# Trends and disparities in perinatal health outcomes among women from a refugee background in Victoria, Australia: A population-based study

EPH190

Yordanos Gizachew Yeshitila[1,2,3],Lisa Gold[1], Julie Abimanyi-Ochom[1], Linda Sweet[4,5] ,Elisha Riggs[3,6] ,Ha N.D Le[1]

[1]Deakin University, Geelong, Australia, Institute for Health Transformation, Deakin Health Economics, School of Health and Social Development, Faculty of Health, Melbourne, Australia; [2] School of Nursing, College of Medicine and Health Science, Arbaminch University, Arbaminch, Ethiopia; [3]Intergenerational Health, Murdoch Children's Research Institute, Parkville, Melbourne, Australia; [4]School of Nursing and Midwifery, Deakin University, Melbourne, Australia; [5]Centre for Quality and Patient Safety Research, Western Health Partnership, Institute for Health Transformation, Victoria, Australia; [6] Department of General Practice, The University of Melbourne, Melbourne, Australia

## Introduction and Aim

- Women from refugee backgrounds have a heightened vulnerability to severe maternal morbidity and perinatal complications(1).
- The extent and nature of disparities in perinatal health outcomes vary across countries where refugees settle, depending on factors like their country of origin and the specific outcomes under investigation(2)
- Addressing health disparities requires identifying causes of inequality, equitable resource distribution, and culturally sensitive, woman-centred healthcare with effective communication(3).
- The study aims to examine the perinatal health outcomes of women from refugee backgrounds compared with Australian-born women in Victoria and to assess trends of adverse outcomes over time

## Methods

**Data source:**

- Victorian government perinatal data collection from 2003 to 2017.

**Outcome measures:**

- **Maternal morbidity:** Perineal tears, postpartum haemorrhage, puerperal sepsis, abnormal labour, postnatal depression, and admission to intensive care unit/high dependency unit (ICU/HDU)
- **Neonatal morbidity and mortality:** Preterm birth, admission to neonatal intensive care unit/ special care baby unit (NICU or SCBU), small for gestational age, APGAR score (below 7 at 5 minutes), stillbirth, and neonatal death

**Exposure variable**

- **Women of refugee background** are those from countries where a significant portion of migration to Victoria has been through humanitarian programs over the past decade.

**Statistical analysis:**

- Pearson's chi-square used to test for differences in adverse neonatal and maternal outcomes between refugee background and Australian-born mothers
- Multiple logistic regression was conducted to explore the relationship between adverse perinatal outcomes and the women's refugee background.
- Trend analysis of adverse outcomes over fifteen years was conducted.

## Results

- Data of 754,270 singleton births to mothers born in Australia (721,425) and refugee backgrounds (32,845) were included in the analysis

Table 1: Variations in adverse perinatal outcomes between refugee background and Australian-born mothers

| Adverse outcomes | Refugee background | Australian born | P-Value |
|---|---|---|---|
| Small for gestational age | 10.3% | 8% | <0.001 |
| Stillbirth | 0.7% | 0.4% | |
| Preterm birth | 5.6 | 6.3 | |
| Abnormal labour | 21.3% | 14.5% | |
| Postpartum haemorrhage | 22.3% | 21.3% | |
| Puerperal sepsis | 0.17% | 0.07% | |
| Maternal admission to ICU/HDU | 1.4% | 1% | |

- Women of refugee background had higher odds of adverse neonatal and maternal outcomes, including stillbirth, neonatal death, low APGAR score, small for gestational age, postpartum haemorrhage, abnormal labour, perineal tear, and maternal admission to intensive care compared to Australian-born women.
- lower odds of neonatal admission to intensive care and maternal perinatal depression.

Table 2: Adjusted odds ratios for selected perinatal health outcomes of refugee-background women and Australian-born women***

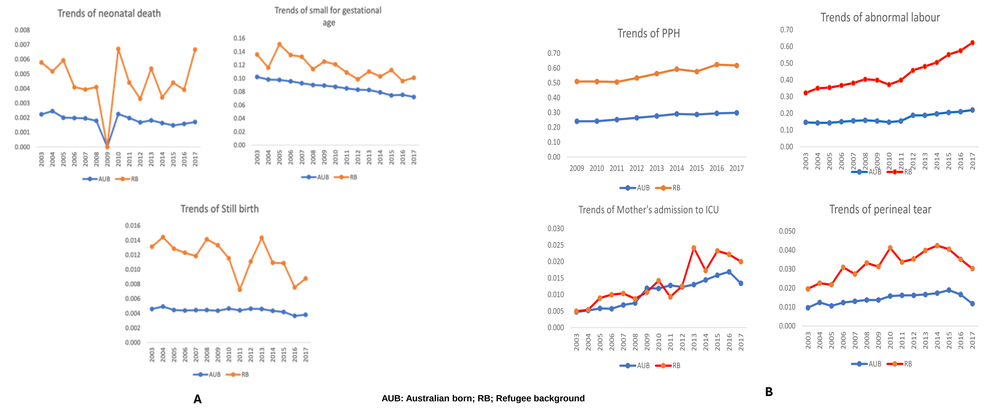
| Adverse outcomes | Australian born (Reference category) | Refugee background AOR (95%CI) |
|---|---|---|
| Small for Gestational Age | 1.00 | 1.75 (1.66, 1.83) |
| Stillbirth | 1.00 | 1.47 (1.17, 1.82) |
| Neonatal death | 1.00 | 1.83 (1.31, 2.57) |
| Baby admission to NICU/SCN | 1.00 | 0.90 (0.85, 0.94) |
| Perinatal depression | 1.00 | 0.23 (0.12, 0.46) |
| 3rd/4th-degree perineal tear | 1.00 | 1.55 (1.40, 1.72) |
| Abnormal labour | 1.00 | 1.65 (1.68, 1.71) |
| Puerperal sepsis | 1.00 | 2.23 (1.67, 2.98) |
| Maternal admission to ICU/ HDU | 1.00 | 1.45 (1.35, 1.62) |

AOR: Adjusted Odds Ratio; CI: confidence interval; ICU: Intensive Care Unit; HDU: High Dependency Care; NICU/SCN: Neonatal Intensive Care Units/Special Care Nurseries

***Adjusted for year of index birth, maternal age, parity, gravidity, socio-economic status body mass index, smoking status, past medical conditions and APH*

- The trend analysis showed limited signs of gaps closing over time in adverse perinatal outcomes.

**Figure 1: Trends of adverse A(neonatal) B(maternal) outcomes**




A B

AUB: Australian born; RB; Refugee background

## Conclusion and Recommendations

- Refugee background was associated with unfavourable perinatal outcomes, highlighting the negative influence of refugee status on perinatal health.
- This evidences the need to address the unique healthcare requirements of this vulnerable population to enhance the well-being of mothers and newborns.
- Implementing targeted interventions and policies is crucial to meet the healthcare requirements of women of refugee backgrounds.
- Collaborative efforts between healthcare organizations, government agencies and non-governmental organizations are essential in establishing comprehensive support systems to assist refugee women throughout their perinatal journey.

**References**

1. Urquia ML, Glazier RH, Mortensen L, Nybo-Andersen A-M, Small R, Davey M-A, et al. Severe maternal morbidity associated with maternal birthplace in three high-immigration settings. Eur J Public Health. 2015;25(4):620-5.
2. World Health Organization (WHO). World Report on the Health of Refugees and Migrants. 2022.
3. Acharya G. The refugee crisis in Europe: will it increase disparity in women' s health? Acta Obstetricia et Gynecologica Scandinavica. 2016;95(4):375-6.

Contact details:
Yordanos Gizachew Yeshitila
y.yeshitila@deakin.edu.au

Need more details about the paper? Use the QR Code