

Institution: Sheffield Hallam University
Unit of Assessment: 3 Allied Health Professions, Dentistry, Nursing and Pharmacy
Title of case study: Organisation of Maternity Care: A Cochrane systematic review on the midwife-led versus other models of care for childbearing women
<p>1. Summary of the impact (indicative maximum 100 words)</p> <p>This systematic evidence, evaluating the effectiveness of midwife-led care, has helped to shape policy improvements in promoting access to midwifery care and reducing health inequalities nationally (e.g. NHS, Department of Health [DH]) and internationally (e.g. Australia, Brazil & US). The review was recognised by the DH and updated rapidly to inform NICE intrapartum guidelines. As part of the Commissioning, Service Delivery and Organisation theme, the Maternal and Early Childhood Health Research Group (MACHRIG) led by Professor Hora Soltani, in collaboration with the Sheffield Teaching Hospital-Jessop Wing (STH-JW) and maternity user representatives, has initiated an awareness campaign to encourage information sharing on types of maternity care and to enhance the implications of findings for women and staff via the hospital website and targeted seminars. It is envisaged that its impact will continue to grow through an extensive dissemination strategy and media coverage.</p>
<p>2. Underpinning research (indicative maximum 500 words)</p> <p>This international collaborative Cochrane review between Sheffield Hallam University (SHU), Warwick University, Kings College, London, National University of Ireland, Galway and Montréal University, Canada, provides evidence to support safe maternity care (Reference 1). As the 'first collective rigorous synthesis of evidence', this shows explicit benefits from the midwife-led care (MidLC) model compared with other maternity care models. Following a systematic search and a rigorous appraisal of the existing evidence, we included 11 randomised controlled trials (12,276 women) comparing midwife-led care with medical-led and shared care models. Women who were allocated to MidLC were less likely to have interventions (e.g. epidurals, episiotomy and instrumental birth), were happier with their care, were more likely to have a known carer during birth and had fewer fetal losses before 24 weeks of pregnancy, compared with those in other models of care. This provides evidence of safety, effectiveness and woman-centeredness for MidLC (References 2, 3, 4).</p> <p>Soltani undertook the majority of the work while at SHU (September 2006 appointed Senior lecturer in Midwifery; November 2009 appointed Reader, March 2013 appointed Professor) including development of the review design, quality appraisal of the studies, obtaining additional information, data extraction and analysis, interpreting and writing the findings and disseminating the results. It is acknowledged that this work commenced in 2004 whilst Soltani was working at Derby City Hospital in collaboration with Prof Ellen Hodnett (who later withdrew from the project due to personal circumstances) and other co-authors in formulating the question and developing the review protocol; results and impact described relate to work undertaken following her appointment to SHU. The full review was published in 2008 and updated in 2010. This was identified as a priority review by the DH, and as requested by Cochrane, the authors updated it again in 2013 (Reference 5). Soltani continued her input as a collaborator from the conception of the idea through to all stages of protocol and review development plus follow on updates. Soltani's involvement was sparked by her other projects supporting local midwifery-led care practice as well as being an experienced Cochrane reviewer.</p> <p>Two additional Randomised Controlled Trials were included in the update, involving more than 16,000 women, showing additional benefits in reducing the risk of premature birth in the MidLC model which added to local and global media interest (Source 3).</p> <p>Recently, Soltani has been leading further development of this work locally, by securing funding (£14,390) from the South Yorkshire Collaboration for Leadership in Applied Health Research and Care (CLAHRC-SY) for a new project called "Promotion of midwifery led care for low risk women"</p>

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which provides on line information and allows impact evaluation (<http://www.sth.nhs.uk/choosingwheretohaveyourbaby>) on the STH-JW website. The results have been accepted for publication in the International Confederation of Midwives Congress, taking place in Prague 1-5th June 2014.

3. References to the research (indicative maximum of six references)

1. Hatem M, Sandall J, Devane D, Soltani H, Gates S. Midwife-led versus other models of care for childbearing women. *Cochrane Database of Systematic Reviews* 2008, Issue 4. Art. No.: CD004667. DOI: 10.1002/14651858.CD004667.pub2.
[The review was the 8th most downloaded Cochrane review in 2010, having 9,500 abstract downloads (based on Wiley InterScience data alone). This has become a “citation classic”, receiving over 285 citations so far (Google Scholar; July 2013) in a variety of international professional and high impact academic journals (e.g. *Lancet*, *American Journal of Obstetrics & Gynecology*, *Birth*). The five-year impact factor for the Cochrane database of systematic reviews (CDSR) is 6.217, ranking it in the top 10 out of the 153 journals in the Medicine, General & Internal category]
2. Soltani H and Sandall J. Organisation of maternity care and choices of mode of birth: a worldwide view. *Midwifery* 2012;28:146–149. DOI: 10.1016/j.midw.2012.01.009 available online from: <http://www.sciencedirect.com/science/article/pii/S0266613812000149>
3. Sandall J, Devane D, Soltani H, Hatem M, Gates S. Improving quality and safety in maternity care: the contribution of midwife-led care. *J.Midwifery Womens Health* 2010;55(3):255-261. DOI:10.1016/j.jmwh.2010.02.002.
[This article has been in the top 10 accessed articles in the journal]
4. Sandall J, Hatem M, Devane D, Soltani H, Gates S. Discussions of findings from a Cochrane review of midwife-led versus other models of care for childbearing women: Continuity, normality and safety. *Midwifery* 2009;25:8–13. DOI: [10.1016/j.midw.2008.12.002](https://doi.org/10.1016/j.midw.2008.12.002).
5. Sandall J, Soltani H, Gates S, Shennan A, Devane D. Midwife-led continuity models versus other models of care for childbearing women. *Cochrane Database of Systematic Reviews* 2013, Issue 8. Art. No.: CD004667. DOI: 10.1002/14651858.CD004667.pub3.

4. Details of the impact (indicative maximum 750 words)

Wide-reaching impacts have been facilitated by the interdisciplinary nature of the review and its global relevance, the inherent Cochrane Library acclaimed standard (References 1 & 5) as well as by the adoption of an active dissemination strategy.

Dissemination

Active and passive forms of dissemination have been important as pathways leading to impact, notably:

Academic and professional journals and networks: This has included publication through commentaries, editorials and peer reviewed papers in journals (e.g. References 2-4), conferences, health forums and invited talks, targeted at various audiences including health care providers, managers and practitioners. Soltani has presented the work at several conferences and networking seminars (an invited speaker at RCM event on the International Day of Midwives "Celebrating Midwives: Celebrating Achievements", 5th May 2011, London; “Reproductive Health” conferences in Iran (Tabriz, Tehran and Mashhad universities 2011); Lebanon (The American University of Beirut (2011), and Indonesia (Andalas University 2012)).

Promotion via global organisations and reputable websites: The summary of the findings has been promoted through globally accessible websites (Sources 1 & 2).

Media coverage: The NBC News Australia covered the original review (Source 3).

Impact to date (31.7.2013)

Within the UK, findings from this work have influenced national policy, specifically:

- The DH Policy paper; “Midwifery 2020: Delivering expectations” (09 Sept 2009) which provides a UK-wide vision for midwives’ contribution to “*achieving quality, cost-effective*

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maternity services for women, babies and families", uses this review to highlight key messages on the leading role of midwives for low risk women (Source 4).

- The Prime Minister's Commission (PMC): Caird et al (2010) who were commissioned by the PMC to undertake a rapid review on the future of Nursing and Midwifery cited our review to support their recommendations on the socioeconomic value of Nursing and Midwifery (Source 5).
- The Healthcare for London strategic review of maternity services: "Improving maternity care in London: A framework for developing services" (March 2011) cites this review in recommending ways of reducing inappropriate interventions designed to improve women's experiences of birth (Source 6).

Internationally our research has informed reviews of maternity services in the USA, Brazil and influenced policy change in Australia:

- Our review informed a report commissioned by the US Institute of Medicine (The Future of Nursing 2011) which produced action orientated recommendations for transforming the safety and quality of midwifery practice (Source 7).
- The review has been used by women's rights activists (WRA) as the best evidence to support their case against the Brazilian Medical Council (BMC) which has released resolutions prohibiting women from having midwives as their carer during childbirth. Using our review, WRA have renounced the BMC resolutions as illegal and against women's human rights and demanded action from the Brazilian Ministry of Health. This has informed subsequent plans for the redesign of maternity services in Brazil (Source 8).
- The impact of the review is well captured in the media release by the Australian College of Midwives (13 May 2009: "Mothers and Midwives Budget winners"). This used our review evidence to support the case for midwife-led care to improve access to continuity of care by midwives for all women and reduce the gap for disadvantaged groups. It stated: "*Research evidence shows a range of benefits when women are cared for by known midwives..... These include less need for epidurals or for any pain relief, fewer episiotomies, more normal births.....*" "*These reforms (by the Australian government) pave the way for tens of thousands of women and their families to benefit from continuity of midwifery care*"

Growing Impact

Following its selection by Cochrane for a press release, with the support of public relation (PR) officers from SHU and other collaborators, we developed promotional summaries in July 2013 and organised interviews to ensure an effective response to the media interest. All collaborators, particularly Sandall, Devane and Soltani, divided media interviews among them. Media coverage has continued beyond July 2013 and details have been broadcast by "Reuters", "Sky News Australia", "Evening Echo", "Daily Mail", "Irish Times", "Yorkshire Post", "Real Radio", "BBC Radio Sheffield", "BC1 Canada".

Global free access is also facilitated by podcasts in several languages in addition to English. Soltani led production of Farsi and Arabic podcasts and other colleagues translated it into Spanish and Portuguese (<http://www.cochrane.org/podcasts/issue-7-8-july-august-2013/midwife-led-versus-other-models-care-childbearing-women>). Soltani has been invited by the United Nations Population Fund (UNFPA) to act as an external consultant to set up the first Midwife-led care initiative in Iran. The updated review findings have been identified by the DH as a priority for incorporation into updated NICE guidelines on intrapartum care.

In addition, through the new project "promoting Midwifery led care for low risk women", Soltani led targeted seminars (for local researchers and clinicians) and meetings with key stakeholders (e.g. Nursing Director & Head of Midwifery, and Maternity Services Liaison Committee (MSLC) members). She established a team including Dr Helen Baston and Alison Brodrick (Consultant Midwives) and Frankie Fair (Midwife) from STH-JW and Alex Scott (Research Assistant) from SHU plus proactive engagement of maternity users (e.g. Rachel Dignall (user group coordinator) and Lucy Atkinson (MSLC Chair) as part of this local awareness and implementation project. Through this, we have provided systematic evidence and women's stories (<http://www.sth.nhs.uk/services/a-z-of-services?id=171&page=126>) about various models of care

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and place of birth (<http://www.sth.nhs.uk/services/a-z-of-services?id=171&page=125>) on the hospital website plus an electronic survey to capture impact of relevant evidence from mothers' and staff's perspectives. Although at an early stage, being launched as recently as July 2013, when there were 281 hits, this project is aimed to raise and maintain awareness in supporting women and staff in making informed decisions about the type of care during pregnancy and birth. Responses from health professionals continue to grow and we are in the process of survey implementation for women.

5. Sources to corroborate the impact (indicative maximum of 10 references)

1. The review has been selected for the World Health Organisation (WHO): Reproductive Health Library (RHL), raising its profile internationally through their website: http://apps.who.int/rhl/pregnancy_childbirth/antenatal_care/general/cd004667_Wiyongecs_com/en/index.html
2. The review was cited in the DynaMed Weekly Update 270109 as an "article most likely to change clinical practice": <http://www.ebsconewsletter.com/dmweeklyupdate/index000332339.cfm> and "BMJ News": <http://www.bmj.com/content/347/bmj.f5321>
3. Media coverage: The News Australia's ABC News quotes 2008 Cochrane Review (Thu Feb 19, 2009 2:34pm AEDT): <http://www.abc.net.au/news/2009-02-19/continuity-of-midwifery-care-undervalued/302516>

Findings have informed:

4. The UK Department of Health Policy Paper, Midwifery 2020: Delivering Expectations, (page 23 & 33) http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_119261
5. UK Prime Minister's Commission on Nursing and Midwifery, available from: <http://www.nhsemployers.org/planningyourworkforce/nursing/toolsandresources/pages/primeministerscommissiononnursing.aspx> & <http://webarchive.nationalarchives.gov.uk/20100331110400/http://cnm.independent.gov.uk/the-report/>, Our review was used in the rapid review (Page 47 cited: Caird J, Rees R, Kavanagh J, Sutcliffe K, Oliver K, Dickson K, Woodman J, Barnett-Page E, Thomas J (2010). *The socioeconomic value of nursing and midwifery: A rapid systematic review of reviews*. Eppi Centre report no 1801, London, EPPI Centre, Social Science Research Unit, Institute of Education, University of London). This was commissioned by the UK PMC and informed the UK PMC future of Nursing and Midwifery report.
6. NHS Commissioning Support for London: Improving maternity care in London: A framework for developing services (March 2011)-Page 34, available from: <http://www.londonhp.nhs.uk/wp-content/uploads/2011/03/Improving-maternity-care-in-London-A-framework-for-developing-services.pdf>
7. US Institute of Medicine (US-IOM) (Advising the nation/improving health): The future of Nursing: Leading Change, Advancing Health (2011): Transforming Practice (pages 28, 35, 57, 78,98,111,144 and 152). Available from: http://books.nap.edu/openbook.php?record_id=12956&page=83
8. The following facilitated an online petition in "demanding a formal and firm reaction from (the Brazilian) Ministry of Health and other related institutions": Association for women's rights in development (awid) (26/07/2012) available from: <http://awid.org/eng=/Get-Involved/Urgent-Actions3/Solidarity-Request-Brazil-Medical-Council-of-Rio-de-Janeiro-causes-national-outrage> (Paragraph 7 line 4 cites Cochrane library evidence)