Optimising Hospital Management of Acute Postoperative Pain

APOP project

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in collaboration with
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National Prescribing Service Limited

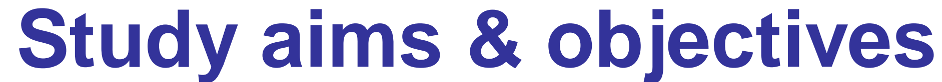
Background

- Literature suggests that this continues to be evidence-practice gap in Australian hospitals[1-3]
  - Significant pain still experienced by patients both within hospital and following discharge
  - Gaps and barriers identified at all levels: patient, nursing, medical, systems

- Consultation with participating states, QUM groups indicated interest/need in improving APOP management

- Australian & NZ College of Anaesthetists, Scientific Evidence, 2005

1.Yates P. et al. J Clin Nurs 1998, 7;521-30.
2. Kable A, et al. ANZ J Surg 2004;74:92-7.
3. National Institute of Clinical Studies www.nicsl.com.au/asp/index.asp



Study aims & objectives

To improve the management of acute postoperative pain by targeting three key areas:

1. Pain assessment – pre and postoperative

2. Analgesic prescribing – promoting safe and effective use of analgesics

3. Communication at the point of discharge – to the patient and the general practitioner (GP)

Methods

- Drug Use Evaluation (DUE) cycle as means of quality improvement - i.e. collect data on key measures/feedback/intervention/data collect

- 50 patients per hospital

- Ethics approval at all hospitals/consent all patients

Data collected:

- Retrospective inpatient medical record review

- Patient telephone survey (post discharge)

- GP survey (following patient discharge)

Key messages#

1. Optimal postoperative pain management begins in the preoperative period
2. Measure pain regularly using a validated assessment tool
3. Ensure all postoperative patients receive safe and effective analgesia
4. Monitor and manage adverse effects
5. Communicate ongoing pain management plan to both patients and primary healthcare professionals at discharge.

#Australian and New Zealand College of Anaesthetists Acute Pain Management: Scientific Evidence, 2nd ed, 2005.
Therapeutic Guidelines: Analgesic, Version 4, 2002.

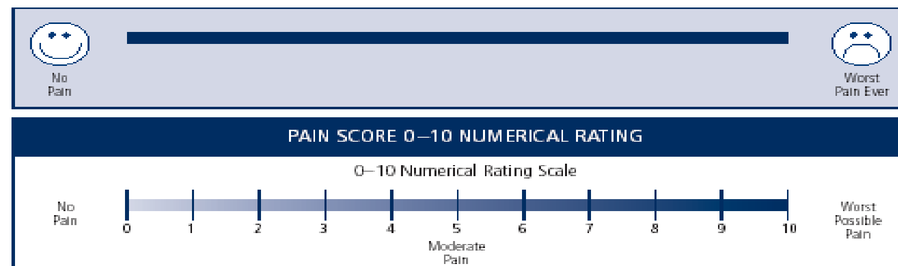
Multi-faceted interventions

- Face-to-face/one-on-one education (academic detailing)
- Group education sessions on ‘best practice’ & feedback of results
- Passive reminders:
  - Wall posters
  - Bookmark (pain scales & discharge plan checklist)

Visual Analog Scale

Pain Scales

Numerical Rating Scale



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Pain assessment

- Use patient’s own assessment
- Measure pain scores both at rest and on movement/function
- Re-assess pain regularly, and before/after administering analgesia
- Include pain assessment in routine observations

Pain Management Plan — discharge checklist

- Communicate plan to patient, GP, pharmacist and other health professionals
- List analgesics, and directions on how, when and how long to use
- Include consumer-specific information (e.g. allergies, drug interactions)
- Consider side effects and management (e.g. constipation)
- Include contact details of person for pain problems

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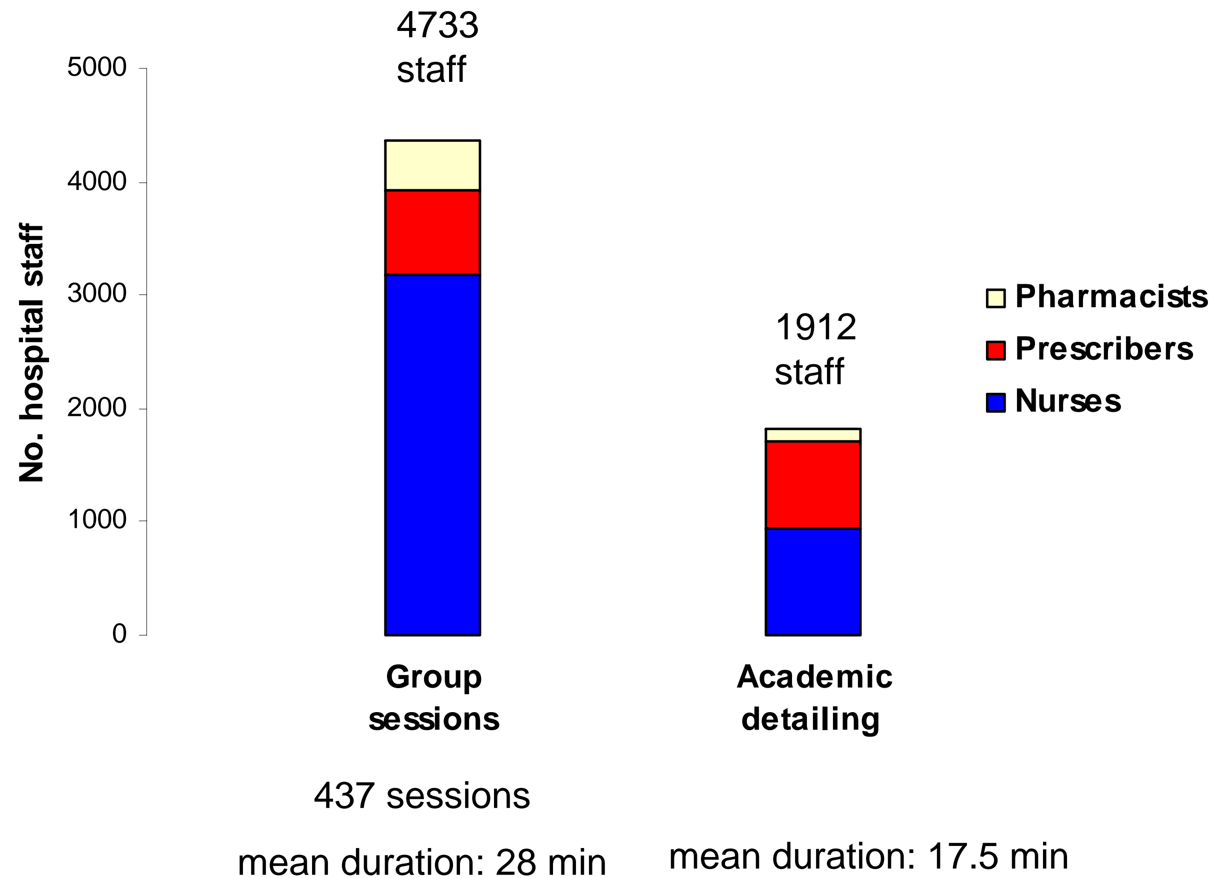
Summary of intervention activities



437 sessions

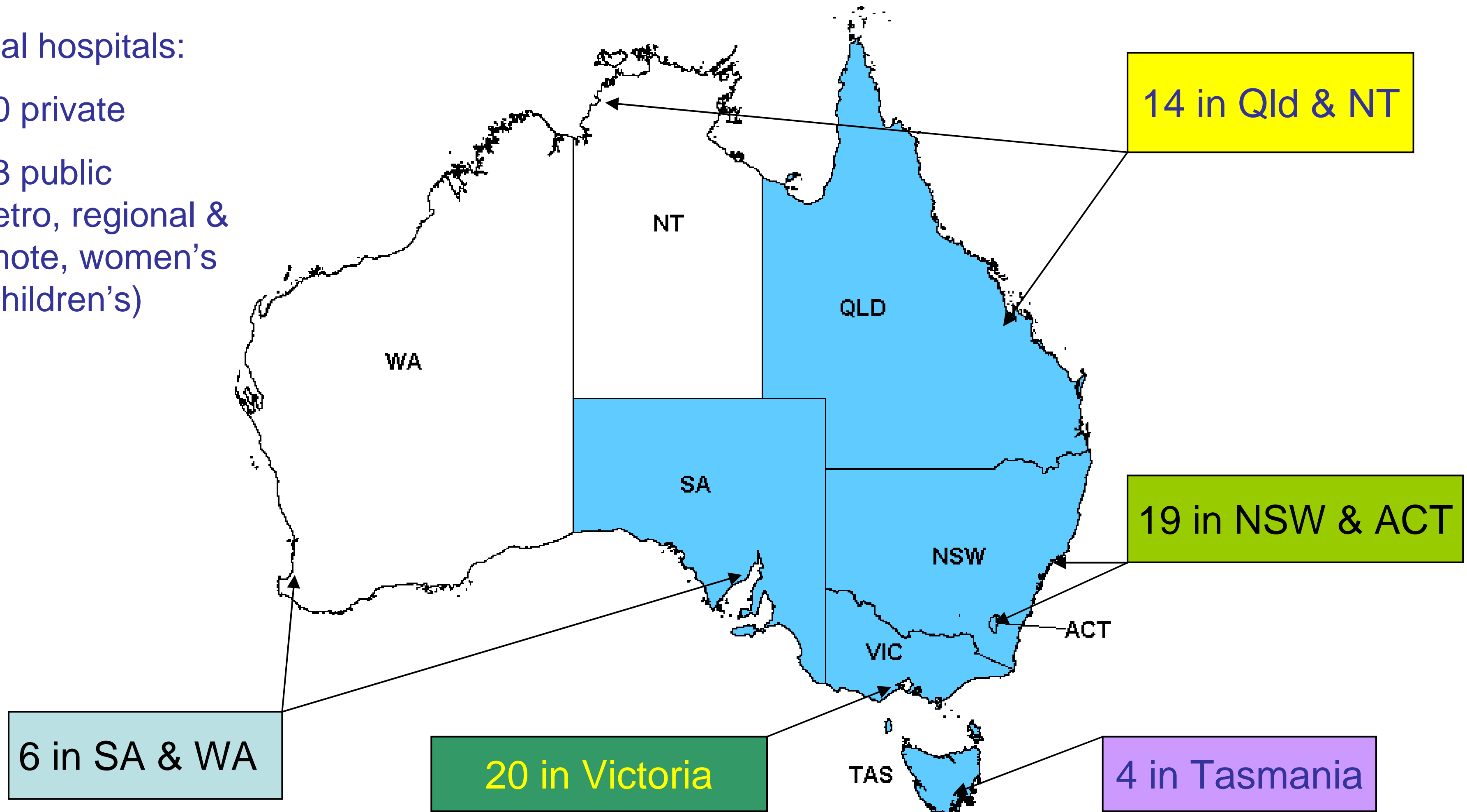
mean duration: 28 min

mean duration: 17.5 min

Participants

Total hospitals:

- 10 private
- 53 public (metro, regional & remote, women's & children's)



Inpatient Medical Record Review Results

Patient demographics

	Baseline *(n =2704)*	**Follow-up** *(n =2780)*
Median age & range (years)	58 (10 -100)	58 (10 -103)
% Gender (female)	59	59
Median length of stay & range (days)	5 (0 -112)	5 (0 -102)

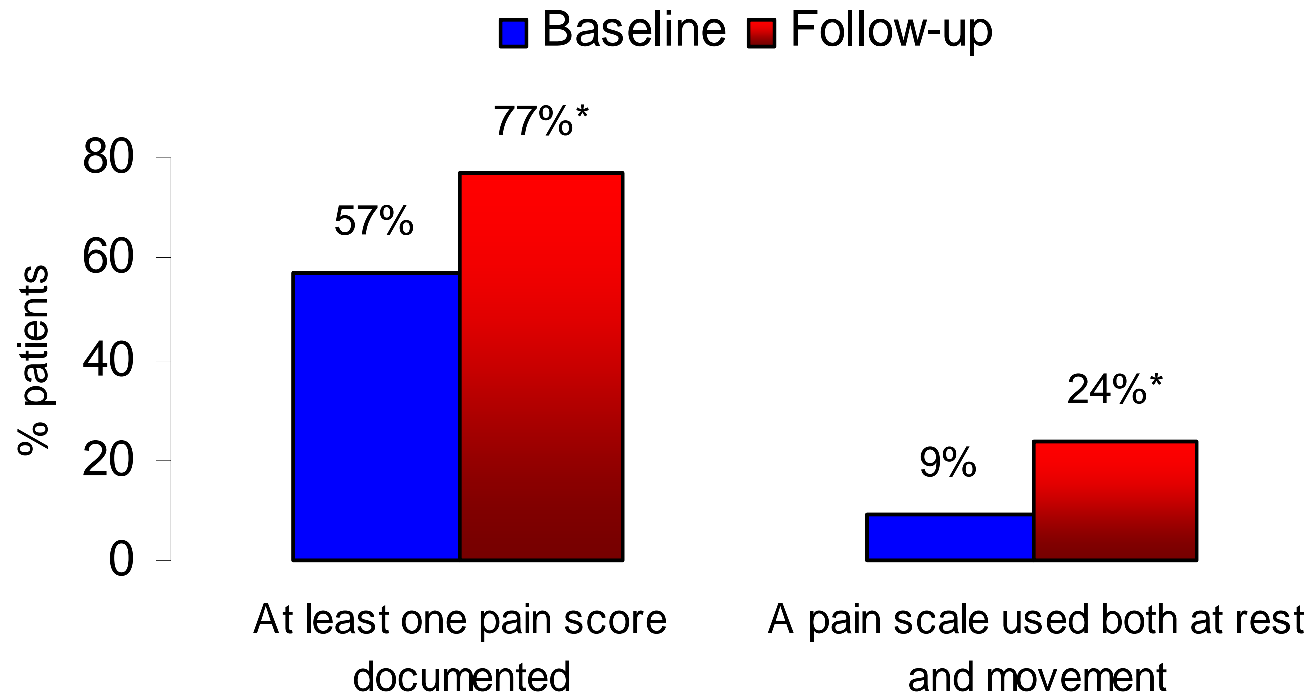
Surgery type

	Baseline *(n =2704)*	**Follow-up** *(n =2780)*
Orthopaedic	31%	31%
Abdominal	24%	22%
Obs & Gynae	18%	17%

	Baseline *(n=2704)*	**Follow-up** *(n=2780)*
Documentation of preoperative education	31%	44%* ↑

*p<0.001

Postoperative pain scores



Postoperative analgesic use

	Baseline *(n=2704)*	**Follow-up** *(n=2780)*
Patients prescribed multimodal analgesia	92%	90%
Patients prescribed regular paracetamol	68%	74%* ↑
Patients prescribed only "prn" analgesia (excludes PCA/epidural)	23%	18%* ↓

*p<0.001

Postoperative sedation scores

	Baseline *(n=1231)*	**Follow-up** *(n=1601)*
At least one sedation score recorded in patients prescribed at least one opioid	50%	61%* ↑

*p<0.001

Discharge measures

	Baseline (n=2704)	Follow-up (n=2780)
Patients prescribed analgesic at discharge	53%	60% ↑
Patients with documented pain management plan	26%	40%* ↑
Of above, with duration of therapy	31%	45%* ↑
Patients with pain management plan communicated to GP	18%	31%* ↑
Patients with pain management plan communicated to patient	22%	34%* ↑

*$p<0.001$

Summary

- APOP intervention was moderately successful at improving some aspects of acute postoperative pain management

- Changes in practice observed:
  - Documentation of preoperative patient education
  - Documentation of use of pain scores both at rest and on movement
  - Documentation of sedation scores in patients using opioids
  - Prescribing of regular paracetamol
  - Prescribing less "*prn*" analgesia only
  - Documentation of discharge pain management plan
  - Discharge communication to GP and patient

On reflection: enablers & barriers

Enablers

- Enthusiasm and passion of those involved with the project
- Support from Hospital executives, Drug and Therapeutic committees, opinion leaders and stakeholders
- Multi-faceted intervention strategies
- Coordination by experienced project officer
- Use of web-based technology

Barriers

- Scheduling appointments with doctors
- Clinicians’ readiness & motivation to change
- Variation in assessment tools between hospitals & states
- Time to capture system change

- Project materials to be made available from NPS website
- Continue APOP with further action and evaluation to capture the effect of any system changes
- NPS committed to develop a simple software audit tool for ongoing use by hospitals - stand alone, automated data analysis and feedback in real time
- Next project 2008-09: Discharge Management of Acute Coronary Syndromes (DMACS) project - To improve management of ACS at the point of discharge

APOP hospitals and hospital project teams

TAS, SA, QLD, VIC & NSW state DUE groups and state project committees

Debra Rowett, Drug and Therapeutics Information Service (DATIS)

NPS staff

- Pharmaceutical Decision Support team
- Data analyst