

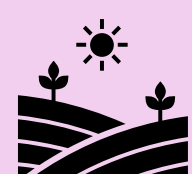


Tackling pain after caesarean birth with education and the challenges of introducing self-administration of pain relief on a postnatal ward

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Background



There are approximately 1500 caesarean births (CB) performed per year at the Royal United Hospital in Bath, with approximately 700 being elective CB with an average length of stay of 1.0 – 1.4 days. The recommended postoperative pain management consists of regular paracetamol and diclofenac (unless contraindicated). This minimises requirement for opiates such as dihydrocodeine and Oromorph, which can be given if needed. All patients receive intrathecal diamorphine unless contraindicated.

Problem



Routine review of postoperative pain scores on day 1 after CB demonstrated that 31% of patients had significant pain (score >5), as well as an increase in opiate use. Poor compliance with administration and prescribing regular paracetamol and anti-inflammatory analgesia was identified. There was increased use of dihydrocodeine and Oromorph instead.

Causes of this were :

- Implementation of electronic prescribing, (EPMA) with very specific medication round times.
- Knowledge gaps, especially in newly qualified midwives.
- Lack of capacity of midwives on the ward to be able to complete regular patient review.

Initial tests of change were implemented (**PDSA CYCLE 1**):

- A standard prescription in EPMA was implemented to ensure paracetamol and diclofenac were prescribed regularly.
- Education was given to all staff.

Following this prescribing of regular analgesia, the pain scores initially improved to 18% but was not sustained. Further education improved scores again by April 2024, but this was still unacceptably high (see figure 1). Further investigation was undertaken to understand the problem, and further ideas were tested.

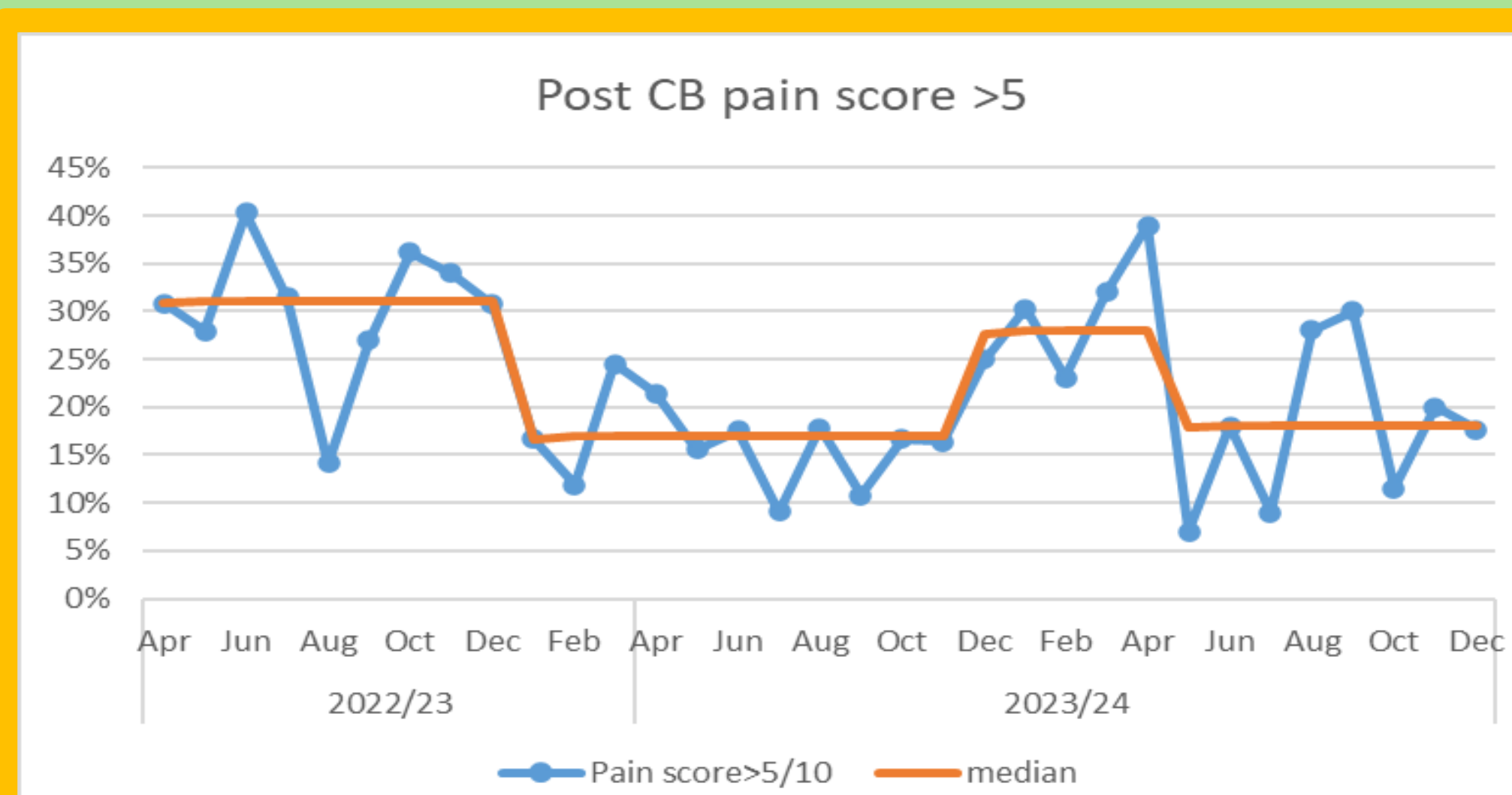


Figure 1: Run chart for post operative pain scores

Aim statement



'A 50% reduction in pain scores on day 1 for patients having an elective CB by August 2025.'

Ideas for implementation were:

1. Introduction of voluntary self-administration of paracetamol and diclofenac for elective caesarean births initially, enabling reliable administration at individualised times to reduce pain scores. This would increase satisfactions and decrease opiate use.
2. Further education and training on pain relief to support the introduction of self-administered analgesia, ensuring clear messaging to patients from all staff.

Stakeholders



All key stakeholders were identified, and a stakeholder map was created, facilitating engagement (see figure 2).

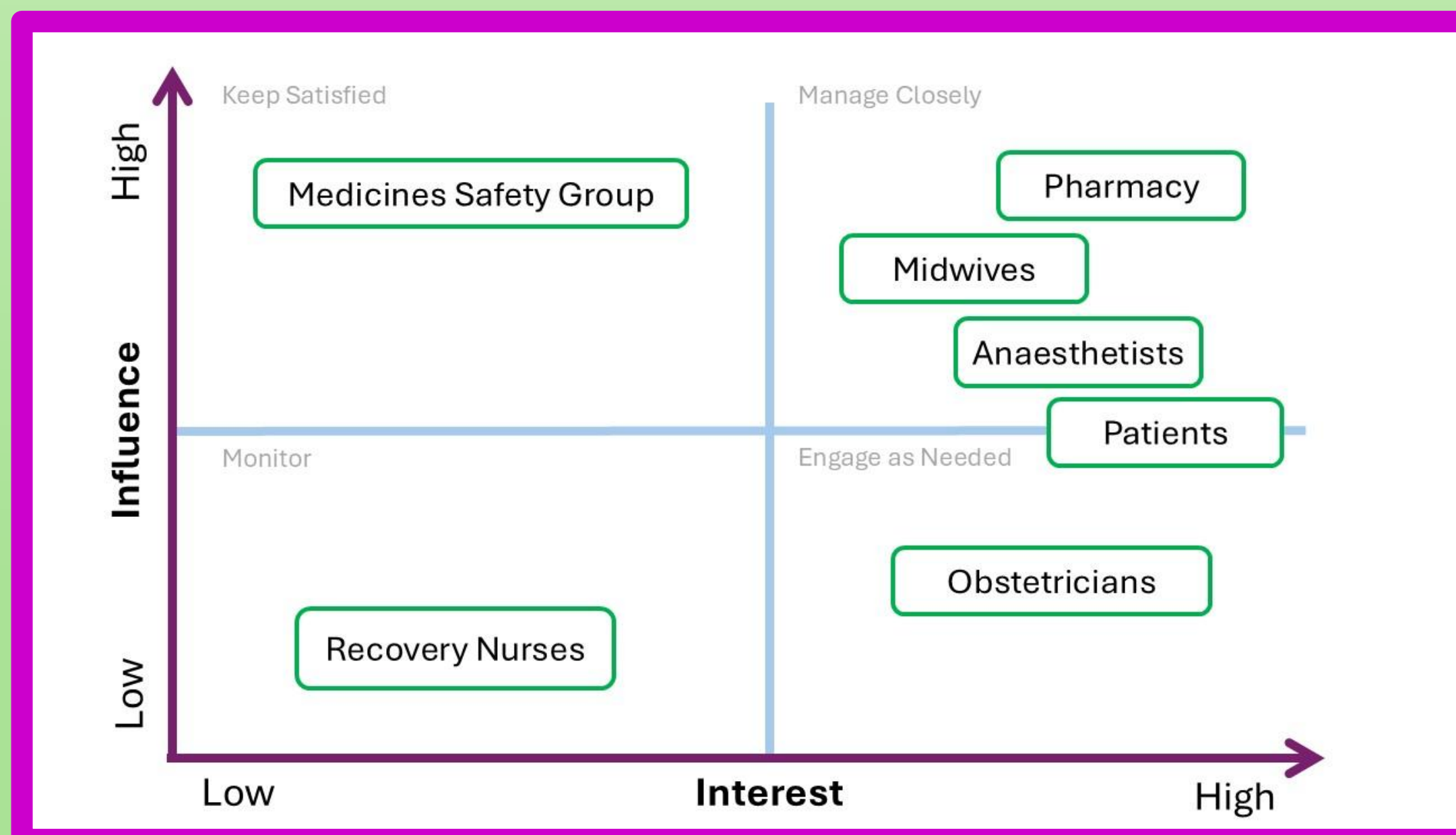
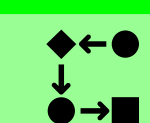


Figure 2: Stakeholder engagement map

Process mapping



The current process was mapped with the teams involved, from booking through to discharge. This process highlighted extra stakeholders involved and helped identify training needs. It also helped to map governance processes and which strategic teams to involve. A process map was created, which allowed everyone involved in the process to see an overview of the whole pathway.

Preparation and planning

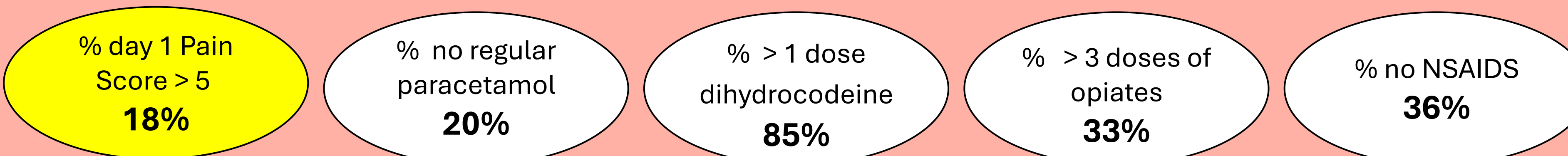


A project group was established with all stakeholders, and senior leadership teams were informed and engaged with the process.

- A trust guidelines and protocol were produced and approved by Trust Medicines Safety Group.
- Funding was secured for lockable bedside lockers (figure 3) for medication storage, which were not currently in place.
- Face-to-face training was given to the midwives and recovery staff, and training material was produced.
- Patient information leaflets were developed.

Baseline Outcome measure:

Baseline Process measures:



Quantitative measures were also collected from patients with multiple comments regarding not receiving regular pain relief and being uncomfortable for long periods of time.



Figure 3: a lockable locker purchased for the project

Implementation and tests of change (PDSA cycles)

CYCLE 2:



CYCLE 3:



Test:

Future pathway was agreed and a tabletop exercise undertaken to walk through the process.

Learning: Areas for further training were highlighted, particularly the use of the keypad locker.

Action Development of specific resources for locker use. Modification to patient information leaflets.

Test:

Trial of 3 cases on one elective list in April 2025. This tested the process before spreading more widely to identify any gaps in the process or training.

Learning: Identified extra processes involved for dispensing the medications, but more training needed for recovery. Message to all midwifery staff not clear. Possibility to consent patients before CB, rather than on the day.

Actions:

Process for dispensing further clarified, and further training material developed. Plans for anaesthetic review of patients at preoperative. Development of further teaching resources including a short video for staff and patients. Extensive training in last 2 weeks of April.

Teaching Outcomes:

A survey of newly qualified midwives highlighted that minimal information was provided by their training provider on the management of pain. There were no formal study modules on pain.

By the end of April 2025, 52% midwives had received face-to-face 'tea trolley training' on the ward and demonstrated improved confidence as a result. The midwifery education lead is also involved.

Day 1 pain scores: improving since further education. Compliance for Jan – March 2025 being evaluated.

Outcome of the test:

100% received regular paracetamol and diclofenac
No one had > 1 dose of dihydrocodeine
100% Pain score < 3 on day 1
100% happy with self-administration

CYCLE 4



Test:

Second test on one elective list planned for May 12th. Aiming to spread to all elective cases from end of May, with weekly review and adaptation of the process.

Ongoing collection of process and outcome measures.

Lessons learned



The project has required considerable stakeholder engagement and modification of processes at each stage. It has been a long process to gain appropriate approvals, whilst communicating with and training enough staff.

As the new system is rolled out, it is likely that further changes will be made to ensure that it is successful and sustainable, improving the care and experiences of patients.

We also need to augment the materials generated with a new online system.

Next Steps



Regular paracetamol and diclofenac were received by all women in the first test. Analgesia improved, signifying that this is the correct intervention.

Processes are being further adapted to ensure that reliable processes are in place. Implementation to all electives is planned for end of May.

An extensive education programme has commenced, and midwifery champions have been identified to help sustain improvements.

Investigating future use of app-based recording, prompting pain relief for patients.

Once successful, plans to spread to emergency CB were suitable.