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1+1= A Healthy Start to Life - Research Report

The *1+1 = A Healthy Start to Life Project: Targeting the year before and the year after birth in Aboriginal children in remote areas* is a three stage baseline, intervention and post-intervention study designed to improve maternal and infant health for remote dwelling Aboriginal families in Maningrida and Wadeye. We are investigating how services can be better designed to increase community involvement in improving early detection of problems and increase the effectiveness of multidisciplinary practice during pregnancy and the year after birth. This study is funded by the National Health and Medical Research Council, the NT Research and Innovation Board and the Helen and Bori Liberman Family. An Australian Research Council funded project in partnership with the Department of Health and Community Services and Danila Dilba Aboriginal Medical Service is looking at Indigenous families and birth which is also informing this work.

Dear Colleagues

Last year the focus of the *1+1* study is around evaluation. This work is led by Sue Kildea and Cath Josif. The evaluation team have analysed data from 99 interviews with 64 stakeholders over 12 months. Medical records from the women (n=315) and their babies (n=320) who have used Midwifery Group Practice (MGP) between September 2009 and June 2011 were audited and are currently being compared with the baseline data collected in 2007 / 2008. This analysis is in progress and will be reported to the department in January.

In association with Dr Charles Kilburn we also started a small sub-study to investigate our finding that babies of mothers from remote communities have quite high rates of admission to the neonatal nursery. This involves a retrospective clinical audit of the reason for admission to the Nursery and interviews with key stakeholders. Deborah Donoghue, a PhD candidate at the University Centre for Rural Health in Lismore NSW, is conducting this research. Deb, a paediatric nurse and perinatal researcher was the inaugural coordinator of the Australian and New Zealand Neonatal Network. She has made two visits to Darwin and so far has completed the audit of the notes of all babies admitted to the nursery for one year.

On the 8th of December 2011 we held a half - day Advisory Committee meeting at the Northern Australian Research Unit (NARU) in Darwin. Nineteen people attended, thirteen from NT Health. Six of these attendees were from the Darwin MGP. At the meeting, Jo Curry presented the baseline patient journey model which highlighted the excessive discontinuities and multiple care providers previously experienced by women and demonstrated considerable improvement since the MGP began. Sue Kildea and Cath Josif reported both quantitative and qualitative findings from the evaluation of the MGP. Sue Kruske facilitated an open discussion with those attendees around culturally safe care which has stemmed from her work on this project and a further consultancy conducted for the Commonwealth.

Finally we would like to congratulate one of our PhD research students Sarah Bar Zeev who was unable to attend the meeting as she recently gave birth to baby Arava. Congratulations Sarah! We would also like to congratulate Cath Farrington now Cath Josif who was married in July.

This year will be the final year of the *1+1* study, we will revisit field sties to collect data to compare with our baseline study and we will continually report our findings through meetings, publications and newsletters.

Lesley Barclay AO PhD

Director and Professor; University Centre for Rural Health North Coast, Chief Investigator on behalf of the project

The Patient Journey

Thanks to the wonders of modern technology Doctor Jo Curry joined the meeting from a very chilly Wellington in New Zealand. Jo, an investigator on the 1+1 Study is a Health Care Improvement practitioner specialising in Patient Journey Modelling. Jo and PhD candidate Sarah Bar-Zeev modelled the journeys of women and infants from two Top End Communities as part of the baseline data collection for the 1+1 Study. They found inefficiencies in service design and delivery of care that contributed to patient and staff dissatisfaction, reduction in quality and safety and increased risk to women due to multiple care handovers.

The issues faced by many women when they relocated to Darwin for maternity services were apparent to many stakeholders but for some it was the visual description of what happened to women provided by the Patient Journey Model that highlighted the discontinuities that were experienced by women when we began this work in 2008. One Stakeholder interviewed as part of the evaluation of the Midwifery group Practice observed *the interruptions to it were just phenomenal … the patient journey model showed all the interruptions of care. We knew what happened but just having it there really showed how fragmented it was (SH 32_1).*

At the Advisory Group meeting Jo briefly described the architecture of the Patient Journey model, or as it is now known the Essomenic Patient Journey Model. She showed the baseline model and one created form more recent data post MGP which highlighted the reduction in discontinuities and multiple care providers and the system of care currently being experienced by women. The current model clearly shows increased continuity of care and carer, patient safety improvements and refined information flow.

Evaluation of the Midwifery Group Practice Darwin

Sue Kildea and Cath Josif reported findings from the evaluation of the MGP. The MGP data consisted of 315 cases collected during 2009-11 with 305 women analysed by pregnancy (excluding multiple pregnancies n=5) or 'maternity episodes'. All babies are included in the analyses (included twins; total n=315). The first comparison group is the baseline (1+1 audit) data from 2004-06, consisting of 416 cases: 408 maternity episodes (excluded multiple pregnancies n=4) and all babies were analysed (included twins n=9). The second comparison group consisted of 1,900 Top End Remote cases collected from the (NTMC) 2003-05. We will also be reporting on Close the Gap indicators. A recent review of the literature on models of maternal infant health care for Aboriginal and Torres Strait Islander women has found a dearth of evidence in this area with many of the evaluations reporting on small numbers with no comparison data. This reiterates the importance of this evaluation though the team still feels that increasing the numbers of women by extending the time frame for analysis of the MGP data would be extremely beneficial. This could be done within the 1+1 study and discussion will occur early in 2012 regarding this possibility.

Three key themes were derived from the analysis of the qualitative data. The themes illustrate three phases in a journey towards system improvement. The first theme described how maternity services were perceived prior to the MGP commencing. The second theme explored the establishment of the new model of care that was required to fit into an existing maternity service and the final theme described how maternity services were perceived after the MGP commenced. The qualitative analysis will be reported to the Department of Health at the end of January 2012 as part of the final report on the evaluation of the MGP and published soon after.

Working conditions perceived as fair and acceptable impact on recruitment and retention of midwives and in turn the sustainability of the MGP. Conducted over a two week period the TMS showed that midwives spent almost half their time engaged in clinical work (47%). administration (13%), transport activities (10%), with meetings and training (12%) accounting for substantial proportions of the midwives time.

The Attitudes to Professional Role questionnaire examined changes in the midwives attitudes to their professional role. An overall positive change in attitudes was demonstrated across four domains; Professional Support, Professional Satisfaction, Client Interaction and Professional Development. At 12 months the mean score for emotional exhaustion for the MGP midwives fell into the average range for this measure as stipulated by MBI manual.

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Culturally Safe Care

In response to the findings of the 1+1 baseline data collection, Sue Kruske presented an overview of the characteristics of culturally competent services. 1+1: services not culturally safe.

Our research has challenged the common misperception that remote people won't/don't access care (we found a mean of 28 presentations per infant in first year of life). In addition there are now many NT and national reviews over 30 years all saying the mainstream services are not culturally safe for Aboriginal and Torres Strait Islander women and their families.

To become more culturally competent, our health system needs to:

- *Value diversity*
- *Have the capacity for cultural self-assessment*
- *Be conscious of the dynamics that occur when cultures interact*
- *Institutionalise cultural knowledge; and*
- *Adapt service delivery so that it reflects an understanding of the diversity between and within cultures*

(NHMRC, 2006, p. 7)

From the literature Sue presented the following domains of culturally competent care:

- Physical environment and infrastructure
- Specific Aboriginal and/or Torres Strait Islander programs and workforce
- Continuity of Care and Carer
- Collaborating with Aboriginal Community Controlled Health Services and other agencies
- Communication, Information Sharing and Transfer of Care
- Staff attitudes and respect
- Cultural Education Programs
- Relationships
- Informed Choice and Right of Refusal
- Tools to measure cultural competence
- Culturally appropriate and effective health promotion and behaviour change activities
- Engaging consumers and clinical governance

Investigators on the study are: Professor Lesley Barclay, *Project leader*; Professor Jonathan R Carapetis, *child health, infectious disease prevention*; Prof Sue Kildea, *PAR, service intervention, evidence based care*; Assoc. Professor Sue Kruske, *child health, parenting practices, nurse workforce reform*; Professor Gweneth Norris, *management accounting, costing, economic analysis*; Dr Carolyn McGregor, *patient journey modeling, health informatics*; Dr Joanne Curry, *patient journey modeling analyses*; Prof Sally Tracy, *innovative service delivery, cost, evaluation, risk management*; Dr Suzanne Belton, *ethnographic studies*, Dr Jacqui Boyle, *Obstetrics, service design*, Dr Ngiare Brown, *Indigenous child health*, Dr Steve Guthridge, *epidemiology, statistical advice*, Noelene Swanson, *remote health service reform*.

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