

A survey of anaesthetists’ and obstetricians’ experiences, attitudes and perceptions regarding decision making for category 1 caesarean sections and mode of anaesthesia - do we share the same mental model?

Nicholas Hobbs, ACCS CT4 (Anaesthetics), Barnsley Hospital

INTRODUCTION

A category one caesarean section (CS) is a time pressured clinical scenario for which both decision making and communication present challenges for anaesthetists and obstetricians. This is especially true regarding mode of anaesthesia. While broadly speaking regional anaesthesia should be offered for a CS [1], a category one CS may necessitate a general anaesthetic (GA). This is associated with an incidence of ‘can’t intubate, can’t oxygenate’ of up to 1:300 [2], and while there may be some confounding by indication, data suggests increased maternal mortality compared with regional anaesthesia [3]. However, despite the importance of close collaboration in this decision, there is no national directive concerning inter-speciality training for emergency CS. The purpose of this survey was to explore anaesthetists’ and obstetricians’ experiences and perceptions of decision-making around category one CS, focusing on mode of anaesthesia, encompassing communication, previous training experiences, and attitudes towards joint training.

METHOD

Obstetricians and anaesthetists of all grades completed an anonymised online survey, comprising 17 paired multiple choice and two free text questions. This was sent to all trainees in the Yorkshire region, and clinicians at two large maternity units and one district general hospital in November 2023. Ethical approval was not sought.

RESULTS

There were 132 completed surveys from anaesthetists and 113 from obstetricians.

Key findings included:

- Only 31% of anaesthetists and 61% of obstetricians felt there was adequate shared understanding regarding decision making around category one CS (see **figure 1**).
- Attitudes varied towards whether decision making regarding mode of anaesthesia should be completely shared (24% of anaesthetist responses versus 41% of obstetrician), anaesthetist led or obstetrician led, with a range of opinions both within and across specialties (see **figure 2**).
- There were discrepancies between responses to the question regarding how mode of anaesthesia should be decided (see figure 2), and what most commonly occurred in clinical practice. For example only 16% of anaesthetist respondents felt that this decision should be shared, but obstetrician led. When asked about their personal experience of this decision making process, 37% of anaesthetist respondents reported it had most commonly been shared, but obstetrician led.
- 55% of anaesthetists felt that obstetricians they had previously worked with had only ‘sometimes’ or ‘rarely’ understood the risks and benefits of regional vs GA for category 1 CS.

REFERENCES

1 - National Institute for Health and Care Excellence. Caesarean Birth [internet]. London: NICE 2021 [updated September 2023, cited December 14 2023]. NICE guideline [NG192]. Available from: <https://www.nice.org.uk/guidance/ng192/chapter/Recommendations#surgical-techniques-for-caesarean-birth>

2 – Rucklidge M, Hinton C. Difficult and Failed Intubation in Obstetrics. *Continuing Education in Anaesthesia, Critical Care and Pain* 2012; 12(2):86-91

3 - Butwick AJ, Palanisamy A. Mode of anaesthesia for Caesarean delivery and maternal morbidity: can we overcome confounding by indication?. *British Journal of Anaesthesia* 2018; 120: 621-623.

4 – Brindley, P. I. Improving teamwork in anaesthesia and critical care: many lessons still to learn. *British Journal of Anaesthesia*. 2014; 112(3):399-401

Figure 1: “In general, do you feel that there is adequate shared understanding of the decision making around category 1 caesarean sections between anaesthetists and obstetricians regarding both anaesthetic and obstetric aspects?”

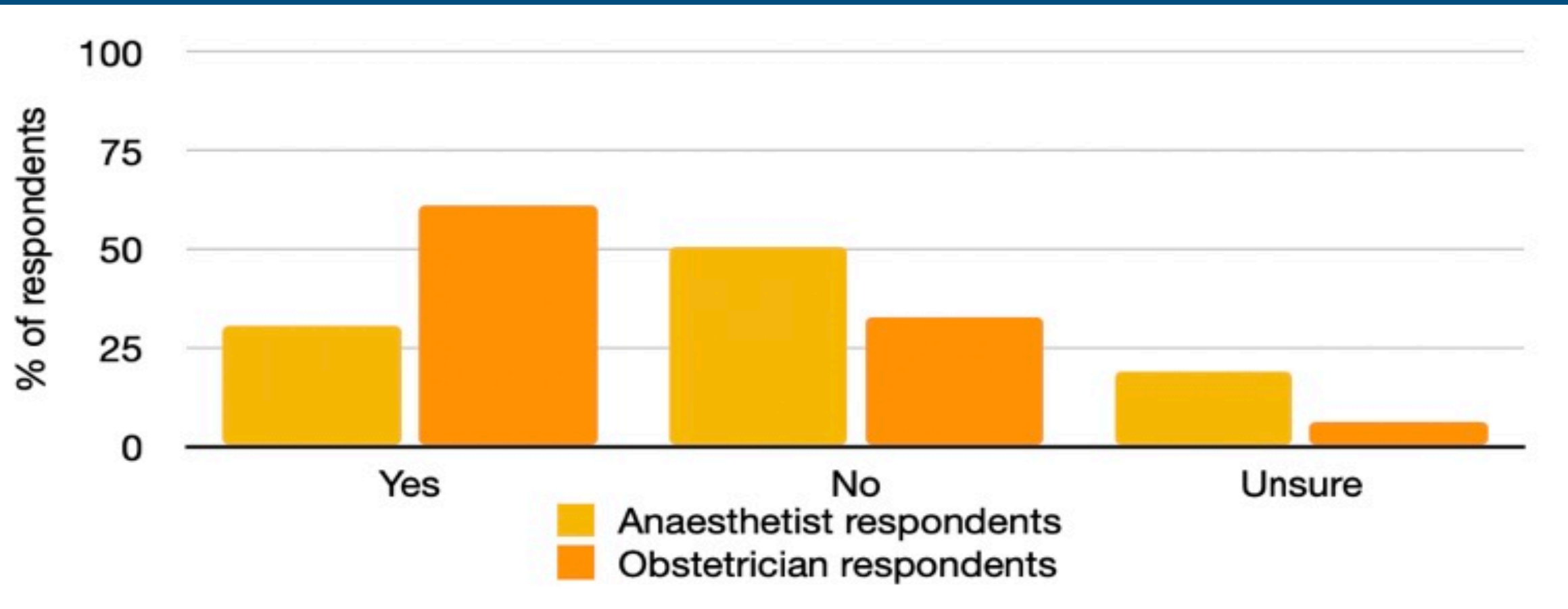


Figure 2: “While accounting for patient wishes, and where there is no absolute contraindication to either, do you feel that the decision as to whether to undertake general or regional anaesthesia (e.g. spinal or epidural top-up) for a category 1 caesarean section SHOULD be:”

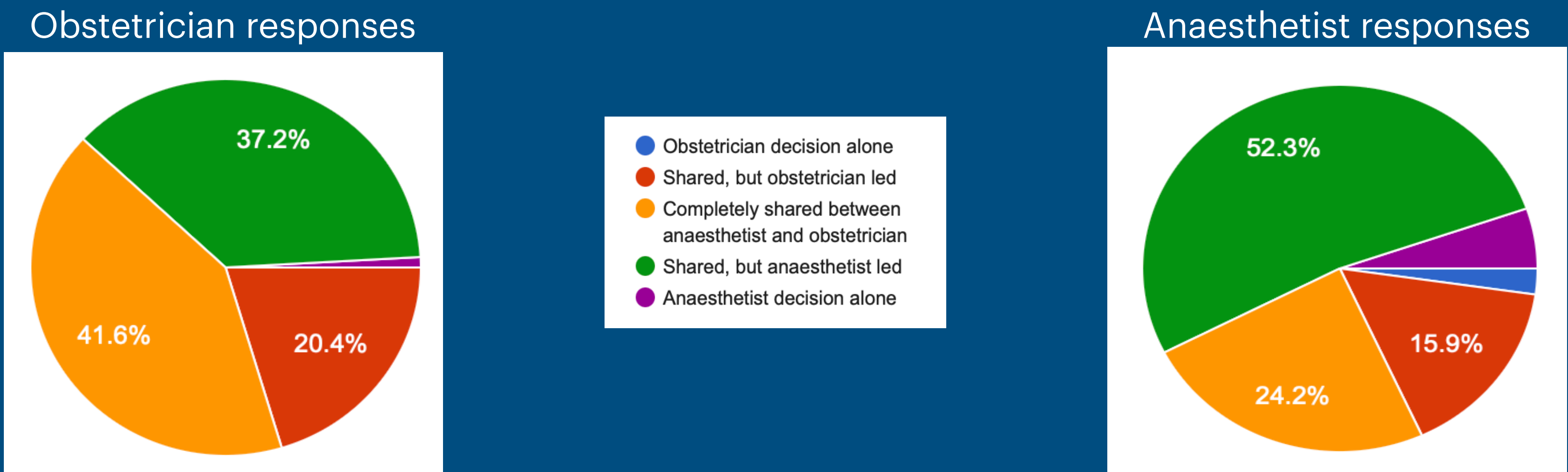


Figure 3: “Have you ever felt pressurised into accepting the anaesthetist's choice of anaesthetic technique for a category 1 caesarean section (obstetricians)/pressurised to provide either a general anaesthetic or spinal for a category 1 caesarean section (anaesthetists) when you felt this was not the best option?”



RESULTS CONTINUED

- 64% of anaesthetists ‘always or almost always’ ask how much time there is for the anaesthetic, 90% of obstetricians would like to be asked this.
- In response to the question ‘if you were having difficulty performing a spinal for a category 1 caesarean section, would you ask the obstetrician whether you should convert to a general anaesthetic?’ 49% of anaesthetists selected ‘always or almost always’. In response to the question ‘if you felt the anaesthetist were having difficulty performing a spinal, would you want to be asked whether they should convert to a general anaesthetic?’ 96% of obstetricians answered yes.
- 61% of obstetricians had never received formal teaching or training on the risks and benefits of regional or GA for CS.
- 62% of anaesthetists had never received formal teaching or training on the factors which obstetricians consider when determining urgency of CS.
- 41% of anaesthetists reported they had in the past felt pressured to provide a GA or spinal when they thought this was not the best option, 33% of obstetricians reported that they had in the past felt pressurised into accepting an anaesthetist’s choice of anaesthetic technique when they did not feel this was the best option (**figure 3**).
- Both groups supported more joint training (91% and 93%).

Respondents were asked to provide further comments on the process of decision making around anaesthetic technique for category 1 CS. Themes which emerged from this were that a proportion of anaesthetic respondents felt that in some instances category 1 caesarean sections were called inappropriately, or were avoidable in that a CS could have been anticipated. Obstetrician responses indicated that there is a generally favourable attitude towards spinal for category 1 CS. There were numerous comments from both groups regarding the benefits of senior clinician presence, as well as difficulty in working with unfamiliar colleagues.

DISCUSSION

There is significant disagreement amongst anaesthetists and obstetricians regarding multiple aspects of decision making for category one CS and mode of anaesthesia. There are discrepancies between these groups regarding how decision making should be shared in this context. Both report training gaps in factors pertinent to the other’s decision making, and anaesthetists differ in the manner and extent to which they consult obstetricians regarding mode of anaesthesia. Perhaps most importantly, there is a perceived lack of shared understanding.

Category 1 CS is a common clinical scenario but one that carries not insignificant risks. A shared mental model – which can be described as a common understanding, or team members being ‘on the same page’ – is a key strategy for teams to succeed [4]. The findings of this survey suggest that this may not be present. In free text responses both groups reported the benefits of senior clinician involvement, but given current UK out of hours working practices this is unlikely to be consistently achievable. The majority of clinicians do however feel that joint training around emergency CS involving obstetricians and anaesthetists would be beneficial. This survey suggests regional and national training bodies could consider exploring the development of such programmes.