Antenatal preparation enhancement for caesarean delivery through anaesthesia focused education

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Introduction

Caesarean section is the most prevalent major abdominal surgery performed worldwide, with rising global rates reflecting both clinical necessity and evolving obstetric practice[1]. As such, optimising the perioperative experience for parturients is an increasingly important component of high-quality maternity care.

Neuraxial anaesthesia is the gold standard for caesarean delivery (CD), providing effective analgesia while allowing maternal consciousness during delivery. However, while pain is typically well controlled, **intraoperative sensations are common**. A recent study demonstrated that:
•91.8% of women reported a sensation of pressure
•56.2% reported touch during surgery[2]

These findings highlight a critical distinction between **analgesia and complete sensory absence**, which is not always well understood by patients.
Local baseline assessment within our unit identified a **significant mismatch between patient expectations and clinical reality**, with many women anticipating complete numbness throughout the procedure. This misconception has the potential to contribute to:
•Increased intraoperative anxiety
•Misinterpretation of normal sensations as pain or complications
•Reduced satisfaction with the birth experience

Despite this, anaesthesia-specific education is not routinely embedded within standard antenatal care pathways, and counselling regarding intraoperative sensations is often variable or delivered immediately preoperatively, limiting patient retention and psychological preparedness.

To address this gap, we developed a quality improvement (QI) initiative introducing structured, anaesthetist-led antenatal education sessions focused specifically on caesarean delivery under neuraxial anaesthesia.

Methods

This project was conducted as a **quality improvement (QI) initiative** within a tertiary obstetric unit, aiming to enhance antenatal preparation for women undergoing planned caesarean delivery (CD) under neuraxial anaesthesia.

Monthly **anaesthetist-led antenatal education sessions** were introduced for women scheduled for elective CD.

A **hybrid delivery model** was adopted to maximise accessibility and attendance:
•Face-to-face group sessions within the maternity unit
•Live online sessions via virtual platforms
•Each session was delivered by a member of the obstetric anaesthesia team and followed a **standardised teaching structure** to ensure consistency.

Sessions focused on providing clear, patient-centred information, including:
•Overview of neuraxial anaesthesia (spinal/epidural techniques)
•Step-by-step explanation of the perioperative pathway
•Expected **intraoperative sensations** (e.g. pressure, pulling, movement)
•Differentiation between **normal sensations and pain**
•Safety, monitoring, and the role of the anaesthetic team
•Opportunities for questions and discussion

Methods

Participants were invited to complete **pre- and post-session questionnaires** designed to evaluate:

Baseline (pre-session):
•Expectations of intraoperative sensations
•Previous anaesthetic experience
•Level of understanding and preparedness

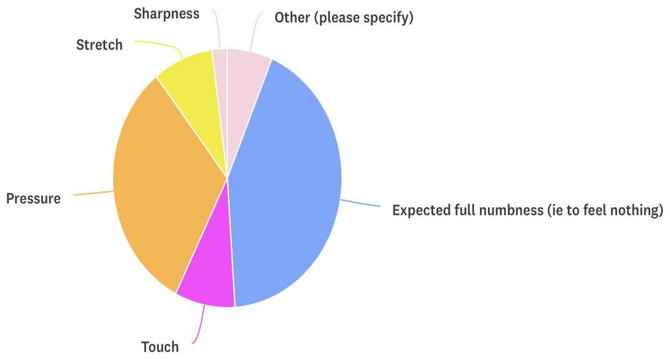
Post-session:

•Change in understanding of neuraxial anaesthesia
•Psychological preparedness for CD
•Perceived usefulness of the session
Responses were collected anonymously and analysed descriptively

Aims

- To improve patient understanding
- Set realistic expectations
- Reduce perioperative anxiety surrounding CD

If yes, what sensations were you expecting to feel during the previous caesarean section?



Results

A total of **116 women** have participated to date. Of these, **52% were primiparous** and **48% multiparous**. For 50% of participants, this was their first neuraxial procedure, while 59% reported undergoing their first CD.

Among multiparous participants, **43% reported that during a previous CD they had expected complete numbness**, highlighting a discrepancy between expectations and actual perceived sensations during CD.

All participants (100%) reported that the intervention helped them psychologically prepare for caesarean delivery and improved their understanding of the sensations they were likely to experience.

Conclusion

Integrating structured, evidence-based education on anaesthesia into routine antenatal classes represents a valuable opportunity to improve maternal understanding of neuraxial techniques in the context of CD.

Providing clear information on indications, procedural steps, potential sensations, and safety considerations allows parturients to approach CD with greater confidence and realistic expectations.

Proactive education delivered in the antenatal period can reduce perioperative anxiety, facilitate informed consent, and empower women to engage more actively in decision-making regarding their care. Improved baseline knowledge may also help to dispel common misconceptions surrounding neuraxial anaesthesia, thereby enhancing perceptions of safety and trust in the multidisciplinary maternity team.

Collectively, these benefits have the potential to translate into improved patient experience, greater satisfaction with anaesthetic and obstetric care, and more positive overall perceptions of maternity services.

References
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2. https://www.hse.ie/eng/about/who/acute-hospitals-division/woman-infants/national-reports-on-womens-health/national-standards-for-antenatal-education-in-ireland.pdf