PAIN OUT project: Optimizing management of perioperative pain in China

The following slides introduce the project to providers on wards who might wish to participate

Background

- Pain related outcomes reported by patients undergoing surgery are poor.
  - *This applies worldwide.*
  - In *adults and children.*

- There is large variability in the processes that lead to these outcomes.

- Strategies used over the last ~40 years have not yielded sufficient improvement.

  Strategies include: compiling evidence based clinical practice guidelines; establishing professional (pain, anesthesia) societies; carrying out research; providing care providers and patients with education; setting up specialized treatment facilities, e.g. Acute Pain Services.

Brennan et al (2007) Anesth Analg, 205-21; Benhamou et al (2008) Pain, 136,134-41
Fletcher et al (2008) Pain, 137(2):441-51;
Meissner et al (2015) Curr Med Res & Opi, 31:11, 2131-2143

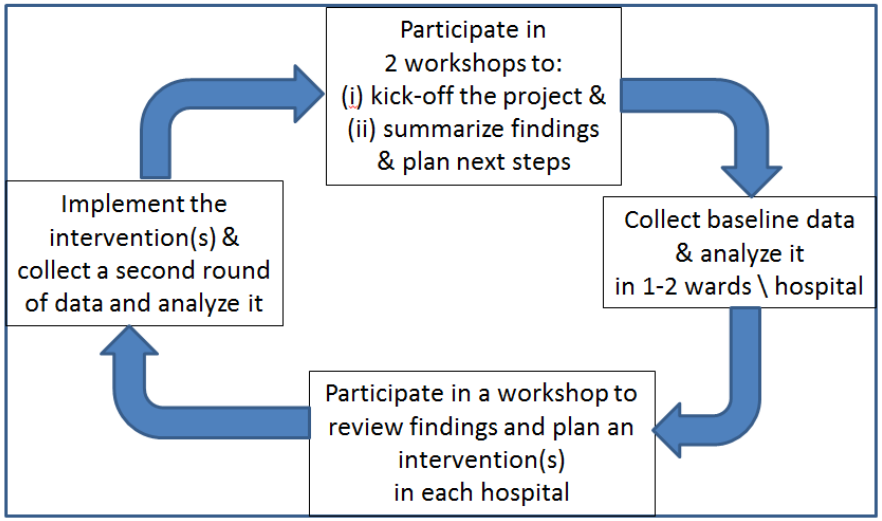
What to do?

-> Employ a new approach !

The Pain Care and Outcomes Improvement Project:

Employs several quality improvement strategies:

(a) Plan–Do–Study–Act-like methodology



(b) Clinical peer review

- Peer review is a well-established method to review and support improvement in professional and clinical practice … to maintain & improve quality of patient care.
- For acute pain – will be developed & tested as part of the project.

(c) 'Learn from the best'

Australian Commission on Safety and Quality in Healthcare, 2010

Methods

Use standardized performance measurement tools developed by PAIN OUT

2 wards from your hospital will work together with up to 10 hospitals from your country, forming a ‘national network‘.

The network will be led in your country by a local collaborator, a ‘network leader‘.

Carry out a 2 year project -> at the end, decide if and how to upscale the project in your hospital & country.

Project outline

Administrative phase
contract; ethics; training surveyors

PLAN phase, months 1 - 6
- **Kick off meeting**
- Collect BASELINE data from patients in 2 wards \ hospital & analyze it;
- **Mid project workshop** to discuss findings; discuss aims; propose 1-3 intervention(s).

DO phase, months 7 - 12
- Discuss interventions with local multi-disciplinary working group & consent on 1-2 to implement;
- Obtain ethics approval (if necessary)
- Start implementing the intervention(s).

STUDY phase, months 13 - 22
- Carry out another round of data collection in the 2 wards.
- Analyze findings & prepare for summary workshop

ACT phase, months 23 /24
Workshop summarizing findings and planning next steps within hospital & network

There is leeway with regards to duration of the phases, however, all hospitals in the network will progress together from one phase to another.

Benefits to you and your colleagues

You'll be able to -

-> work with colleagues, nationally & internationally, interested in improving quality of pain management;

-> participate in developing a novel program;

-> publish findings in peer reviewed journals;

-> present findings at national and international meetings of your professional society.

The aim of collecting data is for *learning* and for *improving* practices carried out by you and your colleagues.

''It has been very useful to do the surveys because it has made us aware of the importance of postoperative pain'.
Dr H.V., Anesthesiologist, Mexico

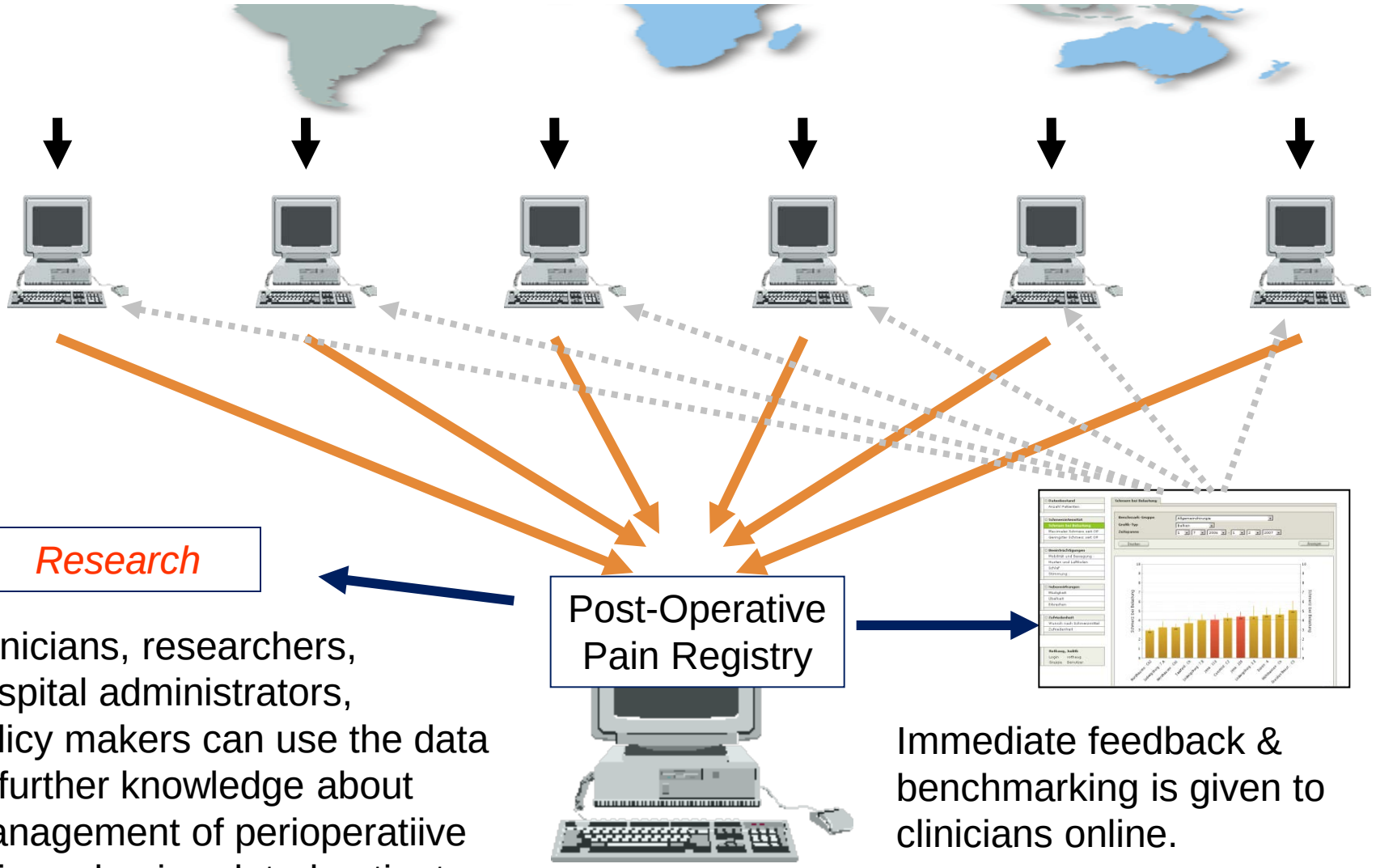
' I have been reviewing the files … well, is seems we still have a lot of work to do here…. but we'll keep the work going ! '
Dr D.M., Anesthesiologist, Mexico

What is PAIN OUT ?

- A web-based quality improvement and research network addressing management of post-operative pain.
- The project has collaborators internationally – in Europe, Americas, Africa, South East Asia.
- Initial funding came from the European Commission.
- It is a not-for-profit, academic project, coordinated from Jena University Hospital, Germany.

How does  work?

Obtain data from clinical sites



Research

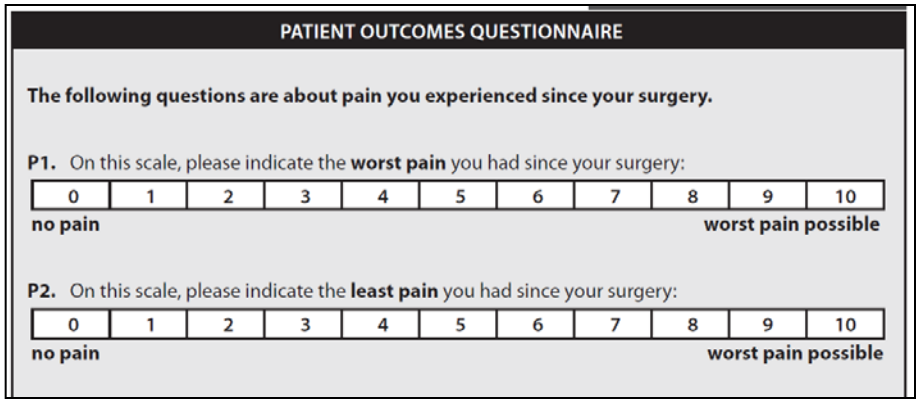
Post-Operative Pain Registry

Clinicians, researchers, hospital administrators, policy makers can use the data to further knowledge about management of perioperatiive pain and pain-related patient reported outcomes.

Immediate feedback & benchmarking is given to clinicians online.

Used for *Quality Improvement.*

How is the data collected? Using 2 questionnaires



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:

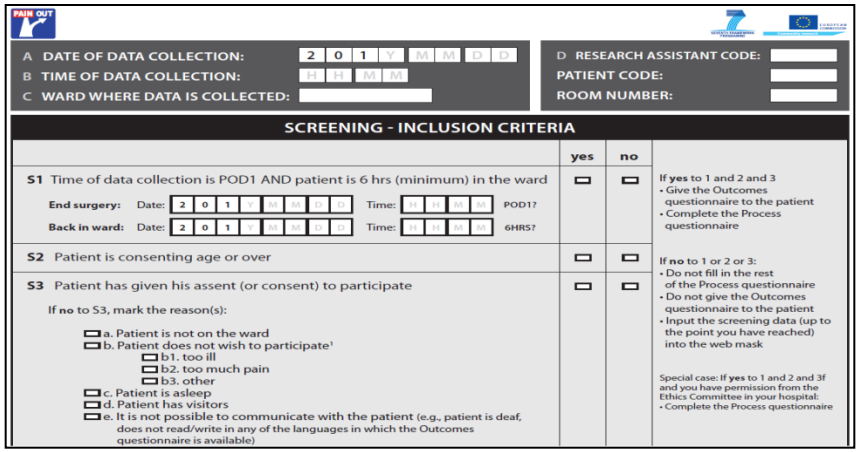
0	1	2	3	4	5	6	7	8	9	10

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**



PAIN OUT

A DATE OF DATA COLLECTION: 2 0 1 Y M M D D
B TIME OF DATA COLLECTION: H H M M
C WARD WHERE DATA IS COLLECTED:

D RESEARCH ASSISTANT CODE:
PATIENT CODE:
ROOM NUMBER:

SCREENING - INCLUSION CRITERIA

	yes	no	
S1 Time of data collection is POD1 AND patient is 6 hrs (minimum) in the ward **End surgery:** Date: 2 0 1 Y M M D D Time: H H M M POD1? **Back in ward:** Date: 2 0 1 Y M M D D Time: H H M M 6HRS?	☐	☐	If **yes** to 1 and 2 and 3 • Give the Outcomes questionnaire to the patient • Complete the Process questionnaire
S2 Patient is consenting age or over	☐	☐	If **no** to 1 or 2 or 3: • Do not fill in the rest of the Process questionnaire • Do not give the Outcomes questionnaire to the patient • Input the screening data (up to the point you have reached) into the web mask
S3 Patient has given his assent (or consent) to participate If **no** to S3, mark the reason(s): ☐ a. Patient is not on the ward ☐ b. Patient does not wish to participate[1] ☐ b1. too ill ☐ b2. too much pain ☐ b3. other ☐ c. Patient is asleep ☐ d. Patient has visitors ☐ e. It is not possible to communicate with the patient (e.g., patient is deaf, does not read/write in any of the languages in which the Outcomes questionnaire is available)	☐	☐	Special case: If **yes** to 1 and 2 and 3f and you have permission from the Ethics Committee in your hospital: • Complete the Process questionnaire

(1) Patient reported Outcomes

Filled in by the patient

In the patient‘s native language

~ 5 - 10 minutes to fill in

↓

To get patient‘s perspective

(2) Process data

Demographics: gender & age, comorbidities; type of anaesthesia; preoperative analgesics.
Abstracted from patient‘s record by a surveyor
~ 10 minutes to fill in
Can be filled in directly to web-based server (depends on availability of Wifi connection).

Languages of the patient questionnaire

☐ Albanian	☐ Arabic	☐ Bahasa Malaysia	☐ Danish	☐ Dutch	☐ English	☐ Filipino
☐ Finnish	☐ French	☐ German	☐ Hebrew	☐ Hindustani	☐ Icelandic	☐ Italian
☐ Korean	☐ Mandarin	☐ Romanian	☐ Russian	☐ Serbo-Croatian	☐ Spanish	☐ Span. Mexico
☐ Swedish						

病人疗效问卷

以下问题是关于自手术后您所承受的疼痛经历。

P1. 请在标尺中标出您自手术后经历的最重痛感程度:

0	1	2	3	4	5	6	7	8	9	10

不痛 剧痛

P2. 请在标尺中标出您自手术后经历的最轻痛感程度:

0	1	2	3	4	5	6	7	8	9	10

不痛 剧痛

P3. 手术后您剧痛的频繁程度?
请圈出您感觉剧痛的时间估算百分比:

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

从不感觉剧痛 总是感觉剧痛

The Patient Outcomes questionnaire assesses:

Pain severity & interference e.g. with activities in & out of bed

Affective impairment, e.g. anxiety, helplessness

Adverse effects, e.g. nausea, drowsiness

Perceptions of care, e.g. would you have wished for more medication to treat pain?

Existence and intensity of chronic pain before admission to hospital.

The patient questionnaire is based on:

- Delphi process carried out during the EU-funding phase of PAIN OUT.
- Questionnaires developed and revised by the American Pain Society (1995, 2005, 2010).
- Experience from QUIPS (German Acute Pain Registry).

Process of validation described in: Rothaug et al. Patients' perception of postoperative pain management: validation of the International Pain Outcomes (IPO) questionnaire. J Pain. 2013 Nov;14(11):1361-70

Include which patients?

1. On the first post-operative day.
2. Of consenting age and over.
3. Who have given oral or written consent
   (depends on requirements of local ethics committee).

Which surgical specialities?

General surgery

Trauma and orthopaedics

Obstetrics & gynaecology

Most of the data in the registry relates to these patients.

Ambulatory surgery -> patients receive an email with the questionnaire

Urological

Neurosurgery

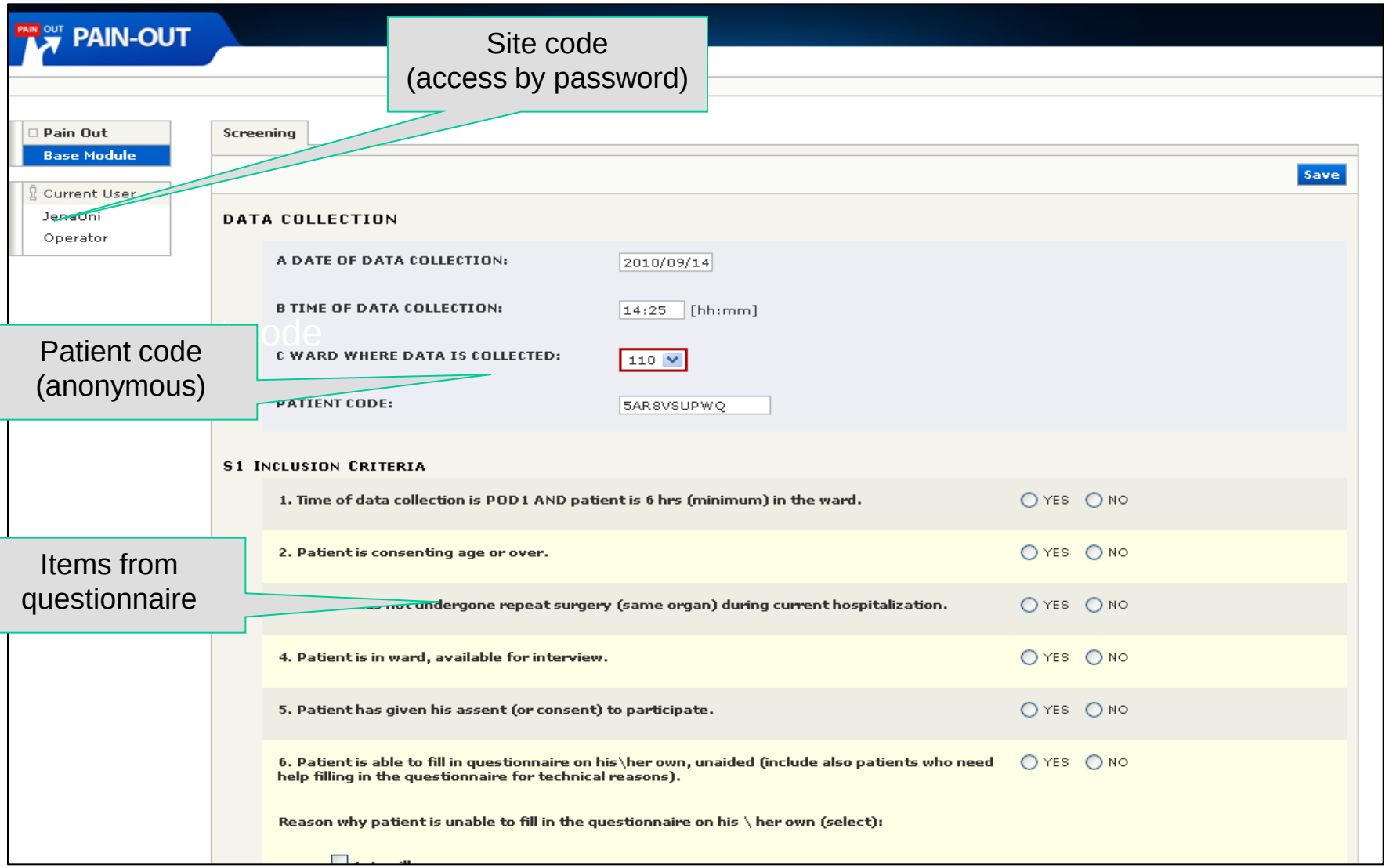
Plastic surgery

Thoracic surgery

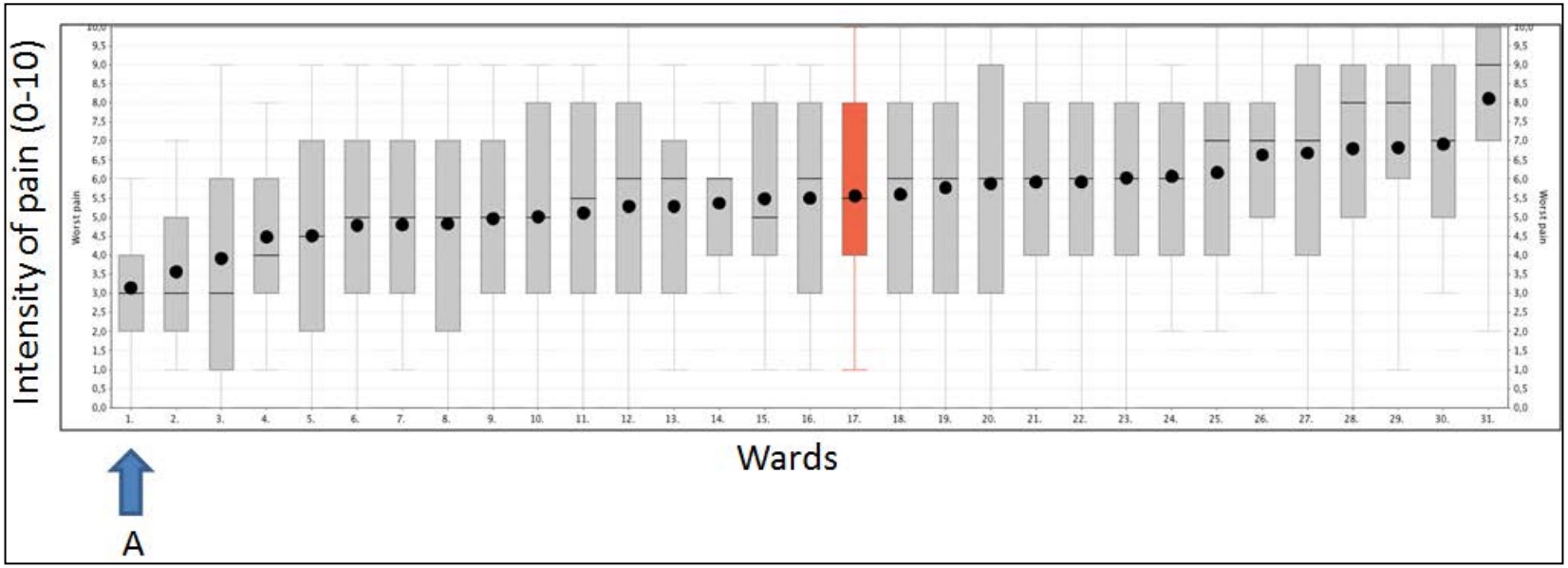
Vascular surgery

Ear, nose and throat

The surveyor inputs the data into the web-based software



Example of online feedback: worst pain



Data about **general surgery** from 31 different wards, internationally

Outcome assessed ‚worst pain since surgery‘.

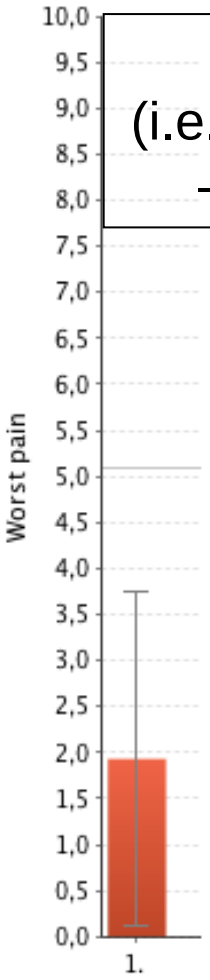
X axis - each ‚box and whisker‘ plot represents summarized data from one ward.
Y- axis – scale assessing extent of outcome: 0 (=‚no pain‘) – 10 (‚worst imaginable‘)

Average scores of wards on the **left** indicate low pain scores;
on the **right** – scores are high.

Findings from your own site are identified: plot in **red**; others are anonymous, in grey.

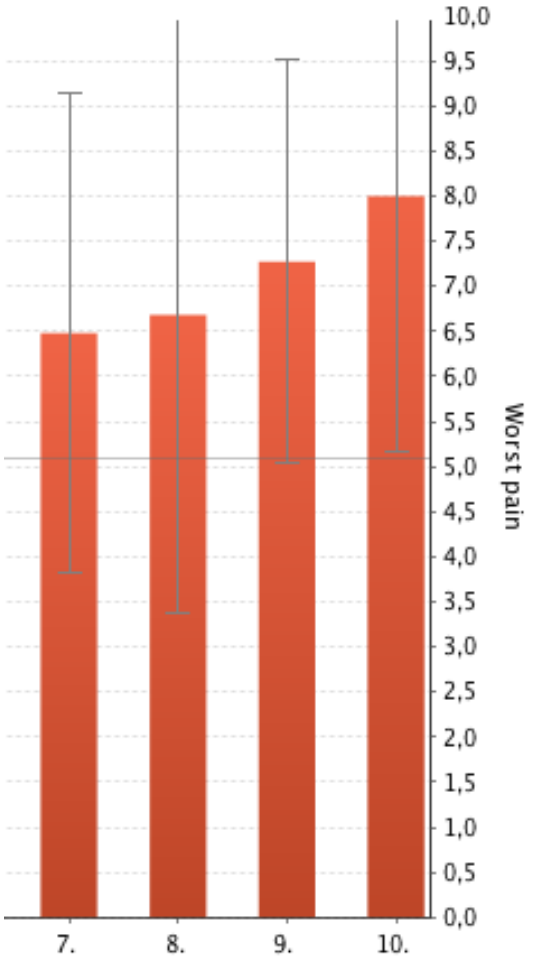
What can you do with the data?

1. Assess quality of care



If outcomes are good
(i.e. conform with current standards)
– continue following over time.

If outcomes are not optimal -
develop strategies for change
& follow their implementation
over time using the data.



What can you do with the data?

2. Research

Collaborators can use data from their site for *single* centre analyses.

Collaborators can obtain *multi*-center data for analyses

- Present findings at national and international meetings
- Publish in peer reviewed journals
  - See next slide

Publications based on PAIN OUT data

Roeb MM , Wolf A, Gräber SS, Meiner W, Volk T. **Epidural Against Systemic Analgesia: An International Registry Analysis on Postoperative Pain and Related Perceptions After Abdominal Surgery.** Clin J Pain. 2017 Mar;33(3):189-197

Allvin R , Rawal N, Johanzon E, Bäckström R. **Open versus Laparoscopic Surgery: Does the Surgical Technique Influence Pain Outcome? Results from an International Registry.** Pain Res Treat. 2016:4087325.

Fletcher D, Stamer UM, Pogatzki-Zahn E, Zaslansky R, Tanase NV, Perruchoud C, Kranke P, Komann M, Lehman T, Meissner W **euCPSP group for the Clinical Trial Network group of the European Society of Anaesthesiology. Chronic postsurgical pain in Europe: An observational study.** Eur J Anaesthesiol. 2015 Oct;32(10):725-34.

Zaslansky R, Rothaug J, Chapman CR, Bäckström R, Brill S, Fletcher D, Fodor L, Gordon DB, Komann M, Konrad C, Leykin Y, Pogatski-Zahn E, Puig MM, Rawal N, Ullrich K, Volk T, Meissner W. **PAIN OUT: the making of an international acute pain registry**. Eur J Pain 2015;19:490-502.

Schwenkglenks M, Gerbershagen HJ, Taylor RS, Pogatzki-Zahn E, Komann M, Rothaug J, Volk T, Yahiaoui-Doktor M, Zaslansky R, Brill S, Ullrich K, Gordon DB, Meissner W. **Correlates of satisfaction with pain treatment in the acute postoperative period: results from the international PAIN OUT registry.** PAIN 2014;155: 1401-11

Chapman CR, Stevens DA, Lipman AG. **Quality of Postoperative Pain Management in American Versus European Institutions**. Journal of Pain & Palliative Care Pharmacotherapy. 2013 Dec;27(4):350-8

Rothaug J, Zaslansky R, Schwenkglenks M, Komann M, Allvin R, Backström R, Brill S, Buchholz I, Engel C, Fletcher D, Fodor L, Funk P, Gerbershagen HJ, Gordon DB, Konrad C, Kopf A, Leykin Y, Pogatzki-Zahn E, Puig M, Rawal N, Taylor RS, Ullrich K, Volk T, Yahiaoui-Doktor M, Meissner W. **Patients' perception of postoperative pain management: validation of the International Pain Outcomes (IPO) questionnaire**. J Pain. 2013 Nov;14(11):1361-70.

Taylor RS, Ullrich K, Regan S, Broussard C, Schwenkglenks M, Taylor RJ, Gordon DB, Zaslansky R, Meissner W, Rothaug J, Langford R; PAIN-OUT investigators. . **The impact of early postoperative pain on health-related quality of life**. Pain Pract. 2013 Sep;13(7):515-23.

Evolution of the current project

Routine PAIN OUT audit & feedback module; hospitals work independently; internationally

PDSA approach, ver 1.
8 hospitals working independently,
in 7 countries

Project completed

PDSA approach, ver 2.
Creating a structure for 10 hospitals in 1 national network

Mexican PAIN OUT network

Project in progress

PDSA approach, ver 3.
10 hospitals in 8 national networks

Project in progress

PAIN OUT is affiliated with:

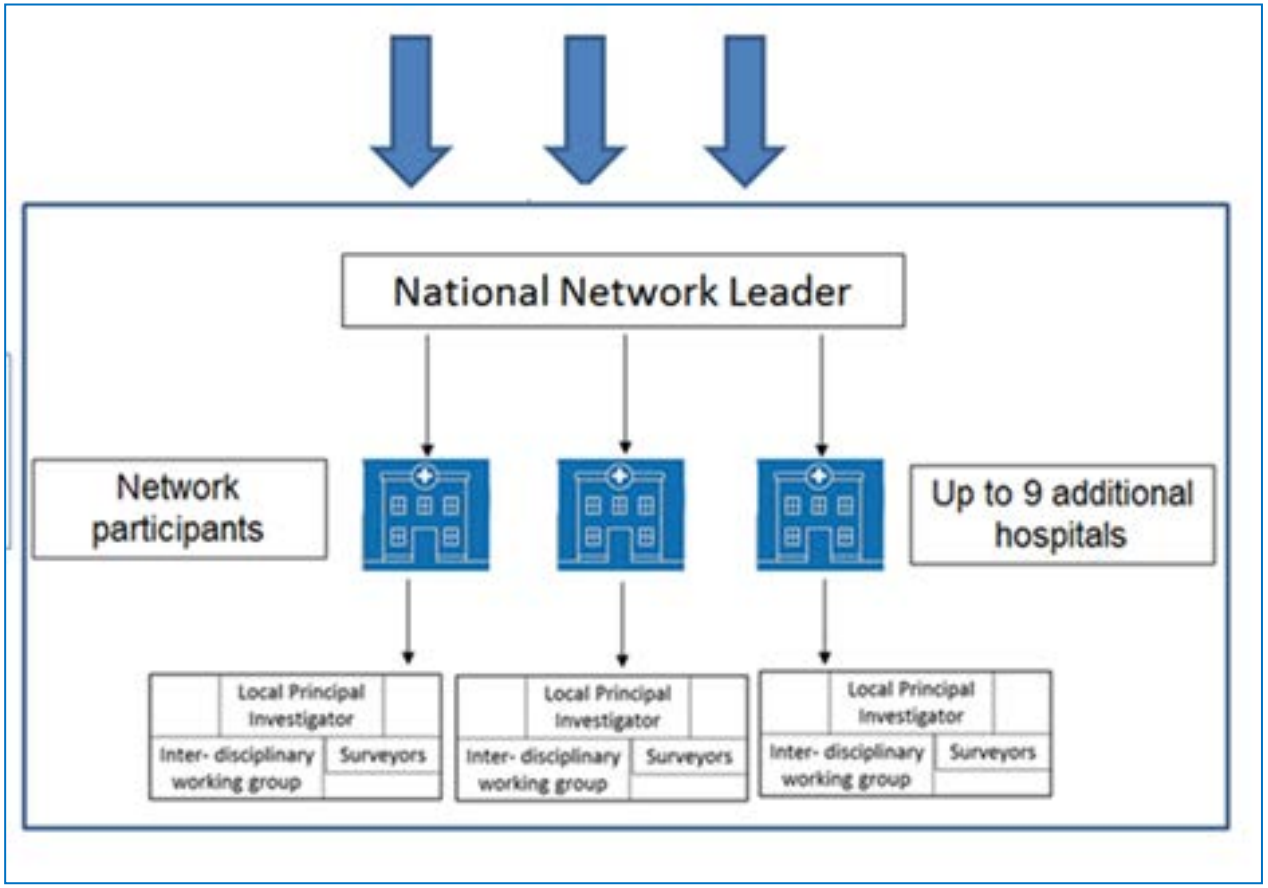
1. International Association for Study of Pain (IASP)
2. European Pain Federation (EFIC)
3. European Society of Anaesthesiologists (ESA),
   an official ESA research group

Structure of the network and roles of participants

Sponsor

PAIN OUT

National network



Roles of Principal Investigator (PI) in each hospital

The PI should be interested to actively lead a project working towards improving quality of post-operative pain management in his \ her hospital\ward.
The project will last 2 years and requires that he \ she takes active part in activities such as:

a.	**Nominating and working with a multi-disciplinary team** to work on a program for assessing and implementing a change in pain management practices in two wards within the hospital;
b.	**Selecting 1-2 surgical wards** where the QI work will be carried out;
c.	**Recruiting 2-4 surveyors** to collect 130 complete patient datasets in the 1-2 surgical wards during 2 time periods, each lasting about 4 months;
d.	Supervising the surveyors and periodically assessing quality of their work;
e.	Supervising analyses of the data; the PI will receive guidance how to carry out the analyses;
f.	**Participating** (him \ her-self or a colleague from the multi-disciplinary team) in three 1-day **workshops**;
g.	Submitting a mid-project progress report and a detailed report at the end;
h.	Optional: **presenting findings** at conferences and **writing research** papers.
a.	Hospitals will receive some funding for data collection and travel to the 3 national workshops.
b.	Reimbursement will be based on submitting the required data sets and two reports according to the project timetable.
c.	Failure to submit these on time will result in non-payment of funds.
Hospitals will join PAIN OUT. The subscription fees for the first two years will be covered by the project, the third year onwards by the hospital itself. Hospitals may leave PAIN OUT once the two year project is complete.	
The information outlined here describes the basic premises of the project. However, details may change with time as a result of experience gained and/or due to project needs.	

See next slides

Selecting a **surveyor** for the project

The hospital will allocate 2-4 people to carry out data collection.

- The person collecting data -
  1. Can be a student (nursing or medical) \ nurse \ resident;
     - They may use the data to promote their studies , e.g. academic degree &\or publication.
  2. Will not – as much as is possible – have clinical duties on the ward where he\ she is collecting data
     - To prevent patients feeling obliged to please the surveyor in the answers they give when filling in the questionnaire.
  3. Will be fluent in reading English;
  4. Will be given time to undergo **training** about methodology of the project. This includes:
     i. Reading the project manual (SOPs) and filling in a quiz;
     ii. Collecting 10 -15 trial patient datasets & entering the data into the PAIN OUT mask;
     iii. Attending the kick off meeting for additional training.
  5. Will be given time **to collect data** for the project in 1 or 2 wards.
     i. # patients: ~130 patients X 2 phases, lasting 4 months each -> ~ 33 patients\ month -> ~ 8 \ week;
        - ~ 15% of patients approached for participation may refuse to participate.
     ii. Time required : 20-30 minutes per patient -> ~ 3-4h \ week for 8 months of data collection.
  6. As both training for data collection AND gaining experience with data collection are time consuming --> aim, as much as is possible, to keep the same surveyors for the duration of the project.

Setting up the multi-disciplinary Working Group (WG) in your hospital

- The WG will help lead the project within the hospital
- What is the charge of the WG ?
  - WG members will communicate to their colleagues in participating wards: (1) project goals; (2) project stages; (3) findings from the baseline and post-intervention phases; (4) gain their involvement and assistance in implementing the intervention.
  - Long term: earn commitment of colleagues to implement and disseminate practices that aim to improve management of pain.

The working group will consist of (this is a suggestion; the composition of the WG is left to your discretion):

- Principal investigator – leader of the team
  - Will communicate & coordinate activities with the Director of Surgery & Head Nurse & hospital administration
- Surveyors
- Surgeon (s) from the participating wards
- Ward Nurse(s)
- Pharmacist
- Additional team member(s)?

This project is made possible through a Global Independent Grant for Learning & Change from Pfizer Inc.