

Addressing barriers to the use of remifentanyl patient-controlled analgesia (PCA) during labour - a quality improvement project

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Introduction

Pain during labour is a major concern for many pregnant women for whom effective pain relief is an important element of a positive maternal experience. Though lumbar epidural remains the gold standard for labour analgesia some women can not have or do not want an epidural.

Remifentanyl (PCA) has been shown to be the most effective non-neuraxial analgesia method. It is associated with high levels of maternal satisfaction, has a good safety profile, and may reduce rates of instrumental delivery(1,2). Despite this, its use is still limited in our unit.

This quality improvement project aimed to explore and address barriers to the use of remifentanyl PCA at the Bradford Royal Infirmary, which has a busy maternity unit with over 6000 deliveries annually.

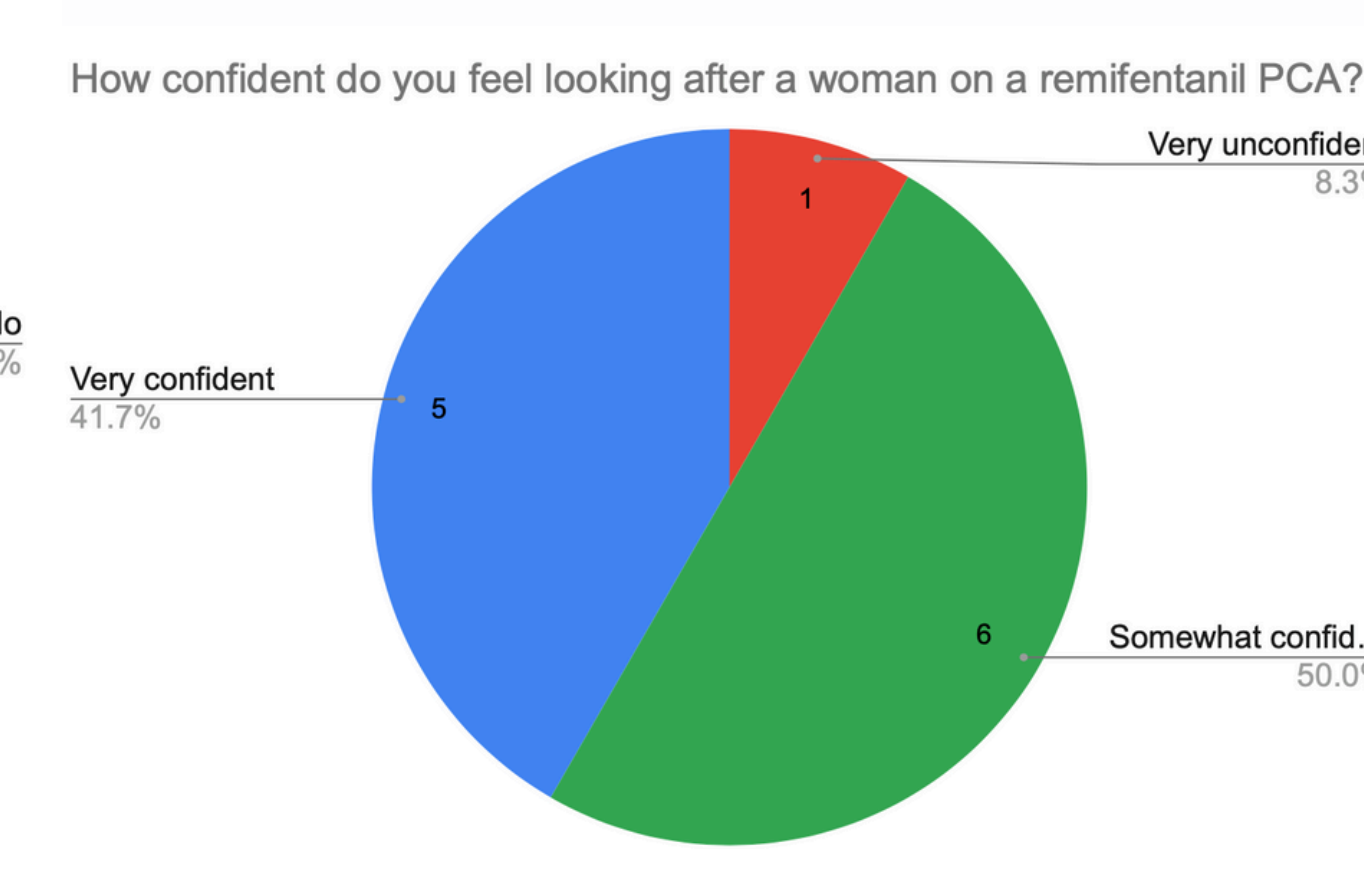
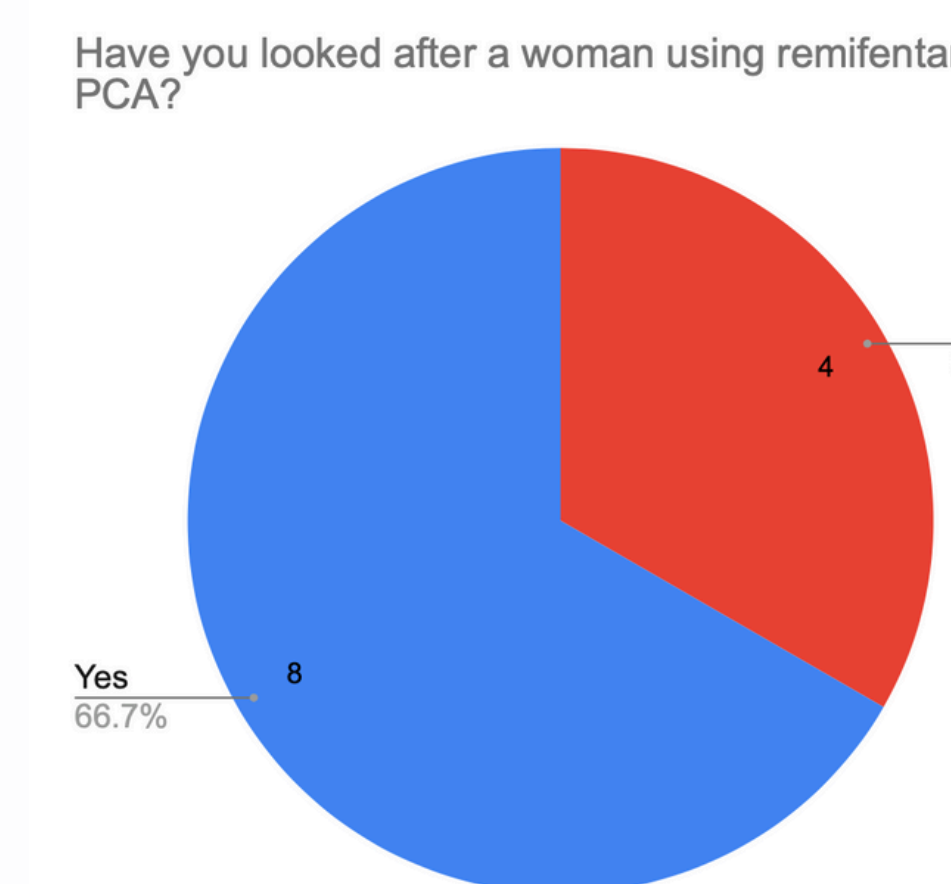
Methods

We explored multidisciplinary team **confidence** in looking after women on remifentanyl PCA and their **concerns** with its use in an anonymous questionnaire.

We delivered tea trolley teaching sessions targeted at midwives and doctors working regularly on labour ward. This took place during our perinatal analgesia week: a period of coordinated patient and staff teaching on analgesia delivered by anaesthetic resident doctors from the 6th to the 10th of January 2025.

Results

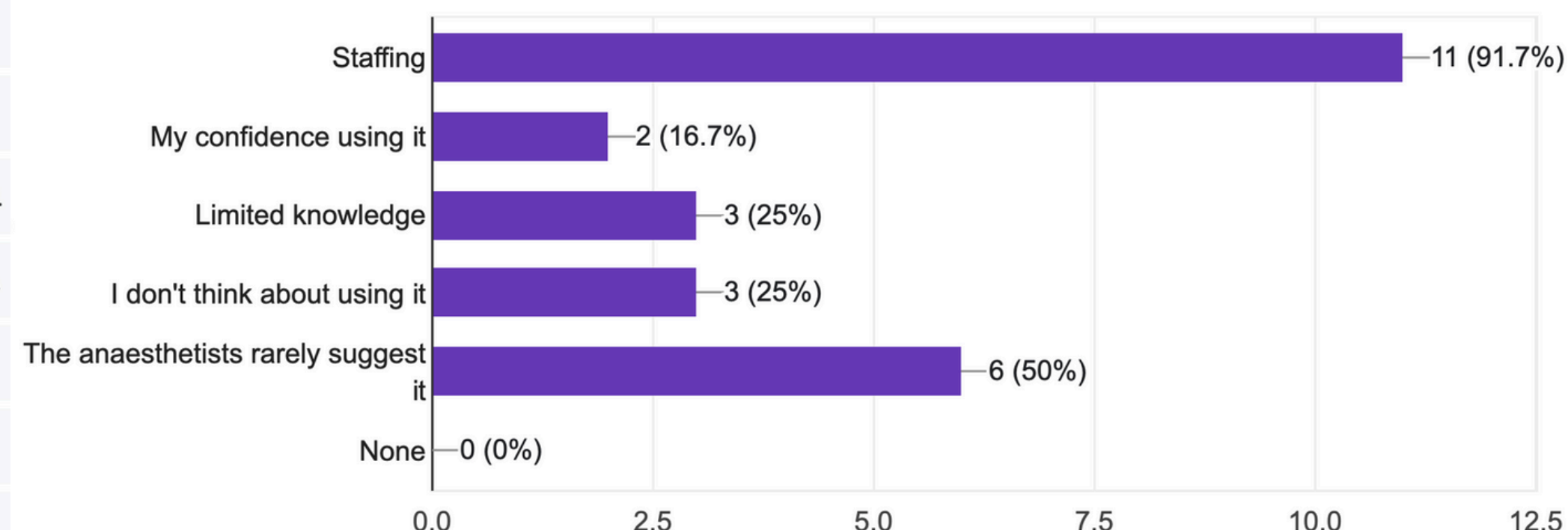
Midwives



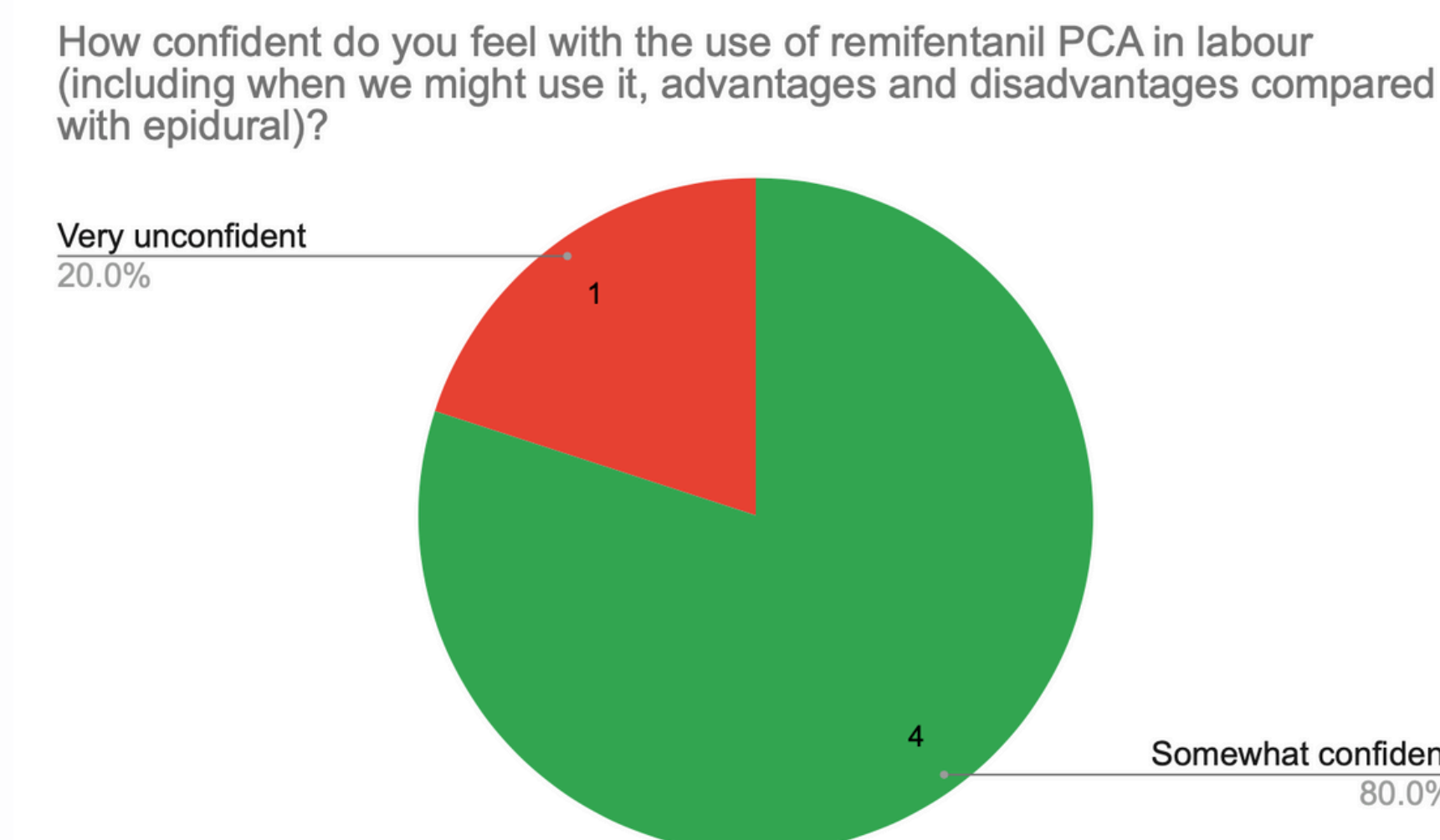
Please explain why/why not
7 responses

Used to giving one to one and EMC care.
Aware of theory however not needed to use in practice.
Previous training at another trust and have done a few times now.
Have not been involved in care of women with a remifentanyl PCA
I understand the need of more observations.
Does not seem difficult, mainly just to observe her resps?
If told what I need to do, I would be fine

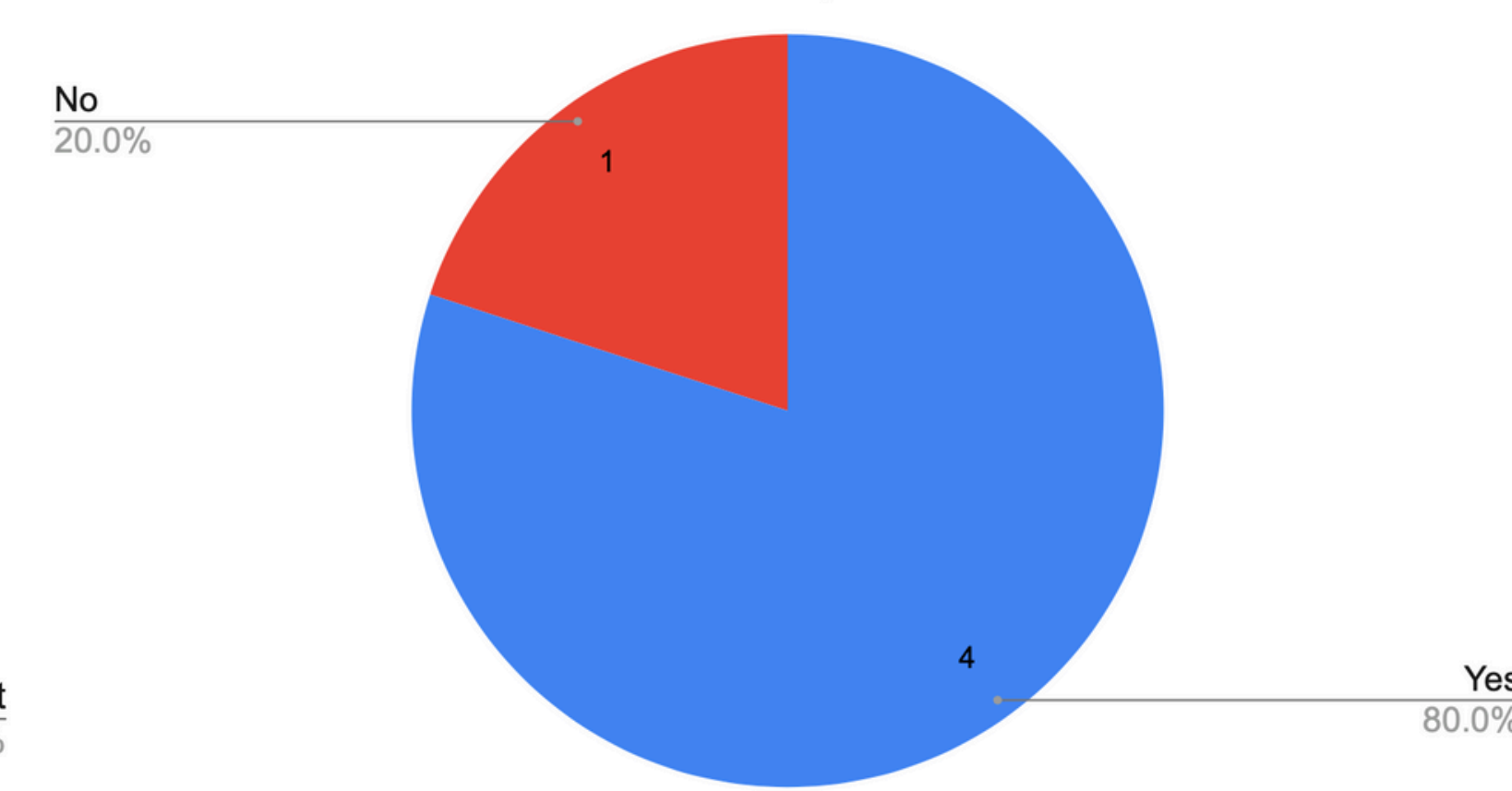
What are the barriers to using remifentanyl PCA? (select all that apply)
12 responses



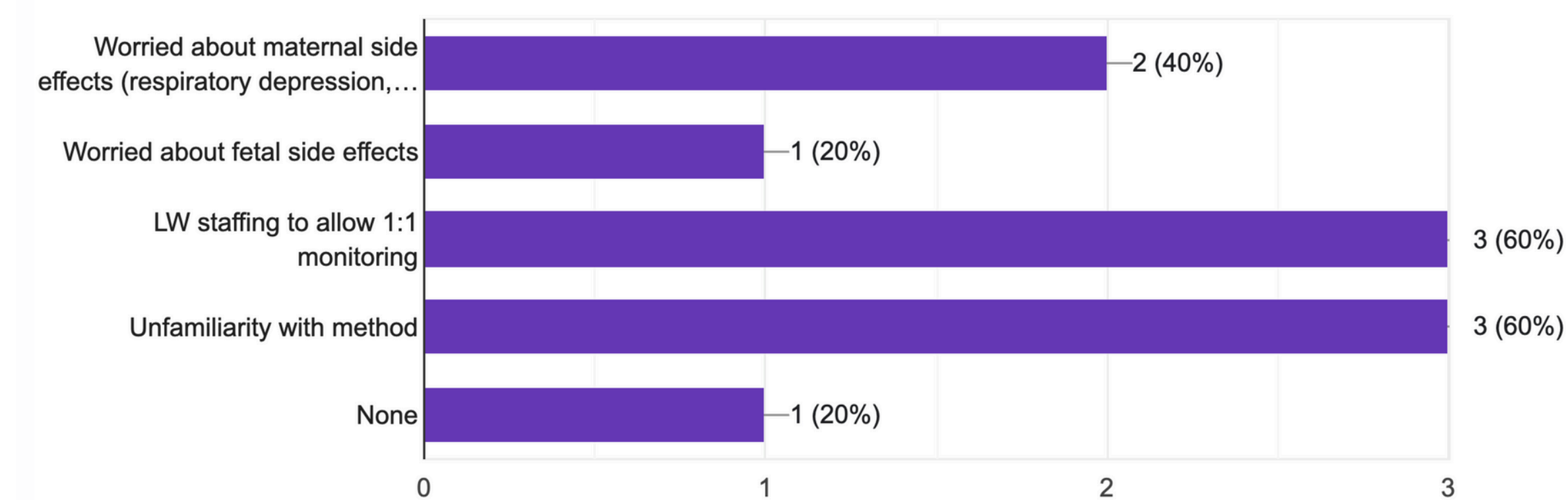
Obstetricians



Have you ever suggested the use of remifentanyl PCA (either to the patient themselves or to the anaesthetist on LW)?

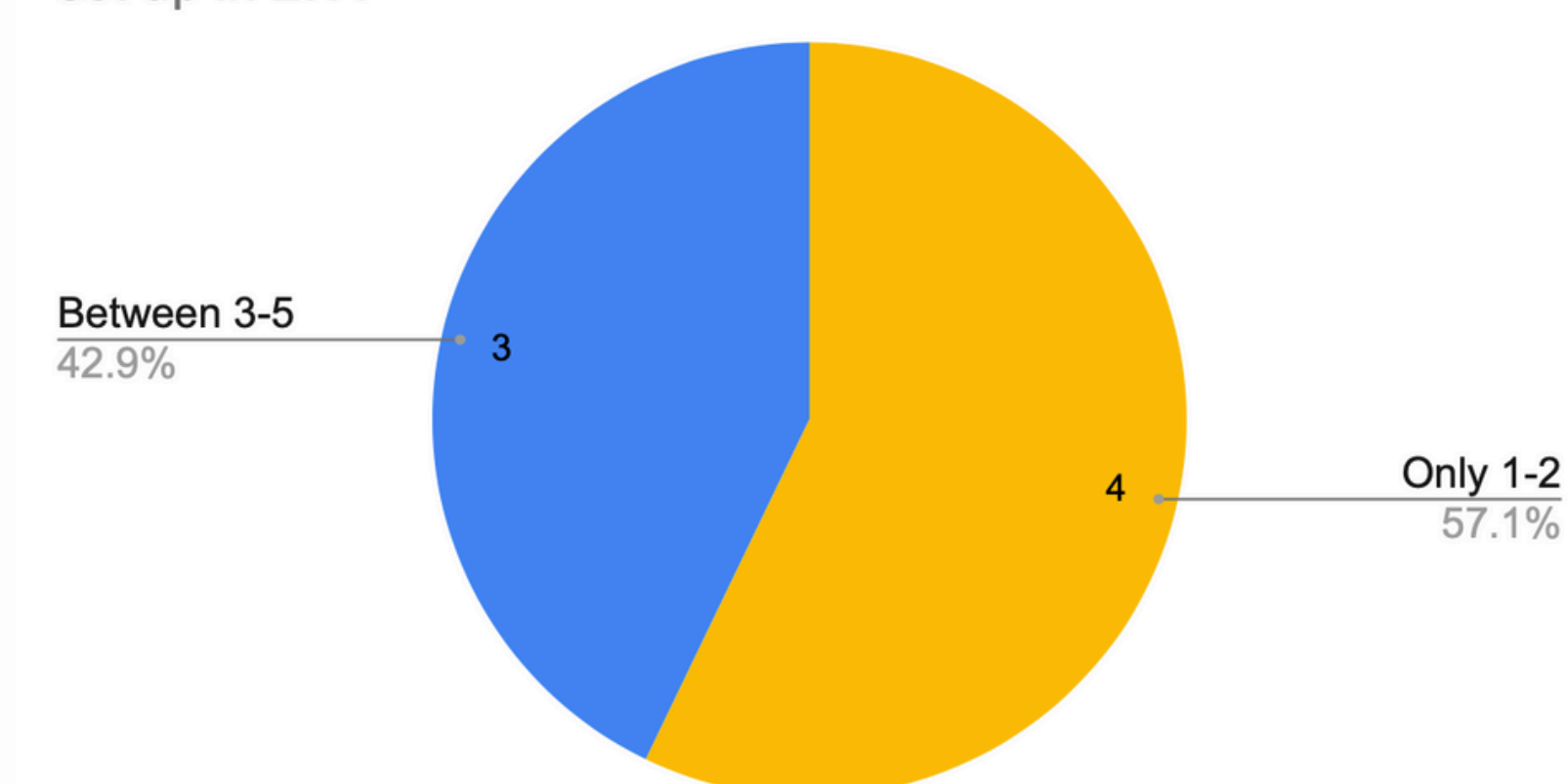


Do you have any concerns about the use of remifentanyl PCA? Select all that apply.
5 responses

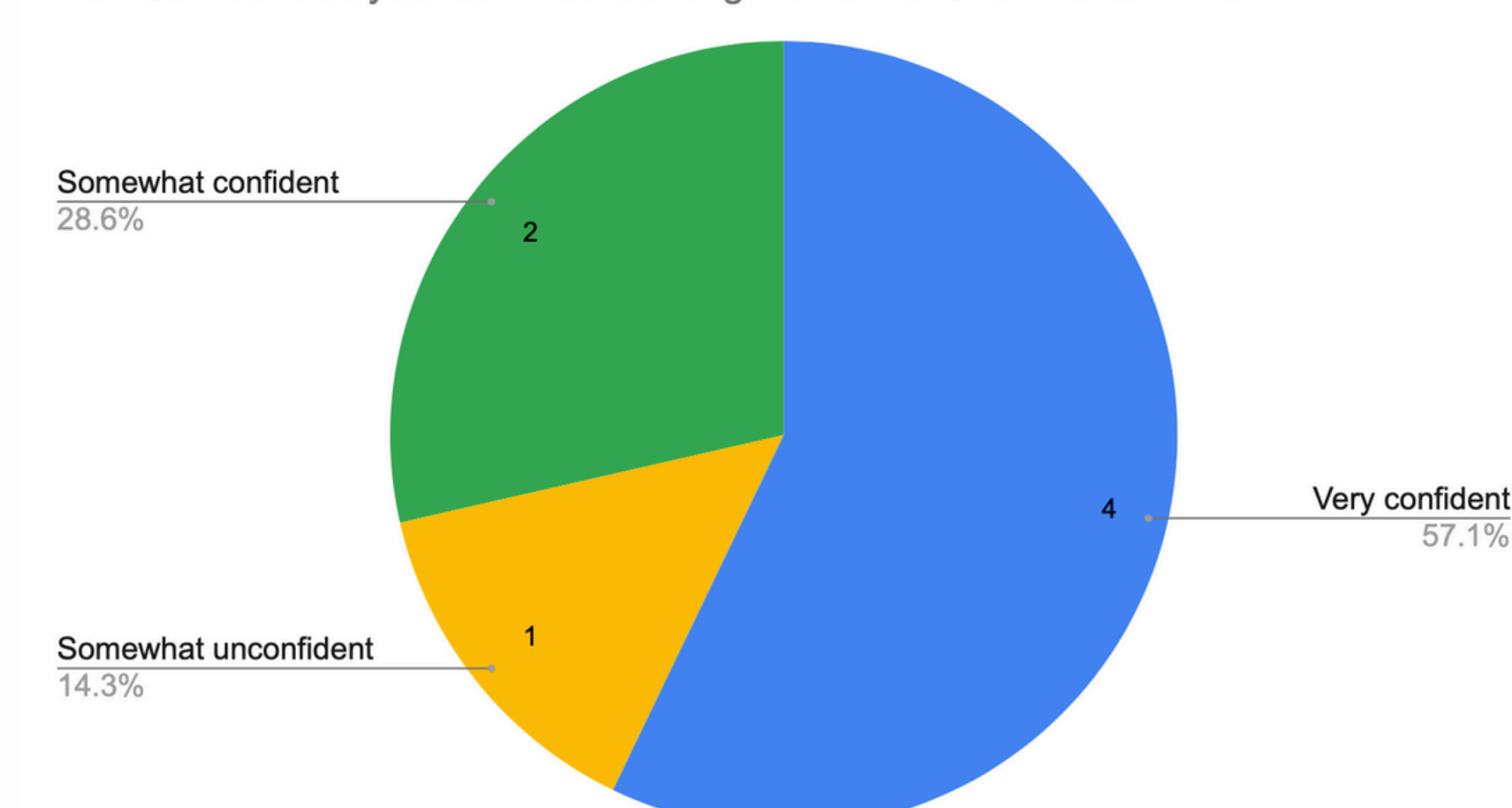


Anaesthetists in training

Over the past 6 months how many remifentanyl PCA have you set up in LW?



How confident do you feel in consenting women for a remifentanyl PCA?



Do you have any concerns about the use of remifentanyl PCA in LW?
6 responses

No
Mainly that midwifery staffing levels can be a barrier to putting one in place
Lack of MW experience and understanding of airway and breathing problems. Also lots of women are exhausted by the time these analgesic options are being explored and I'm not sure a PCAS offers the same relief as an epidural in that situation.
Concerns about the level of training for midwives.
Midwife staffing levels/awareness that the midwives do not like it

Discussion

We would like to routinely offer remifentanyl PCA as a priority to women with an intrauterine death, but also as an option to all patients, particularly those anxious about epidurals. Our survey identified some key issues that need to be addressed in order to achieve this goal.

Our remifentanyl protocol prioritises patient safety stipulating 1:1 care with continuous O2 delivery and saturation monitoring. Labour ward midwifery staffing is thus a major concern, but one that is extremely difficult to address.

Our survey also demonstrated underconfidence among staff is a barrier to PCA use. **Further work is required in delivering information to support the use of remifentanyl in childbirth.**

The response to the tea trolley teaching conducted during our second annual perinatal analgesia week was extremely positive from all members of the MDT and a succinct information poster is now displayed in the several labour ward areas addressing key themes raised by the survey.

Several other interventions are planned including exploration of service user expectation and experience using patient questionnaires, and we will continue to include teaching on remifentanyl PCA in our annual perinatal analgesia week.

References:

1. Ronel, I. and Weiniger, C.F. (2019). Non-regional analgesia for labour: remifentanyl in obstetrics. *BJA Education*, 19(11), pp.357–361. doi:<https://doi.org/10.1016/j.bjae.2019.07.002>.
2. Wilson MJA, MacArthur C, Hewitt CA, et al. (2018) Intravenous remifentanyl patient-controlled analgesia versus intramuscular pethidine for pain relief in labour (RESPITE): an open-label, multicentre, randomised controlled trial. *Lancet* 2018; 392: 662–72.