Australian Government
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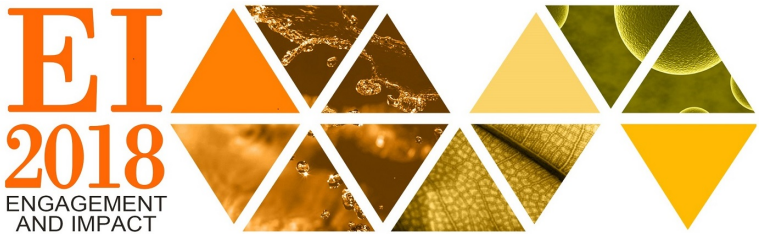

Engagement and Impact 2018

La Trobe University

LTU11-PHS (HLS) - Impact

Overview

Title

(Title of the impact study)

One-on-one midwife care reduces caesarean section rates during childbirth and improves health outcomes for babies

Unit of Assessment

11 - Medical and Health Sciences

Additional FoR codes

(Identify up to two additional two-digit FoRs that relate to the overall content of the impact study.)

Socio-Economic Objective (SEO) Codes

(Choose from the list of two-digit SEO codes that are relevant to the impact study.)

92 - Health

Australian and New Zealand Standard Industrial Classification (ANZSIC) Codes

(Choose from the list of two-digit ANZSIC codes that are relevant to the impact study.)

84 - Hospitals
85 - Medical and Other Health Care Services

Keywords

(List up to 10 keywords related to the impact described in Part A.)

Caesarean

Caseload Midwifery

Continuity of Care

Birth Experience

Midwife-led care

Midwifery Group Practice

Low Birthweight

Special Care Admission

Sensitivities

Commercially sensitive

No

Culturally sensitive

No

Sensitivities description

(Please describe any sensitivities in relation to the impact study that need to be considered, including any particular instructions for ARC staff or assessors, or for the impact study to be made publicly available after EI 2018.)

Aboriginal and Torres Strait Islander research flag

(Is this impact study associated with Aboriginal and Torres Strait Islander content?
NOTE - institutions may identify impact studies where the impact, associated research and/or approach to impact relates to Aboriginal and Torres Strait Islander peoples, nations, communities, language, place, culture and knowledges and/or is undertaken with Aboriginal and Torres Strait Islander peoples, nations, and/or communities.)

Yes

Science and Research Priorities

(Does this impact study fall within one or more of the Science and Research Priorities?)

Yes

Science and Research Priority	Practical Research Challenge
Health	Better models of health care and services that improve outcomes, reduce disparities for disadvantaged and vulnerable groups, increase efficiency and provide greater value for a given expenditure.

Impact

Summary of the impact

(Briefly describe the specific impact in simple, clear English. This will enable the general community to understand the impact of the research.)

The La Trobe University led Comparing Standard Maternity Care with One-to One Midwifery Support (COSMOS) randomised trial (comparing continuity of one-on-one care from a midwife called caseload midwifery with standard maternity care), resulted in a 22% reduction in the proportion of women requiring caesarean section, and a reduction in the proportion of babies requiring admission to a special care nursery. Following this trial (the world's largest and Australian first), the caseload midwifery model is increasingly available, with data showing availability in 31% of Australian public hospitals that responded to a large national survey. The model highlights that trust, and a sustained relationship between the midwife and woman giving birth are critical to positive birth outcomes.

Beneficiaries

(List up to 10 beneficiaries related to the impact study)

Pregnant women and their babies

Partners

Society

Midwives providing care in this model (lower burnout, higher satisfaction)

The health care system

Countries in which the impact occurred

(Search the list of countries and add as many as relate to the location of the impact)

Australia

Details of the impact

(Provide a narrative that clearly outlines the research impact. The narrative should explain the relationship between the associated research and the impact. It should also identify the contribution the research has made beyond academia, including:
- who or what has benefitted from the results of the research (this should identify relevant research end-users, or beneficiaries from industry, the community, government, wider public etc.)
- the nature or type of impact and how the research made a social, economic, cultural, and/or environmental impact
- the extent of the impact (with specific references to appropriate evidence, such as cost-benefit-analysis, quantity of those affected, reported benefits etc.)
- the dates and time period in which the impact occurred.

NOTE - the narrative must describe only impact that has occurred within the reference period, and must not make aspirational claims.)

There is national and international concern about rising caesarean section rates. In Australia, the rates have doubled over the last 20 years and rates are double World Health Organization recommendations. The COSMOS trial was Australia's first, and the world's largest trial of caseload midwifery (n=2,314 women).

Women allocated to caseload midwifery were less likely to have a caesarean section (19.4% vs 24.9%; risk ratio [RR] 0.78; 95% CI 0.67-0.91; P=0.001); more likely to have a spontaneous vaginal birth (63.0% vs 55.7%; RR 1.13; 95% CI 1.06-1.21; P <0.001); and less likely to have an episiotomy (23.1% vs 29.4%; RR 0.79; 95% CI 0.67-0.92; P=0.003). Infants of women were less likely to be admitted to special or neonatal intensive care (4.0% vs 6.4%; RR 0.63; 95% CI 0.44-0.90; P=0.01). No infant outcomes favoured standard care. The length of maternal postpartum hospital stay was also reduced for women (55.4 vs 60.5 hrs; P=0.001)

The COSMOS findings have assisted policy-makers and maternity services in planning for future models of maternity care in Australia. The Australian Nursing and Midwifery Accreditation Council, Midwife Accreditation Standards (2014) state that 'on the basis of this research, it is likely that policy makers will continue to support midwifery-led care as an option for all Australian childbearing women'. The model is also recommended by the Australian College of Midwives in the document 'Know Your Midwife – Benefits' (2015) which stated that 'ACM envisages a future where all childbearing women will have the option of being supported by a known midwife'.

While the model was previously implemented on a small scale in a few countries (e.g. UK), the evidence generated from the COSMOS study stimulated wider uptake and implementation of the model, particularly in Australia. A subsequent study (Dawson et al.) conducted by the COSMOS team in 2015 found the caseload model has increased in availability, from a small number to 31% (44/133) of Australian public hospitals that responded to a large national survey. In addition, 23% of services without the model were in the process of implementing it, and 36% were planning to implement it in the future.

The Mercy Hospital for Women, a major public hospital and specialist referral centre in Melbourne with over 5000 births per year, opted to change to the caseload midwifery model (calling it 'Midwifery Group Practice') after the results of the COSMOS trial were published:

'It was confusing for women looking for pregnancy care and new to the public health system to navigate the hospital system. Women were allocated randomly to different maternity models available such as midwives clinic, team midwifery, standard antenatal care, shared care or the Family Birth Centre. Review of internal processes and models has given women more control and the ability to make informed choice for their antenatal care. The Midwifery Group Practice (MGP) model was introduced in 2014 following the release of the findings from the COSMOS research. The model has proved to be very popular with mothers, we found that satisfaction for women vastly improved and we were able to make cost savings.' – Megan Burgmann, Program Director for Women's and Children's, 2012-2016, Mercy Hospital.

In addition, midwives felt providing continuity of care was an important factor in their job satisfaction:

'I love the continuity I have in antenatal clinic, however as much as I love birth suite and postnatal I feel unsatisfied when I work in those areas, due to heavy patient load and minimal continuity.' – Midwife at the Mercy.

A survey of patients found that they also felt satisfied:

'I want to commend the team at MGP for the care model, using the latest research and evidence based practice to enable low intervention pregnancy care and birthing. I hope to be cared for by MGP with any subsequent babies.' – Woman from the Mercy.

Routinely collected 2016 clinical outcome data from the Mercy Hospital, which included 390 women who had caseload midwifery and 1218 women who had team midwifery, shows that caseload midwifery was associated with lower rates of caesarean section (13.4% vs 23.9%), epidural use (8.8% vs 30.6%) and episiotomies (6.2% vs 20.4%). In addition, 53% of births through the caseload model were unassisted vaginal births compared with 22% in the team model and the percentage of vaginal births following a previous caesarean section was 47% in the caseload model compared with 18.8% in the team model.

The Royal Women's Hospital in Melbourne, the location of the initial trial, now routinely offers the caseload model to women: "The very important findings of the importance of a woman receiving care from a primary midwife are embedded in the way we design our service model and we are constantly tweaking the way we roster to increase the possibility of women seeing the same care provider. Also we have introduced MiST- midwives in small practice in each main team (there are 4). Again this has been as a result of acknowledgement of best practice of receiving care from a primary midwife. We are constantly looking at ways to increase this." Jenny Ryan, Director of Maternity Services at the Women's.

In 2016 the project team leveraged a further 1.5 million in NHMRC partnership funding to implement the model for Aboriginal and Torres Strait Islander women in four Victorian maternity services. This partnership between La Trobe University, Victorian Aboriginal Community Controlled Health Organisation (VACCHO), Goulburn Valley Health, Mercy Health, Western Health and the Royal Women's Hospital, builds on the successful research in the initial COSMOS trial.

The COSMOS trial is a landmark study. It reduced caesarean sections and other childbirth interventions, producing short and long-term benefits and potential cost savings related to the reduced need for surgical care, better infant outcomes and lower hospital length of stay.

Associated research

(Briefly describe the research that led to the impact presented for the UoA. The research must meet the definition of research in Section 1.9 of the EI 2018 Submission Guidelines. The description should include details of:
- what was researched
- when the research occurred
- who conducted the research and what is the association with the institution)

The COSMOS trial was led by Professor Helen McLachlan of La Trobe University. In addition to the improved clinical outcomes (reduced caesareans, more normal vaginal births, less epidurals, decreased infant admissions to special care and low birthweight babies), women reported more positive experiences of the birth (adjusted odds ratio 1.50, 95% CI 1.22-1.84). They felt more in control during labour, were more proud of themselves and more likely to have a positive experience of pain.

Caseload midwifery was also associated with higher satisfaction with antenatal care (OR 3.35; 95 % CI 2.79, 4.03), intrapartum care (OR 2.14; 95 % CI 1.78, 2.57), hospital postpartum care (OR 1.56, 95 % CI 1.32, 1.85) and home-based postpartum care (OR 3.19; 95 % CI 2.64, 3.85). Women were more likely to report that care was provided in a safe way, that they felt informed, had an active say in their care, and that they received the advice they needed to care for their baby.

'Effects of continuity of care by a primary midwife (caseload midwifery) on caesarean section rates in women of low obstetric risk: the COSMOS randomised controlled trial' paper was ranked 386 out of 51756 articles published between 2010 to 2014 in the Obstetrics and Gynaecology category by Web of Science.

Since the publication of the COSMOS trial, a subsequent Australian trial of caseload midwifery published in the Lancet (Tracy et al 2013) reported that caseload was associated with reduced cost per woman of AUS$566·74.

FoR of associated research

(Up to three two-digit FoRs that best describe the associated research)

11 - Medical and Health Sciences

References (up to 10 references, 350 characters per reference)

(This section should include a list of up to 10 of the most relevant research outputs associated with the impact)

1.McLachlan H, Forster D, Davey M, Farrell T, Gold L, Biro M, Albers L, Flood M, Oats J, Waldenström U. Effects of continuity of care by a primary midwife (caseload midwifery) on caesarean section rates in women of low obstetric risk: the COSMOS randomised controlled trial. BJOG 2012;119:1483–1492.

2.Forster DA, McLachlan HL, Davey M-A, Biro MA, Farrell T, Gold L, Flood M, Shafiei T, Waldenström U. Continuity of care by a primary midwife (caseload midwifery) increases women's satisfaction with antenatal, intrapartum, and postpartum care: results from the COSMOS randomised controlled trial. BMC Pregnancy and Childbirth 2016;16:28

3.McLachlan HL, Forster DA, Davey M-A, Farrell T, Flood M, Shafiei T, Waldenström U. The effect of primary midwife-led care on women's experience of childbirth: results from the COSMOS randomised controlled trial. BJOG 2016;123:465–474

4.Dawson K, McLachlan H, Newton M, Forster D. Implementing caseload midwifery: Exploring the views of maternity managers in Australia – A national cross-sectional survey. Women and Birth 2015; 214-222

5.Dawson K, Newton M, Forster D, McLachlan H. Comparing caseload and non-caseload midwives' burnout levels and professional attitudes: A national, cross-sectional survey of Australian midwives working in the public maternity system. Midwifery. 2018 May 7;63:60-67.

6.Dawson K, Forster DA, McLachlan HL, Newton MS. Operationalising caseload midwifery in the Australian public maternity system: Findings from a national cross-sectional survey of maternity managers. Women Birth. 2017 Sep 27

7.Davey MA, McLachlan HL, Forster D, Flood M. Influence of timing of admission in labour and management of labour on method of birth: results from a randomised controlled trial of caseload midwifery (COSMOS trial). Midwifery. 2013 Dec;29(12):1297-302.

8.McLachlan HL, Forster DA, Davey MA, Lumley J, Farrell T, Oats J, Gold L, Waldenström U, Albers L, Biro MA. COSMOS: COmparing Standard Maternity care with one-to-one midwifery support: a randomised controlled trial. BMC Pregnancy Childbirth. 2008 Aug 5;8:35.

Additional impact indicator information

Additional impact indicator information

(Provide information about any indicators not captured above that are relevant to the impact study, for example return on investment, jobs created, improvements in quality of life years (QALYs). Additional indicators should be quantitative in nature and include:
- name of indicator (100 characters)
- data for indicator (200 characters)
- brief description of indicator and how it is calculated (300 characters).)