

# ANALYSIS OF HIGHER EDUCATION OFFER OF PAIN MEDICINE IN SLOVENIA

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# MEDICAL FACULTY

- PAIN MEDICINE IS COVERED BY DIFFERENT DEPARTMENTS AND INSTITUTES
  - PATOPHYSIOLOGY
  - PHARMACOLOGY
  - SURGERY
  - INTERNAL MEDICINE
  - PSYCHIATRY
  - NEUROLOGY
  - ANAESTHESIOLOGY
  - ONCOLOGY
- SUBJECTS: PAIN, ANAESTHESIOLOGY + OPTIONAL SUBJECTS



# ANAESTHESIOLOGY AND PAIN

- PERIOPERATIVE PAIN MANAGEMENT
- CHRONICAL PAIN
- NON CONVENTIONAL PAIN MANAGEMENT
- LECTURES
- PRACTICAL WORK AT ACUTE PAIN SERVICE UMC LJUBLJANA
- PAIN CLINIC UMC

# APS UMC LJUBLJANA

NURSE – BASED ANAESTHESIOLOGIST-SUPERVISED LOW-COST MODEL

N Rawal. Pain 1994



# DOES APS IMPROVE POSTOPERATIVE OUTCOME?

- Werner, MU et al. Does APS improve postoperative outcome? *Anesth Analg* 2002;95:1361-72.
- Lee A et al. The costs and benefits of extending the role of APS on clinical outcomes after major elective surgery. *Anesth Analg* 2010;111:1042-50
- Kainzwaldner V et al. Qualität der postoperativen Schmerztherapie. *Der Anaesthesist* 2013;62:453-9.
- Rawal N. Current issues in postoperative pain management. *Eur J Anaesthesiol* 2016;33:160-71.



# HOW TO START



- Written protocols for postoperative analgesia
- New nurse profile: pain nurse
  
- Education of doctors
- Education of ward nurses and patients
- Make pain visible: pain assessment
- Recording VAS and analgesic consumption
- Recording side effects and complications
  
- Statistical analysis
- Regular meetings and improvement plans



# APS TODAY

- 1 anesthesiologist on call (phone 7200)
- 2 -4 pain nurses (phone 8623, 7243)
  
- 100 PCA pumps in use daily
- Per 1 year:  $\geq 5000$  patients with IV PCA, PCEA, peripheral catheters
- Each patient PCA for 3 days:  $\geq 15000$  visits per year
- STANDARDIZED analgesic mixtures prepared by UMC Pharmacy



## APS : NOT ONLY ACUTE PAIN...

- **Perioperative pain**

- **Non surgical pain:**

untractable pain of different etiologies (neurological causes, infections, vascular / ischemic pain...)

- **Paliative care**



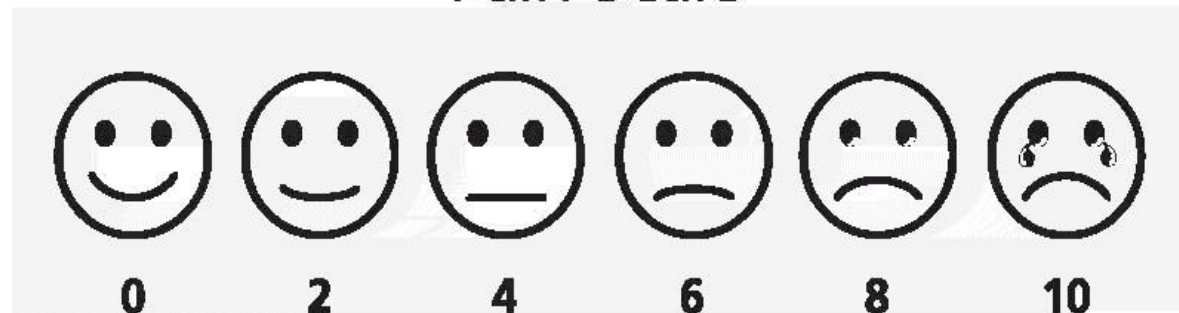


## MAKING PAIN VISIBLE

- **Ward nurses record VAS pain scores :**  
in intensive care units 1x / hr  
on surgical wards: 1x / 3 hrs

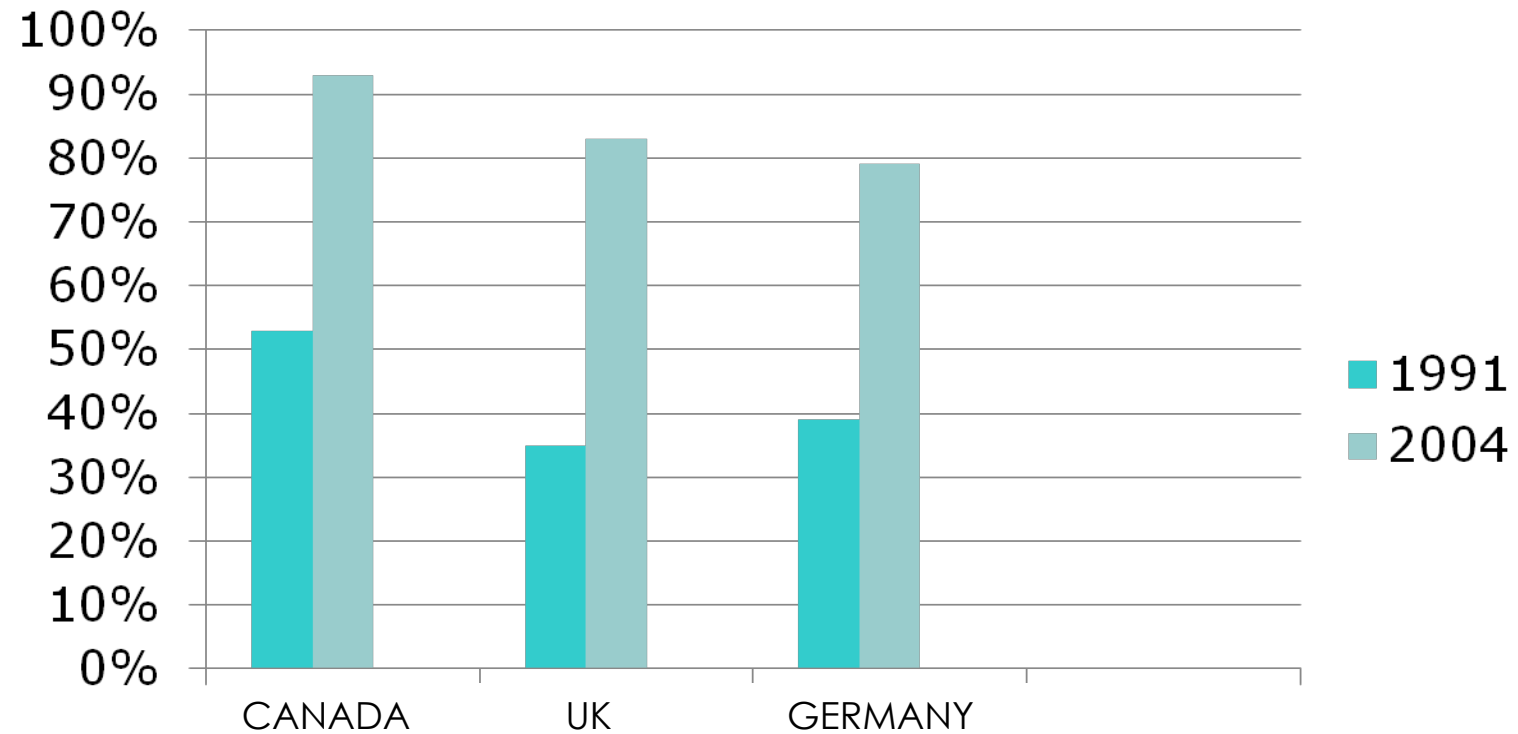
**SEEPAIN**  
CAMPAIGN

### Pain Scale





## TEACHING HOSPITALS WITH APS



Rawal N. Organization, function and implementation of APS. *Anesth Clin N Am* 2005;23:211-25.



# APS ACHIEVEMENTS

- Pain is assessed and recorded as 5th vital sign on all surgical wards
- Effective postoperative pain relief in all recovery rooms and surgical wards
- There are few side effects and complications
- Regular monthly education programs for ward nurses
- High patient satisfaction: results of regular inquiries 4,9points ( of 5 possible)



# PAIN CLINIC LJUBLJANA UMC LJUBLJANA

- MULTIDISCIPLINARY APPROACH
- 4 ANAESTHESIOLOGISTS
- 1 NEUROLOGISTS 1X / WEEK
- 1 PSYCHOLOGIST 1X / WEEK
- 1 PHYSIATRIST 1X / 2 WEEKS
  
- NUTRICIONIST ON CALL
- SOCIAL SERVICE ON CALL

# DAILY FREQUENCY

- 2 PARALEL AMBULATORY ROOMS (APPX 20 PTS DAILY)
- ROOM FOR US GUIDED BLOCKS (DAILY APPX 5-8 BLOCKS)
- ROOM FOR RTG BLOCKS (3X / WEEK, 5 BLOCKS DAILY)
- 10 BEDS FOR RECOVERY ROOM OR I.V. INFUSIONS
- 10 EXTRA BEDS FOR ACUPUNCTURE TREATMENT (50-60 PTS DAILY)



# PAIN TREATMENT TECHNIQUES

- SYSTEMIC ANALGESIC COMBINATIONS
- ANALGESIC EPIDURAL BLOCKS, INTRAARTICULAR BLOCKS
- TRIGGER BLOCKS
- US GUIDED BLOCKS
- RTG GUIDED BLOCKS
- ACUPUNCTURE



THANK YOU