

TRENDS BETWEEN ASSISTIVE REPRODUCTIVE TECHNOLOGY AND FOETAL AND MATERNAL OUTCOMES IN PREGNANCY.

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OBJECTIVE

We aimed to describe the trends in assistive reproductive technology (ART) with adverse maternal and foetal outcomes using a national population study.

METHODS

Utilised live birth data in the United States (n=22,618,566) from the Centers for Disease Control and Prevention.

Maternal and foetal outcomes were investigated.

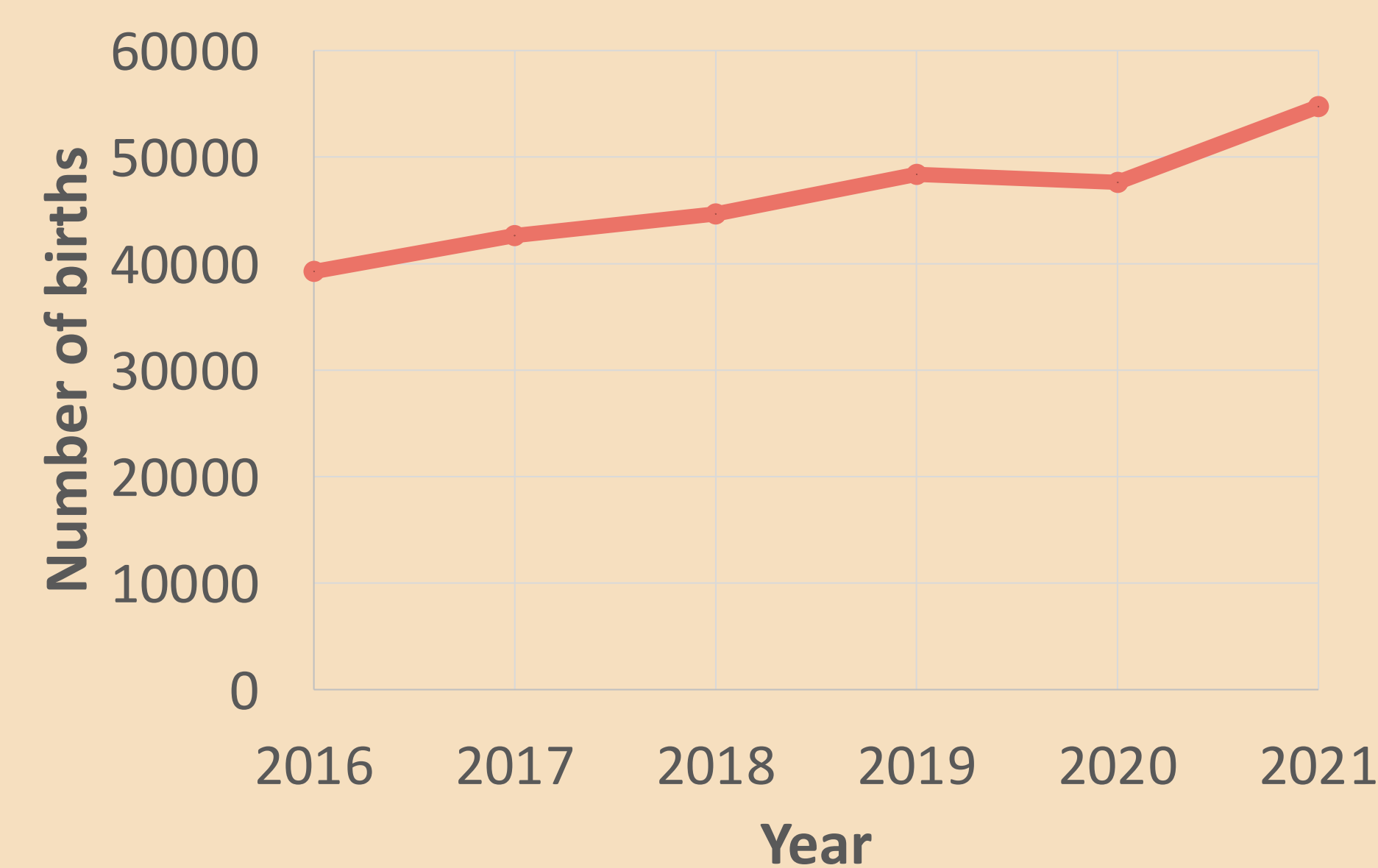
Data on demographics and prevalence were extracted and collated and Microsoft Excel and STATA.

Maternal outcomes included delivery methods, and complications of pregnancy.

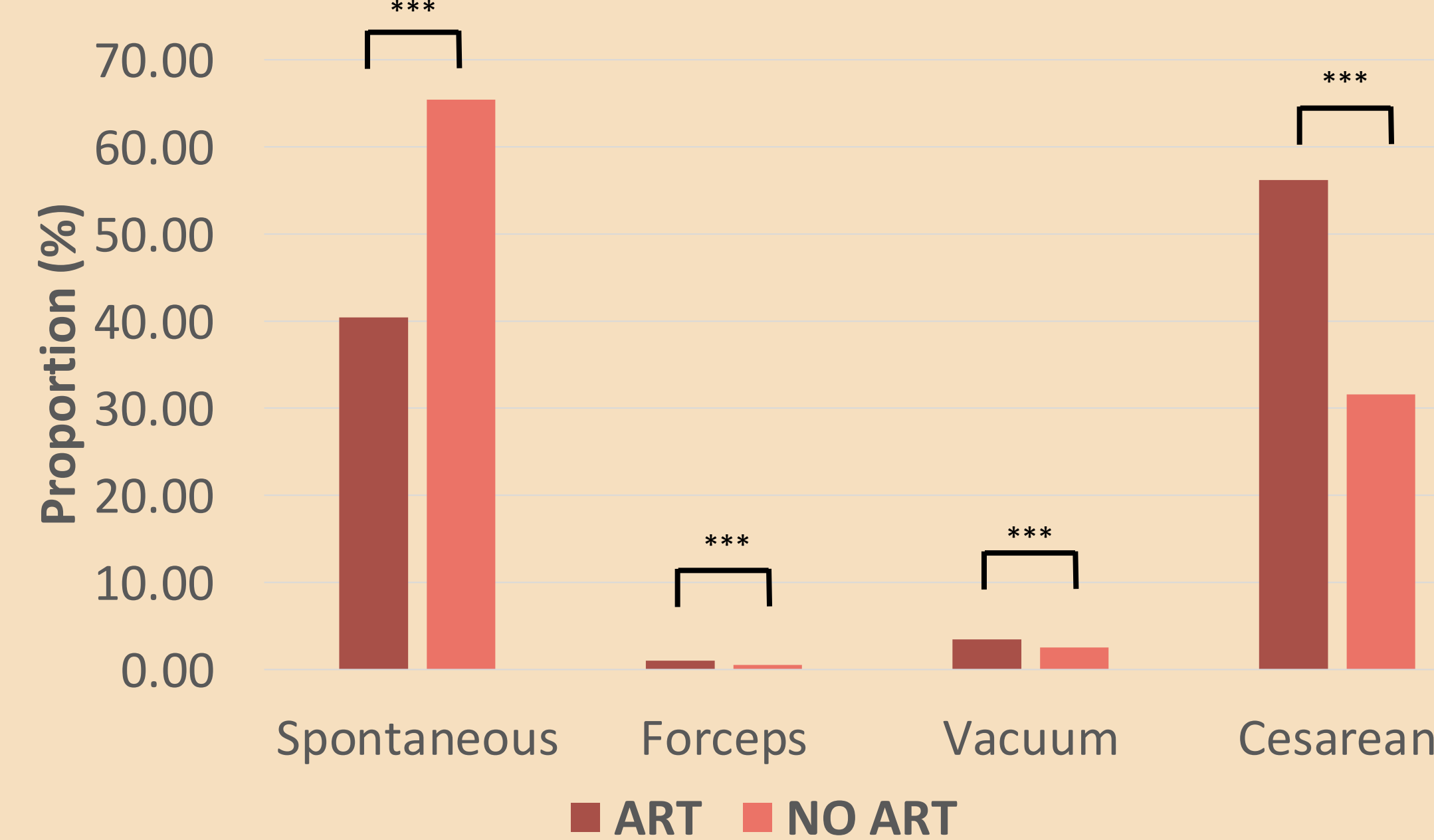
Foetal outcomes consisted of a prevalence of congenital birth defects, gestation age at birth and admission to Neonatal Intensive Care Unit.

FIGURES

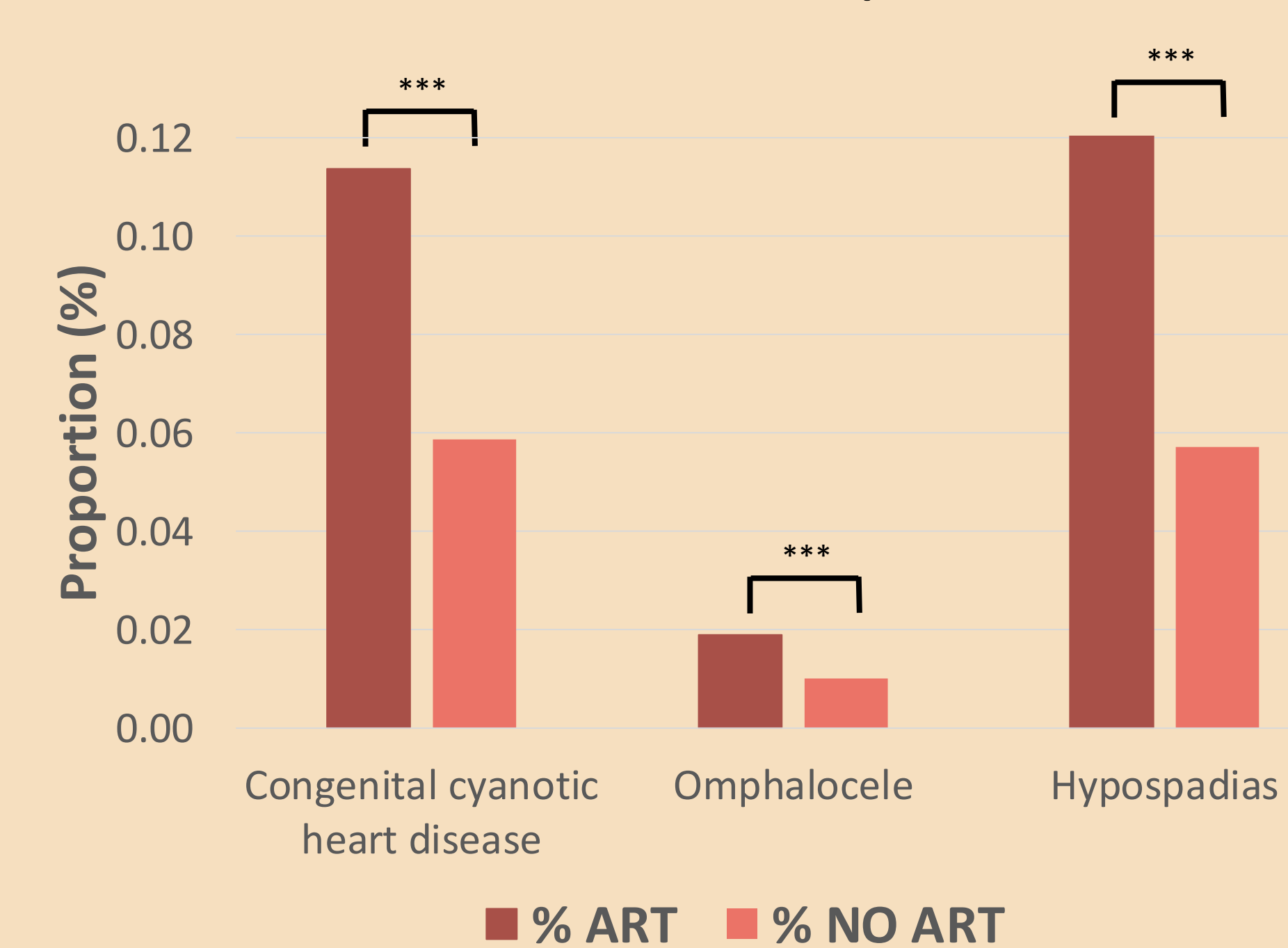
Trends in ART Births in the United States, 2016 - 2021.



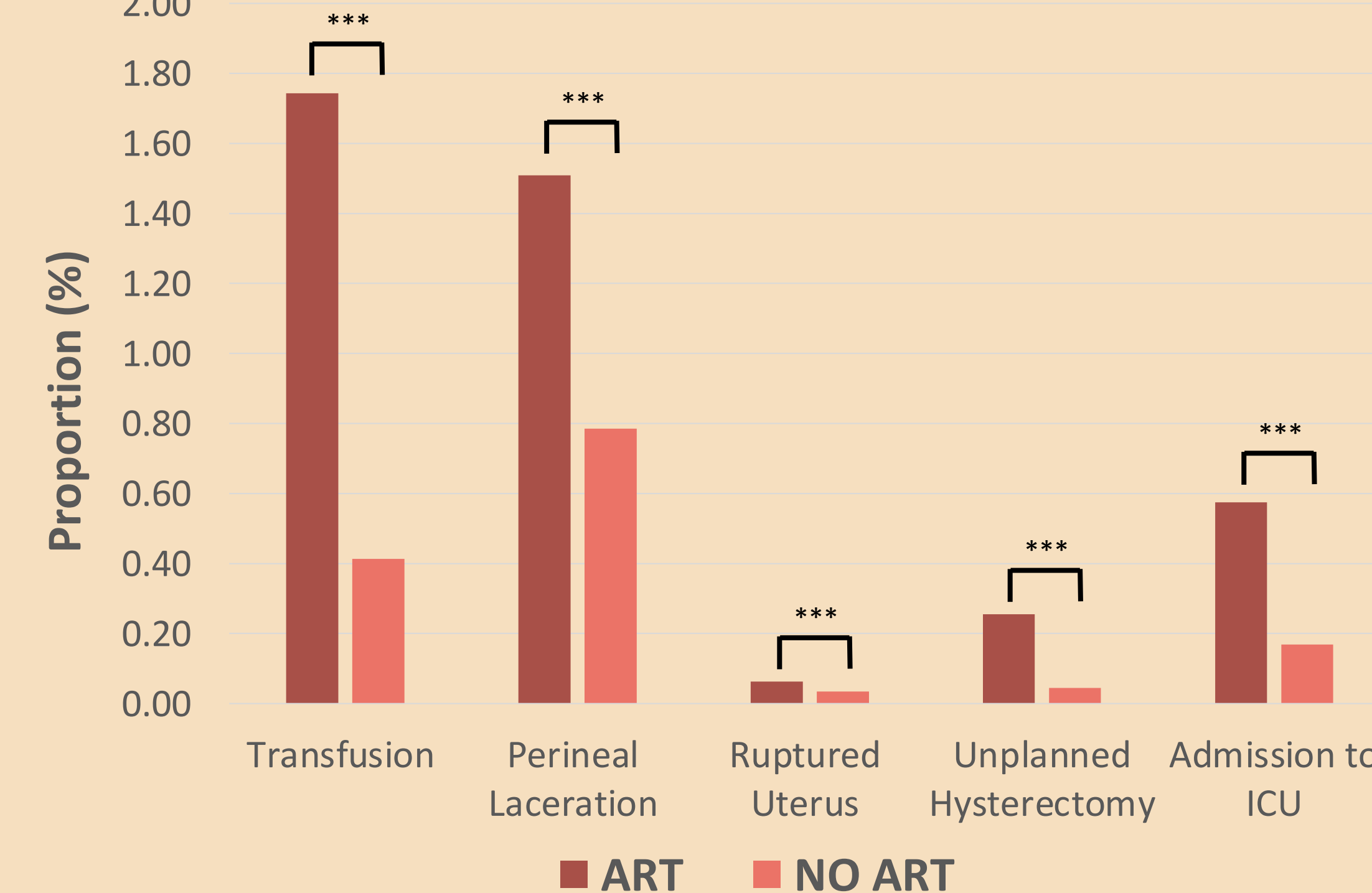
Delivery methods for ART births compared to non-ART births.



Foetal outcomes for ART births compared to non-ART births.



Maternal outcomes compared between ART and non-ART births.



RESULTS

- Among 22,618,566 live births, 277,217 (1.23%) utilised ART.
- The prevalence of ART births has increased by **6.10%** from 2016 to 2021.
- ART pregnancies were associated with a **2.72-fold increase** in odds of caesarean section (95% CI 2.70 – 2.74)
- There was a **4.23-fold increase** in the risk of blood transfusion (CI 95% 4.11 – 4.36) compared to the non-ART births.
- ART is associated with a greater risk of congenital defects. For example, there was a **1.92-fold increase** in congenital cyanotic heart disease (95% CI 1.71 0 2.15).
- Admission to the Neonatal Intensive Care Unit was higher with premature births occurrence being more likely

CONCLUSION

- This study confirms a significant association between ART and worsened maternal and foetal outcomes.
- With the increasing trends of ART being utilised, further longitudinal studies are necessary to fully understand the outcomes of ART.