Post-operative opioid prescribing trends on discharge: a retrospective audit

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Background

Opioids are commonly prescribed to manage acute post-operative pain. The prescribing of opioids in Australia has dramatically increased over the last decade, which has been linked to increased morbidity and mortality.[1]

Aim

To identify and evaluate trends in opioid prescribing on discharge following orthopaedic and plastic surgery.

Method

A retrospective audit of discharge prescriptions from Orthopaedic Surgery (OS) and Plastic Surgery (PS) units between July and September 2017 was conducted at a metropolitan teaching hospital. Clinical pharmacy services were provided to these units. Opioids prescribed on discharge were compared to inpatient opioid requirements and pain scores. Audit criteria were determined using opioid prescribing recommendations, summarised in Table 1.

Inclusion criteria: Patients with at least one overnight stay and undergone an orthopaedic or plastic procedure.
Exclusion criteria: Patients under the age of 18, on opioids for chronic conditions or were transferred to another facility.

Recommendations for Prescribing Opioids on Discharge
Review opioid use and pain score 24-hours prior to discharge
Ensure dose of opioid on prescription ≤ actual dose administered as inpatient
Limit duration of supply between 5 – 7 days
Avoid slow-release preparations

Table 1. Summary of opioid prescribing recommendations from current guidelines.[2,3]

Results

- **Opioids were prescribed on discharge** in 87% (298/342) of OS and 59% (148/250) of PS patients. The most commonly prescribed opioid was immediate release oxycodone.
- **A pain score of zero** was reported in 42% (144/342) of OS patients and 66% (165/250) of PS patients 24 hours prior to discharge. However, 74% and 35% of these patients, respectively were prescribed opioids on discharge. (See Figure 1).

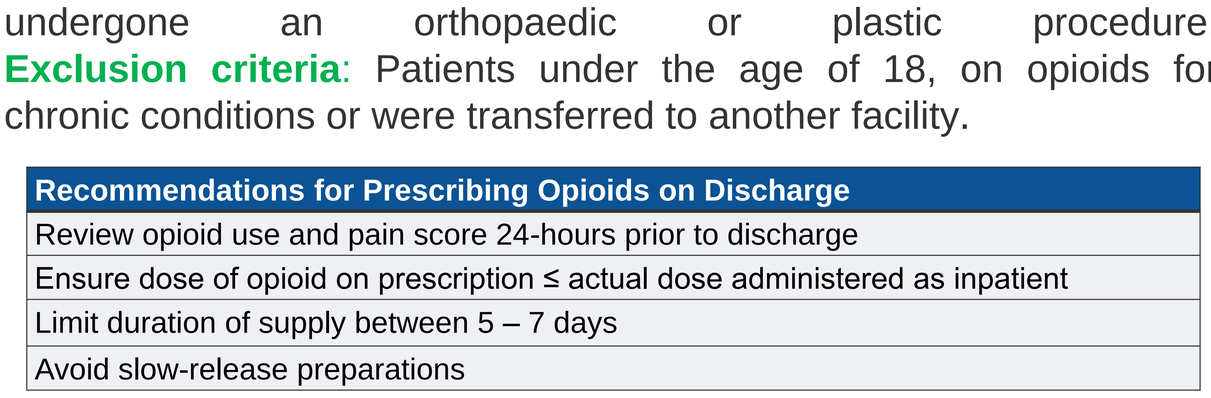

Figure 1. Proportion of patients with pain score zero prescribed opioids on discharge

- **Opioid doses on discharge were higher** in 66% (197/299) of OS and 37% (55/148) of PS patients, **when compared to opioid requirement 24 hours prior to discharge.**
- Of the total number of OS and PS patients, 26% (154/592) opioid prescriptions on discharge **exceeded seven days supply**. Most commonly prescribed quantity were maximum quantities allowed on the Pharmaceutical Benefit Scheme (PBS).
- **Slow-release preparations were prescribed** on discharge in 22% (130/592) of OS and PS patients, with oxycodone/naloxone slow-release most commonly prescribed.

Discussion

Current Practice

Opioids were widely prescribed in the treatment of post-operative pain. A systemic review has suggested high proportions of opioids prescribed post-operatively on discharge remain unused, leading to potential misuse and subsequent patient harm.[4]

Best Practice

Current opioid prescribing guidelines recommend reviewing opioid use and pain score in the immediate 24 hours preceding discharge to predict opioid requirements on discharge. Analgesic stewardship services have not been implemented in this hospital, likely contributing to the audit result of opioid overprescribing on discharge.

Gaps in Practice

Audit results indicated that overprescribing appears to be more prevalent in patients discharged from OS units compared to PS units, indicating that type of surgical procedure may influence opioid prescribing practices. Prepopulated PBS quantities in e-prescribing software and the lack of post-operative and procedure-specific opioid prescribing guidelines may have contributed to audit results.

Future Direction

Implementation of best practice interventions and researching their impact is necessary to optimise opioid prescribing in this patient cohort.

Conclusion

Audit results indicated opioid prescribing practices in this patient cohort require improvement, and may be generalisable to other settings. A multi-model approach consisting of clinician education and feedback, implementation of opioid prescribing guidelines underpinned by analgesic stewardship services may be indicated. There is potential for scope of practice changes with pharmacist initiating discharge prescriptions to improve opioid prescribing.

References

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