

Snapshot audit of use of pre-operative Paracetamol and NSAIDs in adults in Royal Derby Hospital (RDH)

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Introduction

Evidence shows that pre-operative oral analgesia has multiple benefits:

- Reduces post-op pain and the need for rescue analgesia¹
- Reduces overall post-op opiate requirements^{2,3}
- Is at least as effective as intra-op IV equivalents and can have a more prolonged benefit²
- Reduces costs

RDH pain management guidelines encourage the use of pre-operative paracetamol (up to 2g) and NSAIDs where appropriate.

We address the following questions:

- Is pre-op analgesia routinely being prescribed?
- Does this vary across different theatre complexes within the hospital?
- Is there an association between pre-op analgesia and reduced post-op analgesic requirements in this cohort?

Methods

We performed a snapshot audit of all operations on a single day (15/10/2014) in RDH.

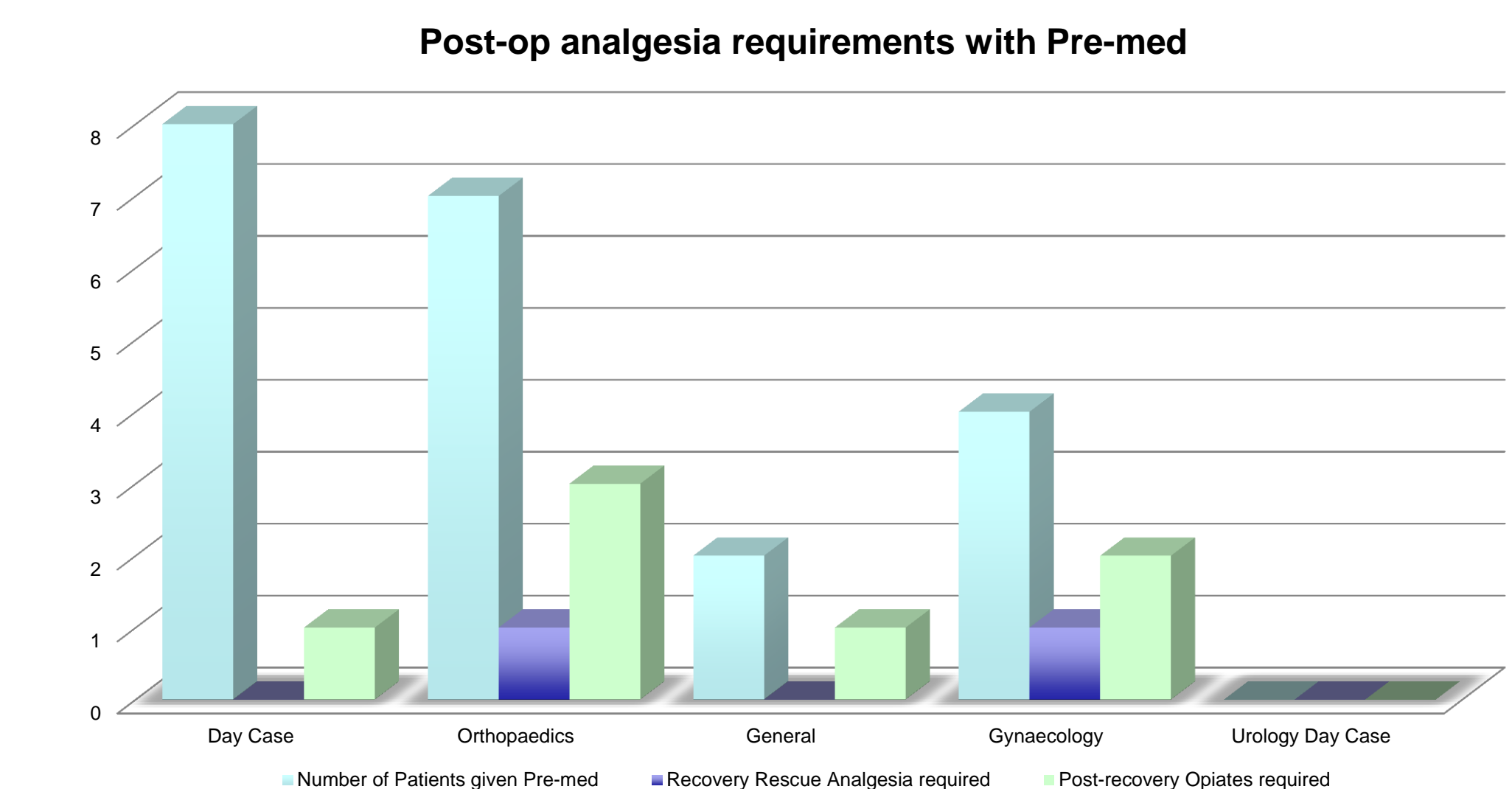
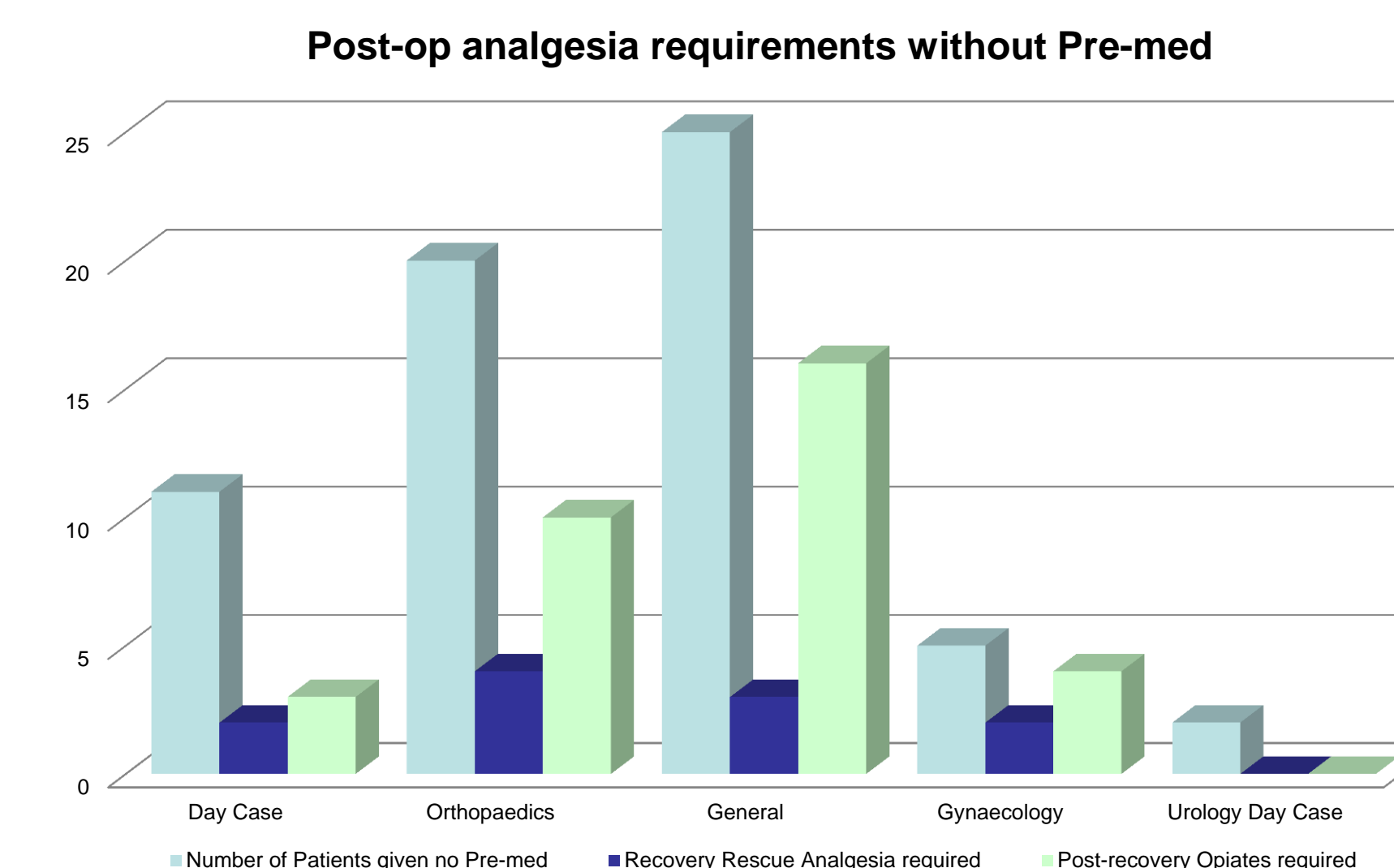
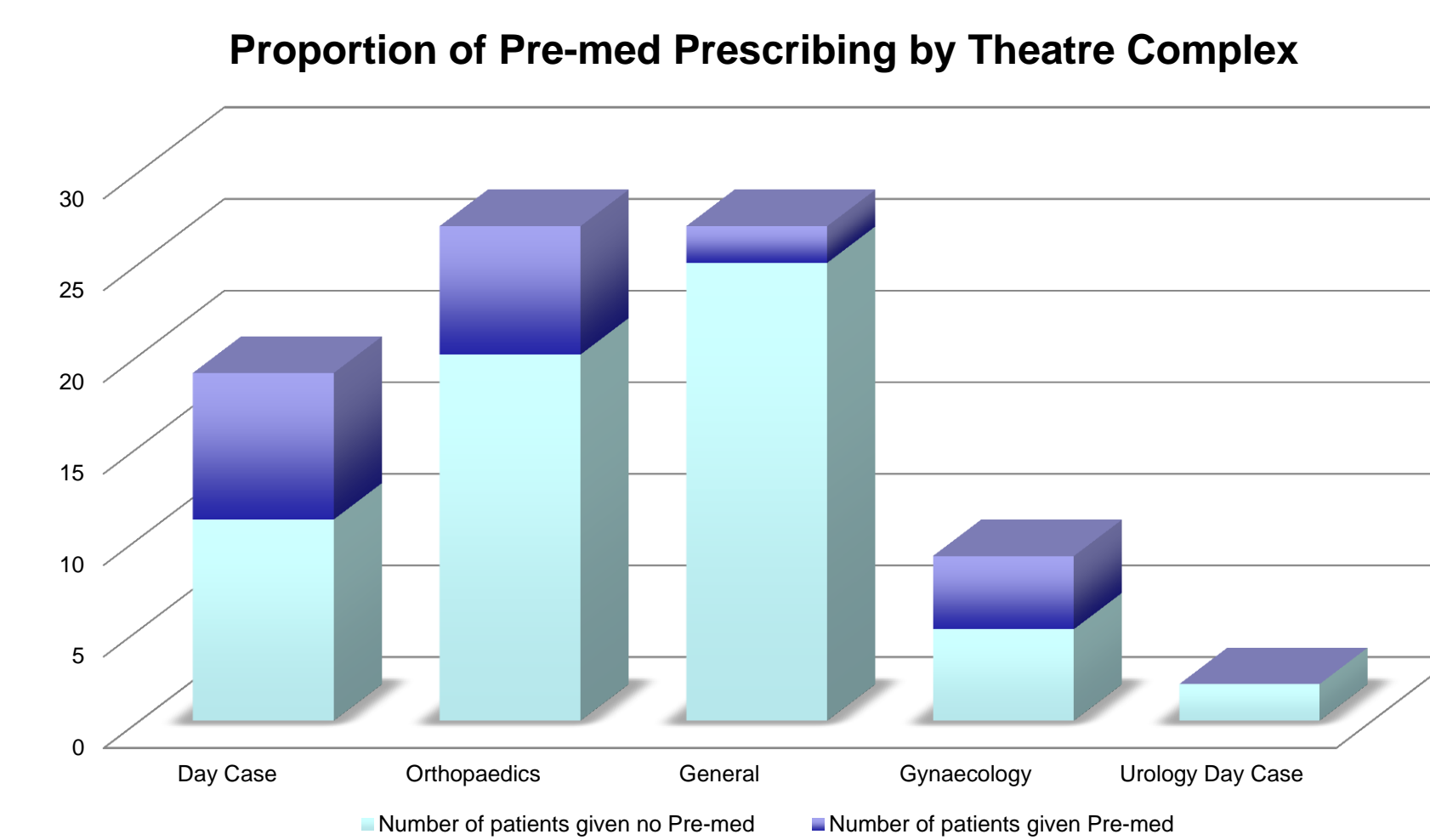
A combination of written audit proforma, review of electronic prescription charts and review of medical notes were used to identify:

- Pre-op analgesia prescribed and given
- Intra-op paracetamol given
- Recovery analgesia given
- Post op analgesia requirements

84 relevant cases were identified and subjected to further analysis

Results

	Total number of Patients	Pre-med Given	Pre-med given and recovery rescue analgesia required	No pre-med given and recovery rescue analgesia required	Pre-med given and post op opiates required	No pre-med given and post op opiates required
Day Case	19	8 (42%)	0 (0%)	2 (18%)	1 (12.5%)	3 (27%)
Orthopaedics	27	7 (26%)	1 (14%)	4 (20%)	3 (43%)	10 (50%)
General	27	2 (7%)	0 (0%)	3 (12%)	1 (50%)	16 (64%)
Gynaecology	9	4 (44%)	1 (25%)	2 (40%)	2 (50%)	4 (80%)
Urology Day Case	2	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Totals	84	21 (25%)	2 (9.5%)	11 (17.5%)	7 (33%)	33 (52%)



Key Findings

Only 21% of cases had pre-operative analgesia. There was significant variation across the different theatre sites in RDH, ranging from:

- 42% in day case theatres
- 7% in general theatres

There was a reduced need for both recovery rescue analgesia and post-op opiate analgesia in the cohort who had been given pre-med analgesia.

Post-Audit Actions

Audit findings presented at clinical governance. Discussed barriers to prescribing pre-medication:

- Anaesthetists assured previous problems of prescribed drugs not given have been resolved.
- Practical solutions proposed to make it easier to prescribe pre-meds for all using the e-prescribing system (shared learning from those who were making it work well).
- Shared evidence that pre-medication has benefits for patients and trust to encourage use.

Discussion:

Variable use of pre-med prescribing amongst anaesthetists in RDH despite guidelines:

- Previously issues with drugs prescribed but not given, however in this data set 100% of prescribed pre-med analgesics were given.
- New e-prescribing system, some anaesthetists report practical difficulties in prescribing for all patients before starting list.

Our data set showed an association between pre-med analgesia and reduced need for post-op pain relief, however caution needed interpreting this:

- Audit – not research. Not designed for confirmation of statistical significance.
- Case mix effects: Pre-meds often not prescribed for more major surgery which would expect to have greater post op analgesic requirement anyway.

References:

1. Koteswara C, Sheetal D. A Study on Pre-Emptive Analgesic Effect of Intravenous Paracetamol in Functional Endoscopic Sinus Surgery. *Journal of clinical and diagnostic research* 2014 Jan; 8(1): 108–111
2. Fenlon S, Collyer J, Giles J, Bidd H, Lees M, Nicholson J, Dulai R, Hankins M, Edelman N. Oral vs intravenous paracetamol for lower third molar extractions under general anaesthesia: is oral analgesia inferior? *British Journal of Anaesthesia* 2013; 110(3): 432-437.
3. Maund E, McDaid C, Rice S, Wright K, Jenkins B, Woolacott N. Paracetamol and selective and non-selective non-steroidal anti-inflammatory drugs for the reduction in morphine-related side-effects after major surgery: a systematic review. *British Journal of Anaesthesia* 2011 Mar; 106(3):292-7

