

Post-Implementation Evaluation of a Telehealth-Integrated Antenatal Care Model in Australia

Introduction

In response to the COVID-19 pandemic, the largest maternity provider in Melbourne, Australia implemented a world-first telehealth-integrated antenatal care schedule for both high- and low-risk pregnancies. Since the program has now been maintained for more than two years, clinical and economic evaluation is essential to guide its ongoing use.

Method

Clinical outcomes were compared using time-series analysis and economic outcomes evaluated with a comparative cost analysis, for all booked births between 1st January 2018 – 22nd March 2020 (pre-telehealth cohort, n=20,031) and 25th April 2020 – 31st December 2021 (post-telehealth cohort, n=~16,500), allowing for a 1-month implementation period.

Findings

Analysis to date indicates comparable outcomes and service utilization between cohorts. No significant differences in adverse pregnancy outcomes including preeclampsia, fetal growth restriction and stillbirth were seen. The proportion of telehealth appointments increased from 0.06% pre-implementation to nearly 50% post-implementation, with no statistically significant differences in patient engagement. When surveyed, most multigravida women were satisfied with telehealth-integrated care, while primigravida women preferred more in-person appointments.

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Telehealth may reduce healthcare costs, but its socioeconomic impact remains unclear as previous evaluations of smaller programs found either increased costs from added home monitoring, or cost savings from decreased travel. A cost analysis of this large-scale program is under way to clarify costs to funders and the affordability of the program.

Proposed solution

We recommend:

1. Ongoing monitoring of clinical outcomes;
2. Further research into patient engagement and experience;
3. Robust economic evaluations to inform financial sustainability; and
4. Development of national Australian telemedicine standards for safety/quality.

Conclusion

The telemedicine-integrated model for antenatal care appears to be safe and acceptable. It may also be cost-saving, but ongoing research is needed to shape its future - optimizing the quality and value of pregnancy care, and ensuring sustainable, equitable and resilient healthcare systems.

Keywords

Antenatal care, COVID-19, Obstetrics, Pregnancy, Prenatal care, Telehealth, Telemedicine

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