

# MODELS OF CARE SYNTHESIS

## RESEARCH GAPS FROM COCHRANE REVIEWS (Cochrane Library Issue 1, 2009)

The faces indicate the direction of findings in each review:

- ☺ **Likely to be effective**
- ☹ **Both benefits and risks**
- ❓ **Uncertain or limited effect**
- ☹ **Likely to be ineffective or potentially harmful**

*Important research implications are more likely to arise from  
❓ reviews with uncertain findings  
or where*

*☹ the risks and benefits are mixed.*

### DURING PREGNANCY

#### ❓ **Antenatal day care units versus hospital admission for women with complicated pregnancy (Kröner 2001)**

*The single study that was included showed that day care assessment for non-proteinuric hypertension can reduce inpatient stay and rate of induced labour. Assessed as up-to-date: 19 July 2001*

- Need more trials assessing the risks and benefits of antenatal day care, and trials looking at other complications besides hypertension

#### ☺ **Fewer routine antenatal visits in low-risk pregnancy (Villar 2001)**

*Lowering the number of routine prenatal visits does not jeopardise health outcomes for pregnancy women or their babies, but may reduce women's satisfaction with care. Assessed as up-to-date: 17 August 2001*

- Need further trials in developed countries.
- Need additional studies assessing costs of various options.

#### ❓ **Giving women their own case notes to carry during pregnancy (Brown 2004)**

*There are both potential benefits (increased maternal control and satisfaction during pregnancy, increased availability of antenatal records during hospital attendance) and harms (more operative births).*

*Assessed as up-to-date: 26 June 2007*

- Need a large multicentre trial, including poorly resourced settings, that looks specifically at clinical outcomes, administrative issues, and qualitative studies to explore women's sense of satisfaction, empowerment and sense of control.

#### ❓ **Group versus conventional antenatal care for pregnant women (Homer 2009)** *Cochrane protocol, Cochrane review in progress*

**? Labour assessment programs to delay admission to labour wards (Lauzon 2001)**

*The single included study showed that women with term pregnancies may benefit from labour assessment programs which aim to delay hospital admission until women are in active labour.*

*Assessed as up-to-date: 30 January 2004*

- Need multi-centre RCTs to determine the risks and benefits of the same or a similar intervention.
- Studies should be large enough to allow for the determination of clinically important outcomes, such as (the effect on caesarean section rates, neonatal well-being, rates of intrapartum interventions, women's evaluations of their care, and costs).
- Potential risks should also be evaluated (unplanned out-of-hospital births and the potentially harmful effects of withholding caregiver support and attention to women in early or latent phase labour).

**☺ Midwife/general practitioner managed care compared with obstetrician-led shared care (Villar 2001)**

*While clinical effectiveness seemed similar, women appeared to be slightly more satisfied with midwife/general practitioner managed care compared with obstetrician/gynaecologist led shared care.*

*Assessed as up-to-date: 17 August 2001*

- No implications for research on the two forms of care were reported.

**? Support during pregnancy for women at increased risk of low birthweight babies (Hodnett 2003)**

*Programs offering additional social support for at-risk pregnant women were not associated with improvements in any perinatal outcomes (numbers of preterm babies, low birthweight babies or perinatal mortality), but women were less likely to have a caesarean birth and were more likely to choose to terminate the pregnancy.*

*Assessed as up-to-date: 29 September 2005*

- No need for further trials evaluating the medical effects of social support, but need further trials investigating psychosocial outcomes
- Need qualitative studies about women's evaluations of additional support.
- Urgently need studies that aim to identify the cause(s) of preterm birth.
- Future studies of forms of care to prevent low birthweight should differentiate between the two distinct causes of low birthweight: being born preterm and being small for gestational age.

## **DURING BIRTH**

**☺ Continuous support for women during childbirth (Hodnett 2007)**

*Women who had continuous intrapartum support were **more likely** to have shorter labour, a spontaneous vaginal birth, to report satisfaction with childbirth and **less likely** to have intrapartum analgesia, particularly when provided by women who were not part of hospital staff.*

*Assessed as up-to-date: 17 April 2007*

- Few existing trials measured postpartum outcomes

- Need more trials conducted in poorly resourced settings
- All trials need to assess cost-effectiveness
- Comparisons of different models of continuous support would be helpful

### ☺ **Home-like versus conventional institutional settings for birth (Hodnett 2005)**

*Home-like birth settings may have modest benefits, including decreased medical intervention and higher rates of spontaneous vaginal birth, breastfeeding, and maternal satisfaction. However, there may be an added risk of perinatal mortality.*

*Assessed as up-to-date: 11 November 2004*

- Future trials of alternative birth settings should seek participants' consent prior to randomization and use bias-free methods of random allocation.
- They need to address the potential confounding effects of differences in the extent of continuity of caregiver in the home-like versus conventional birth settings.
- Need trials of freestanding birth centres
- Trials of all home-like settings should encourage high response rates to postal questionnaires, and analyse cost-effectiveness
- Qualitative studies, examining what happens when women are transferred from home-like to conventional birth settings, would shed light on the impact of transfer on women, care providers, and decision-making processes regarding the need for intervention.

### ❓ **Home versus hospital birth (Olsen 1998)**

*One study of reasonable quality was included, but was too small to be able to draw conclusions.*

*Assessed as up-to-date: 26 April 2006.*

- An extremely large trial would be needed to assess neonatal mortality

### ❓ **Package of care for active management in labour for reducing caesarean section rates in low-risk women (Brown 2008)**

*No significant differences in caesarean rates were seen between the active management and routine care groups.*

*Assessed as up-to-date: 28 February 2008*

- Need trials with greater statistical power
- Future trials need to evaluate maternal satisfaction in different settings

## **POSTNATAL**

### ❓ **Early postnatal discharge from hospital for healthy mothers and term infants (Brown 2002)**

*Although adverse outcomes were not seen with early postnatal discharge for healthy mothers with term infants, methodological limitations of included trials mean that adverse outcomes cannot be ruled out.*

*Assessed as up-to-date: 22 May 2002*

- Need large well-designed trials of this intervention.
- Future studies should be large enough to detect important differences taking into account the likelihood of attrition.
- Process evaluation to assess the nature and uptake of any co-interventions is of critical importance.

- Use of standardised approaches to outcome assessment would greatly improve the capacity to interpret results and compare the findings of future studies.

☺ **Early skin-to-skin contact for mothers and their healthy newborn infants (Moore 2007)**

*Skin-to-skin contact between mother and baby at birth reduces crying, improves mother-baby interaction, keeps the baby warmer, and helps women breastfeed successfully.*

*Assessed as up-to-date: 2 April 2007.*

- Need to assess the effects of early skin-to-skin contact on vulnerable infants (e.g. preterm) and on mothers giving birth by caesarean.
- Future research in this area needs to use standard outcome measures.
- Future trials need to report their findings following the CONSORT guidelines.
- Need to investigate a possible dose-response relationship which requires skin-to-skin contact initiation time, frequency and duration of skin-to-skin care to be reported.

? **Home-based post-discharge parental support to prevent morbidity in preterm infants (Webster 2002)**

*Cochrane protocol, Cochrane review in progress*

☺ **Support for breastfeeding mothers (Britton 2007)**

*All forms of extra support analysed together showed an increase in duration of 'any breastfeeding' (includes partial and exclusive breastfeeding).*

*Assessed as up-to-date: 8 November 2006*

- Need further trials to assess the effectiveness of lay, professional and combined support in different settings - in particular in those communities with low rates of breastfeeding initiation.

## **DURING PREGNANCY, BIRTH AND POSTNATAL PERIOD**

? **Maternity waiting facilities for improving maternal and neonatal outcome in low-resource countries (van Lonkhuijzen 2007)**

*Cochrane protocol, Cochrane review in progress*

? **Midwifery-led versus other models of care delivery for childbearing women (Hatem 2008)**

*Women who had midwife-led models of care were less likely to experience antenatal hospitalisation, the use of regional analgesia, episiotomy, and instrumental delivery and were more likely to experience no intrapartum analgesia/anaesthesia, spontaneous vaginal birth, to feel in control during labour and childbirth, have a known midwife at birth and to initiate breastfeeding.*

*Assessed as up-to-date: 2 May 2008*

- Need further comparisons of different models of midwife-led care
- Further research is needed on more recently developed midwife-led models of care that include home birth

- Need to describe intervention and standard models of care in more detail delivered.
- Need better and standardised definitions and measurement of continuity of care.
- Need to determine midwives' views of the acceptability of different models of midwife-led care
- Need to consider a framework for trials of complex interventions which involves theoretical modelling between processes and outcomes, at trial design stage
- Future research should explore why fetal loss is reduced for babies under 24 weeks' gestation in midwife-led models of care
- Future trials need to assess longer term outcomes such as urinary and faecal incontinence, pain and birth injury (to the baby)
- Need research in countries where hospitals are resource constrained.
- Need to include the viewpoint of the mother and their perception of their role in the decision-making process (sense of control, maternal self-confidence, post-traumatic stress disorder, coping after the birth)
- Need all trials to include economic analyses of relative costs and benefits

**? Specialised antenatal clinics for women with a multiple pregnancy to improve maternal and infant outcomes (Dodd 2007)**

*No RCTs were included.*

*Assessed as up-to-date: 18 December 2006*

- Need appropriately powered and designed randomised controlled trials.

**? Specialised antenatal clinics for women with a pregnancy at high risk of preterm birth (excluding multiple pregnancy) to improve maternal and infant outcomes (Whitworth 2007).**

*Cochrane protocol, Cochrane review in progress*

**? Support for mothers, fathers and families after perinatal death (Flenady 2008)**

*No RCTs were identified.*

*Assessed as up-to-date: 5 November 2007*

- Need trials to assess the effects of interventions aimed at providing appropriate support or parents and families after a perinatal death.
- Certain high-risk groups (like women who are socially isolated women, have low levels of social support, or who underwent termination of pregnancy for fetal anomalies) and fathers need to be specifically targeted.
- Further trials should ensure that the range of outcome measures is clearly defined, are assessed by standard psychometric tools, that data are complete and that adequate follow up is possible.

**? Traditional birth attendant training for improving health behaviours and pregnancy outcomes (Sibley 2007)**

The potential of traditional birth attendant training to decrease newborn death is promising, when combined with improved health services.

*Assessed as up-to-date: 29 June 2008*

- Need further adequately powered trials with a focus on traditional birth attendant training in relation to reducing perinatal death, and which potential mechanisms hold the most promise.

- Need adequate baseline data from participants to allow sub-group analyses.
- Need for research that seeks to improve family and community-based interventions, in relation to traditional birth attendant training.

## **INFANT CARE**

### **☺ Developmental care for promoting development and preventing morbidity in preterm infants (Symington 2006)**

*Developmental care interventions may help preterm infants cope better with the environment of the Neonatal Intensive Care Unit.*

*Assessed as up-to-date: 30 December 2005*

- Need more RCTs, including cluster trials, to assess the effects of developmental care interventions on short and long term outcomes and costs
- Long term neurodevelopmental follow-up data should include consistent timing of assessment and method of measurement
- Future research in this area should involve outcome measures consistent with those in previous studies.
- Future RCTs could also include the study of untested developmental care interventions: prone versus supine positioning, clustering of nursery care activities, and visual stimulation.

### **❓ Specialty teams for neonatal transport to neonatal intensive care units for prevention of morbidity and mortality (Chang 2008)**

*Cochrane protocol, Cochrane review in progress*

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