

# Contemporary Trends in Perinatal Outcomes Following Instrumental Vaginal Births: The Victorian Context

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## Background

**Instrumental Vaginal Births (IVBs)** refer to the use of forceps, vacuum, or both instruments during childbirth to expedite complicated second stage arrests<sup>1</sup>. Indications include fetal distress, prolonged labour, or when maternal pushing efforts are contraindicated<sup>1</sup>.

Currently in Victoria, approximately **15%** of all births are completed by IVBs, and this percentage appears to be rising<sup>2</sup>.

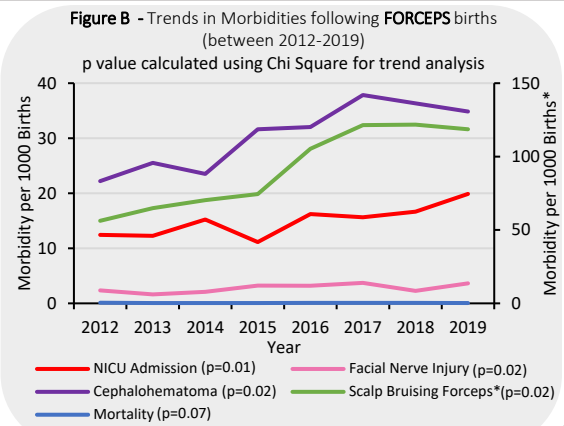
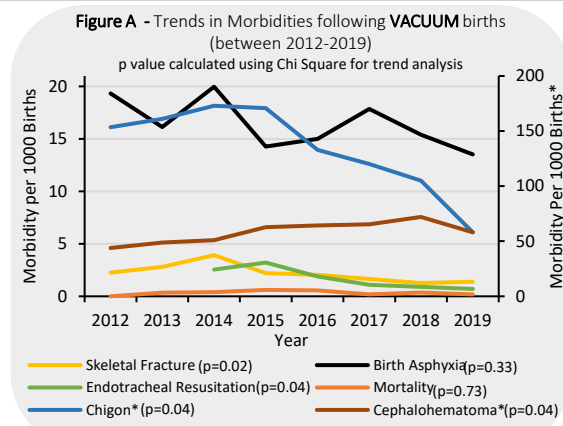
Whilst IVBs are often utilised as an alternative to Caesarean Sections to avoid associated complications, IVBs can also result in morbidities for both mother and baby<sup>3</sup>. Current literature on IVBs primarily focuses on maternal harms and are **underpowered for rare fetal outcomes**<sup>3</sup>.

Recent Victorian neonatal fatalities following IVBs have questioned the **safety of instrumental practice**. Further, fetal morbidity and mortality rates may be increasing and going unrecognised across Victoria<sup>2</sup>.

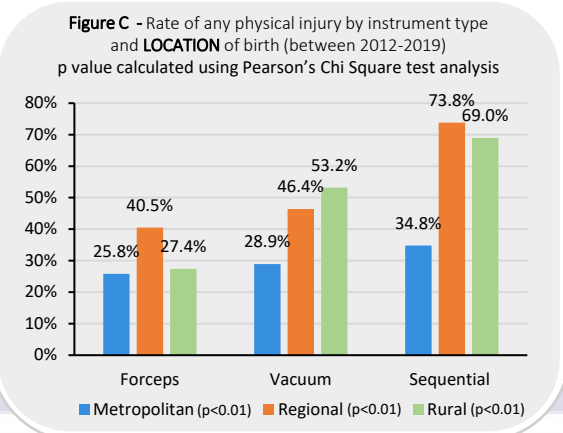
## Aims

- To determine the rates of morbidity and mortality associated with Instrumental Vaginal Births between 2012-2019.
- To determine if the rates of morbidity and mortality, following IVBs between 2012-2019, differ by location of birth (metropolitan, regional, and rural settings)

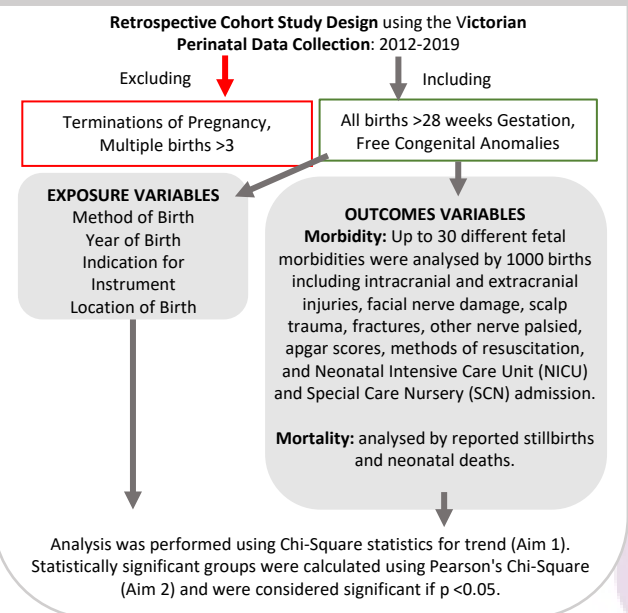
## Results



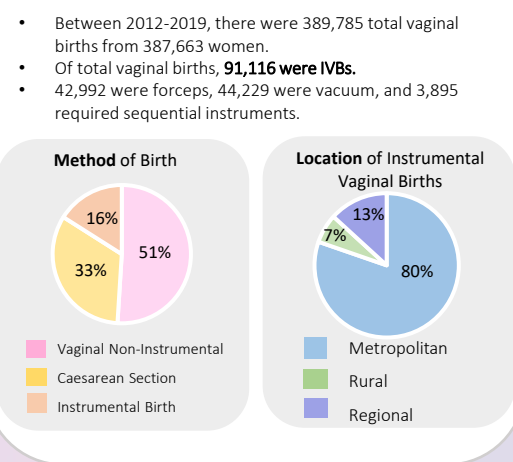
Note: Not all morbidities analysed are included in Figure A and B due to poster size restrictions. Contact authors for further information.



## Methods



## Demographic Results



## References

- RCOG. Operative Vaginal Delivery Green-top Guideline No. 26. UK; 2011.
- CCOPMM. Victoria's mothers, babies and children 2019 report. SCV, Victorian Government 2021.
- Verma GL, Spalding JJ, Wilkinson MD, Hofmeyr GJ, Vannevel V, O'Mahony F. Instruments for assisted vaginal birth. Cochrane Database of Systematic Reviews. 2021(9).

## Discussion

In Victoria between 2012-2019, rates of certain morbidities following **vacuum birth decreased significantly**. Contrastingly, rates of certain morbidities following **forceps birth increased significantly**. No significant trend changes in mortality were seen following either method of birth.

Babies born in rural and regional settings had the highest rates of physical morbidity among all types of instrumental births.

Rates of morbidity differed by instrument type and fetal harms may be increasing, particularly among forceps and those performed in regional and rural centers. Our results support ongoing analysis into the causes of increasing fetal morbidities, and discrepancies in care across locations.