

Anaesthesia for women with a booking body mass index >40 kg.m-2 for elective caesarean birth in nine maternity units across the north-west of England.

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INTRODUCTION

- The Royal College of Anaesthetists (RCoA) best practice standards for elective caesarean birth (CB) suggest that over 95% of elective CB should be conducted under a regional anaesthetic (RA) and < 1% should be converted to a general anaesthetic (GA).¹

OBJECTIVES

- To analyse whether nine maternity units in the north-west (NW) of England meet the RCoA standards for patients with booking BMI > 40kg.m⁻² scheduled for elective caesarean birth.
- Attendance at antenatal anaesthesia clinic and whether women were re-weighed in the third trimester was also assessed.

METHODS

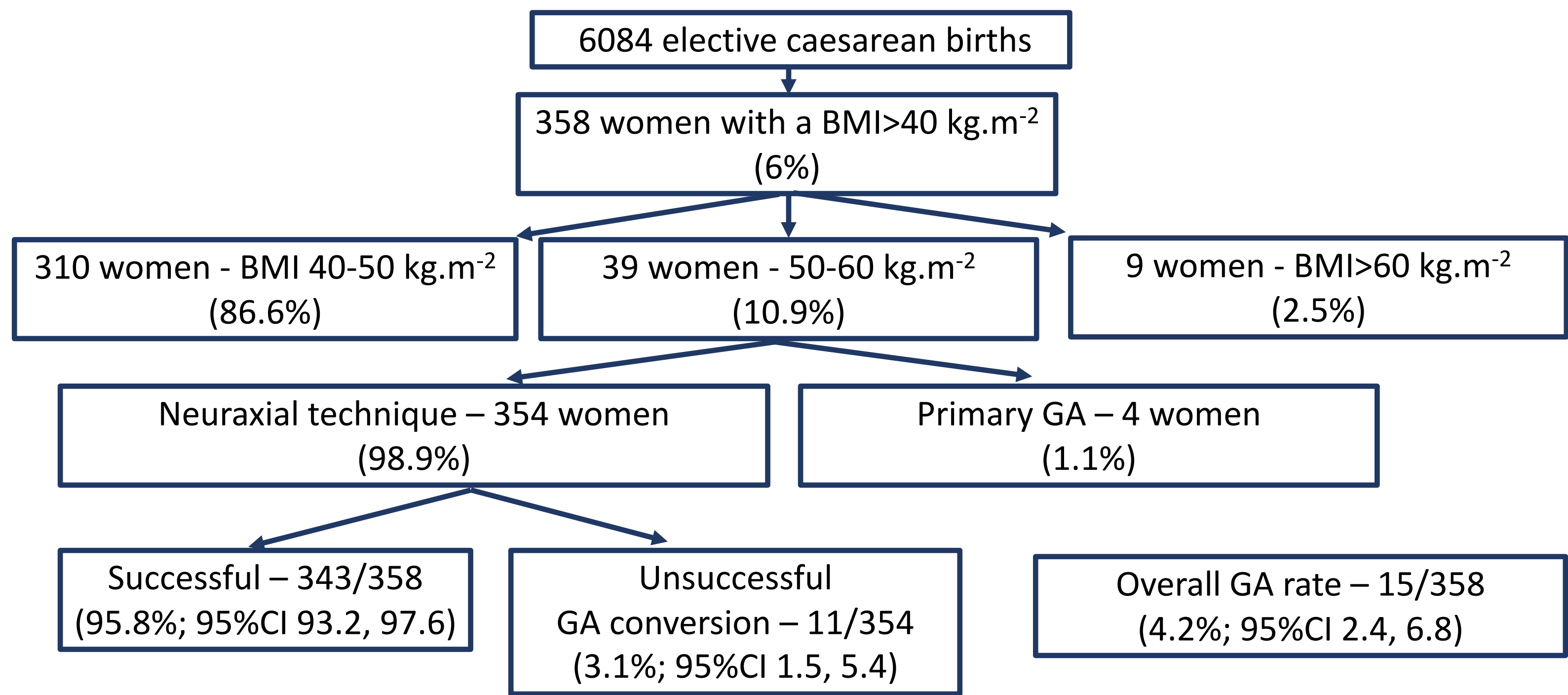
- Retrospective review of the anaesthetic technique and outcomes in patients with a booking BMI > 40kg.m⁻² undergoing an elective CB between 1st October and 30th September 2023.¹
- Results are presented as count (%), median [interquartile range;IQR] and odds ratio (OR) with 95% confidence intervals (CI) and were analysed using Clopper-Pearson exact statistics and logistic regression with significance at *P*<0.05 (two-sided).

RESULTS

- Across the nine units, 6084 elective CBs were performed.
- A BMI > 40kg.m⁻² or greater was recorded in 358 (6%) women.

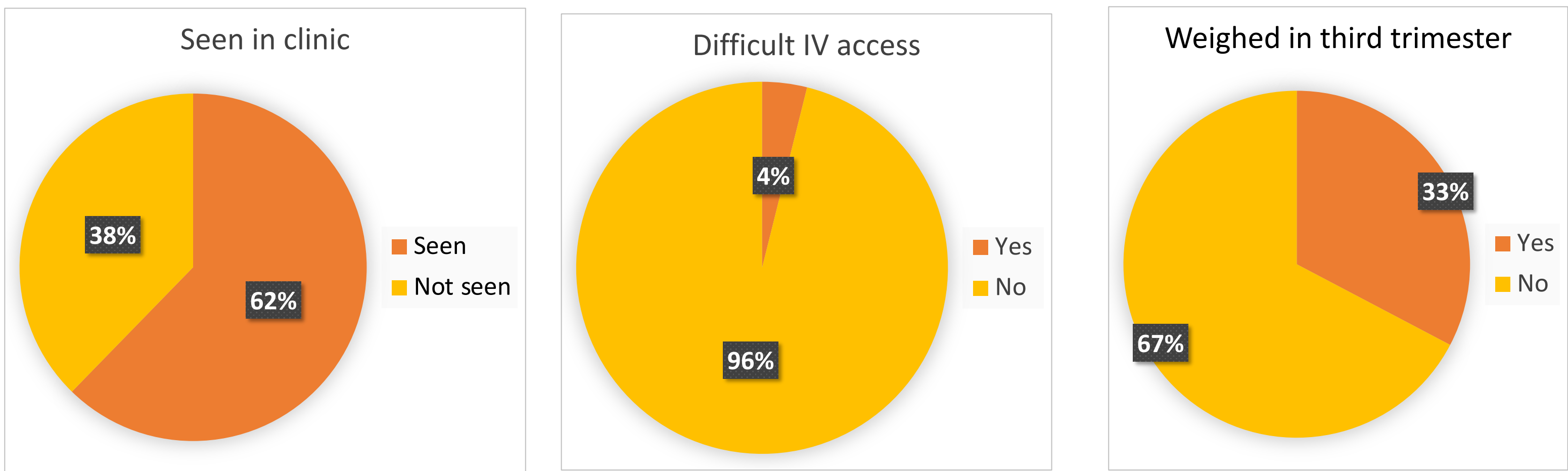
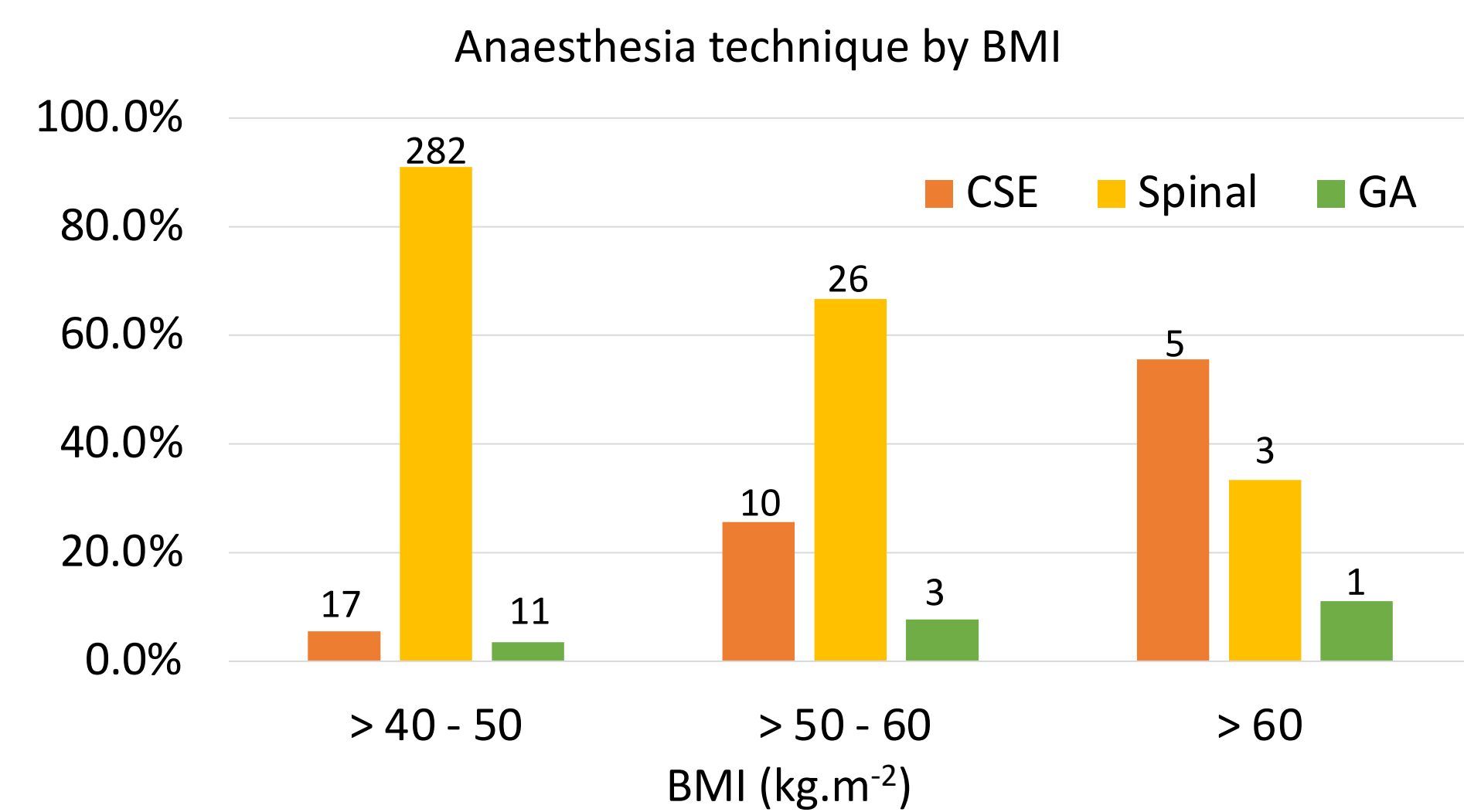
DEMOGRAPHICS

Median age (IQR)	32 (28-35) years
Median BMI (IQR)	43 (41.1 – 46.7) kg.m ⁻²
Median gestational age at delivery (IQR)	39 (38-39) weeks
Primiparous	71 (19.8%)



As BMI increased...

- The use of a combined spinal-epidural (CSE) increased significantly (*P*<0.0001) from 5.5% (17/310) in BMI > 40 – 50 kg.m⁻², to 25.6% (10/39; OR 5.9; 95%CI 2.5, 14.1) in BMI > 50 – 60 kg.m⁻² to 55.6% (5/9; OR 21.4; 95%CI 3.8, 87.0) in women with BMI > 60 kg.m⁻².



- Seven of the nine hospitals (77.8%) met the RCoA regional anaesthesia standard.
- Only three hospitals (33.3%) met the RA to GA conversion standard.
- None of the hospitals met the 100% standard for women to be seen in antenatal anaesthesia clinics or being weighed in the third trimester.
- No significant differences were recorded in the GA rates or the RA to GA conversion rates across the different BMI cohorts.

DISCUSSION

- Our data suggests that RA is utilised successfully in 96% of women with booking BMI > 40 kg.m⁻² in our nine centres in the NW of England.
- The choice of anaesthetic technique varied with increasing BMI across the NW maternity units with CSE use increasing significantly in patients with BMI > 50kg. kg.m⁻² in line with other studies.²
- The rate of RA to GA conversion was high in this cohort and 66.6% hospitals did not meet the recommended RCoA standards for conversion RA to GA.
- Increased use of pre-puncture neuraxial ultrasound, may help decrease the conversion rates from RA to an unplanned GA in this cohort this has implications for training.
- Difficult for hospitals to review all patients in anaesthesia antenatal assessment clinics, though these may provide additional opportunity to weigh patients in third trimester.
- Findings will help informed consent in women with BMI > 40kg.m⁻² scheduled for elective caesarean birth.

REFERENCES

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- Van den Bosch OFC, Fiset ME, Downey K, Maxwell C, Carvalho JCA. Anesthetic management of patients with class 3 obesity undergoing elective Cesarean delivery: a single-centre historical cohort study. *Canadian Journal of Anaesthesia*. 2023; 70: 202-210.

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