

Code Caesarean: an analysis of outcomes from a level one, tertiary rural centre

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Introduction

The decision-to-delivery interval (DDI) is the time between the decision to perform an emergency caesarean section and the birth of the foetus. The UK Royal College of Obstetricians and Gynaecologists guidelines (2010)¹ use a DDI of 30 minutes as an audit tool, but note unnecessary haste may increase risk².

We conducted an audit at Mildura Base Hospital, to assess reasons for Code Caesareans, DDIs, and maternal and foetal outcomes.

Objectives

To assess reasons for delays in the DDI, and whether these delays negatively affected maternal or foetal outcomes.

Methods

The date and time of Code Caesareans were collected from hospital paging system records and cross-referenced with the birth registry to identify the patients. Data was retrieved from Birthing Outcome System; medical records; and Clinical Results pathology system

Results

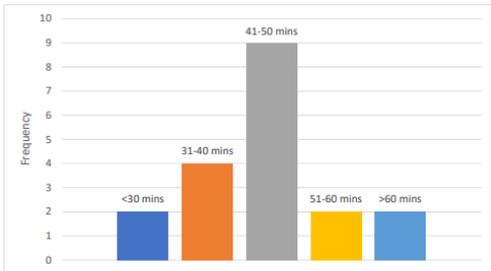


Table 1: Decision to Delivery Intervals

The DDI ranged from 25 to 210 mins with a median (interquartile range) of 45 mins (33 – 49 mins).

Reasons for delays >50 minutes

Case 1: DDI 210 minutes. Delayed Caesarean until arrival of PIPER team

Case 2: DDI 71 minutes. Awaiting theatre staff following 0628hrs code

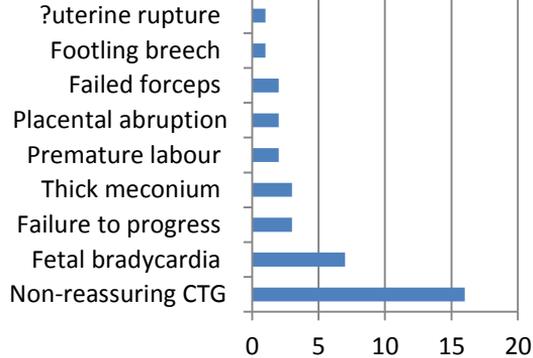
Case 3: DDI 55 minutes. Two theatres running; mobilisation of third team.

Case 4: DDI 54 minutes. Delayed transfer to theatre; failed spinal anaesthesia.

Results

Codes called during normal working hours had a shorter median DDI than those called out of hours (38 vs 46 minutes). However, this was not statistically significant ($p=0.13$).

Reasons for Code Caesareans



Neonatal Outcomes

7 (37%) babies were admitted to Special Care Nursery. The mean (SD) DDI were:

- 45 minutes (15 minutes) for admitted babies
- 41 minutes (10 minutes) for babies not admitted ($p=0.51$) (excludes outlier of 210 minutes). Excluding two premature infants transferred to Melbourne, all were discharged within a week.

Three babies had APGARs <7 at 1 minute, requiring intubation (1) or Neopuff with PEEP (2). However, all 5 minute APGARs were >7.

Conclusion

This audit suggests DDIs were acceptable at MBH, culminating in acceptable outcomes during the time period studied. Within the limitations of this study, no negative outcome were directly attributable to DDIs greater than 30 minutes.

References

1. Royal College of Obstetricians and Gynaecologists Classification of Urgency of Caesarean Section – A continuum of risk. Good Practice No 11 April 2010.
2. MacKenzie IZ, Cooke I. Prospective 12 month study of 30 minute decision to delivery intervals for “emergency” caesarean section. BMJ 2001;322:1334–5 cited from Classification of Urgency of Caesarean Section – A continuum of risk. Good Practice No 11 April 2010. Royal College of Obstetricians and Gynaecologists. https://www.rcog.org.uk/globalassets/documents/guidelines/go_odpractice11classificationofurgency.pdf2