

Reducing caesarean section: COSMOS trial findings

Helen McLachlan

In July, findings from the COSMOS trial were published in the *British Journal of Obstetrics and Gynaecology*. 'COSMOS' – 'COMparing Standard Maternity care with One to one midwifery Support' – was a trial of caseload midwifery, a model of maternity care recommended in Victoria and throughout Australia. A number of hospitals have introduced caseload in recent years; however, the model had not been subjected to rigorous evaluation.

Funded by the National Health and Medical Research Council, the trial compared

caseload midwifery care with standard options of care for women at low risk of medical complications at the Royal Women's Hospital in Melbourne. In caseload midwifery, women are cared for by a primary midwife throughout pregnancy, birth and the early postnatal period, and care is provided by one or two back-up midwives when needed. The study is the first randomised controlled trial of caseload midwifery in Australia and only the third internationally. It is also the largest study of its kind in the world.

The COSMOS trial, which recruited over 2,300 women, found that women who were randomly allocated to receive caseload midwifery care (compared with women allocated to standard care), were less likely to have a caesarean birth, more likely to have a normal birth, and less likely to have epidural pain relief during labour. The study also found that babies of women who had caseload midwifery care were less likely to be admitted to the special care nursery or neonatal intensive care. Women allocated to caseload midwifery were also more satisfied with their care during pregnancy, birth, and after the birth in hospital and at home.

The reduction in caesarean births and associated reduction in length of stay may also yield some cost savings. A full cost analysis and cost-effectiveness analysis will be completed based on these birth outcomes and data on service use and costs over the first six months after birth.

The results will assist policy-makers and maternity services in planning for future models of maternity care in Australia and internationally.

McLachlan HL, Forster DA, Davey MA, Farrell T, Gold L, Biro MA, 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 (in press). Epub 2012 July 25.



Implementation & sustainability in complex community interventions

Karen Willis

The increasing imperative to find what works in health services has meant a rise in research trialling interventions deemed 'complex'. While the strength of these interventions comes from taking a 'whole of problem' approach using multiple and inter-linking strategies, ways of examining

implementation are under-explored. Building sustainability is an important part of implementing complex intervention research, but this too has received little exploration in the implementation literature.

We recently published an article that explores issues of implementation and sustainability by examining the case of PRISM (Program of Resources, Information and Support for Mothers), our earlier community randomised trial, aimed at improving maternal health and wellbeing. Documents placed on the PRISM website were analysed, allowing a focus on the 'work' of the intervention – who does the work and what activities comprise the work – in order to examine implementation

as it relates to sustainability. Document analysis of this kind provides a useful way of considering implementation and sustainability of complex intervention research. It can 'value add' to findings from process evaluation and extend our understanding of an intervention beyond outcome measures. Analysis of the documents in this case provides insights into why sustainability of an intervention may be difficult to achieve during implementation.

Willis K, Small R, Brown S. Using documents to investigate links between implementation and sustainability in a complex community intervention: The PRISM study. *Soc Sci Med* 2012;75(7):1222-9.



Need to improve GP knowledge for better uptake of long-acting contraception

Angela Taft

General practitioners' lack of familiarity with long-acting reversible contraception (LARC) may make it harder for women to find out about this type of contraception. Our recent study analysed data from the *Bettering the Evaluation and Care of Health*

(BEACH) program, which collects information about clinical activities in general practice in Australia.¹

The study found that LARC, such as intrauterine devices (IUDs) and contraceptive implants, were discussed, prescribed or managed in around 15 of every 100 contraception problems managed in general practice. The oral contraceptive pill – the most frequently prescribed contraception – was the topic of around 69 of 100 consultations about contraceptives. LARC is an effective long-term method and needs minimal maintenance once in place, but only 1.2% of women in Australia use long-acting contraception. A shift towards prescribing LARC, as recommended in clinical guidelines, has yet to occur in Australian general practice.

The study also found that some groups consulted GPs less often about contraception, including Indigenous women, those who spoke a language other than English at home, and those who had a Commonwealth

Health Care Card. While young women (aged 18–24 years) were more likely to see their GP about emergency contraception, overall rates of management of emergency contraception in general practice were low.

Most Australian women remain unaware of the over-the-counter availability of emergency contraception, have misconceptions about it, and want more information from their general practitioners.

1. Mazza D, Harrison C, Taft A, Brijnath B, Britt H, Hobbs M, Stewart K, Hussaini SY. Current contraceptive management in Australian general practice: an analysis of BEACH data. *Med J Aust* 2012;197(2): 110-4.

Maternal diet and breastfeeding

Lisa Amir

I have always been interested in exploring the determinants of breastfeeding that are thought to have physiological causality. When I first read that women who smoke are less likely to breastfeed because nicotine interferes with milk let-down, I wondered whether nicotine is really to blame – or is nicotine the chemical scapegoat? Likewise, women who are obese are less likely to breastfeed than women with normal weight, and some researchers suggest that excess adipose tissue delays onset of lactogenesis and thus successful breastfeeding. But, is it the physiological effect of obesity, or the psychosocial and behavioural differences between women who are obese or not that makes the difference?

With my colleague Susan Donath, from the Murdoch Childrens Research Institute, I have looked at these questions about smoking and obesity and breastfeeding by conducting literature reviews and secondary analyses of large datasets.¹

The Longitudinal Study of Australian Children collected information about the mother's diet as well as the usual determinants of breastfeeding. When Susan and I looked at the relationship between maternal intake of fruit and vegetables and breastfeeding duration we found a clear dose-response

relationship; with each increase in daily fruit or vegetable intake women breastfeed for longer. Although epidemiologists often conclude that a dose-response relationship is evidence of a biological relationship between variables, we felt it was unlikely anyone would expect this to be the case. Although researchers have said that we could increase breastfeeding rates by decreasing maternal smoking, we don't believe anyone would recommend giving new mothers a piece of fruit to improve their chances of breastfeeding success.

We presented these data as a poster at two conferences in 2008, in Perth (see photo)² and Las Vegas,³ where I was able to discuss these issues with other delegates. I worked on the paper at our COMPASS writing retreat in 2009. And, finally, the paper has been published in *Early Human Development*,⁴ a well-regarded interdisciplinary journal. We have long argued that maternal infant feeding intention is the strongest predictor of

actual breastfeeding duration,⁵ and continue to stress the importance of collecting this variable in research studies.

1. Dr Lisa Amir staff home page <http://www.latrobe.edu.au/mchr/html/staff/amir.html>.
2. Amir LH, Donath SM. Maternal alcohol consumption and diet, and initiation and duration of breastfeeding: data from the Longitudinal Study of Australian Children (Poster). International Society for Research in Human Milk and Lactation (ISRHML); Perth, Australia, 2008.
3. Amir LH, Donath SM. Maternal alcohol consumption and diet, and initiation and duration of breastfeeding: data from the Longitudinal Study of Australian Children (Abstract). *J Hum Lact* 2009;25(1):100.
4. Amir LH, Donath SM. Maternal diet and breastfeeding: A case for rethinking physiological explanations for breastfeeding determinants. *Early Hum Dev* 2012;88(7):467-71.
5. Donath SM, Amir LH, ALSPAC Study Team. Relationship between prenatal infant feeding intention and initiation and duration of breastfeeding: a cohort study. *Acta Paediatr* 2003;92(3):352-5



Lisa Amir at ISRHML Conference (2008)

The RUBY Study

Della Forster

Breastfeeding has many benefits for both mother and baby, but in Australia, while the overall proportion of infants receiving at least some breast milk has increased in recent years,¹ the gap between the breastfeeding outcomes of socially advantaged and socially disadvantaged women has increased.² Women who are more disadvantaged are less likely to initiate and continue breastfeeding than other women.²

Very few interventions have been found to be effective in increasing breastfeeding. A Canadian trial found proactive telephone support from another mother with breastfeeding experience increased breastfeeding by 14% at three months postpartum;³ however, a number of other trials of peer support have not shown a difference. In the Australian context no trials have been conducted, but the idea of testing peer support as an intervention has been well-received among health professionals and in our feasibility studies.

With the Women's Hospital, we recently received funding from the Felton Bequest

to undertake a randomised controlled trial to test whether telephone support for first-time mothers, provided using a proactive approach in the postnatal period, increases the proportion of infants who are breastfed for at least six months.

We are excited to be undertaking this project in collaboration with Sunshine Hospital, the Australian Breastfeeding Association (ABA, the peak community advocacy group for breastfeeding) and Monash Medical Centre. Together, the three hospitals have catchments that include areas with some of the lowest breastfeeding rates in the state, so the intervention will be offered to women with the most to gain in terms of breastfeeding outcomes.

We will recruit women who have themselves successfully breastfed to provide the intervention. Women randomised to receive peer support will receive regular phone calls from their allocated volunteer mother, with the focus being on supporting and encouraging breastfeeding. The volunteers will follow a pre-defined call schedule, with a focus on the first three months, but with an option to vary this as needed. The ABA will assist with the recruitment of volunteer mothers and will provide the required training.

This approach could be incorporated into routine maternity care in Australia if it is shown to improve outcomes and be cost-effective.

Funding: Felton Bequest

Investigators: Della Forster, Helen McLachlan, Mary-Ann Davey, Lisa Amir, Lisa Gold, Rhonda Small

Associate investigators: Anita Moorhead, Kate Mortenson, Nanette Shone, Chris East, Patrice Hickey, Jenny Tenni, Fiona McLardie-Hore, Heather Grimes

1. Australian Institute of Health and Welfare. 2010 Australian National Infant Feeding Survey: indicator results. Canberra: AIHW, 2011.
2. Amir LH, Donath SM. Socioeconomic status and rates of breastfeeding in Australia: Evidence from three recent national health surveys. *Med J Aust* 2008;189(5):254-6.
3. Dennis CL, Hodnett E, Gallop R, Chalmers B. The effect of peer support on breast-feeding duration among primiparous women: a randomized controlled trial. *CMAJ* 2002;166(1):21-8.

PhD by Publication

Kristina Edvardsson

I am a visiting PhD student at MCHR, doing my studies through Epidemiology and Global Health, Department of Public Health and Clinical Medicine, Umeå University in Sweden. I have been fortunate to be invited to MCHR for a research visit as part of my PhD training, which involves studies of the implementation of a child health promotion program in Sweden, the health of expectant parents, as well as parents' experiences of health promotion and lifestyle change during pregnancy and early parenthood.

Like many Swedish PhD students, I am writing my thesis by publication. In summary, this means writing four papers, getting at least two of them published (standard demand for completion of PhDs at Umeå University), and summing up the work in a conceptual and methodological cover story. I am currently working on my fourth and last paper, aiming at defending my thesis at a public seminar in Sweden in May 2013.

In my experience, the tricky part of writing a PhD by publication is planning the work so that it allows for articles to get published within a set timeframe. The research questions and plan need to be very clear at an early stage, with some margin allowed to account for lengthy review processes. After publishing two papers, and submitting a third, I see many advantages of the thesis-by-publication format. Submitting papers means that these parts of the thesis are finished and peer-reviewed, and you can move on to the next step of your research. And, it is quite exciting when papers are finally accepted for publication after sweaty ping-pong games with reviewers and editors, and your CV begins to grow.

But, what is most important is that study findings are disseminated and shared in a relatively short time if articles are accepted for publication in international peer reviewed journals. Further, it is quite a boost for one's self-confidence when you find that other researchers refer to your work. Writing for publication also gives familiarity with the important end-stage of research – the communication of findings. Thus, I can happily recommend doing a PhD thesis by publication.

I would like to thank Professor Rhonda Small and her team for welcoming me and for providing a very creative and inspiring research environment at MCHR.

Kristina Edvardsson



Grants

Congratulations to the following staff for their recently awarded grants:

Della Forster (under the auspices of the Royal Women's Hospital) and her team - **Helen McLachlan, Mary-Ann Davey, Lisa Amir**, Lisa Gold, **Rhonda Small**, Anita Moorhead, Chris East, Jenny Tenni, Patrice Hickey, Kate Mortenson, Nannette Shone - received a grant from the Felton Bequest (2012-2014, \$240,000) for the project: "Does telephone peer support in the early postnatal period increase breastfeeding duration? A randomised trial (RUBY)"

Della Forster also received an NHMRC Equipment grant for the project: "Diabetes and antenatal milk expressing (DAME): a randomised controlled trial". Research team: Sue Jacobs, **Lisa Amir**, Peter Davis, Sue Walker, Kerri McEgan, Gillian Opie (2012, \$10,698).

Awards

Anita Moorhead and **Lisa Amir** won best poster award at the international nursing and midwifery day at the Royal Women's Hospital for their poster: "Can I breastfeed without being pregnant? Case studies of induced lactation".

Congratulations

Ingrid Wilson has been awarded the inaugural **Judith Lumley PhD Scholarship**. Her study will explore the question: can we reduce alcohol-related intimate partner violence through intervening to reduce harmful drinking? Ingrid will receive the award at a Faculty Award Ceremony later in the year.

Healthy Motherhood Program

In 2011, the Faculty of Health Sciences identified established research programs/ research strengths within the Faculty. The Healthy Motherhood Program was recognised as one of these and received funding of \$130,000 for 2012 to support project developments. Program members come from MCHR, the School of Nursing & Midwifery, Physiotherapy, the Rural Health School and Allied Health. They meet approximately every six weeks to discuss current projects, exchange knowledge and experience and plan future projects.

For more information about the Healthy Motherhood Program and the projects within it, please contact mchr@latrobe.edu.au

Staff News

Dr **Arthur Hsueh's** appointment ended at the end of March. He is a Health Economist who worked as a part-time Senior Research Fellow at MCHR since 2008. He was appointed Honorary Senior Research Fellow to continue his collaboration with the Centre on current and future research projects.

Maggie Flood has worked at MCHR for 10 of the last 12 years in a range of capacities, recently as a project co-ordinator for a major NHMRC-funded trial of caseload midwifery (and is a co-author of the recently accepted primary outcomes paper in BJOG). She will now be part of the project team *Risk factors and trends in postpartum haemorrhage* with Dr Mary-Ann Davey and Prof. Sue McDonald.

Dr **Mridula Bandyopadhyay**, who joined MCHR in 2007 as a team investigator on COMPASS, is moving to a new position at Victoria University. Her research interests centre around immigrant and refugee women's health issues. She has made significant contributions to MCHR's work over these years and will continue collaborative work with the Centre. We wish her well in her new role.

Our New Postgraduate Students

Kate Dawson
Sonia Reisenhofer
Moni Rani Saha
Sarmin Sayeed
Ingrid Wilson
Laura Whitburn

For more information about them and their projects, see www.latrobe.edu.au/mchr/html/staff.html

Visits

Audrey Saftlas, Professor at the University of Iowa, College of Public Health, Department of Epidemiology, and Adjunct Professor of Epidemiology at La Trobe University, visited MCHR for two weeks at the end of January / beginning of February. During her visit she taught successful grant writing, peer reviewed a number of MCHR grant applications and held a seminar about a trial to determine if motivational interviewing is an effective intervention to help women in abusive intimate relationships.

International presentations

Columbia University, Mailman School of Public Health, March 2012.

Taft A. Screening for intimate partner violence: emerging evaluation from randomised controlled trials [presentation].

18th Annual Conference of the Nursing Network Violence Against Women, International (NNVAWI); Charlottesville, Virginia, USA 4-6 March, 2012.

Reisenhofer S. The influence of emergency healthcare on sense of self and safety decision-making activities for women living with intimate partner violence.

Taft A. MOVE: a multi-method trial evaluation of community maternal child health nurse IPV care in Melbourne, Australia.

A national workshop on violence against women: Contemporary issues & challenges; New Delhi, India, 7 March 2012.

Bandyopadhyay M. Acid violence in South Asia. [Invited Plenary Speaker]

National Conference on Health and Domestic Violence (NCHDV); San Francisco, USA, 29-31 March 2012.

Taft A. Methodological and ethical issues in randomised controlled trials of health care interventions for women survivors of IPV.

Taft A, Small R, Humphreys C, Hegarty K, Walter R. MOVE: Participatory implementation and randomised trial evaluation of a sustainable good practice model of maternal and child health (MCH) nurse care for mothers experiencing intimate partner violence [oral presentation].

13th World Congress on Public Health; Addis Ababa, Ethiopia, 23-27 April 2012.

Small R, Gissler M, Fantahun MF. Research on Maternal and Perinatal Outcomes and Experiences among Migrants [workshop].

5th International Asian & Ethnic Minority Health and Wellbeing Conference Auckland, New Zealand, 27-28 June 2012.

Bandyopadhyay M. Lost in translation? Health care providers' and South Asian women's perspectives about GDM management strategies.

Maharaj N. Culture and identity: mothering experiences of Indian immigrant women in Melbourne, Australia [Oral Presentation].

Recent Publications

MCHR staff and students have published 11 papers in peer reviewed journals to date in 2012, and 12 papers are forthcoming / in press.

Please refer to the listing on our website at www.latrobe.edu.au/mchr/html/publications.html



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