# HOW CAN I MINIMISE PAIN AFTER CAESAREAN SECTION?

## *Intrathecal morphine, transabdominal plane blocks and intraoperative NSAIDs may hold the answer*

## AN ANALYSIS OF PERIOPERATIVE PAIN MANAGEMENT IN WOMEN UNDERGOING CAESAREAN SECTION

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### BACKGROUND

Intrathecal morphine 100-150$\mu$g combined with fentanyl 15$\mu$g and bupivacaine is commonly used in Australia as primary neuraxial anaesthesia in caesarean section. In response to diamorphine shortages in the United Kingdom, the use of intrathecal morphine as an alternative to diamorphine has been endorsed by both the Obstetric Anaesthetists' Association (OAA) and British Journal of Anaesthesia (BJA)[1,2]. This audit was conducted in two metropolitan hospitals in Australia and evaluated the effectiveness and frequency of techniques to reduce pain after caesarean section such as intrathecal morphine, transabdominal plane blocks and perioperative simple analgesia.

REFERENCES
[1]Obstetric Anaesthetists' Association. OAA commentary on alternatives to intrathecal and epidural diamorphine for caesarean section analgesia. OAA. 2021.
[2]Sultan P, Carvalho B. Evidence-based guidance for use of intrathecal morphine as an alternative to diamorphine for Caesarean delivery analgesia. BJA. 2021;127(4):501-505.

**2 months data**

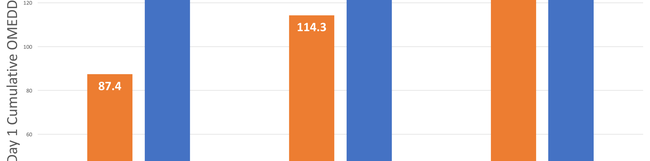
**2 Australian hospitals**

**264 women**

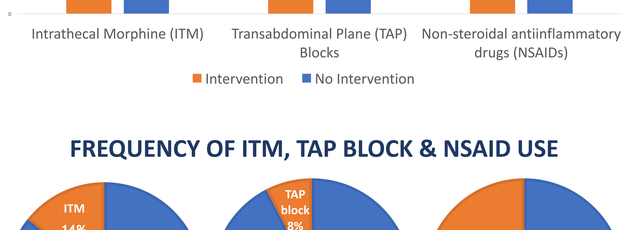
### METHOD

Electronic data on all women who underwent lower-uterine-segment-caesarean-section (LUSCS) at Eastern Health's Box Hill and Angliss campuses between July and August 2021 was collected. Oral morphine equivalent daily dose (OMEDD) was calculated for all opioids given on Day 0 to Day 3 post-LUSCS and on discharge scripts. A total of 276 underwent LUSCS during the data collection period: 12 were excluded from the final data set due to requiring additional surgical intervention during their admission, use of Patient-Controlled-Analgesia or having a cumulative OMEDD requirements more than 3 standard deviations above the mean. OMEDD requirements for patients were compared based on factors including use of intrathecal morphine (ITM), transabdominal plane (TAP) blocks and simple analgesia such as non-steroidal-anti-inflammatory-drugs (NSAIDs).

### COMPARISON OF OPIOID USE AT DAY 1 POST LUSCS




### FREQUENCY OF ITM, TAP BLOCK & NSAID USE




### RESULTS

Of 189 women who received spinal anaesthetic alone, 27 received ITM. Women who received ITM had a significantly lower average cumulative Day 1 (D1) OMEDD compared to women who did not receive ITM at 87.4 and 148.3 respectively, $p < 0.001$. A total of 20 women received either surgical or anaesthetic TAP blocks. Women who received TAP blocks had a significantly lower average cumulative D1 OMEDD compared to women who did not receive TAP blocks at 114.3 and 142.6 respectively, $p = 0.014$. 158 women received an NSAID intraoperatively or in theatre recovery. Women who received NSAIDs intraoperatively or in theatre recovery had a significantly lower average cumulative D1 OMEDD compared to women who did not at 132.6 and 152.2 respectively, $p = 0.002$. 1 patient in the ITM spinal group and 1 patient in the non-ITM spinal group had significant post-operative hypotension on the ward (systolic blood pressure <90mmHg). 1 patient reported significant itch after ITM. No other significant side effects were noted in documentation. Our data supports findings that use of ITM, TAP blocks and NSAIDs reduces postoperative opioid requirements, however overall use of these techniques remains infrequent in our hospital network.

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