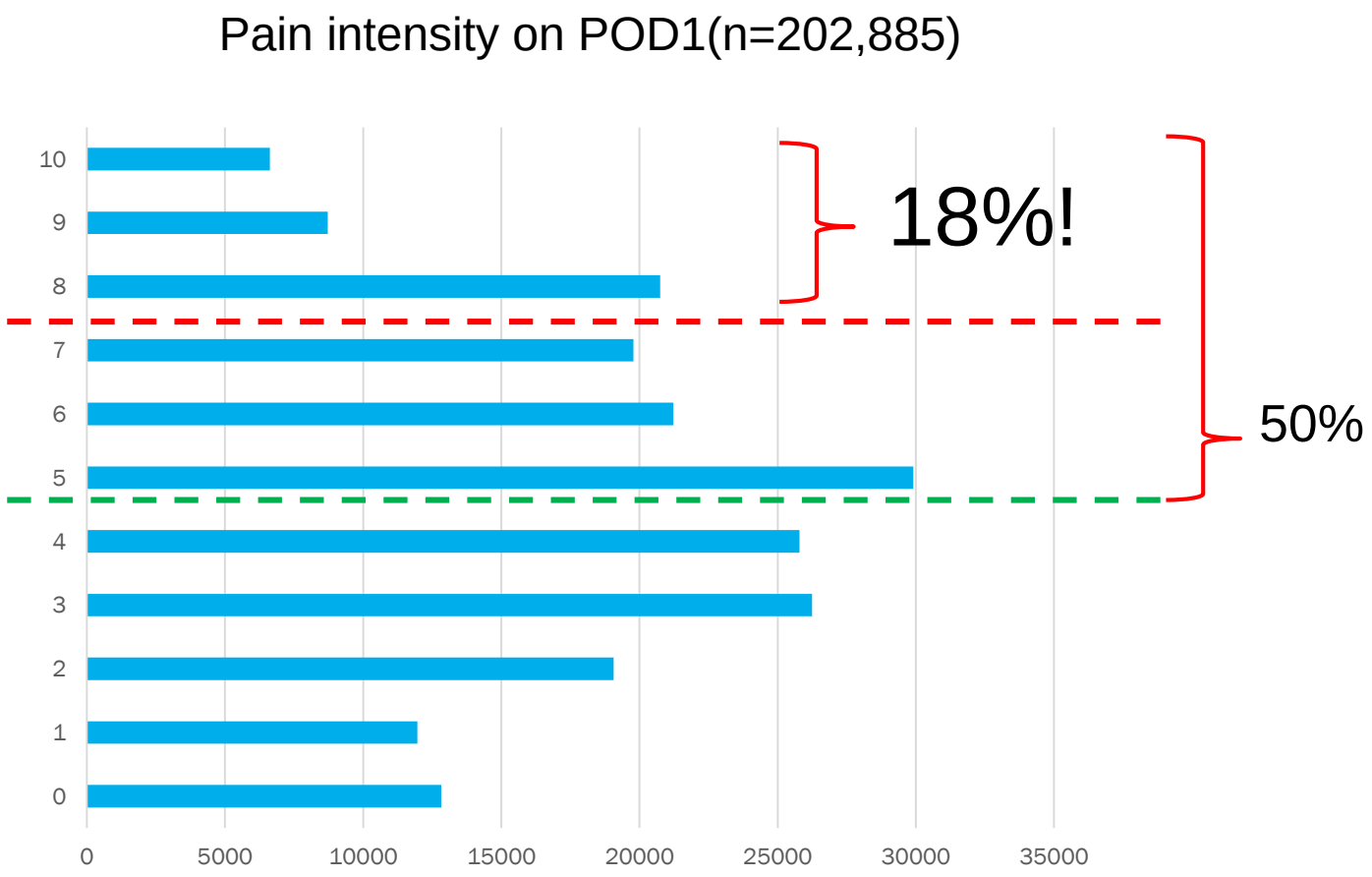
- Paravertebral block (breast cancer surgery); epidural block (thoracic surgery):
  Andreae MH and Andreae DA. BJA 2013,111: 711-720

Why postoperative pain management?

- It may facilitate enhanced recovery
- It may reduce complications
- It may prevent chronic pain
- (Inflammation? Cancer recurrence?)

- It reduces suffering

Clinical reality



Data from QUIPS registry

Clinical reality

n=6347 patients, 11 European hospitals

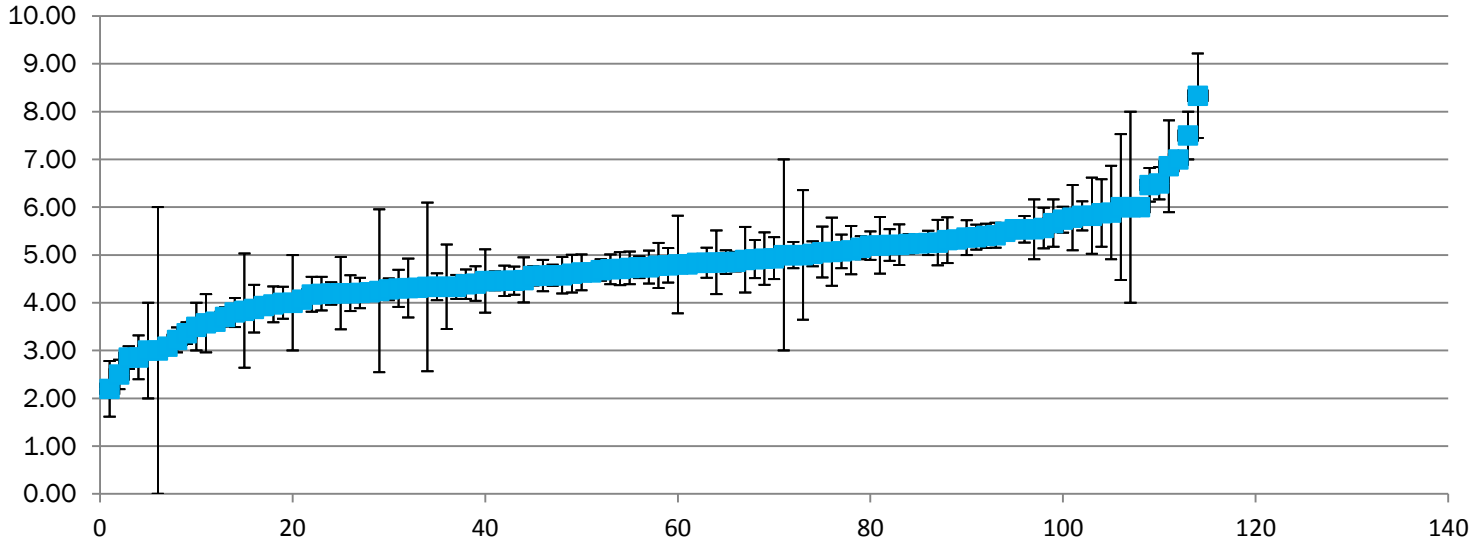
Routine pain assessment:	76% (0.3%-99%)
Received information:	65% (27%-85%)
Regional analgesia in TKA:	42% (1.8%-80%)

However: Only small effect size for impact of pain assessment on PRO (moderate ES for patient information!)

Zaslansky R et al. EJP 2015;19:490-502

Clinical reality

Pain intensity [NRS] after cholecystectomies: interhospital differences



Data from QUIPS registry

Clinical reality

- Enormous variation in practices and outcome between hospitals (and countries)
- Weak association between some guideline recommendations and outcome
- 50% of patients suffer from severe pain

Postoperative pain management

- Importance and clinical reality
- Challenges and solutions

Potential solutions

- Increase awareness
- Change of clinical routine towards evidence and best practice
- Patient involvement
- Focus on patients and settings at risk

Increase awareness

Other stakeholders:

- Importance of adequate pain management
- Information on short/long term effects
- Role of „surgical“ and nursing techniques
- Pain as a quality indicator?

Pain specialists:

- Balance of benefit / side effects
- Focus on functional outcome (instead on pain reduction)

MEDIZIN

Martyrium im Aufwachraum

Die Bedeutung von Schmerz im Krankenhausalltag wird oft unterschätzt. Nun will der TÜV für Abhilfe sorgen – er verleiht das Siegel „Initiative Schmerzfreie Klinik".

Angst hatte Jens M., 38, aus der Nähe von Erfurt, eigentlich nicht. Schon zweimal hatte ken Zeigefingers, de unfall zerquetscht w Klinikum Jena unters de Male hatte er na gut wie keine Schmer sollte es das dritte M

Wie anders es diesr schon im Aufwachrau richtig los." Fünfmal tern bitten, ihm Sch spritzen, erst dann wu „Ich bin nicht der Ty aber das waren starke

Der Grund für sein ner kleinen Änderun Bei den beiden erste die Narkose-Ärzte zur theter direkt an jenes Achselgegend gelegt, aus dem Finger weite blieb der Katheter auc liegen; verspürte M.

deutig ein organisatorisches Pro Auch Edmund Neugebauer, Leiter stituts für Forschung in der Ope Medizin in Köln-Merheim meint: „ der Patient einfach ins Loch der digkeiten."

Meißner und Neugebauer besch sich seit Jahren mit dem Akutsc Meist, so haben sie dabei festgeste der Patient vor der Operation zw

US Surgery Patients Report More Pain, Receive More Opioids

Posted on June 2, 2015

MedicalResearch.com Interview with:

Winfried Meissner, M.D.

Dep. of Anesthesiology and Intensive Care

Jena University Hospital

University Hospital Jena, Germany

Medical Research: What is the background for this study?

Dr. Meissner: Post-operative pain is managed inadequately worldwide. There are probably many reasons for this, one of which may be lack of evidence about outcomes of treatment in the clinical routine.

„Unnecessary suffering"

Iran Herald

Presenting news from the Islamic Republic of Iran

Iran Herald http://www.iranherald.com 5:06 PM Tuesday 15 October 2013 Issue 4

Iran News | Breaking Business News | Breaking International News | Breaking Sports News | Medical News | Economics News | Breaking Entertainment News | Travel And Tourism News | Breaking Financial Markets News | World News | Iran News | Iran News

International acute pain register: Adherence to clinical practice guidelines does not always improve outcomes

Medical News Today Monday 14th October, 2013

Even if postoperative pain is correctly managed as recommended by clinical practice guidelines, this does not necessarily mean a positive effect for patients. That is indicated in any case by data from the international acute pain registry PAIN OUT presented at the Congress of the European Pain Federation EFIC in Florence. Project Director Prof Winfried Meissner from the University Clinic of Jena: "Clinical practice guidelines are an

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06 May 2014

by Constanze Böttcher

European hospitals compare notes on pain management to improve care

Comparing data between hospitals across Europe helps health care professionals better manage patients' pain.

NDEN

A

Schnitt klein, Schmerz groß

Nicht die größten chirurgischen Eingriffe sind oft am schmerzhaftesten, sondern die kleinen. So lautet das Ergebnis einer Analyse von 50 000 Fällen durch Forscher der Klinik für Anästhesiologie und Intensivtherapie des Uni-Klinikums Jena (*Anesthesiology* Online). Eine Erklärung dafür ist, dass Patienten Darm- oder Lungeneingriffe besser verkraften, weil sich die Ärzte besonders intensiv um die Schmerzen kümmern. Bei Mandel- oder Blinddarmentzündung dagegen sei der Pflegeaufwand geringer. Zudem seien Entzündungsprozesse besonders schmerzhaft.

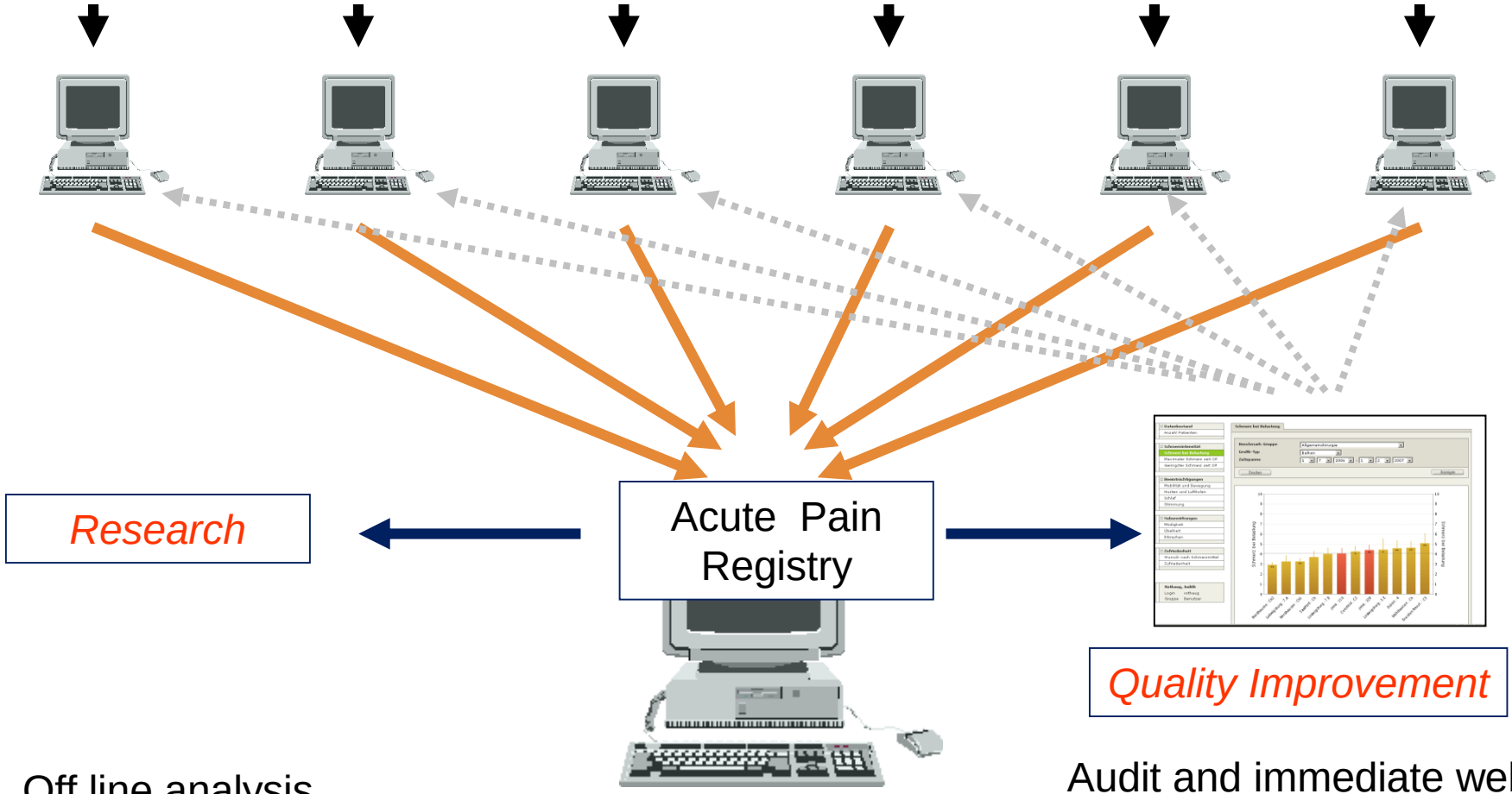
Change of clinical routine towards evidence and best practice

- Increase guideline adherence
- Measure outcome (e.g., PAIN OUT)
- Learn from reality

PAIN-OUT

Improvement in
Postoperative PAIN OUTcome

Data is obtained from patients



Off line analysis.

Audit and immediate web-based feedback to clinicians.

PAIN-OUT

Improvement in
Postoperative PAIN OUTcome

- 170 hospitals in Germany, 45 int nally
- > 460,000 data sets
- Backed by several na international societies (DGAI, EFIC, IASP…)
- Quality imp & research

www.pain-out.eu

- Richard La , Kristin Langford & team in Barths Health part of EU project
- Rod Taylor / Exeter: QoL
- Pediatric module presented by Julian Berry at the PPTC

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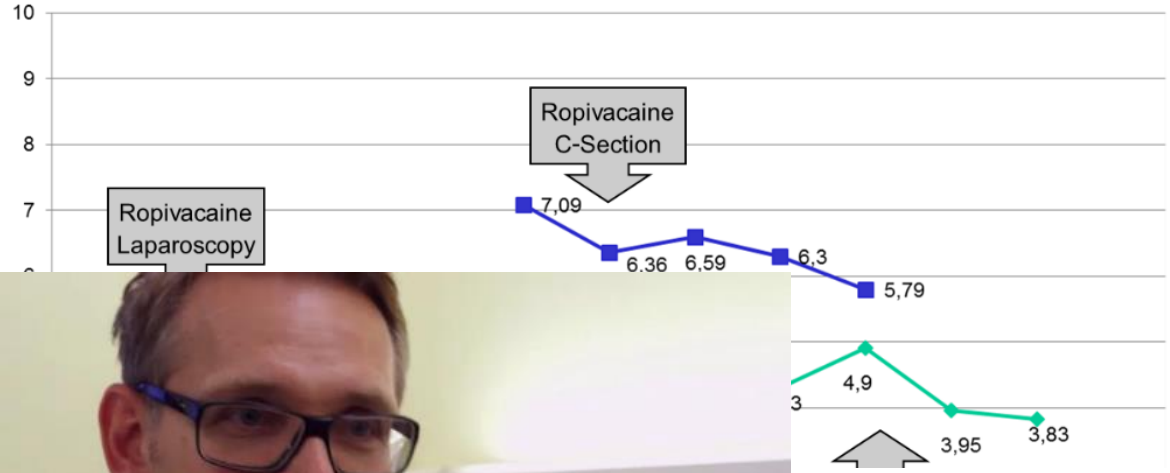
Participation in PAIN OUT / QUIPS:



European Journal of Obstetrics & Gynecology and Reproductive Biology 179 (2014) 11–16

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journal homepage: www.elsevier.com/locate/ejogrb

f pre-emptive port-site and intraoperative
ropivacaine for reduction of postoperative pain: a prospective cohort study

Jorge Jiménez Cruz [a], Herbert Diebolder [a,*], Askin Dogan [a,*], Anke Mothes [a,*], Mathias Rengsberger [a,*], Michael Hartmann [b], Winfried Meissner [c], Ingo B. Runnebaum [a,*]

[a] Department of Gynaecology and Obstetrics, Jena University Hospital, Friedrich-Schiller-University Jena, Bachstraße 18, Jena 07743, Germany
[b] Pharmacy, Jena University Hospital, Friedrich-Schiller-University Jena, Erlanger Allee 101, Jena 07747, Germany
[c] Department of Anaesthesiology and Intensive Care, Jena University Hospital, Friedrich-Schiller-University Jena, Erlanger Allee 101, Jena 07747, Germany

Patient involvement

- Provide information
- Involve in decision making

Correlates of satisfaction with pain treatment

- 16,868 patients, 42 sites, 11 countries

Main predictors of patient satisfaction:

- Perceived pain relief (%)
- Participation in treatment decision
- No desire for more pain treatment

Schwenkglenks M et al. PAIN 2014; 155: 1401-11

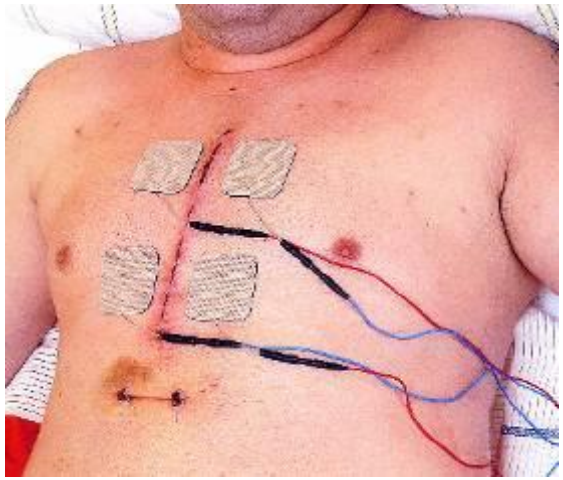
Patient-controlled analgesia

- New PCA devices

- TENS:
  - Pain reduction 25mm (100 mm VAS)
  - NNT (50% pain reduction): 2.5!

Johnson, M.I., et al. Cochrane Database Syst Rev, 2015. 6: CD006142

TENS



- Medium-size thoracic and visceral surgery

- Information during pre-anesthesia visit.
- Initiation in recovery room
- 3x/d for ½ h (and on request)
- APS sees patient 1x/d and collects the device after treatment

n=97

Would use TENS again	84%
Didn‘t request additional analgesics:	89%

Focus on patients and settings at risk

- Patients at risk
- Surgeries at risk

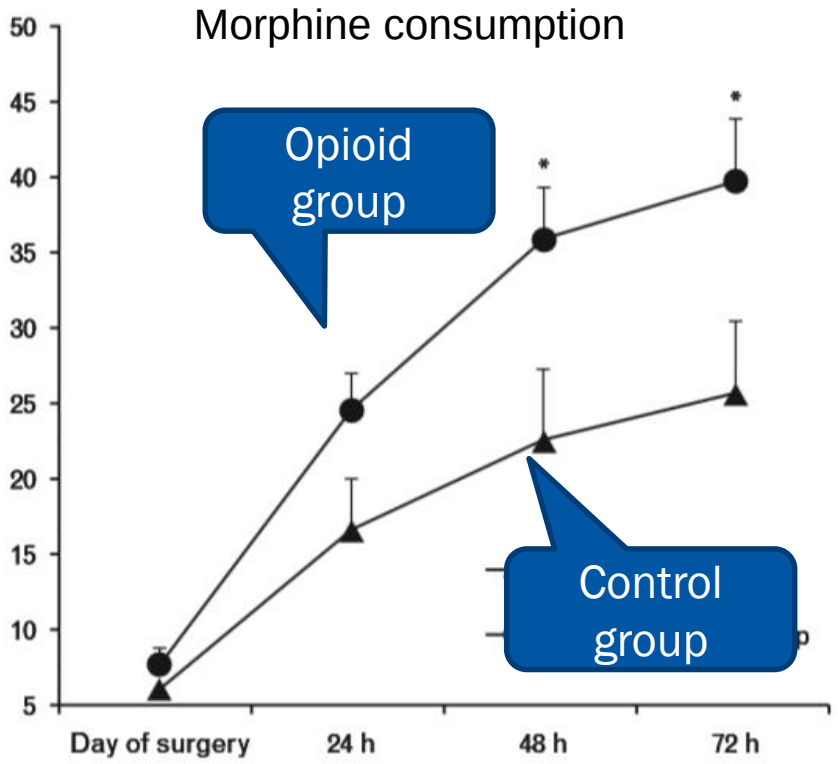
- Pain vigilance, catastrophising, preoperative pain and preoperative opioid treatment are the most important predictors of acute and persisting chronic pain

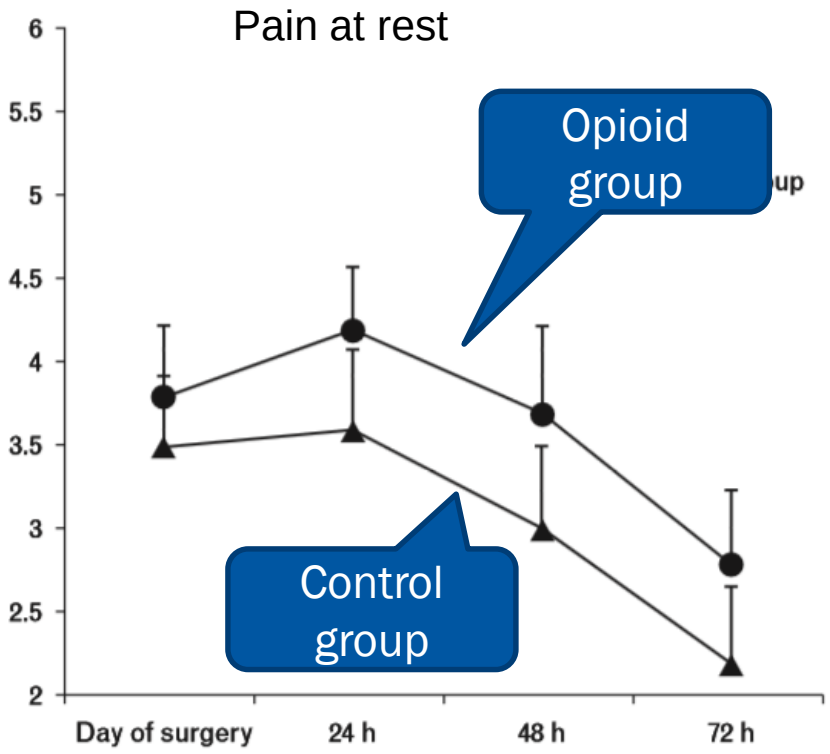
Dimova, V., et al., Association of genetic and psychological factors with persistent pain after cosmetic thoracic surgery. J Pain Res, 2015;8: 829-44

Lewis, G.N., et al., Predictors of persistent pain after total knee arthroplasty: a systematic review and meta-analysis. Br J Anaesth, 2015;114: 551-561

Hina N et al. Eur J Anaesthesiol 2015;32: 255-61

- Chronic pain patients with/without opioids
- Opioid group: 42±25 mg/d morphine





Hina N et al. Eur J Anaesthesiol 2015;32: 255-61

Pain Intensity on the First Day after Surgery

Gerbershagen et al. Anesthesiology 2013, 118: 934-44

- n=50.523
- 179 surgical groups
- „Ranking“ according to pain intensity

- Results mirror painfulness of surgery and received pain treatment

Low pain intensity

Surgery	NRS/rank
• Limb amputation	(4,6 / 115)
• Open lung resection	(4,5 / 118)
• Gastrectomy	(4,5 / 120)
• Rad. prostatectomy	(3,6 / 141)

Gerbershagen et al. Anesthesiology 2013, 118: 934-44

High pain intensity

Surgery	NRS/rank
• Calcaneus-OP	(6,7 / 1)
• Sectio	(6,1 / 9)
• Appendectomy (open)	(6,0 / 19)
• Hemorrhoidectomy	(5,9 / 23)
• Tonsillectomy	(5,9 / 24)
• Cholezystectomy (open)	(5,8 / 25)
• Appendectomy (lap.)	(5,4 / 47)

Gerbershagen et al. Anesthesiology 2013, 118: 934-44

Summary

- Postoperative is important: Impact on LoS, complications, CPSP - and individual suffering
- 50% of patients still report mod.-severe pain

- Increase awareness
- Change of clinical routine towards evidence and best practice
- Patient involvement
- Focus on patients and settings at risk

Should we go or should we stay?

Yes, we really miss you!

Thank you:

Alle QUIPS- Teilnehmer
J Rothaug, C Weinmann, M Komann,
A Goettermann, S Mescha, Germany
R Zaslansky – Israel - Berlin
R Chapman, USA
N Rawal, R Backstrom, Sweden
D Fletcher, France
M Puig, Spain
R Langford, Dr K Ullrich, UK
C Konrad, Switzerland
M Schwenkglenks, Switzerland
T Volk, Dr A Kopf, Germany
E Pogatzki-Zahn, Germany
L Fodor, Romania
S Brill, Israel
Y Leykin, Italy
C Engel, Germany
R Taylor, UK
H Gerbershagen, Utrecht
I Buchholtz (TAKWA), Germany
…
German Society of Anesthesiology (DGAI, BDA)
German Society of Surgery (DGCH, BDC)
AK Akutschmerz der DGSS
International Pain Registry – IASP
ESA, EFIC, APS

German Ministry of Health
European Commission (EU)