Reasons for delay in decision to delivery in category one lower segment caesarean section (LSCS): a retrospective audit

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Introduction

Approximately 25-30% of pregnant women in the UK undergo caesarean section (CS)[1]. The urgency of caesarean birth is classified from category one to four[1].

Category one is where there is an immediate threat to life of the woman or fetus and aims to perform caesarean birth as soon as possible, and within 30 minutes of decision to delivery (DDI)[1].

Methods

A retrospective audit over an 8 month period from January to August 2021 analysing cases with a DDI time of greater than 30 minutes. Data was collected from electronic records.

Results

There were 1418 caesarean births during this period, of which 16% were category one CS. Almost a third of category one CS were delayed, with a maximum DDI time of 67 minutes.

Of these: 61% took place out of hours; the decision maker was a consultant in 42% and 79% were high-risk pregnancies. Indication for delivery in 75% was presumed fetal compromise.

A specialty grade anaesthesia doctor was involved in 94% of cases and over 80% of deliveries took place in the Obstetric theatre. The average parturient body mass index was 31.9. There was disparity in documentation of timings across our electronic recording systems.

More than 50% had a delay prior to anaesthesia. Anaesthesia related delays occurred in 27% and just over 25% were post anaesthesia delays.

Figure 1: Pie charts detailing reasons for delay

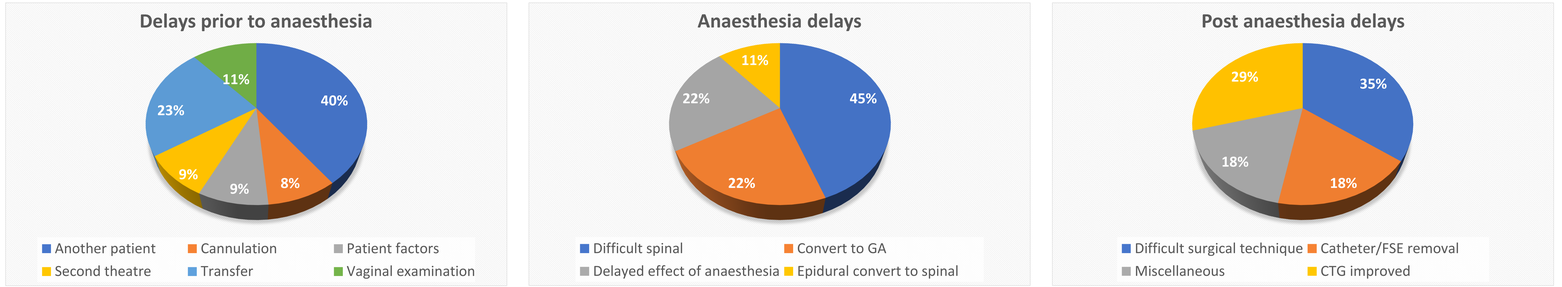


Table 1: Average and maximum times for each part of the patient journey from decision to delivery

	Average time	Maximum time
Decision for LSCS to send time	4.4 minutes	31 minutes
Decision for LSCS to arrival in theatre	12 minutes	38 minutes
Arrival in theatre to start of anaesthesia	5.5 minutes	22 minutes
From start of anaesthesia to knife to skin	16.8 minutes	38 minutes
Knife to skin to delivery of baby	5 minutes	13 minutes

References

1. National Institute for Health and Care Excellence. (2021). Caesarean birth (NICE guideline NG 192) https://www.nice.org.uk/guidance/ng192/chapter/Recommendations
2. Kinsella SM, Girgirah K, Scrutton MJL. Rapid sequence spinal anaesthesia for category-1 urgency caesarean section: a case series. Anaesthesia 2010; 65: 664-669

Discussion

A category one CS is a stressful situation and effective and clear communication amongst team members is essential to maintain safety.

There are several points in the process of DDI where delays can be minimised, particularly pre-theatre, which would increase time for regional anaesthesia (RA). RA has a better safety profile than general anaesthesia (GA)[2].

The recommendations we made include ensuring that all labouring women are theatre ready; introduction of a single call system to communicate with team members simultaneously, provision of scrubs on labour ward for birth partners.

We aim to have 100% Consultant Obstetrician involvement in decision for category one CS and to de-escalate when appropriate. We are introducing multidisciplinary simulated training highlighting risks of obstetric GA and plan to run simulated category one LSCS scenarios to improve and streamline logistics.