

General anaesthesia for caesarean section: a survey of regional practice

Emma Plunkett, Joanna Mackie, Joanna Marriott
Worcestershire Acute Hospitals NHS Trust, Worcester, UK



Introduction

According to the results of the 5th National Audit Project (NAP 5), obstetric anaesthesia carries by far the highest risk of Accidental Awareness under General Anaesthesia (AAGA) and is associated with many of the risk factors for awareness: rapid sequence induction (RSI), use of thiopentone, neuromuscular blockade and increased incidence of a difficult airway¹. Recommendations in the NAP 5 report have led to questioning the standard obstetric RSI.

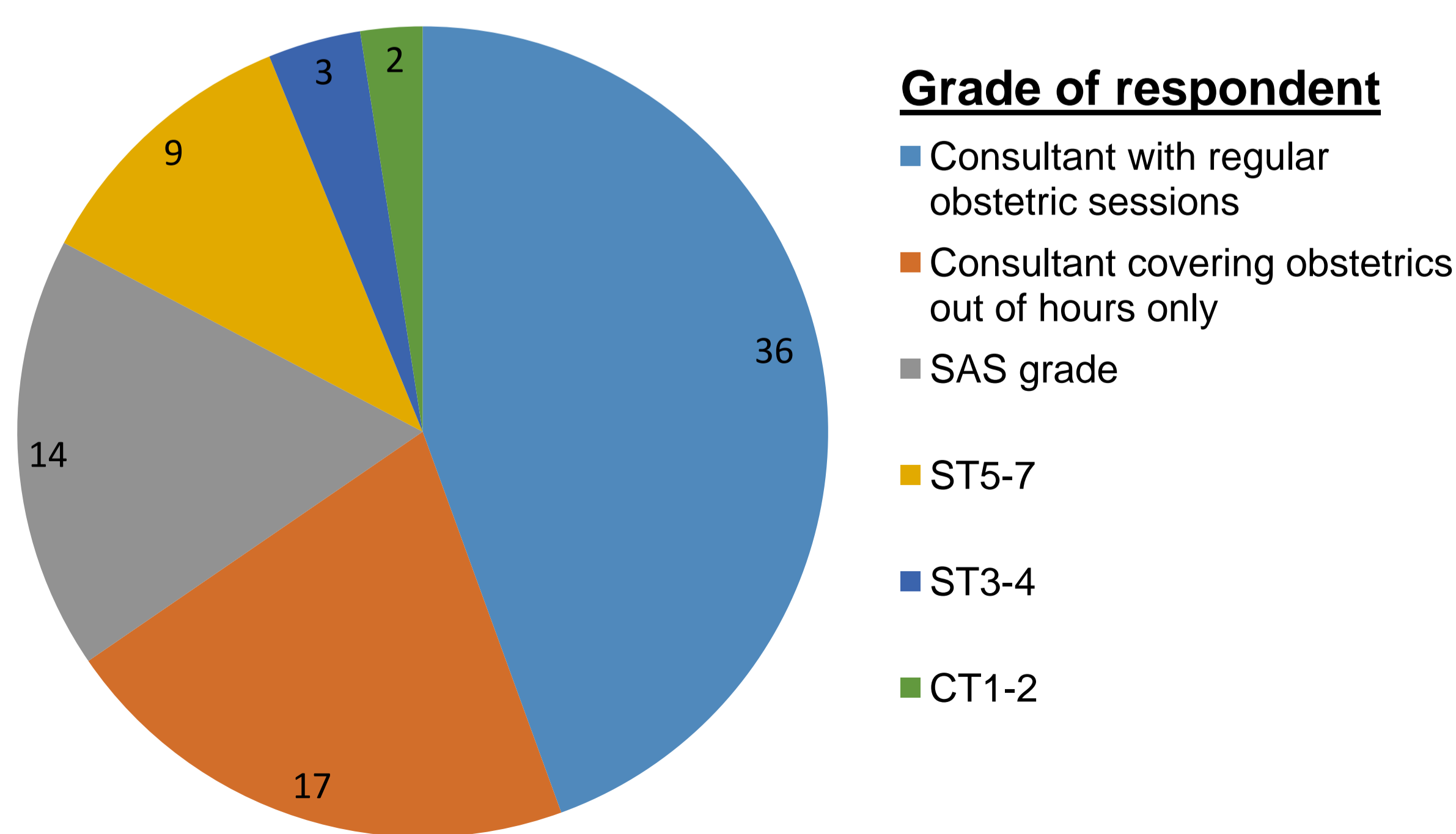
Aim: We sought to establish what our local practice of obstetric general anaesthesia is and whether a change of practice has been considered in the light of the report. Anticipating the joint OAA and DAS guidelines for obstetrics, we also asked about preference for first choice of laryngoscope and availability of video laryngoscopes.

Methods

An online survey based around the recommendations of NAP 5 was designed via iterations with the authors. It included questions on choice of anaesthetic drugs, airway management and the potential impact of the results of NAP 5 on the respondents' practice of obstetric general anaesthesia. The survey was distributed between July and December 2015 via contacts for the Midlands Obstetric Anaesthesia Network (MOAN). The network is a group of obstetric anaesthetists in the West Midlands with representation from most hospitals in the region. The number of people to which the link was sent was requested in order to calculate denominator data.

Results

There were 81 respondents to the survey. Unfortunately we did not receive a complete response regarding denominator numbers, although we confirmed that the survey link was sent to a minimum of 159 people, giving a response rate of 51%. The breakdown of respondents according to grade can be seen in the pie chart below.



Anaesthetic drugs for induction

The vast majority of anaesthetists (69/81; 85%) reported using only thiopentone for induction of general anaesthesia for caesarean section. The choice of anaesthetic agent and muscle relaxant for induction according to urgency of procedure can be seen in Table 1 below.

Drug	Emergency Caesarean Section (n = 81)	Elective Caesarean Section (n = 62*)
Thiopentone	89% (72)	85% (53)
Propofol	5% (4)	6% (4)
Either thiopentone or propofol	6% (5)	8% (5)
Suxamethonium	81	62
Rocuronium	4	4

Table 1: Choice of induction agent and muscle relaxant at induction for emergency and elective caesarean section.

*19 anaesthetists did not do elective obstetrics

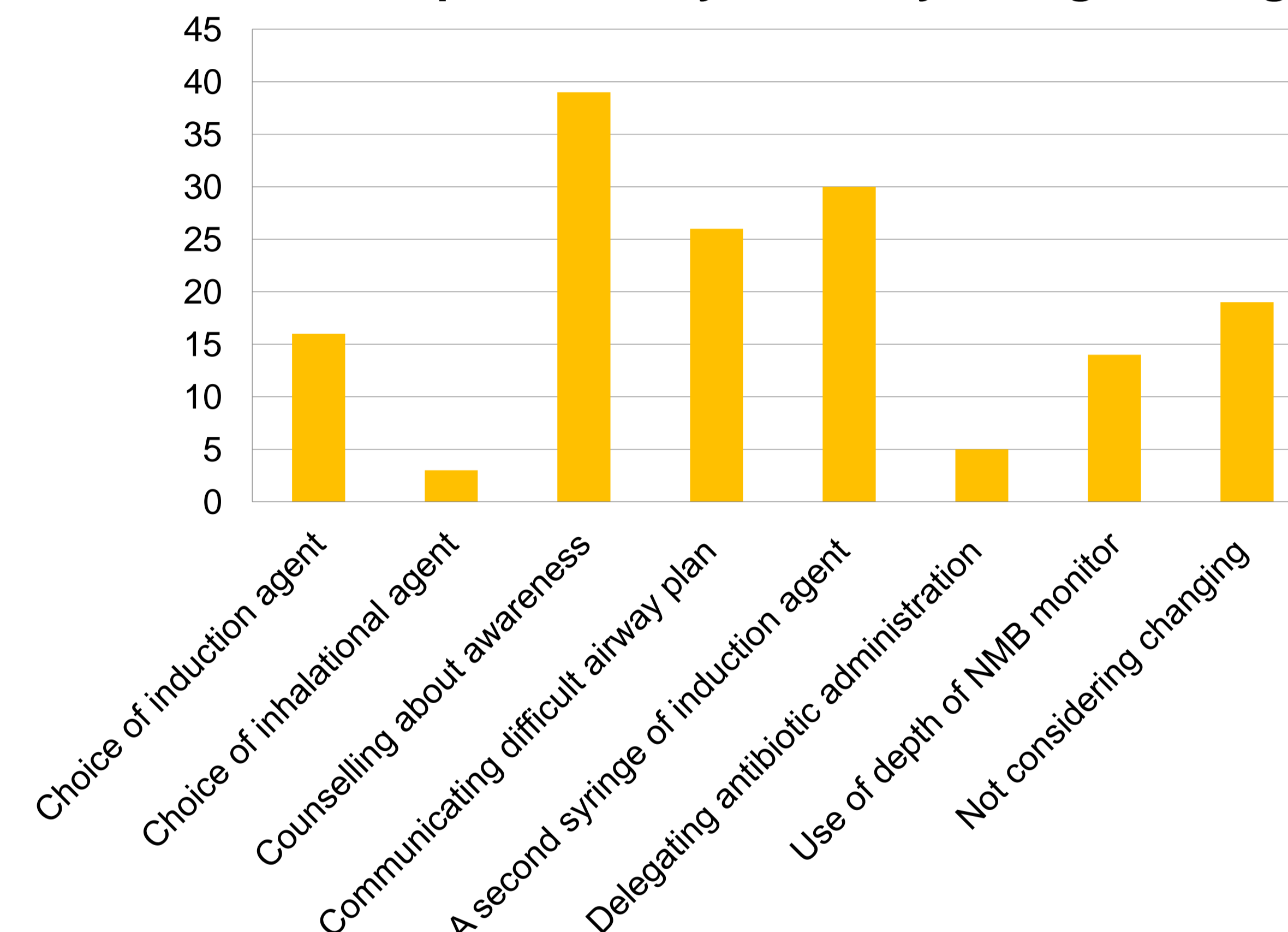
Peripheral nerve stimulator (PNS):

64% reported there is a PNS available in their obstetric theatre, 20% did not have one and 16% did not know if there was one.

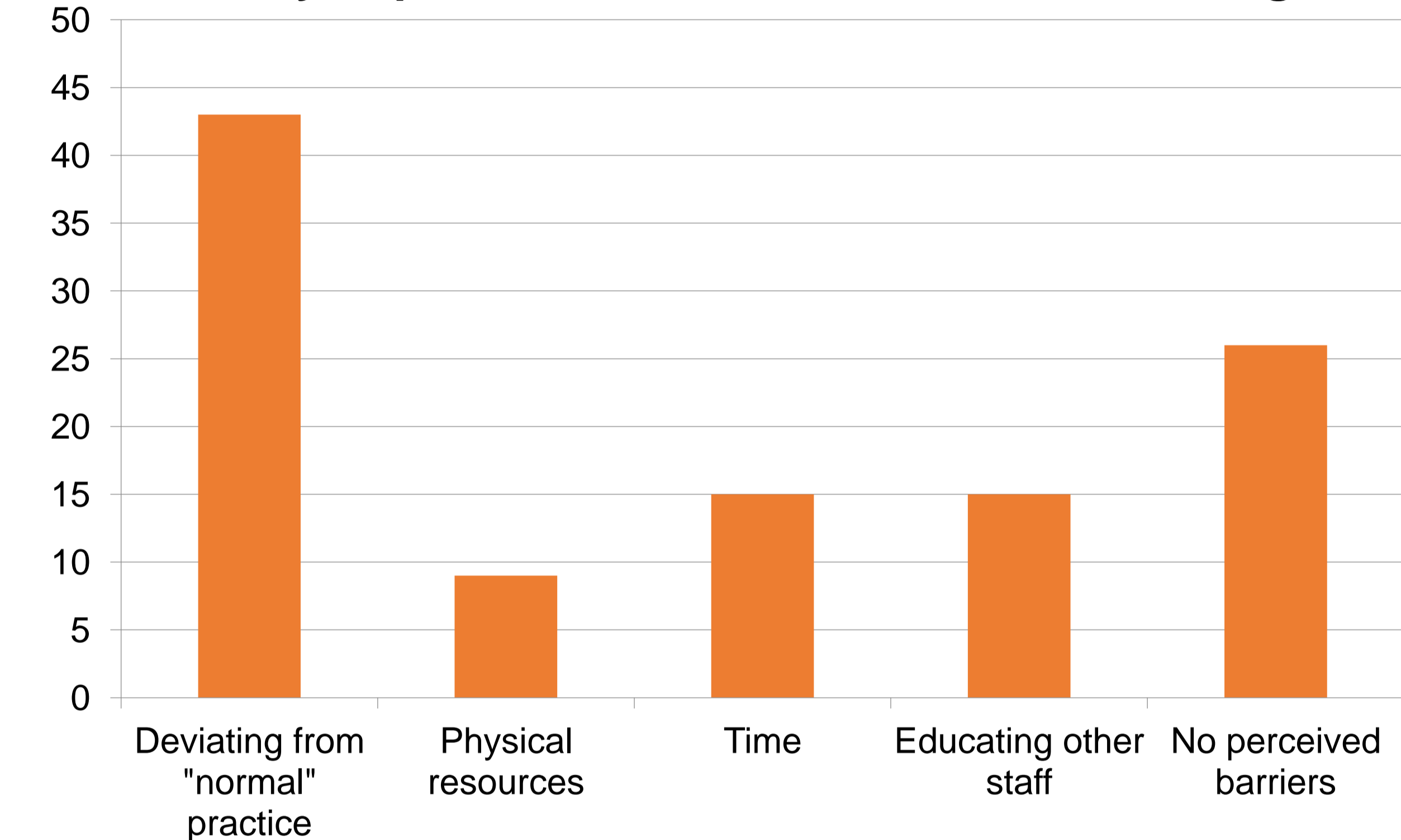
The effect of NAP 5 on clinical practice

We asked participants whether they had changed their practice based on the NAP 5 recommendations. 12% reported that they have changed their practice because of the results of NAP 5, with a further 54% considering changing. Only 2 of the respondents who use propofol as an induction agent reported that their practice had changed due to the results of NAP 5.

What areas of practice do you think you might change?



What do you perceive would be the barriers to change?



Laryngoscope preference and availability

Classical laryngoscopes remain the preference for intubation. The most common first choice laryngoscope was a standard length handle with a Macintosh blade chosen by 53% (size 3 blade 36%; size 4 blade 17%); 28% prefer a short handle (16% with a size 4 blade and 12% with a size 3 blade); 16% use a C-MAC video laryngoscope as first choice and 2% a polio blade. 12 respondents did not have a video laryngoscope available on their unit.

Discussion

Our survey suggests that the recommendations of NAP 5 are being considered in our region but that practice has been slow to change. Our data indicate that thiopentone remains the most widely used induction agent with few changing to propofol. However a significant limitation of our survey is the lack of denominator data and so it is possible that more people have changed practice than our results suggest. The most popular area in which a change in practice is being considered is counselling regarding the risk of awareness.

It will be interesting to see how the practice of general anaesthesia in obstetrics changes in our region over the coming months as historical practices are challenged and information becomes available from other regions. We understand that the Obstetrics Anaesthetists Association are conducting a national survey on a similar subject, so we await these results with interest.

References

- Pandit JJ and Cook TM. The 5th National Audit Project of the Royal College of Anaesthetists and the Association of Anaesthetists of Great Britain and Ireland. Accidental Awareness during General Anaesthesia in the United Kingdom and Ireland. Report and findings. September 2014.