

# Implementing opioid stewardship initiatives: the value of opioid usage data

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## Background

### Analysing prescription data

Learnings from international opioid stewardship and national antimicrobial stewardship programs indicate metrics comparing prescribing patterns to that of peers, as a successful intervention for promoting behaviour change.<sup>1-3</sup> Currently in Australia, standardised opioid usage data sets are not available for hospitals to benchmark and monitor appropriateness of opioid prescribing.

### OME versus DDD?

Oral morphine equivalent (OME), also described as morphine milligram equivalent (MME), or morphine equivalence, is an opioid dosage's equivalency to morphine.<sup>2</sup> Calculating OME accounts for differences in opioid drug type and strength, and equates the many different opioids into a common scale of measurement, allowing prescribing rates to be compared across different types of opioids.<sup>2</sup>

While defined daily doses (DDDs) are widely used in pharmacoepidemiology, they can be less useful for medicines where there is a large difference between the DDD and the actual or prescribed dose used in practice, or for medicines that have highly individualised dosing regimens, such as opioids.<sup>2,4</sup> OMEs are being increasingly reported in opioid utilisation studies, are used internationally as a stewardship measure [see Image 1] and appear to represent the most appropriate metric for presenting data on opioid utilisation.<sup>1,2,5</sup>

## Objectives

To establish a national peer-group benchmark report using a standardised opioid measure, in order to describe and compare trends in opioid discharge prescribing in adult acute care hospitals, and drive stewardship implementation.

**Image 1: American Hospital Association opioid stewardship list of measures as rated for effort and impact<sup>1</sup>**



### List of Measures:

1. Average Total MME Per Prescription
2. MME Per Opioid Prescription
3. Number of Opioid Prescriptions Per Prescriber at Discharge
4. Average MME Dose Administered Per Inpatient Day
5. Percent of Patients Receiving Opioid Only for Pain Management
6. Percent of Patients Receiving Multimodal Pain Management
7. Proportion of Hospitalised Patients who have Documentation of Patient Defined Comfort and Function Goals
8. Patient Pain Management Planning and Education

## Actions

- Aggregate data was obtained from a national pharmacy-service provider's prescription records.
- OMEs were used to equate different opioids into a standard value based on morphine potency. OME conversion factors were derived from a variety of peer-reviewed references.<sup>2,5-8</sup>
- The prescribing rate of total OMEs supplied per patient on discharge was calculated using the opioid's OME conversion factor, milligram dosage and quantity supplied. The denominator was the number of patients supplied opioids at discharge [see Image 2].
- Hospitals were peer group classified using Australian Institute of Health and Welfare criteria.<sup>9</sup>

**Image 2: Example of calculation of standard dose and prescribing rate**

### Standardising the dose

- $OME = \text{strength of preparation [mg]} \times \text{quantity [number dispensed]} \times \text{OME conversion factor}$
- Example: An individual is supplied twenty oxycodone 5mg tablets:  
5mg oxycodone tablets x 20 tablets x 1.5 conversion factor = 150 mg OME

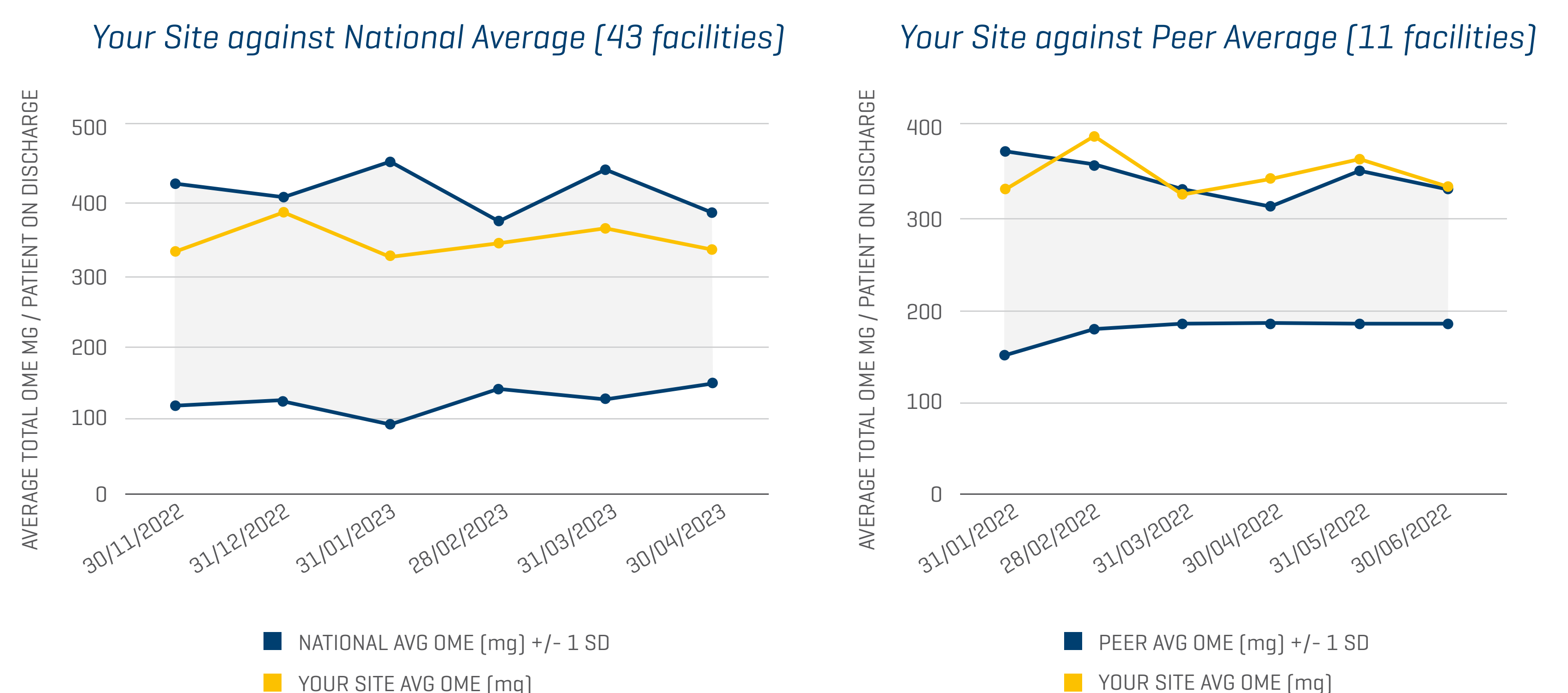
### Calculating the rate

- Average total milligram OME supplied per patient on discharge/month/hospital was calculated as:  
$$\frac{\text{Total milligram OME supplied on discharge per month}}{\text{Number of patients [unique identifier] supplied opioids at discharge}}$$

## Evaluation

A monthly trending report demonstrating average OME supplied to each patient at discharge with peer-group and national data benchmarking was created and distributed to 43 pharmacies supporting acute-care hospitals.

**Image 3: Example opioid surveillance report**



Six months following production, 50% of pharmacies had discussed their report with their hospital drug and therapeutic committees.

High discharge OME rates have been used as a stimulus to initiate opioid stewardship interventions introduced through the Icon Group Opioid Stewardship Program, such as:

- Completing an Acute Pain Clinical Care Standard (CCS) gap analysis [12%]
- Working with hospitals to introduce quality improvement studies [23%]
- Liaising to implement a standardised pain management plan (PMP) on discharge [30%]

## Discussion

Quantitative data comparing opioid drug utilisation and prescribing patterns can inform successful interventions for promoting behaviour change.

This novel report allows hospitals to compare their average discharge OME supply with peer-group hospitals and a national acute hospital benchmark to identify opportunities for improvement, track progress and provide prescriber feedback.

Mitigating excess opioid prescribing for acute pain at hospital discharge is a harm minimisation focus, achievable through reducing risk of prolonged opioid use and decreasing the quantity of unused opioids in the community.

### References

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