

An Analysis Of Opioid Supply On Hospital Discharge Post Orthopaedic Surgery

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BACKGROUND:

Opioids are an important treatment option in acute postoperative pain [1] and are commonly used in this setting [2]. However, literature suggests that overprescribing of opioids can contribute to the pool of unused opioids in the community, and duration of use is correlated with risk of long-term use [3-5]. Guidelines do not recommend slow-release (SR) opioids for acute pain due to an increased risk of complications such as opioid-induced ventilatory impairment [6].

AIM:

To gain an understanding of postoperative opioid analgesia prescribed at discharge and subsequently consumed, and identify opioid stewardship opportunities to improve patient care.

METHODS:

A prospective medication chart audit was conducted on orthopaedic wards at Epworth Hospital Richmond, the largest private hospital in Victoria. Data was collected over a consecutive three-week period. Patients who underwent total knee arthroplasty (TKR), total hip arthroplasty (THR) or anterior cruciate ligament (ACL) surgery were included in the study. Only patients who were discharging directly home during the ward pharmacist hours of 8am-4.30pm on weekdays (excluding public holidays) were included. De-identified patient information was collected and follow-up phone interviews with patients were conducted 10-14 days after discharge.

RESULTS:

Forty-two patients were audited during the three-week data collection period. Characteristics of these patients and prescribed analgesia data can be seen in table 1. 98% of the patients were opioid naïve on admission. All patients were prescribed at least one opioid on discharge, with the most common being immediate-release (IR) oxycodone (67%). 50% of patients received a SR opioid, see figure 1.

Of the 35 patients interviewed, 63% had leftover opioids. A total of 1005 opioid tablets were supplied, with 385 tablets being unused (38%), see table 2.

Phone interviews showed patient's perception regarding the need for opioids did not consistently align with current recommendations. Patients requested additional supply for:



Additionally, correct opioid disposal processes were only known by 17% of patients.

	THR (n=13)	TKR (n=11)	ACL (n=18)
Age (yrs), median	73	64	22
Length of hospital stay (d), median	5	5	1
>5 regular medications preadmission, n	2	3	0
Pain score (0-10) on discharge, median	2	4	4
Type of analgesics prescribed, n (%)			
Paracetamol	13 (100)	11 (100)	18 (100)
Non-steroidal anti-inflammatory	3 (23)	5 (45)	13 (72)
Oxycodone IR	9 (69)	5 (45)	14 (78)
Oxycodone SR	3 (23)	1 (9)	0 (0)
Tapentadol IR	6 (46)	7 (64)	4 (22)
Tapentadol SR	8 (62)	8 (73)	2 (11)
Tramadol IR	0	1 (9)	0
Total no. of opioid tablets supplied on discharge	471	389	384
Total number of opioid tablets supplied per patient, median	36	40	20
Total OME of opioid discharge supply, average	482.31	522.73	235.83

Table 1: Characteristics for eligible patients (n=42) and analgesia prescribed

Type of orthopaedic surgery	Number of opioid tablets prescribed to patients	Number of opioid tablets not required by patients	% of opioid tablets not used by patients
THR	372	238	64%
TKR	289	29	10%
ACL	344	118	34%
TOTAL	1005	385	38%

Table 2: Usage of opioid tablets post 10-14 days of hospital discharge

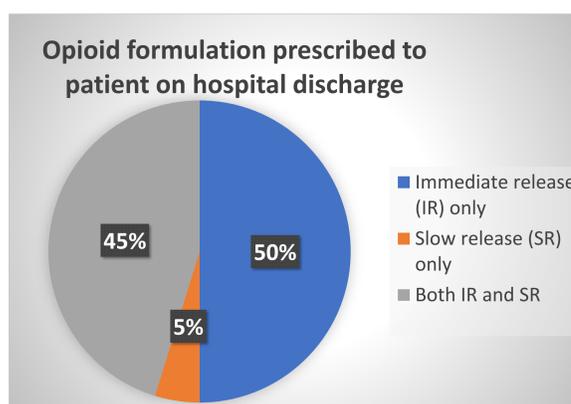


Figure 1: Opioid formulation prescribed to patients on hospital discharge

DISCUSSION:

Although guidelines do not recommend SR opioid formulations for acute pain in opioid naïve patients, a large percentage of patients received this at hospital discharge. Patients who had THR or TKR were more likely to go home with SR opioid and combination opioids, compared to those who had an ACL.

A high proportion of patients had opioid tablets left over. Despite this, some patient's perceptions of need for opioids did not align with current recommendations. 11 patients (31%) contacted their surgeon or had a GP consult to obtain more opioids, reasons included: they had run out of supply; or wanted more. It was found that patients who sought follow-up with their doctor for additional opioid supply, were discharged home with an average opioid morphine equivalence (OME) of 497mg, compared to an average OME of 318mg for patients who did not. This indicates that large quantities supplied post acute surgical procedures does contribute to ongoing and possible chronic use.

Most patients were not aware of correct medication disposal. This survey exposed a number of unsafe practices in the community including: disposing into general waste, keeping for 'next time', flushing down the toilet, putting into compost and burning left over tablets.

Incorrect disposal or keeping of unused medications contributes to the pool of unused opioids in the community which carries the risk of accidental or intentional future misuse.

LIMITATIONS:

Possible limitations of the study may include a collection period that is not representative of usual practice as data was collected during a time when some specialists were away. Further to this, Targin® was out of stock and in low supply in Australia. This potentially changed the prescribed SR opioid or overall therapy of choice. There may be potential bias due to the self-reported nature of the follow-up phone-call survey.

CONCLUSION:

Excess quantities of opioids are being prescribed to patients post orthopaedic surgery with half receiving SR opioids to manage acute pain. Planned strategies include: discussion with the medication safety management committee to leverage engagement with opioid stewardship activities, pharmacist-led intervention to tailor opioid prescription to individual pain requirements, prescriber feedback and patient education regarding opioid weaning and cessation plan as well as safe opioid disposal.

References:

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