

Anaesthesia and the Category 1A Caesarean Section.

Our experience with the 20 minute decision-to delivery interval.

Michelle Walters, Kimberley Hoyland

William Harvey Hospital, East Kent Hospitals University Foundation Trust

Why sub-divide category 1 caesarean sections (CS) into 1A and 1B?

The original categorisation of CS (1-4) did not specify any delivery time frames. Audit standards subsequently recommended decision to delivery interval (DDI) goals.

In 2017 East Kent Hospitals concluded that the proposed DDI time frame (30-90 minutes) for a category 2 LSCS was too lengthy in cases with CTG concerns and after several clinical incidents the risk management team put forward the Category 1B CS in order to give these cases (CTG concern but not life-threatening) the urgency they require.

Category 1A was to be reserved for the very urgent ‘crash’ CS and be given a new DDI of 20 minutes.

Why perform this audit? Anecdotally it is thought that our unit has a high rate of general anaesthesia for CS. We questioned this and if correct could it be a consequence of the 1A/1B subclassification?

Results: How many caesareans were performed in 2022 at our hospital?

1423. How many of these were emergency CS?

795 emergency CS (56%). Including 160 Category 1 CS (11%).

What % of all CS were performed under general anaesthesia? 6%.

At what time did the Category 1 CS predominantly occur? 62% and 64%

of Cat 1A and Cat 1B CS respectively took place ‘out of hours’ at night.

Who was the anaesthetist? 60% Cat 1A and 82% Cat 1B were performed

by anaesthetists in training.

Category 1

Category 1A
DDI 20 mins

Category 1B
DDI 30 mins



References:

1. Kinsella SM. A 20-minute decision-delivery interval at emergency caesarean section using general anaesthesia: a clinically relevant target. *Anaesthesia* 2021; 76: 1021-1025.
2. Kinsella SM, Walton B, Sashidharan R, Draycott T. Category-1 caesarean section: a survey of anaesthetic and peri-operative management in the UK. *Anaesthesia* 2010; 65: 362-368.
3. Bhatia K, Columb W, Bewlay A, Eccles J et al. The effect of COVID-19 on general anaesthesia rates for caesarean section. A cross-sectional analysis of six-hospitals in the north-west of England. *Anaesthesia* 2021; 76: 312-319.

Results: What were the neonatal outcomes of the baby’s born at Cat 1 A/B CS?

Neonatal outcomes were rated by obstetricians as ‘good’ or ‘poor’ at delivery. 24/160 were born in poor condition. Of these, 18 and 6 were born at Cat 1A and Cat 1B CS respectively. 17/24 (71%) of the baby’s in poor condition were born following general anaesthesia.

How do our results compare with other institutions? The last UK wide survey (2010) on mode of anaesthesia demonstrated a GA rate of 50% at Cat1 CS in similarly sized units (2). Our unit has a comparable rate of 43% at Cat 1 CS but the majority of these are categorised as Cat 1A. More recent data is available since the Covid-19 pandemic. A change in practice resulted in significant reductions in GA CS rates. GA rates halved in some units (3). It is not yet known if these reductions have been sustained post-pandemic.

What can we conclude from our audit? A Cat 1A CS is usually performed under GA. The majority of Cat 1B are regional anaesthesia. Advocates for the subclassification argue a 1A category identifies urgent cases and aides rapid anaesthetic decision making. The 1B category provides an urgency for cases with abnormal CTG’s where a 60-90 minute DDI is inappropriate. Opponents argue that mode of anaesthesia is a decision for the anaesthetist with the team and general anaesthesia is associated with anaesthetic morbidity and is rarely the woman’s preference and that chasing a shorter DDI must be balanced with this.

Results: Mode of anaesthesia for Category 1A and 1B LSCS in 2022:
Number (%)

	General Anaesthesia	Spinal	Epidural top-up	Total
Category 1A	65 (80% of Cat 1A)	14 (17% of Cat 1A)	2(3% of Cat 1A)	81 (51% of total Cat 1)
Category 1B	4 (5% of Cat 1B)	59 (75% of Cat 1B)	16 (20% of Cat 1B)	79 (49% of total Cat 1)
Category 1A+1B	69 (43%)	73 (46%)	18 (11%)	160 (100%)