The Spirit of Birth: Nature, Nurture and the Evidence

Dr Maggie Banks
PhD, SM, RGN

The safest way to help labouring women is to respect nature and not interfere with spontaneous events unless there is clear evidence that to do so would be beneficial.

It is a dangerous practice to overestimate the ability of obstetric technology and to underestimate the spontaneous reactions and the innate biological behaviour of the birthing woman (Naaktgeboren, 1989, p. 803).

Safety in birthing

Hormones of labour and birth

- Oxytocin: love
- Beta-endorphin: pleasure + transcendence
- Catecholamines: excitement/fight + flight
- Prolactin: mothering (Buckley, 2015)
**Spontaneous vaginal birth**

"the birth of a baby without any obstetric delivery assistance to facilitate delivery" (MOH, 2015a, p. 31).

May include ARM, IOL (24%), augmentation (26.6%), narcotics, epidural (27%), vaginal examinations, instructed pushing, episiotomy (15%), CCT and eccholics, PPH, suctioning of baby, separation from mother.

**Medicalised birth**

1 in 3 'normal' births
1 in 2 had at least 1 intervention
The Spirit of Birth: Nature, Nurture and the Evidence

Type of birth, 2014 (MOH, 2015b)

<table>
<thead>
<tr>
<th>Type</th>
<th>NZ %</th>
<th>Range %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spontaneous vaginal birth</td>
<td>42.0</td>
<td>32.4 – 51.3</td>
</tr>
<tr>
<td>Normal birth</td>
<td>21.3</td>
<td></td>
</tr>
<tr>
<td>Caesarean</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elective</td>
<td>4.4</td>
<td>1.2 – 13.3</td>
</tr>
<tr>
<td>Emergency</td>
<td>13.2</td>
<td>14.4 – 16.5</td>
</tr>
<tr>
<td>Operative</td>
<td>9.3</td>
<td>2.7 – 10.7</td>
</tr>
</tbody>
</table>

Place of birth

- No strong evidence to favour either planned hospital birth or planned home birth for ‘low risk’ pregnant women (Olsen & Clausen, 2012).
- Risk of emergency CS 4.62 times more likely in obstetric hospital than primary birthing unit.
- Higher incidence (1.4) of NICU admission (Davis et al, 2011).
- ‘Alternative’ institutional settings (Hodnett et al, 2010).

Delaying hospitalisation

- Assessing term labouring women out of Delivery Suites:
  - Lessens likelihood of oxytocic augmentation
  - Lessens use of analgesics
  - Lessens time spent in Delivery Suite
  - More in control of labour (Lauzon & Hodnett, 2004).
Warm water pool

...there was a significant reduction in epidurals ... [and] there is no evidence of increased adverse effects to the fetus/neonate or woman from labouring in water or waterbirth (Cluett & Burns, 2009).

Assessing unborn baby

- Pinard – safe & effective (Alfirevic et al, 2013)
  - Ultrasound-free
  - Least stimulating
  - Cheap
  - Loving touch
- BASIC MIDWIFERY SKILL
- Movements (Banks, 2003)

Assessing cervical dilatation in labour

- Friedman curve (Duff 1998)
- 22% women pass ‘alert line’ (Chalmers et al, 1989)
- Inaccurate & subjective (Phelps 1998)
- Smaller dilatation, higher inaccuracy (Letic 2003)
- More frequent, more inaccurate (Letic 2003)
  - 4 hourly – 11% too slow
  - 2 hourly – 33% too slow - 11% arrested
- Protracted or arrested labour criteria too stringent for nulliparous women (Zhang 2002)
The longer push

Retrospective cohort study, 15,759 women, first babies, live born
• 46% born within an hour
• 33% 1-2 hours
• 14% 2-3 hours
• 14% 3-4 hours
• 7% 0-12 hours
• >6 hours – 4.4% CS

‘Prolonged 2nd stage’ is associated with increased maternal morbidity & operative birth but not poor neonatal outcome (Cheng et al, 2004)

Physiological pushing

... the recommendation for clinical practice is that midwives should not direct pushing. This recommendation arises particularly from evidence suggesting that perineal trauma may be reduced, but also that directed pushing may be harmful to fetal wellbeing (Cooke, 2010).

Intact membranes

66% at full dilatation, 12% of these born-in-caul (Dixon, 2003)
• Aids dilatation of cervix
• Equalises uterine pressure on baby’s skull, placenta & cervix
• Protects - ascending infection
• Cleanses vagina at birth
• Reduces midwife distress!
Artificial rupture of membranes

The evidence showed no shortening of the length of first stage of labour and a possible increase in caesarean section. Routine amniotomy is not recommended for normally progressing labours or in labours which have become prolonged (Smyth et al, 2013).

Meconium-stained liquor

- 8-20% births at term (Hiersch et al, 2014)
- Approx 2/3 (4% live births) - below vocal cords (Katz, 1992)
- MAS develops in 1:1000 live-born infants (Katz, 1992)
- 50% infants with inhaled meconium clear the lungs spontaneously (Katz, 1992)
- Secondary meconium – more significant (Hiersch, 2014)
- No suctioning does not increase MAS (Vain et al, 2004)

Maintaining the links

- Skin to skin contact increases oxytocin secretion
- Placental birth
- Ejection colostrum
- Love hormone
- Stress reducing
- In arms baby
- Eye to eye contact
Placental birth

Active management of third stage reduced the risk of haemorrhage greater than 1000 ml in an unselected population, but adverse effects are identified. Given the concerns about early cord clamping and the potential adverse effects of some uterotonic agents, it is critical now to look at the individual components of third stage management (Begley et al., 2010).

Cord clamping

No or delayed cord clamping respects, promotes & protects physiology
- Less intervention is better (Mercer et al., 2007)
- Better cardiopulmonary adaptation (25-30% more blood volume) (Mercer & Skovgaard, 2002)
- Less anaemia (up to 60% more RBC) (Mercer, 2001)
- Facilitates immediate and uninterrupted mother baby contact

Midwife’s traditional kit

- Her wisdom
- Her body
- Her time
- Touch/Massage
- Warmth
- Movement
- Herbs
- Food
- Furniture