A midwifery perspective
National Women’s Maternity
Annual Clinical Report

Melissa Brown
Midwifery Director
Aspiring to excellence

- Where have we done well?
- Identify variations
- Identify opportunities for improvement
- Impact on quality of care and service delivery
- Priorities moving forward

Consider:
1. What is best practice?
2. What strategies are required to make improvements?
3. What do I need to do to make a difference?
"Everyone thinks of changing the world, but no one thinks of changing himself."

Leo Tolstoy
Clinical outcomes - where have we done well?

- Significant reduction in births between 32 and 36 weeks gestation (lowest in a decade)
- SGA babies born between 40 and 42 weeks lower – GROW and SGA guideline/pathway
- Women under care of self-employed LMC 75% up from 65% in 2006
- ECV pathway
  - 43% increase in referrals (104 women)
  - 49% success rate (51 women)
  - 69% vaginal birth (35 women)
- Exclusive breastfeeding at discharge 77%
- Perinatal related mortality rate 11.7/1000 births (lowest rate in past 13 years)
- Contraception information and support (6% reduction in first trimester TOP, 30% reduction in last decade)
- Multiple birth rate low – single embryo transfer policy (Fertility Plus)
Clinical outcomes – no change

- Ratio of multiparous to nulliparous women remained constant at 1:1
- Little change in maternal age over the past 10 years, apart from a significant reduction in teenage mothers
- Rates of PPH>500mls unchanged since 2008
- Hypertensive disease in pregnancy consistent at 7.6%
- Maternal obesity – consistent from 2009 to 2015
  - 41% overweight (BMI>25)
  - 8.7% morbidly obese (BMI>35)
- Very little change in numbers of postnatal transfers to NWH wards and Birthcare
Clinical outcomes - variation

• Reduction in normal birth to 57.3% (only 41.9% of nulliparas achieved a spontaneous vaginal birth)
• Increase in CS rates – highest rate ever at NWH 35.6%
• Increasing CS rate for multiple pregnancy 71%
• Increase in births at 38-39 weeks – elective IOL and CS
• Increase in IOL rates – standard primiparas, 37 and 38 weeks, gestational diabetes less than 40 weeks
• Increase in episiotomy
• Increasing rate of PPH >1L (10.3%)
• Increase in term babies
  – admitted to NICU, 42.4% for respiratory distress (202 of 476 admissions at term)
  – with low Apgar scores at 1 and 5 minutes
  – Requiring CPAP/Hi Flow support
• Reduction in women going directly home from Birth Suite
Midwifery aspiring to excellence 2015

Te Manawa o Hine - Maori Midwifery Team

• Commenced July 2015
• Multi disciplinary, holistic and woman centred
• Culturally appropriate in partnership with women
• Community hub collaboration with Ngati Whatua
Midwifery aspiring to excellence 2015

Transition to LMC practice

• Commenced December 2015 with graduate midwives
• Inpatient rotation to gain experience across scope
• 6 month rotation to Community Midwifery Team
• LMC experience, build caseload
• Opportunity to establish LMC practice
Births - Mothers and babies at NWH 2006-2015

6.3% reduction in the number of women giving birth from 2014 (467 women)
NWH Births by ethnicity 2015

Number of women

Ethnicity

New Zealand European
Chinese
Other European
Māori
Indian
Samoa
Tongan
Other Asian
Southeast Asian
European NFD
Middle Eastern
Cook Island Māori
African
Niuean
Asian NFD
Fijian
Latin American
Other Pacific Peoples
Tokelauan
Other Ethnicity

Welcome Haere Mai | Respect Manaaki | Together Tūhono | Aim High Angamua
NWH Staffing ethnicity by occupational group

<table>
<thead>
<tr>
<th>Occupation</th>
<th>European</th>
<th>Other</th>
<th>Asian</th>
<th>Pacific</th>
<th>Māori</th>
<th>Not Stated</th>
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<tbody>
<tr>
<td>Admin</td>
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<td>Midwifery</td>
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<td>RMO</td>
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<td>SMO</td>
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<tr>
<td>Technical</td>
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</tbody>
</table>

Welcome Haere Mai | Respect Manaaki | Together Tūhono | Aim High Angamua
Acute activity

2015 saw 133 less referrals to WAU in 12 months (9% reduction)
Auckland District Health Board

NWH birth type 1998 - 2015

Number of births

- Total births
- Spontaneous vaginal birth
- Vaginal breech
- Operative vaginal birth
- Caesarean section
- Linear (Spontaneous vaginal birth)
- Linear (Caesarean section)
NWH normal births and caesarean sections

<table>
<thead>
<tr>
<th>Year</th>
<th>Spontaneous Vaginal Birth</th>
<th>Caesarean Section</th>
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</thead>
<tbody>
<tr>
<td>1998</td>
<td>60%</td>
<td>40%</td>
</tr>
<tr>
<td>1999</td>
<td>59%</td>
<td>41%</td>
</tr>
<tr>
<td>2000</td>
<td>58%</td>
<td>42%</td>
</tr>
<tr>
<td>2001</td>
<td>57%</td>
<td>43%</td>
</tr>
<tr>
<td>2002</td>
<td>56%</td>
<td>44%</td>
</tr>
<tr>
<td>2003</td>
<td>55%</td>
<td>45%</td>
</tr>
<tr>
<td>2004</td>
<td>54%</td>
<td>46%</td>
</tr>
<tr>
<td>2005</td>
<td>53%</td>
<td>47%</td>
</tr>
<tr>
<td>2006</td>
<td>52%</td>
<td>48%</td>
</tr>
<tr>
<td>2007</td>
<td>51%</td>
<td>49%</td>
</tr>
<tr>
<td>2008</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>2009</td>
<td>49%</td>
<td>51%</td>
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<tr>
<td>2010</td>
<td>48%</td>
<td>52%</td>
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<td>2011</td>
<td>47%</td>
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<td>2012</td>
<td>46%</td>
<td>54%</td>
</tr>
<tr>
<td>2013</td>
<td>45%</td>
<td>55%</td>
</tr>
<tr>
<td>2014</td>
<td>44%</td>
<td>56%</td>
</tr>
<tr>
<td>2015</td>
<td>43%</td>
<td>57%</td>
</tr>
</tbody>
</table>

Linear (Spontaneous vaginal birth): increasing trend
Linear (Caesarean section): increasing trend
Opportunities to increase normal birth rates

- Continuity of care
- One to one care from a midwife during established labour
- Supporting use of water, upright positions and mobility
- Providing the opportunity to birth in a primary birth unit
New Zealand Data

Figure 6: Percentage of spontaneous vaginal births among standard primiparae, by facility of birth (secondary and tertiary facilities), 2014

Percentage of standard primiparae having a spontaneous vaginal birth

Facility of birth

75th percentile
Median
25th percentile
New Zealand data

Figure 10: Percentage of caesarean section deliveries among standard primiparae, by facility of birth (secondary and tertiary facilities), 2014

Percentage of standard primiparae having a caesarean section

Facility of birth


75th percentile
Median
25th percentile
Indication for elective caesarean section (all gestations)
Indication for in labour emergency caesarean section all gestations

- 1a Fetal distress
- 1b Other fetal indication
- 2a Fetal intolerance of augmented labor
- 2b Augmentation causes hyperstimulation
- 2c Poor uterine response to optimal augmentation
- 2d Suboptimal augmentation
- 2e Inefficient uterine action - no oxytocin
- 3 Efficient uterine action - obstructed labor
- 4b Maternal request
- 4a Other non-medical
- Missing
### International practice - UK

- [https://indicators.rcog.org.uk/results/indicators](https://indicators.rcog.org.uk/results/indicators)

<table>
<thead>
<tr>
<th>NHS</th>
<th>Births 2013/14</th>
<th>CS rate Primip</th>
<th>CS rate Multi</th>
<th>Neonatal deaths per 1000 births (perinatal &gt;24wks)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK National</td>
<td>690,820</td>
<td>22.1%</td>
<td>21.3%</td>
<td>1.77 (5.92)</td>
</tr>
<tr>
<td>Leeds</td>
<td>4900</td>
<td>14.9%</td>
<td>18.3%</td>
<td>3.57</td>
</tr>
<tr>
<td>King’s College</td>
<td>6000+</td>
<td>19.6%</td>
<td>18.9%</td>
<td>1.74</td>
</tr>
<tr>
<td>Central Manchester (St Mary’s)</td>
<td>8400</td>
<td>17.6%</td>
<td>17.8%</td>
<td>3.09</td>
</tr>
<tr>
<td>Imperial College (Queen Charlotte’s and Chelsea)</td>
<td>9000</td>
<td>21.8%</td>
<td>19.4%</td>
<td>1.76</td>
</tr>
</tbody>
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- What are they doing differently?
- Latest CS NICE guideline includes aspects of counselling and psychological support for maternal request
## International practice - Australia

<table>
<thead>
<tr>
<th>State</th>
<th>CS rate</th>
<th>IOL rate</th>
<th>Perinatal deaths/1000 births (neonatal)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Victoria</td>
<td>15.5% public 33% private</td>
<td>2.9%</td>
<td></td>
<td>Standard primip</td>
</tr>
<tr>
<td>New South Wales</td>
<td>32.1%</td>
<td>29.6%</td>
<td>7.8</td>
<td></td>
</tr>
<tr>
<td>Queensland</td>
<td>33.8%</td>
<td></td>
<td>10.0 (3.2)</td>
<td></td>
</tr>
<tr>
<td>South Australia</td>
<td>34%</td>
<td>32.5%</td>
<td>9.0 (2.3)</td>
<td>2013 data</td>
</tr>
<tr>
<td>Western Australia</td>
<td>34.6%</td>
<td>29.1%</td>
<td>8.4 (1.4)</td>
<td>2012 data</td>
</tr>
<tr>
<td>Northern Territory</td>
<td>31%</td>
<td>26.2%</td>
<td>8.8</td>
<td>2013 data</td>
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Caesarean Section opportunities to improve

- Continue to benchmark
- Accountability to best practice CS guideline - do we have unnecessarians??
- Reducing rates of primary CS
- Providing evidence based information/support for women antenatally
- Explore and address women’s concerns/anxieties
- Elective CS – reducing variation, consistent process, scheduling from 39 weeks
- Use of fetal blood sampling
- Promotion of VBAC
- Documentation – clear plan
- Audit – indications, outcomes
- Research
Caesarean section - service impact

Increases

- Workforce and infrastructure pressures
- Acuity and complexity
- Length of stay
- Pressure on maternal beds – access and flows
- Admissions to NICU
- Costs
1. Organisational characteristics
2. Keeping first pregnancy and birth normal
3. VBAC
4. Elective CS
NHS ten characteristics in services with optimal maternity care and lower caesarean section rates

- Pregnancy and birth are kept normal unless indicated
- Clinicians practice as a team, respect of roles and expertise
- Current, evidence based guidelines
- Clinicians practice consistently using the same clinical guidelines – no opting out
- Women are realistically prepared for labour and expectations are managed
- Accurate information is provided regarding risks and benefits in a positive way
- Planned caesarean section processes are efficient and effective
- Maternity service performance measurement is accurate, timely and relevant
- Maternity services involve women and stakeholders in their care
Impact on neonatal outcomes

Figure 115: Neonatal morbidity among live births by mode of onset of birth (all gestations) NWH 2015, p 115
Figure 116: Neonatal morbidity among live births at term (>37 weeks) by mode of onset of birth NWH 2015, p115
Figure 117: NICU admission and low Apgar scores among live births at term NWH 2007-2015, p115
Admissions to NICU at term or post term 2015

- Spontaneous labour
- Induced labour
- CS elective
- CS emergency

Birth mode

Percentage of births
Figure 168: Number of term and post term babies needing respiratory support (IPPV, HFOV, CPAP and HiFlow) NWH 1995-2015, p135
Figure 122: HIE rate (per 1000 term births) by LMC
NWH 2006-2015, p116
Figure 120: Stillbirth and neonatal death rates at term NWH 2006-2015, p116
Induction of labour

Figure 61: Induction of labour rates NWH 1992-2015, p80
Figure 67: Primary indication for induction at term as a percentage of term births by parity NWH 2015, p81

- Poor Obstetric History
- Multiple Pregnancy
- APH
- Maternal Request
- IUD/Fetal Anomaly
- Other
- Maternal Medical Comps
- Maternal Age
- Fetal Wellbeing
- Hypertension
- Prolonged Latent Phase
- Post Dates
- Diabetes
- Small for Gestational Age
- Term PROM

Nullipara
Multipara
NZ - Induction of labour

Figure 12: Percentage of inductions of labour among standard primiparae, by facility of birth (secondary and tertiary facilities), 2014
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Figure 97: Epidural use among women with spontaneous and induced labour 2006-2015, p103
Primary PPH (>1000mls)

Number of women

2005*
2006*
2007*
2008
2009
2010
2011
2012
2013
2014
2015

1999
2000
2004

Incidence of Primary PPH (>1000mls)

Percentage of women

2005*
2006*
2007*
2008
2009
2010
2011
2012
2013
2014
2015
Induction opportunities for improvement

- Continue to benchmark
- Accountability to best practice IOL guideline
- Clinically indicated and evidence based decision making
- IOL Process – reduce variation, appropriate scheduling
- Providing evidence based information/support for women antenatally
- Explore and address women’s concerns/anxieties
- Documentation – plan, variations, rationale
- Audit – indications, variation, outcomes
- Research
Figure 102: Perineal trauma among all vaginal births NWH 1995-2015, p108
Figure 109: Perineal trauma among vaginal births by LMC and parity NWH 2015, p109

- Intact perineum:
  - Private Obstetrician: nullipara and multipara
  - IMW: nullipara and multipara
  - NW Community: nullipara and multipara
  - NW High Risk*: nullipara and multipara

- Episiotomy:
  - Private Obstetrician: nullipara and multipara
  - IMW: nullipara and multipara
  - NW Community: nullipara and multipara
  - NW High Risk*: nullipara and multipara

- 3rd/4th degree tear:
  - Private Obstetrician: nullipara and multipara
  - IMW: nullipara and multipara
  - NW Community: nullipara and multipara
  - NW High Risk*: nullipara and multipara
Figure 14: Percentage of standard primiparae giving birth vaginally with intact lower genital tract, by facility of birth (secondary and tertiary facilities), 2014
Figure 16: Percentage of standard primiparae giving birth vaginally and undergoing episiotomy without mention of third- or fourth-degree tear, by facility of birth (secondary and tertiary facilities), 2014
Perineal outcomes – improvement opportunities

- Continue to benchmark
- Accountability to best practice - do we need to consider the evidence again?
- Providing evidence based information for women
- Managing second stage - reducing variation, improving outcomes
- Assessing current practice
- “Hands on” approach
- Documentation – plan, interventions, perineal outcome, repair and follow up
- Audit – second stage practices, perineal assessment and repair
- Research
Figure 124: Exclusive breastfeeding at discharge from NWH by mode of birth 2005-2015, p119
Breastfeeding – improvement opportunities

- Continue to benchmark
- Accountability to best practice BFHI
- Skin to skin for LUSCS
- Evidence based information for women
- Support for women
- Reducing variation in clinical practice and advice
- Documentation – plan, variations, follow up
- Audit – practice, planning, rates
- Research
Maternal destination immediately after birth NWH 2009-2015
Variation in practice

Impact on quality of care and service delivery

- Variation in clinical outcomes (generally poorer)
- Increased clinical risk
- Women’s satisfaction
- Staff satisfaction
- Workforce required
- Length of stay variations
- Bed access and flows
- Increased cost
Priorities for 2016-17

• Enhance evidence based clinical practice
• Improve clinical outcomes through reducing
  – Variation in clinical practice
  – Unnecessary, non clinically indicated interventions
  – Clinical risk
• Add value for women
• Improve vaginal birth rates
• Build workforce capacity and capability
• Improve LOS, bed access and flows
• Be sustainable
Questions?

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