

Analysis of mode of delivery by anaesthesia and ethnicity at North Bristol NHS Trust central delivery suite

Isra Salah¹, Sethina Watson², Rachel Wood²

¹University of Bristol Medical School, ²North Bristol NHS Trust

Introduction

A recent nationwide cohort study [1] found that general anaesthesia (GA) for caesarean sections (CS) was 58% more common in Caribbean (black or black British) women and 35% more common in African (black or black British) women compared to British white women.

This project aimed to identify differences in obstetric anaesthesia care delivery at the North Bristol Trust (NBT) compared to this study. Specifically, we wanted to determine that there were no differences between ethnic groups in percentages receiving GA.

Methodology

- Data was extracted from the Euroking electronic patient record (EPR) at NBT for all deliveries at the central delivery suite between 1/4/2021 and 31/3/2023.
- Data for 11,237 was analysed.
- Data included, ethnicity, birth outcome, caesarean category, vaginal birth, general and neuraxial anaesthesia. The project was registered with the clinical audit and effectiveness group and received Caldicott approval.

Results

- The findings are based on the analysis of data extracted from digital records by the users (midwives).
- The data was charted inconsistently, so this audit provides discernible patterns instead of definitive data.
- Among the cases examined, 137 instances were identified where GA was used for CS. Using baseline data for comparison cases of the 137 GA were analysed, only 136 records were useable. This included 24 elective sections and 108 emergency sections.

Table 1. Ethnicity Emergency	Count	Percentage	Total %
Asian or Asian British: Bangladeshi	1	0.93	0.59
Asian or Asian British: Indian	3	2.80	2.12
Asian: Any other Asian background	2	1.87	1.78
Black or Black British: African	6	5.61	3.19
Black or Black British: Caribbean	2	1.87	0.82
Mixed: Any other mixed background	2	1.87	0.85
Mixed: White and Asian	2	1.87	0.66
Mixed: White and Black African	1	0.93	0.38
Other: Any other Ethnic Group	4	3.74	2.78
Other: Not stated	15	14.02	8.01
White: Any other White background	8	7.48	10.38
White: British	60	56.07	64.31
White: Irish	1	0.93	0.75
Total	107	100	

- Whilst Table 1 indicates 107 emergency sections, our text references 108. This inconsistency emerged from a data discrepancy identified during the analysis phase.

Results cont.

As shown in Table 1, Total % refers to the total dataset of over 11,000 records. If the total percentage is equal to the percentage of cases where GA was administered, then the percentage of cases where GA was used should also be equal. Our results found that white women had lower GA rates for emergency sections compared to Black African, mixed and other ethnic groups.

Conclusion

This project demonstrates the importance of accurate data collection. NBT now has a new EPR where data related to anaesthesia is entered by anaesthetists, which may improve accuracy for future analysis. However, our findings showed disparities in GA rates by ethnicity groups, with white women receiving lower GA rates for emergency sections compared to Black African, mixed and other ethnic groups. Although the reasons are unclear, this could be representative of inequality in the care of mothers in these ethnic groups. Understanding the significance of research into obstetric care inequalities is essential to pursuing health equity.

References

[1] MBRRACE-UK Saving Lives Improving Mothers' Care - Lessons learned to inform maternity care from the UK and Ireland Confidential Enquiries into Maternal Deaths and Morbidity 2018-20. Available: [hps://www.npeu.ox.ac.uk/assets/downloads/mbrrace-uk/reports/maternal-report-2022/MBRRACEUK_Maternal_MAIN_Report_2022_UPDATE.pdf](https://www.npeu.ox.ac.uk/assets/downloads/mbrrace-uk/reports/maternal-report-2022/MBRRACEUK_Maternal_MAIN_Report_2022_UPDATE.pdf)