

# Retrospective comparison of quality of documentation in electronic medical records versus paper-based notes

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## Introduction

With the increasing movement to implement electronic medical record (EMR) systems in the Australian health system, there is ongoing use of paper-based notes and EMR in parallel. The aim of this study was to assess the completeness of EMR documentation where compared to paper-based notes at identifying maternal co-morbidities and peri-partum outcomes. This study has important implications for researchers and clinicians engaged in secondary use of EMR data.

## Objective

To compare documentation of sociodemographic data, maternal comorbidities and peri-partum outcomes in paper based patient notes (including hand-held record) when compared to the EMR, Healthware.

## Method

This retrospective comparative study was conducted over a one month period in August 2018. Data was collected from 173 inpatients who delivered at a tertiary centre whose data was documented in both Healthware and paper-based records from pregnancy booking date. The data was collected and analysed using Microsoft Excel.

## Results

Socio-demographic data, antenatal complications and delivery outcomes had similar percentages of documentation as displayed below. For post-natal outcomes, paper-based documentation was approximately 10% less than in EMR. Pre-pregnancy comorbidities were documented significantly more in paper-based notes at 83.4% vs EMR at 41.9%. Documentation of psychosocial issues such as child protection services involvement were 69.3% in paper-based notes, compared to 45.4% in EMR.

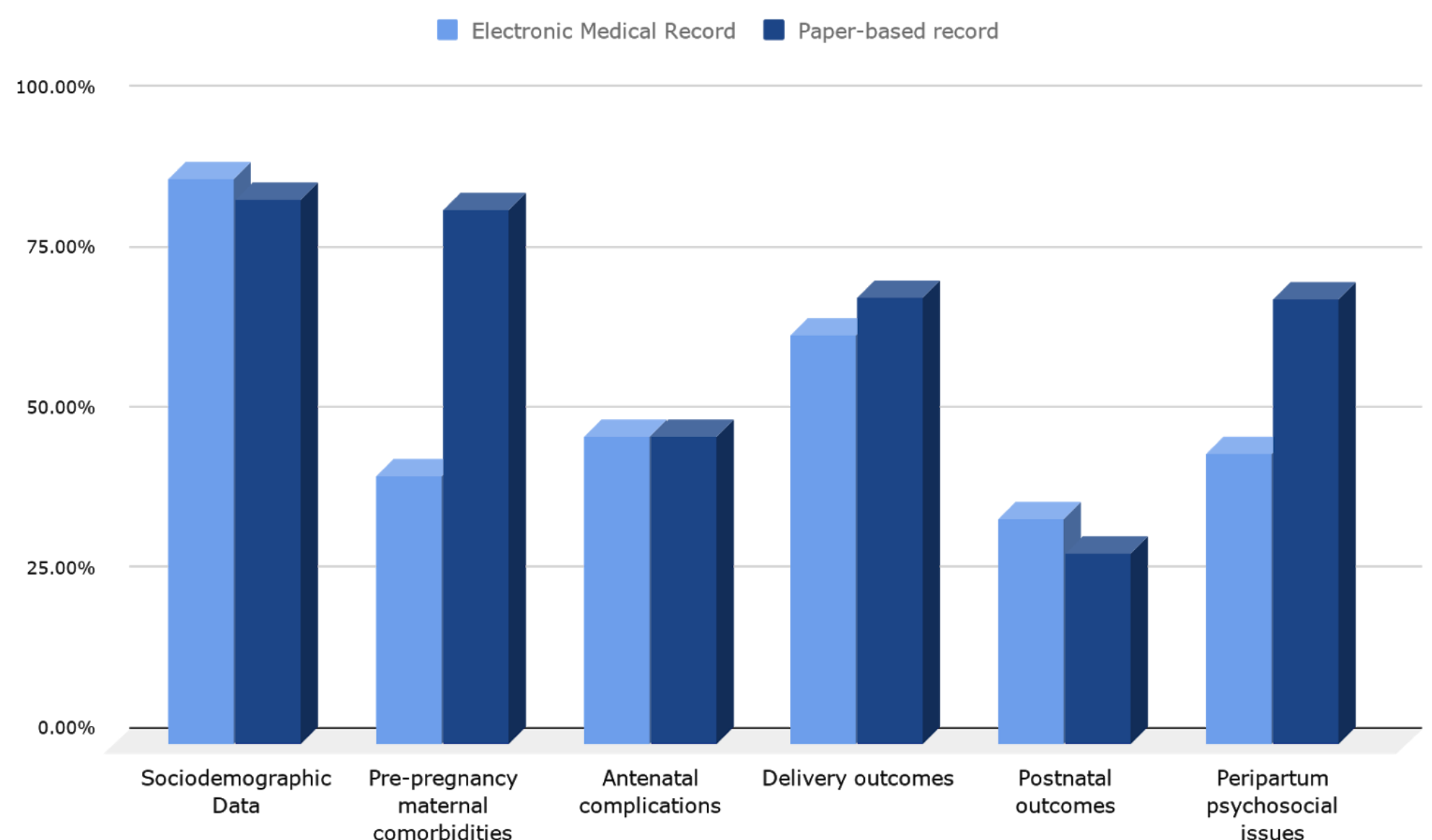


Figure 1: Overall completeness of paper-based vs. EMR (n = 173)

## Conclusion

Paper-based documentation was an overall more comprehensive representation of both maternal comorbidities and psychosocial issues. This is likely due to many factors including paper-based antenatal proformas prompting documentation, along with more multidisciplinary use of paper-based records compared to EMR. This research may have implications for the use of EMR for research audits and patient care in the future. We suggest further research into barriers to documentation in EMR as well as paper-based notes.

## References