

Neonatal Deaths in a London Hospital: Maternal, Fetal, and Ethnic Risk Factors

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Objectives

- To identify key maternal and foetal risk factors contributing to neonatal deaths at a London District General Hospital in 2023.
- To evaluate the use and timing of diagnostic and management strategies, including antenatal care pathways and genetic screening.
- To assess the impact of early antenatal interventions in pregnancies complicated by prematurity, chromosomal anomalies, and congenital malformations.
- To explore the role of ethnic disparities, particularly in relation to late antenatal booking and adverse neonatal outcomes.
- To contextualise findings within the framework of the NHS 10-year plan to address inequalities in maternity care.

Study Design

- A **retrospective case series** analysing nine neonatal deaths managed at a London District General Hospital.

Core Focus Areas

- Evaluation of maternal and foetal risk factors
- Review of diagnostic pathways and analysis of management strategies prior to neonatal death.

National Benchmarks

- Findings were reviewed in the context of national targets for neonatal mortality reduction.

Health Inequality Lens

- Emphasis was placed on ethnic and socioeconomic disparities, aligning with national efforts to advance equity in maternity care.

Methods

- Reviewed medical records of nine women with maternal risk factors (e.g., advanced age, obesity, hypertension, consanguinity, late booking).
- Categorised neonatal deaths by cause: prematurity, chromosomal abnormalities, congenital defects, and infections.
- Analysed antenatal diagnostics: trisomy screening, foetal echocardiography, infection panels.
- Included postmortem reports for diagnostic confirmation.
- Incorporated MBRRACE-UK¹ data showing increased risk among socioeconomically deprived ethnic groups.

Results

Neonatal Death Patterns

- 7 / 9 deaths occurred in extreme preterm births (<28 weeks)
- 4 cases involved Trisomy 13, 18, or 21 + congenital anomalies
- 1 case due to congenital CMV infection

Maternal Risk Factors

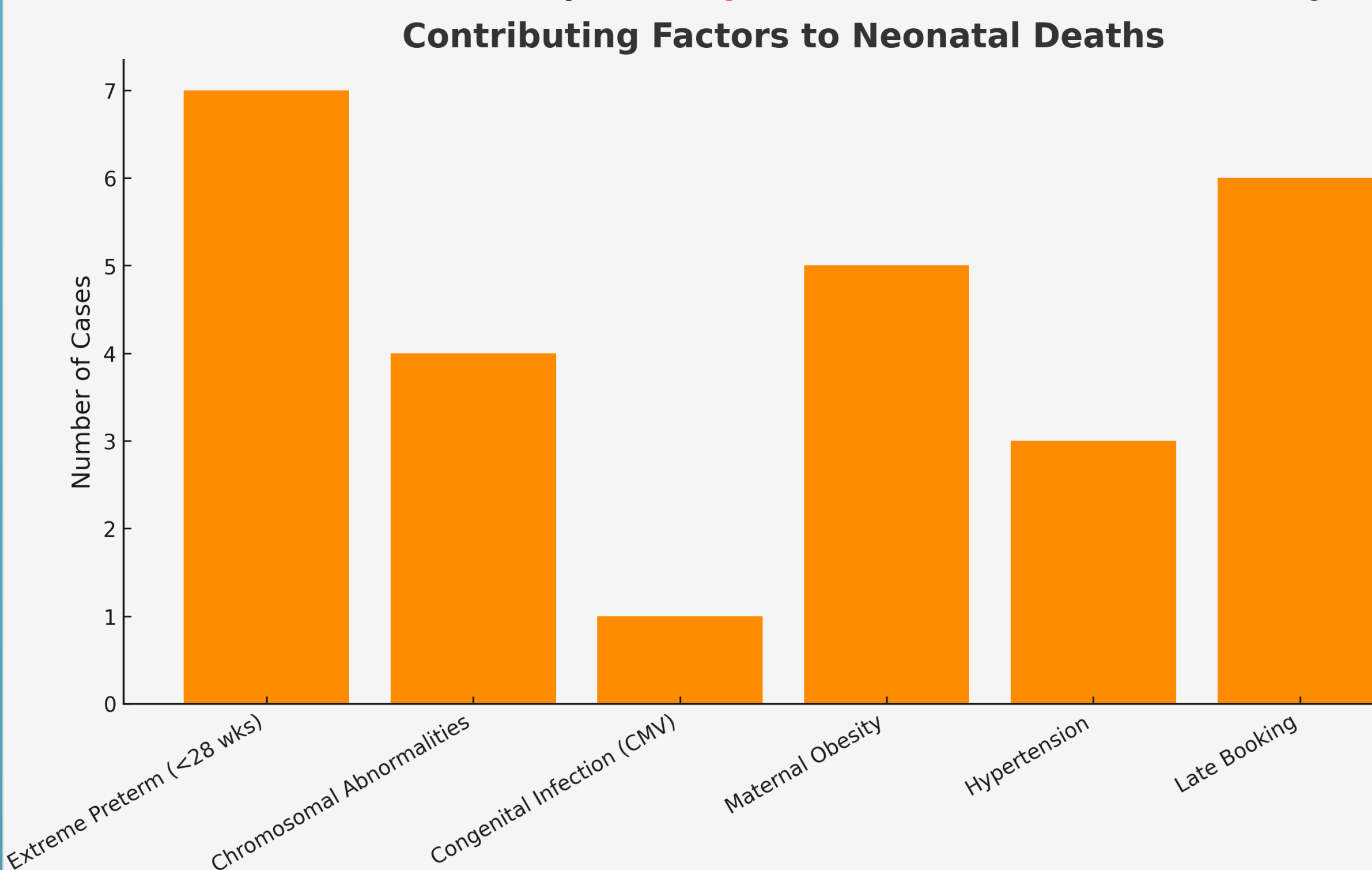
- Obesity
- Hypertension
- Late antenatal booking
- These were more common in South Asian mothers

Ethnic & Social Disparities

- Late booking** (Often due to language barriers, cultural norms and lack of early pregnancy awareness)
- Resulted in missed screening and intervention windows

Mortality Rate Comparison

- Local neonatal mortality rate (2024): **0.19%**
- NHS 10-year plan target: **0.05%¹**
- The local rate is nearly **4x higher** than the national target



Conclusions & Recommendations

Key Conclusions

- Early antenatal care** and **timely intervention** are critical to reducing neonatal deaths
- Late booking** remains a major barrier — especially among ethnic minorities
- Ethnic and social inequalities** continue to drive disparities in outcomes

Strategic Recommendations

- Promote **early booking** as a priority across maternity services
- Implement **personalised care pathways** for high-risk and minority groups
- Improve **engagement with ethnic minority families**, especially South Asian communities

Proposed Actions

Awareness Campaign Suggestions

- Launch a **community-based education campaign** on early booking
- Produce a poster that can be distributed to key community sites.
- Ensure materials are:
 - **Multilingual**
 - **Culturally sensitive**
 - Involve **key family decision-makers** (e.g., spouses, elders, community/religious leaders)(Not yet Implemented)

References

- 1 - MBRRACE-UK Perinatal Mortality Report 2023
- NHS Saving Babies' Lives Care Bundle v3
- NICE Guidelines CG62 Antenatal Care