

A medical records review of inpatient opioid consumption and discharge opioid prescribing following hip surgery

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Background

In Australia, initiation of opioids in the post-operative setting and the prescription of opioids on hospital discharge has been linked to long-term abuse and misuse.¹

Appropriate relief of pain is a priority in hip fracture patients, and opioids remain integral in acute moderate to severe postoperative pain management.²

Despite care standards recommending regular assessment and review of pain medication throughout the patient journey, it is unknown whether how often the dose prescribed on discharge considers in-hospital opioid requirements.

The aim of this study is to describe opioid consumption in the week following hip surgery and to compare this to opioid dose prescribing on hospital discharge.

Methods

Study Design and setting: This was a retrospective longitudinal cohort study conducted in a quaternary teaching hospital in Australia between 1st July 2019 and 30th January 2020. Information on opioids including oral, subcutaneous and intravenous routes was extracted from the electronic medication record. Information on adjuvant pain medications including peripheral nerve blocks and infusions was also collected. The daily opioid use for the first week following surgery, and discharge opioid prescription dosing was converted to oral morphine equivalent daily doses (OMEDD) using Australian New Zealand College of Anaesthetists (ANZCA) Opioid Dose Equivalences.

Inclusion Criteria: All patients aged ≥ 18 years who underwent a hip surgical procedure that required a general anaesthetic, prescribed an inpatient opioid, with a minimum hospital length of stay of 24 hours, and were discharged.

Results

Study Population: A total of 88 patients were included. The majority were female (68%), aged greater than 75 years (65%), and opioid naive (75%). The majority of surgery undertaken was emergency surgery (85%), and the most common procedure was total hip arthroplasty and hemiarthroplasty. The median length of stay in hospital was 11 (IQR: 6-23) days. The most common opioids used on day 1 was oral oxycodone IR (75%), IV fentanyl (14%) and subcutaneous morphine (5%). The most common opioids supplied on discharge was oral oxycodone IR (74.2%), oxycodone/naloxone SR (18%), tapentadol SR (2%), tapentadol IR (1%). 55% of discharge dose directions were directed to be taken "when required." The proportion of patients with anxiety or depression was 23%.

Inpatient opioid consumption and discharge dose prescribing

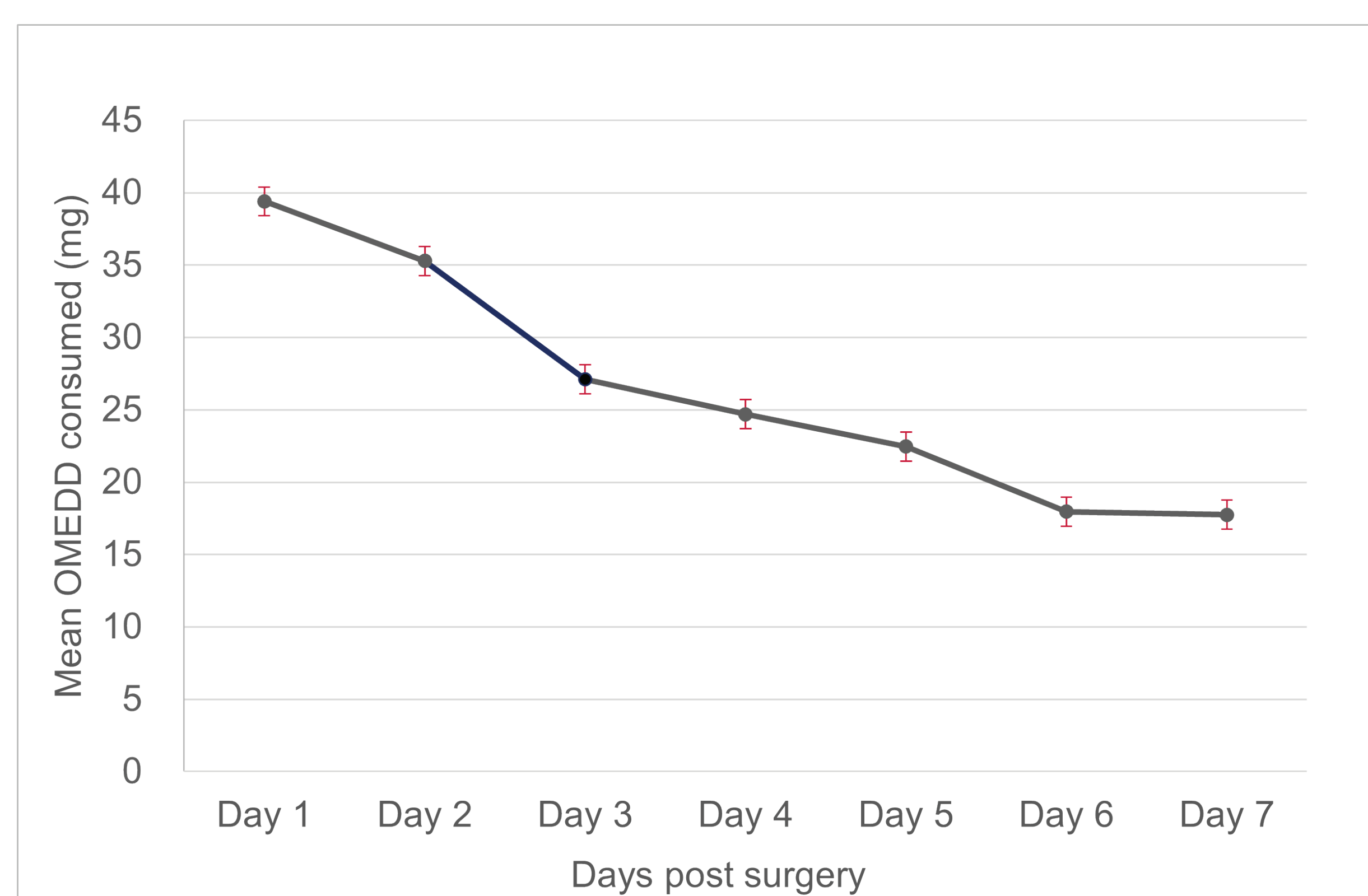


Figure 1: Mean OMEDD administered from day 1 to day 7 post hip-surgery.

On Day 1 post hip surgery, the mean OMEDD consumed was 39.4mg, and on day 7, the OMEDD had reduced to 17.8 mg ($p=0.002$).

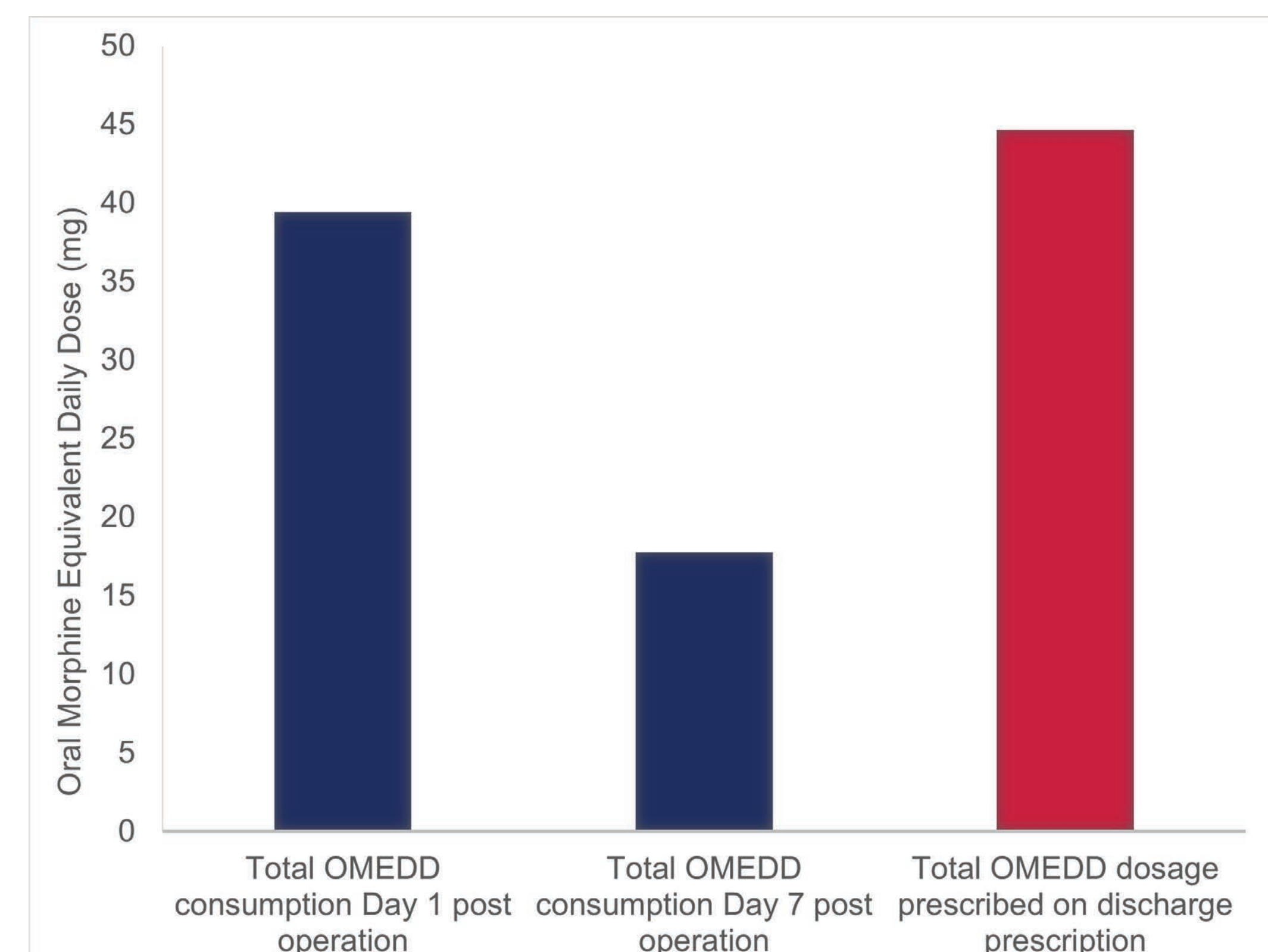


Figure 2: Total mean OMEDD consumed Day 1 post operation compared with daily OMEDD prescribed on discharge.

The mean amount of OMEDD directed on discharge (45 mg) was more than the OMEDD required to maintain pain control on day 1 post-operation (39 mg, $p=0.591$) and significantly more than day 7 post-operation (18 mg, $p=0.001$).

Conclusion

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Growing evidence suggests that opioid stewardship interventions are effective in reducing inappropriate inpatient and discharge opioid prescribing.⁴ It is evident that routine pharmacist involvement in providing tailored dose and quantity of discharge opioids is required.^{5, 6}