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Continuity of care by a primary midwife (caseload midwifery): a cost analysis using results from the COSMOS randomised controlled trial

Emily J Callander ,[1,2] Hannah Jackson ,[3] Helen L McLachlan,[4,5] Mary-Ann Davey,[6] Della A Forster[2,4]

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For numbered affiliations see end of article.

Correspondence to
Dr Emily J Callander, University of Technology Sydney, Sydney, Australia;
Emily.callander@uts.edu.au

ABSTRACT

Introduction Caseload midwifery (continuity of midwifery carer) offers benefits including lower caesarean section rates, lower risks of preterm birth and stillbirth, and improved maternal satisfaction of care. Despite these advantages, concerns about additional costs hinder widespread implementation. This study examines the cost of caseload midwifery compared with standard maternity care from the perspective of both public hospitals and public funders.

Methods A cost analysis was conducted using data from a randomised controlled trial of 2314 low-risk pregnant women in Melbourne, Australia. Women randomised to caseload care received antenatal, intrapartum and postpartum care from a primary midwife, with some care provided by a 'back-up' midwife. Women in standard care received midwifery-led care with varying levels of continuity, junior obstetric care or community-based medical care. The cost analysis compared differences in mean costs of health resources to public hospitals and to public funders. Additionally, a budget impact analysis estimated total costs to the health system between 2023 and 2027.

Results For public hospitals, there was no significant difference in overall costs between women receiving caseload midwifery (n=1146) versus standard care (n=1151) ($A12 363 (SD: $A4967) vs $A12 323 (SD: $A7404); p=0.85). Conversely, public funders incurred lower expenditures for women receiving caseload midwifery ($A20 330 (SD: $A8312)) versus standard care ($A21 637 (SD: $A11 818); p <0.001). The budget impact analysis estimated savings of $A625 million to the health system over the next 5 years with expanded access to caseload midwifery in Australia.

Conclusion Caseload midwifery in low-risk women is cost-neutral to public hospitals and cost-saving to public funders.

Tweetable abstract Continuity of midwifery for low-risk women reduces costs to public funders, with no additional costs to hospitals.

WHAT IS ALREADY KNOWN ON THIS TOPIC

⇒ Continuity of care by a primary midwife (caseload midwifery) is associated with beneficial health outcomes and increased rates of maternal satisfaction.

⇒ Despite positive effects, uncertainty regarding the economic consequences associated with this model of care remains a significant barrier to the uptake of this highly effective maternal health intervention.

WHAT THIS STUDY ADDS

⇒ To drive changes in the uptake of caseload midwifery, this study assessed the cost implications of caseload midwifery in comparison to standard maternity care from the perspective of both public hospitals and public funders.

HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

⇒ Caseload midwifery was found to reduce costs to public funders for low-risk women without increasing costs for public hospitals.

INTRODUCTION

High-income countries are grappling with the concurrent challenges in maternity care of rapidly increasing intervention rates, particularly caesarean sections, and the imperative to prevent rare but catastrophic outcomes such as morbidity and death.[1 2] This is set against a background of rapidly increasing healthcare costs and tightening government expenditure.[3] Caesarean section is a high-cost medical procedure that comes with an increased risk of adverse outcomes.[4 5] Consequently, reducing the need for caesarean section is an ongoing international priority.[6]

While high-income countries have very low rates of maternal and neonatal morbidity and mortality, some individual health services have recently been identified as service 'failures', with clusters of catastrophic adverse events.[7–9] These incidents have highlighted the need for attention to maternal experience and maternal and neonatal safety.[10 11] Furthermore, follow-up responses have also highlighted the need to prioritise

the implementation of evidence-based responses both within these individual services, and across maternity care more broadly.[12]

Continuity of midwifery carer in women of low obstetric risk has been shown in the COmparing Standard Maternity care with One-to-one midwifery Support (COSMOS) randomised controlled trial (RCT) to reduce the risk of caesarean section, and admission to special or neonatal intensive care for the infant.[13] The model, called 'caseload midwifery', where women received antenatal, intrapartum and postpartum care from a primary midwife, also resulted in an improvement in birth experience for women,[14 15] and has been associated with lower risk of preterm birth, stillbirth and neonatal death.[16] Other RCT evidence from all-risk women concluded that caseload midwifery is safe for women of any risk and produces cost savings for hospital funders.[17] As such, increasing access to caseload midwifery should be a key strategy to concurrently address rising intervention rates, while improving experience and safety.

A key barrier to wider implementation or scale-up of caseload midwifery is the perceived additional costs to public hospitals associated with this model.[18] Comprehensive evidence of the costs of caseload midwifery and standard care is thus needed in order to inform decision-making about establishment or scale-up. The objective of this study was to identify the cost and budget impact of caseload midwifery compared with standard care among women of low obstetric risk in Australia.

METHODS

Study setting and location

In Australia, caesarean section rates were 37% in 2020, which is above the Organisation for Economic Co-operation and Development average.[19 20] It is projected that 45% of births in Australia will be by caesarean section by 2030.[21] Maternity care is funded through a mix of public funding, out-of-pocket fees and private health insurance funds.[22] Public hospitals are funded jointly by both the federal and state governments through Public Hospital Funding Agreements on an activity-based funding model. Each episode of inpatient, outpatient and emergency department care in public hospitals is funded at a set rate determined by the Independent Hospital Pricing Authority, with no out-of-pocket fees for Medicare-eligible patients.[23] Any care provided outside of public hospitals is partly subsidised through a different pool, Medicare, which is funded solely by the federal government.

Public hospitals are owned and managed by state governments, with individual hospitals being operated by a board and executive responsible for the provision of services and financial sustainability. Once government funding reaches a hospital, the hospital is then responsible for providing the care, including payment of staff, consumables and facility costs. This includes midwife and medical salaries associated with providing maternity care. Caseload midwifery in Australia is designed for implementation in the public hospital setting. As such, it will have cost implications to public funders as it will affect the types of activities or episodes of care being funded, and to individual hospitals as it involves different staff, consumable and facility costs.

Study population

COSMOS was a two-arm RCT designed to compare caseload midwifery to standard maternity care in women at low risk of obstetric complications. The trial design is described in detail elsewhere.[13 24] Briefly, women at low risk of obstetric complications were recruited at the Royal Women's Hospital, a public tertiary women's hospital in Melbourne, Australia, between September 2007 and June 2010. Women were eligible for inclusion in the trial if they were able to speak, read and write English, if they had a singleton pregnancy of less than 24 weeks gestation at recruitment and if they were considered low obstetric risk, with no complications during the current pregnancy and no precluding medical conditions (eg, cardiac disease, diabetes, epilepsy, substance use, obesity or significantly underweight). Women with a previous caesarean section were excluded. Caseload midwifery was not available to women outside the trial.

Comparators

Caseload midwifery care

Women randomised to the intervention group received the majority of their antenatal, intrapartum and postnatal care from a primary caseload midwife at the hospital. If complications arose, the primary midwife collaborated with other health professionals (eg, obstetricians) while continuing to provide caseload care. Caseload midwives provided 'back-up' care for each other, so that if a caseload midwife was sick, on personal leave or unavailable the back-up midwife would provide care for a woman. Women saw an obstetrician at booking, at 36 weeks of gestation and if the pregnancy lasted beyond 40 weeks' gestation. Intrapartum care was provided in the birth suite by the caseload midwife (89% of the time), or otherwise by a core hospital midwife. Postpartum, the caseload midwife saw women on most days in hospital to provide postnatal care and provided domiciliary care following discharge from hospital. All care was provided according to hospital guidelines and protocols. Full-time midwives had a caseload of 45 women per annum.

Standard maternity care

Women randomised to the control group could choose from the standard hospital options for low-risk women (referred to as 'standard care'). These included midwifery-led care (78%), which generally meant that women saw a different midwife at each visit, based on who was rostered to work at the time of care; obstetric trainee care (2%); or shared care where antenatal care is shared between an accredited general medical practitioner (GP) and the hospital (15%). Five per cent transferred their care elsewhere. As with caseload midwifery care,

women in the standard care model saw an obstetrician at booking, and 36 weeks' gestation and at 41 weeks' gestation if required. Care was provided according to the same hospital guidelines and protocols as women in the caseload midwifery arm.

Study design: cost analysis

We conducted a cost analysis using data from the COSMOS RCT to determine if there are differences in cost between caseload midwifery and standard care for individual public hospitals providing care, and public funders.

Time horizon, discount rate

The time horizon for the cost analysis was from booking at around 16 weeks' gestation, through to 2 months post partum. Since the follow-up period was less than 12 months, discounting of costs was not required.

Measurement and valuation of resources

Public hospital costs

Use of public hospital resources was identified from a combination of self-reported health service use from a survey administered to women at 2 months post partum, data collected from hospital records by the study team and administrative data. Health resources were costed from the hospital's perspective. These are described in detail in online supplemental appendix 1.

Expenditure by public funders

Expenditure by public funders was based on all episodes of care, also identified from self-reported health service use survey data administered to women at 2 months post partum, data collected from hospital records by the study team and administrative data. Funding per activity was based on the Independent Hospital Pricing Authority National Efficient Price Determination for 2022/2023,[25] with the Inlier weight per activity multiplied by the National Efficient Price.[25] These are described in detail in online supplemental appendix 1.

Study design: budget impact analysis

The second analysis was a budget impact analysis including costs to the health system, comprising both public hospital costs and expenditure by public funders for caseload midwifery and standard care in women at low risk of obstetric complications. This was designed to capture the cost implications of hypothetical national implementation. We assumed that uptake of caseload would be 70% in women at low risk of obstetric complications, and that adherence would be 90%; this was considered more reflective of potential use in practice. The analysis was designed to represent the Australian population of births between 2023 and 2027. Full methodological details are provided in online supplemental appendix 2.

Time horizon

The model took a 5-year time horizon, including all births and considering costs and outcomes between 2023 and 2027 (ie, for births in 2023 costs and outcomes will be considered for up to 5 years post partum, whereas those born in 2026 will only have costs and outcomes considered up to 1 year post partum). No discounting was applied.

Currency, price date and conversion

All costs are presented in 2021/2022 Australia dollars. For reference, at time of writing 1 Australian dollar is equal to 0.56 Pounds sterling, 0.63 Euros and 0.67 United States Dollars. When unit prices and funding amounts were not recorded in the original source in this price date, they were adjusted for inflation using the Reserve Bank of Australia inflation figures.[26]

Data analysis

Data were analysed on an intention-to-treat basis. Demographic characteristics of women receiving caseload midwifery and standard care were compared. Differences between groups were calculated using Pearson's χ^2 test, and Student's t-test (p values reported). The average number of, or frequency of access to, different resources was then compared, followed by costs to public hospitals and expenditure by public funders. A supplementary analysis was conducted that compared costs to public hospitals and expenditure by public hospitals for women receiving shared care (with a GP). For costs, generalised linear models were used to compare differences, with a gamma distribution and log link function to account for the skewed nature of the cost data. Health service use was analysed as count data with negative binomial distribution. All analysis was conducted using SAS V.9.4.

RESULTS

There were 1146 women allocated to caseload care and 1151 women allocated to standard care. Of the 1151 women allocated to standard care, 79.7% (917/1151) received public antenatal care with either midwives or obstetric trainees; 15.1% (174/1151) received shared care (with a GP); and 5.2% (60/1151) transferred to care elsewhere. Of the 1146 women allocated to caseload care, 3.3% (38/1146) received other care either at the Royal Women's Hospital, or at a facility outside of Melbourne due to relocation. Table 1 demonstrates that the two groups were similar in terms of demographic characteristics.

In terms of health resources used, women allocated to caseload midwifery accessed slightly more antenatal midwife appointments (6.7 vs 6.1; p <0.001) but were less likely to have an epidural (28.3% vs 30.8%; p =0.04) than women in the standard care group. They also were less likely to have a caesarean section birth (19.3% vs 24.8%; p =0.001), had a shorter length of labour (12.9 hours vs 14.0 hours; p =0.04), and a shorter postnatal ward stay (55.5 hours vs 60.2 hours; p <0.001). The babies of women allocated to caseload midwifery had fewer admissions to special care nursery (SCN) or neonatal intensive care unit (NICU) (5.9% vs 9.2%; p=0.002) and had shorter lengths

Table 1 Demographic characteristics of women receiving caseload and standard care

	Caseload (n=1146)	Standard care (n=1151)	P value
Model of care received within allocated group	Caseload only care—1108 (96.7%)	Midwives or obstetrics trainees—917 (79.7%)	n/a
	Transferred to care elsewhere—38 (3.3%)	Share care with a GP—174 (15.1%)	n/a
		Transferred to care elsewhere—60 (5.2%)	n/a
Age at booking visit—mean (SD)	31.2 (4.6)	31.3 (4.7)	0.62
Body mass index at booking visit—mean (SD)	24.1 (3.7)	23.8 (3.7)	0.13
Gestation at booking—mean (SD)	16.3 (2.8)	16.3 (2.9)	0.57
Nulliparous—n (%)	803 (70.1%)	799 (69.4%)	0.73
Married or de facto—n (%)	1076 (93.9%)	1062 (92.3%)	0.33
Postsecondary education—n (%)	874 (76.3%)	828 (71.9%)	0.05
Born in Australia—n (%)	652 (56.9%)	644 (56.0%)	0.79

GP, general medical practitioner; n/a, not applicable.

of stay post birth (68.2 hours vs 73.9 hours; p <0.001). Women in the caseload group also had slightly more postnatal home visits (2.1 visits vs 1.7 visits; p <0.001) (table 2).

Based on annual caseload midwife salary and a caseload of 45 women, caseload midwives cost public hospitals $A3414 per woman to provide care through the antenatal, intrapartum and postnatal time period. Women receiving caseload midwifery had lower mean costs associated with antenatal visits (which includes non-caseload midwife, obstetrician and GP time) ($A214 vs $A316; p <0.001), epidural use ($A94 vs $A110; p =0.04), birth suite ($A1376 vs $A3,729; p <0.001) and postnatal ward costs for mother

Table 2 Health service use of women

	N	Caseload Mean (SD)/n (%)	N	Standard care Mean (SD)/n (%)	P value
Antenatal visits					
Antenatal visits—midwife	1146	6.7 (0.7)	1151	6.1 (1.7)	<0.001
Antenatal visits—GP*	1146	0.0 (0.0)	1151	0.6 (1.6)	n/a
Antenatal visits—obstetrician	1146	2.3 (0.5)	1151	2.2 (0.5)	0.42
Emergency department presentations	1146	0.7 (0.9)	1151	0.7 (1.0)	0.46
Induction—n (%)	1146	351 (30.6%)	1151	386 (33.5%)	0.54
Epidural—n (%)	1146	324 (28.3%)	1151	354 (30.8%)	0.04
Birth					
Caesarean section—n (%)	1146	221 (19.3%)	1151	285 (24.8%)	0.001
Vaginal birth: instrumental—n (%)	1146	202 (17.6%)	1151	222 (19.3%)	0.31
Vaginal birth: unassisted—n (%)	1146	719 (62.7%)	1151	637 (55.3%)	<0.001
Length of labour (hours)	1146	12.9 (30.1)	1151	14.0 (27.9)	0.04
Postnatal—baby					
SCN or NICU admission	1146	67 (5.9%)	1151	106 (9.2%)	0.002
Baby length of stay (hours)	1146	68.2 (45.7)	1151	73.9 (40.0)	<0.001
Postnatal ward—mother					
Mother length of stay (hours)	1146	55.5 (31.2)	1151	60.2 (24.9)	<0.001
Postnatal visits, after discharge (home visits)					
Postnatal home visits	1146	2.1 (1.0)	1151	1.7 (0.7)	<0.001

*0 for those receiving caseload, as antenatal care by a GP was only provided for those receiving 'shared care' as a subset of those in standard care.
GP, general medical practitioner; NICU, neonatal intensive care unit; SCN, special care nursery.

Table 3 Mean costs to public hospitals per woman

	Caseload	Standard care		
	n=1146	n=1151	P value	Difference
Caseload midwife salary cost	$A3414	–	n/a	$A3414
Antenatal visits (non-caseload midwife, obstetrician), mean (SD)	$A214 ($A55)	$A316 ($A63)	<0.001	–$A102
Emergency department presentations*, mean (SD)	$A487 ($A659)	$A508 ($A699)	0.29	–$A21
Induction*, mean (SD)	$A35 ($A53)	$A39 ($A55)	0.22	–$A4
Epidural*, mean (SD)	$A94 ($A139)	$A110 ($A145)	0.04	–$A16
Birth suite, mean (SD)	$A1376 ($A1694)	$A3729 ($A4855)	<0.001	–$A2353
Postnatal (ward, SCN or NICU)—baby, mean (SD)	$A3731 ($A2557)	$A4154 ($A2263)	<0.001	–$A423
Postnatal ward—mother, mean (SD)	$A2993 ($A1619)	$A3239 ($A1289)	<0.001	–$A246
Postnatal costs, after discharge (home visits), mean (SD)	n/a included in caseload midwife salary cost	$A198 ($A81)	n/a	–$A197
Total costs for all services, mean (SD)	$A12 363 ($A4967)	$A12 323 ($A7404)	0.85	–$A41
Midwife and obstetrician staff costs only				
Caseload midwife salary cost, mean (SD)	$A3414	–	n/a	$A3414
Hospital midwife staff costs (excluding caseload midwives), mean (SD)	$A2877 ($A1619)	$A5627 ($A4670)	<0.001	–$A2749
Obstetric staff costs, mean (SD)	$A521 ($A245)	$A561 ($A251)	<0.001	–$A41
Total, mean (SD)	$A6812 ($A1721)	$A6188 ($A4734)	<0.001	$A624

*Mean cost across all women in each group.
NICU, neonatal intensive care unit; SCN, special care nursery.

($A2993 vs $A3239; p <0.001) and baby ($A3731 vs $A4154; p <0.001). Women receiving caseload care had $A0 for postnatal costs after discharge as these costs were included in caseload midwife salary costs. There was no significant difference in overall costs between women allocated to the caseload group compared with women allocated to standard care ($A12 363 vs $A12,323; p=0.85) (table 3). There was also no significant difference in costs per woman for public hospitals for women receiving shared care (with a GP), and women receiving caseload midwifery (online supplemental appendix 3). In the scenario analysis where women received intrapartum care from their caseload or back-up midwife *and* the rostered hospital midwives as well, costs were $A1971 higher for women receiving caseload midwifery (online supplemental appendix 4).

Expenditure by public funders on midwife antenatal outpatient episodes ($A1380 vs $A1260; p <0.001) and obstetrician antenatal outpatient episodes ($A597 vs $A583; p=0.01) was higher for women receiving caseload midwifery care compared with women receiving standard care (table 4). In contrast, expenditure by public

Table 4 Expenditure by public funders per woman

	Caseload	Standard care		
	Mean (SD)	Mean (SD)	P value	Difference
Antenatal health service use				
Outpatient episodes—midwife	$A1380 ($A143)	$A1260 ($A348)	<0.001	$A119
Outpatient episodes—obstetrician	$A597 ($A126)	$A583 ($A119)	0.01	$A13
Outpatient episodes—general practitioner	n/a no shared care	$A47 ($A128)	n/a	–$A47
Emergency department episodes	$A408 ($A551)	$A426 ($A584)	0.62	–$A17
Antenatal expenditure total	$A2384 ($A588)	$A2316 ($A665)	0.01	$A68
Labour, birth, postnatal in-hospital service use				
Induction of labour	$A1676 ($A2522)	$A1835 ($A2583)	0.36	–$A159
Labour and birth inpatient episodes—mother	$A7885 ($A2516)	$A8234 ($A2753)	<0.001	–$A349
Neonatal inpatient episode—baby	$A4920 ($A6368)	$A5193 ($A10 650)	0.02	–$A273
Postnatal inpatient episode, prior to discharge	$A3041 ($A2509)	$A3707 ($A2281)	0.01	–$A666
Labour, birth, postnatal in-hospital expenditure total	$A17 521 ($A8361)	$A18 967 ($A11 811)	<0.001	–$A1447
Postnatal outpatient episode (home visits)	$A424 ($A181)	$A348 ($A143)	<0.001	$A76
Total expenditure for all services	$A20 330 ($A8312)	$A21 637 ($A11 818)	<0.001	–$A1307

Table 5 Modelled budget impact analysis of caseload midwifery compared with standard care, assuming 70% uptake rate and 90% adherence

	2023	2024	2025	2026	2027
Australian population of women giving birth	300 680	298 056	298 160	296 603	296 645
Public hospital births	231 532	233 772	233 412	234 828	236 690
Low-risk women (target population)	165 582	166 691	157 457	149 625	144 185
Uptake	104 317	105 015	99 198	94 264	90 837
Standard care					
Costs to public hospitals (A)	$A1 285 494 201	$A1 294 103 912	$A1 222 415 845	$A1 161 612 191	$A1 119 378 806
Expenditure by public hospital funders (B)	$A2 257 099 572	$A2 272 216 695	$A2 146 345 179	$A2 039 584 759	$A1 965 430 432
Net costs from health system's perspective	$A3 542 593 774	$A3 566 320 607	$A3 368 761 024	$A3 201 196 950	$A3 084 809 238
Caseload midwifery					
Costs to public hospitals (A)	$A1 289 666 868	$A1 298 304 525	$A1 226 383 761	$A1 165 382 741	$A1 123 012 268
Costs to public hospital funders (B)	$A2 120 757 698	$A2 134 961 659	$A2 016 693 510	$A1 916 382 038	$A1 846 707 062
Net costs from health system's perspective	$A3 410 424 565	$A3 433 266 184	$A3 243 077 272	$A3 081 764 779	$A2 969 719 329
Savings from caseload midwifery	–$A132 169 208	–$A133 054 423	–$A125 683 752	–$A119 432 171	–$A115 089 909

funders on labour, birth and postnatal inpatient episodes of care was lower for women receiving caseload midwifery care compared with women receiving standard care ($A17 521 vs $A18 967; p <0.001). In all, expenditure by public funders was $A1307 less for women receiving caseload midwifery than women receiving standard care (p <0.001).

The modelled budget impact analysis (table 5) shows the overall cost implications of caseload midwifery compared with standard care for low-risk women in Australia, with hypothetical nationwide implementation. The overall number of eligible women (women of low obstetric risk, giving birth in a public hospital) is expected to initially rise, due to the increasing proportion of women giving birth in public hospitals, and then decline due to the decreasing proportion of women considered to be low obstetric risk. There would be net cost savings of $A132 million to the public health system in year 1 (2023), and $A115 million in year 5 (2027). Overall, there would be savings of $A625 million to the health system over the next 5 years if 70% eligible women had access to caseload midwifery in Australia, with 90% adherence.

DISCUSSION

Main findings

Caseload midwifery for women at low obstetric risk was not associated with increased overall costs to public hospitals ($A12 363 for women receiving caseload; $A12 323 for women receiving standard care). Caseload midwifery was associated with a reduction in expenditure to public funders of $A1307 per woman compared with standard care. This was primarily by lower use of epidural, caesarean section, instrumental vaginal birth, fewer special care nursery and neonatal intensive care unit admissions, and shorter length of labour and length of stay post birth for women receiving caseload midwifery compared with standard care. The lower use of these resources, and thus lower costs to public hospitals, offset the additional staffing costs for midwife and obstetric time. When considered at the national level from a health systems perspective (considering both costs to public hospitals and expenditure by public funders), caseload midwifery is cost saving. If implemented at a national level in Australia, caseload midwifery for low-risk women could save the system $A625 million over the next 5 years.

Strengths and limitations

The primary limitation of the study was that it was based on a single site, in an urban setting with strong leadership. This may mean that the findings may be different to those seen with wider implementation. Previous studies from this trial[13] have noted some differences in the characteristics of women participating in the trial compared with the overall population, notably the higher proportion of women who were married or living with their partner, nulliparous women and women born overseas. The key strength of this study is that it is based on results directly collected during an RCT and thus represents a balanced comparison between study groups. Furthermore, the study took a comprehensive approach to cost measurement, capturing both public hospital costs and expenditure by public funders.

Interpretation

Few studies have assessed the costs of caseload midwifery relative to standard care, and the limited evidence base on costs of caseload midwifery is still considered a barrier to implementation. The M@NGO RCT of all risk women found cost savings to hospital funders associated with the birth event for women receiving caseload midwifery, compared with standard care.[17] A Cochrane review[16] published in 2016 compared midwife-led continuity of care models with other models of care and found a trend towards cost-saving for midwife-led continuity of care models. More recently, an observational study from

Australia comparing the real-world costs of caseload midwifery and standard care demonstrated cost-savings of AU$A5208 per woman in the caseload model from the public funder's perspective; however, this is related to all-risk women.[27] Two modelling studies have also been conducted—one study from the USA demonstrated that a shift from obstetric-led to midwife-led care could be cost saving for low-risk pregnancies[28] and another Australian study identified that caseload midwifery in low-risk nulliparous women was cost-saving compared with standard care.[29] However, none of these previous studies have considered staffing costs to public hospitals.

Our study also highlighted a number of important factors that need to be considered as a part of implementation to ensure financial sustainability. First, when considering only midwifery staffing costs, caseload midwifery is higher cost than standard care. It is also higher cost when the caseload midwife *and* rostered hospital midwives both provide intrapartum care. Cost savings to public hospitals are seen through a small reduction in obstetric staff time but also through a reduction in costs of anaesthetists for epidurals and caesarean sections, theatre costs for providing caesarean section, SCN and NICU admissions. Thus, for implementation within public hospitals, there would need to be a redistribution of cost savings from other areas into midwifery salary to support the additional midwifery staffing costs required for caseload midwifery. Another crucial finding from this study is that caseload midwifery will result in higher costs to public hospital funders if the number of midwives rostered to birth suite to provide standard care is not proportionately reduced with caseload midwifery.

Our findings that demonstrated substantial cost savings for public hospital funders are also an important consideration for implementation. The cost-saving per woman receiving caseload midwifery to public funders ($A1307 per woman) is larger than the potential additional staffing costs for midwives incurred by public hospitals ($A624 per woman). From a policy perspective, public hospital funders (in Australia, state and Federal governments) could fund individual hospitals to support start-up costs of caseload midwifery, given the previously noted need for hospitals to internally redistribute staff savings and reduce birth suite midwives providing standard care. This could still be cost saving to public funders given the reduction in expenditure associated with reduced numbers of caesarean section births, reduction in length of stay in birth suite and postnatal ward, and fewer neonatal admission to special care.

CONCLUSION

Among low-risk women, caseload midwifery is not associated with increased costs to public hospitals compared with standard care, and significantly reduces costs to public funders. Overall, to health systems, caseload midwifery reduces costs compared with standard care in low-risk women and could result in substantial cost savings if fully implemented.

Author affiliations
[1]University of Technology Sydney, Sydney, New South Wales, Australia
[2]The Royal Women's Hospital, Melbourne, Victoria, Australia
[3]Faculty of Health, University of Technology Sydney, Broadway, New South Wales, Australia
[4]Judith Lumley Centre, La Trobe University, Melbourne, Victoria, Australia
[5]School of Nursing and Midwifery, La Trobe University, Melbourne, Victoria, Australia
[6]Department of Obstetrics and Gynaecology, Monash University, Clayton, Victoria, Australia

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ORCID iDs
Emily J Callander http://orcid.org/0000-0001-7233-6804
Hannah Jackson http://orcid.org/0000-0002-9788-8821

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