

Ethnic Variations in the Utilisation of REMIFENTANIL PCA AND EPIDURAL ANALGESIA DURING LABOUR

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INTRODUCTION

Epidural analgesia and Remifentanil patient-controlled analgesia (PCA) are frequently used for labour analgesia. While ethnic variation in epidural use is well reported,¹ comparative data for Remifentanil PCA are lacking.

METHOD

The electronic patient record system was searched to find all delivery records between 1st September 2022 to 1st January 2026 across 3 Manchester hospitals.

Delivery records with labour epidurals and Remifentanil PCA were included.

The patients' ethnicity as recorded was split into 5 ethnic groups as per 2021 census.

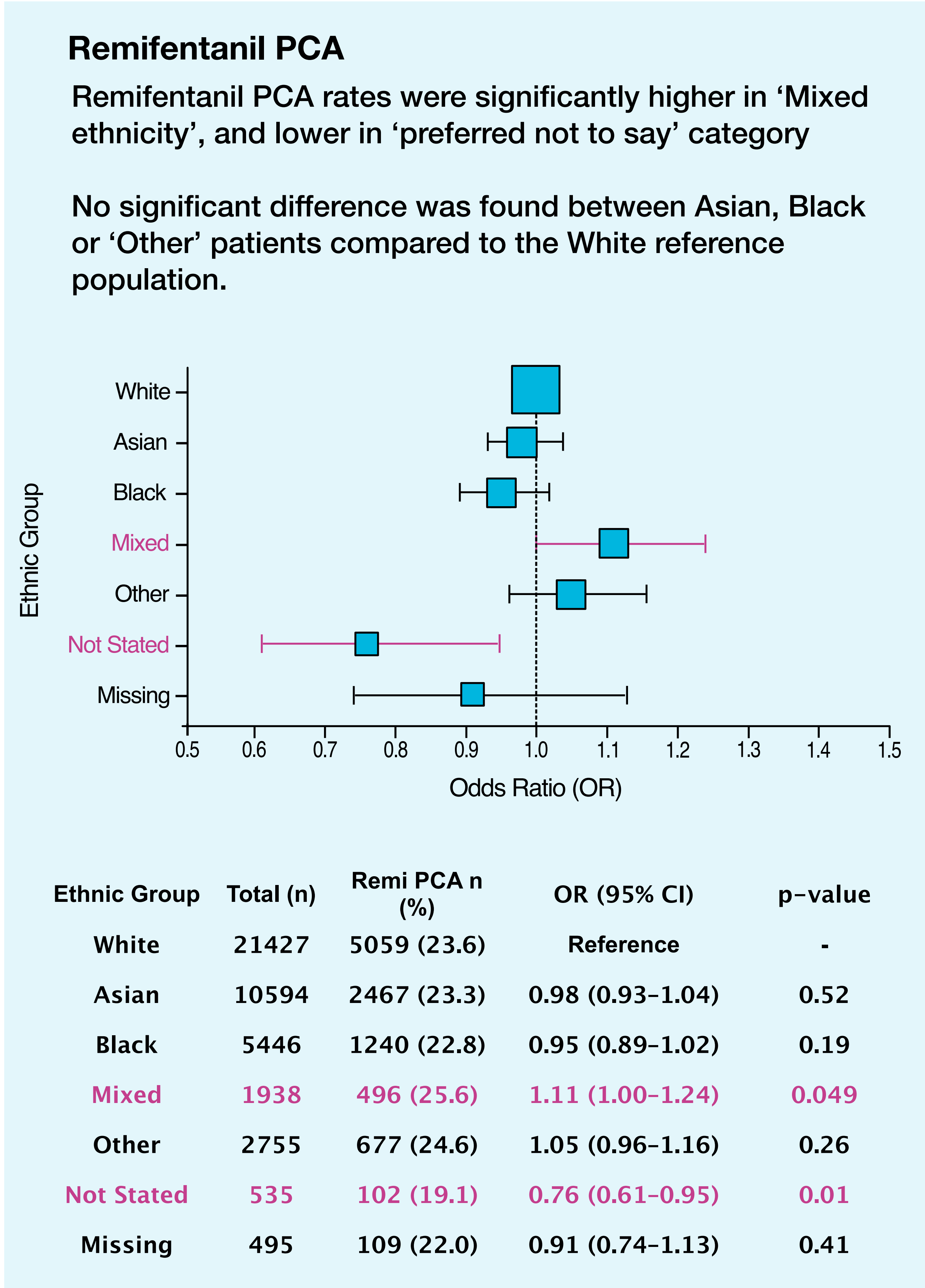
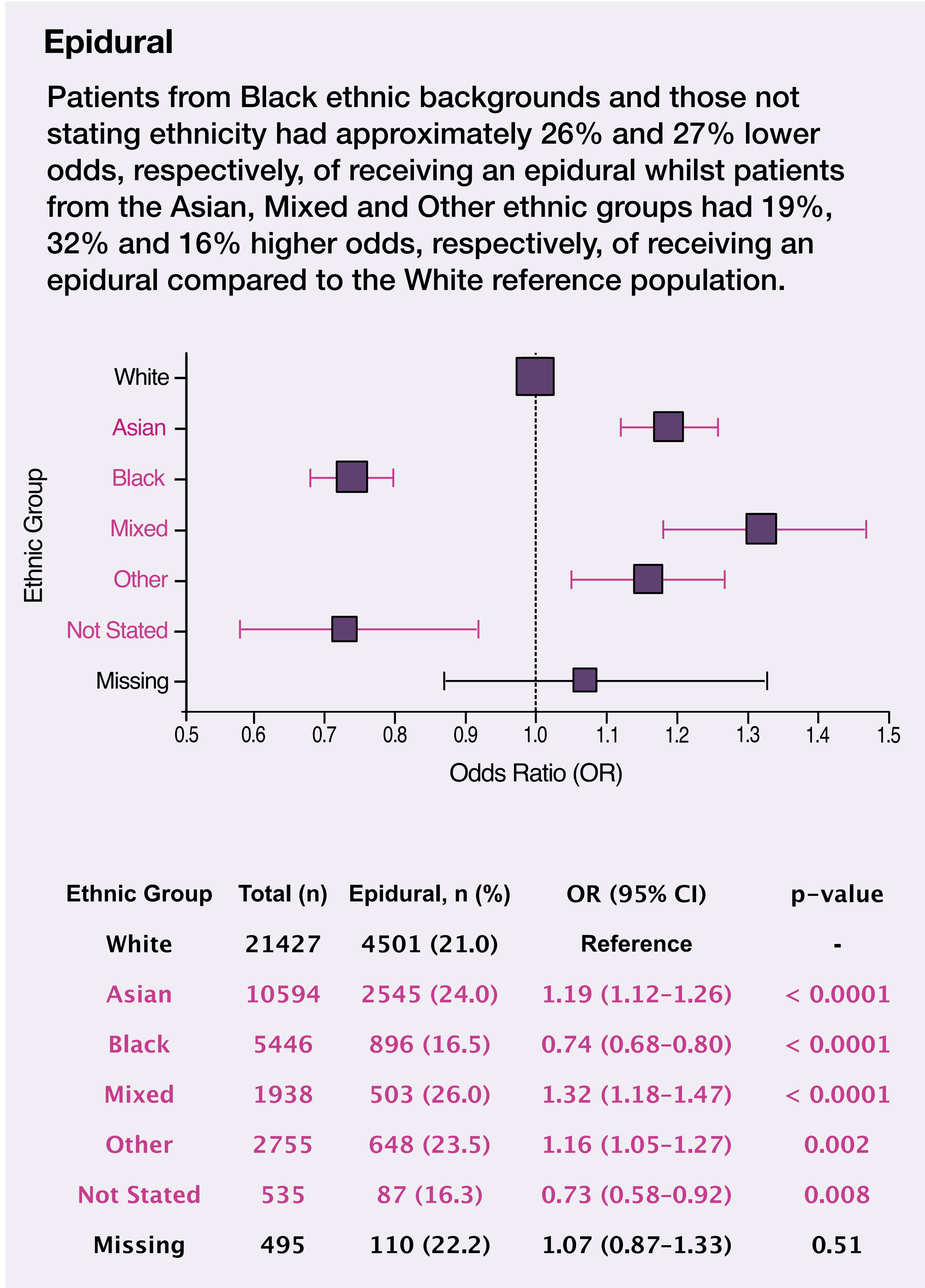
The rates of labour epidurals and Remifentanil PCA were collected.

The data was analysed using chi-square for independence and logistic regression to estimate the odds ratio and 95% confidence intervals using white ethnicity as reference.

Statistical significance was defined at p<0.05.

KEY RESULTS

Of 43,190 births (excluding elective caesareans), Remifentanil PCA was requested by 10,130 (23.5%), whilst 9290 had a labour epidural (21.5%). There was significant ethnic variation in both epidural (p<0.0001) and Remifentanil PCA (p=0.0025) use.



KEY MESSAGE

Ethnic disparities exist in both epidural and Remifentanil PCA use, but Remifentanil PCA may offer more equitable access to labour analgesia across ethnic groups.

DISCUSSION

Our study demonstrates crude ethnic variation in the use of labour epidural and Remifentanil PCA, though substantially less pronounced in the latter.

The use of epidural analgesia is particularly low in black patients. This may be multi-factorial and influenced by communication barriers, cultural attitudes, socio-economic status and provider factors.

A Remifentanil PCA service may provide more equitable access to labour analgesia. Remifentanil PCA is a rapidly accessible, easy to initiate, patient-controlled option.

Promoting broader, standardised use of Remifentanil PCA could play a key role in reducing disparities in maternity care and improving access to effective pain relief for all women.

Further large-scale studies are needed to confirm ethnic disparities and elucidate underlying causes, including individual, provider and systemic determinants.

REFERENCES

1.Bamber JH, Goldacre R, Lucas DN, A national cohort study to investigate the association between ethnicity and the provision of care in obstetric anaesthesia in England between 2011 and 2021. *Anaesthesia* 2023; 78: 820–829.