From Audit to Action: Practical Solutions
PMMRC Conference 2014

Title: A midwifery perspective
Presenter: Lesley Dixon
Strengths of NZ maternity system

Continuity of care – supporting safety

“Care received from LMC’s is a strength of maternity care”
(Maternity consumer survey 2011)
Reporting mortality for 2012

- Six years of data collection and trend analysis
- Significant reduction in stillbirth from 2007 to 2012
- Reduced unexplained antepartum stillbirth and hypoxic peripartum stillbirth
- Improved understanding of key influences
International comparisons

- World Health Organization international definition for perinatal mortality
- NZ has had significant reduction in perinatal mortality from 2007 to 2012
- Comparable rates to Australia and United Kingdom
International comparisons

Figure 1.15: Perinatal mortality rate international comparisons using Australasian and UK definitions 2011 (with 95% CIs)
## Perinatal mortality rates

<table>
<thead>
<tr>
<th>New Zealand definition</th>
<th>Rate per 1000 births</th>
</tr>
</thead>
<tbody>
<tr>
<td>Still births</td>
<td>5.1</td>
</tr>
<tr>
<td>Neonatal deaths (birth to 28 days)</td>
<td>2.9</td>
</tr>
<tr>
<td>Perinatal related mortalities</td>
<td>10.7</td>
</tr>
</tbody>
</table>

A Lead Maternity Care midwife provides care to 50 women on average each year.
Over 20 years = 1000 women

10 to 11 women experiencing the loss of their baby.
Issues uncovered by PMMRC Reviews

- Failure to offer/follow recommended best practice
- Infrquent antenatal care
- Lack of recognition by patients and their family of the complexity or seriousness of their condition.
Women at increased risk

- Higher Socioeconomic deprivation
- Ethnicity
- Primiparity

*Modifiable*
- Smoking
- Increased Body Mass Index
Previous and current PMMRC recommendations

• Introduce multi-disciplinary guidelines
• Support earlier registration with a LMC
• Explore reasons for barriers to access to care
• Reduce smoking during pregnancy
• Support optimal weight gain – reduce impact of BMI
How are we doing?

Multi-disciplinary guidelines

Treating Postpartum Haemorrhage

Ongoing significant bleeding

Don't delay transfer to secondary/tertiary obstetric service if at home or in a primary care setting.
- Allocate care of baby to a suitable person.
- Commence intravenous infusion (550 mL in normal saline over 1000 mL over 4 hours).
- Reconsider the 4Ts.
- Apply bimanual compression to arrest blood loss.
- Ensure senior obstetric and midwifery team present on arrival.

Ongoing uncontrolled bleeding

Call for additional help
- Senior obstetrician and senior anaesthetist for care.
- Consult haematologist/transfusion medicine.
- Transfer to operating theatre.

Assess and arrest bleeding
- Reconsider the 4Ts.
- Consider laparotomy.
- Consider early recourse to hysterectomy.
- Consider other options if appropriate:
  - uterine compression sutures (+/- tampon)
  - uterine artery ligation
  - internal iliac embolisation
  - aortic compression

Resuscitation
- Administer blood and blood products.
- Trigger massive transfusion protocol (MTP).
- Avoid hypothermia, hypocalcaemia and acidosis.
- Use of cell saver where available.
- Consider tranexamic acid.
- Consider recombinant factor VIIa.

Maternal observations and actions
- Consider arterial line or central venous line.
- Assess and document blood pressure, pulse, temperature, oxygen saturation.
  - Document resuscitation fluid and blood loss.

Observation of mother and baby in the immediate postnatal period: consensus statements guiding practice

July 2012

Introduction
This consensus guidance has been developed by members of the New Zealand College of Midwives and the Royal Australian and New Zealand College of Obstetricians and Gynaecologists – New Zealand Committee, with the support of the Ministry of Health. This guidance has been reviewed by the Neonatal Encephalopathy working group of the Perinatal and Maternal Mortality Review Committee and is endorsed by the Ministry of Health and the National Maternity Guidelines Working Group.

Implementation of this guidance will be led by the relevant professional colleges, and included in every DHB's local Maternity Quality and Safety Programme. It is expected that all practitioners supporting mothers and babies in the immediate postnatal period will use this document to guide their practice.
NZCOM Find your midwife website

Search for a midwife by name

When are you due?
- All months
- Not sure when you're due...

Where do you live?
- All Localities

Where do you plan to have your baby?
- No Preference

Search

Calendar Colour Key
- AVAILABLE
- ENQUIRE
- UNAVAILABLE

Print available Midwife list
Smoking cessation during pregnancy

New Zealand Smoking Cessation Guidelines
So how are we doing?
Smoking during pregnancy
(Andrews et al., 2014)
Smoking and ethnicity
(Andrews et al., 2014)
Smoking amongst age groups
(Andrews et al., 2014)
Weight gain during pregnancy

<table>
<thead>
<tr>
<th>BMI</th>
<th>Recommended weight gain (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underweight</td>
<td>13 - 18 kg</td>
</tr>
<tr>
<td>Normal weight</td>
<td>11 - 16 kg</td>
</tr>
<tr>
<td>Overweight</td>
<td>7 - 11 kg</td>
</tr>
<tr>
<td>Obese</td>
<td>5 - 9 kg</td>
</tr>
</tbody>
</table>
## Healthy Weight Gain in Pregnancy

Gaining the right amount of weight during your pregnancy is one of the most important things you can do to support your health and the health of your baby.

<table>
<thead>
<tr>
<th>Your pre-pregnancy/early pregnancy weight</th>
<th>kg</th>
<th>Your BMI is</th>
</tr>
</thead>
</table>

It is recommended you gain between kg to kg in your pregnancy.

This means you will ideally weigh between kg and kg at the end of your pregnancy.

### Track your weight gain on this table:

<table>
<thead>
<tr>
<th>Week</th>
<th>Weight</th>
</tr>
</thead>
</table>

### What you can do:
- **Pregnancy is not about losing weight.** In the first 12 weeks of pregnancy, you can eat the same amount as you usually would, but it is important to focus on healthy food.
- **After the 12th week,** and you are a healthy weight, the extra food you need each day is about the same as a whole grain sandwich and a banana. If you are overweight or obese, the extra food you need is about the same as one slice of whole grain bread or two apples.
- Drink water rather than sweetened drinks (soda, fruit juice or milk).
- Drink low-fat milk (green top) or low-fat extra (yellow top) or light blue top milk instead of full-fat (blue or yellow top) milk.
- Eat wholegrain bread instead of white bread.
- Eat a healthy breakfast every day, such as whole grain or porridge with low-fat milk or two slices of wholegrain toast.
- Have at least four servings of vegetables and two servings of fruit every day. Both vegetables and fruit that are in season, or buy frozen vegetables to help reduce cost, waste and preparation time.
- Exercise and eat meals at home. Have takeaways no more than once a week.
- Choose healthy meals such as unseasoned low-fat yogurt, fruit, cheese and crackers, a small bowl of cereal, home-made popcon or a small wholegrain sandwich.
- Aim to do at least 30 minutes of moderate intensity activity five or more days a week, for example brisk walking or swimming (as advised by your midwife, doctor or physiotherapist).

### What are some of the risks of gaining more weight than recommended?

There are an increased risk of:
- Having a large baby,
- Increased blood pressure in pregnancy with complications (pre-eclampsia),
- Needing a caesarean section,
- Diabetes in pregnancy (gestational diabetes).

Gaining more weight than recommended in pregnancy may also make it harder for you to get back to your pre-pregnancy weight following the birth of your baby.
Work to support improvements to access and women’s health

<table>
<thead>
<tr>
<th>Solutions</th>
<th>Ongoing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi-disciplinary guidelines</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Earlier registration with a midwife</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Support information access</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Reduce smoking during pregnancy</td>
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<tr>
<td>Support optimal weight gain – reduce impact of BMI</td>
<td>Ongoing</td>
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</table>

Changing health related behaviour is always difficult and needs a whole of society approach

Also need to consider different approaches for different groups
## Focusing on Maternal mortality

<table>
<thead>
<tr>
<th>Direct Maternal death</th>
<th>2006 to 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amniotic Fluid embolism</td>
<td>10</td>
</tr>
<tr>
<td>Post partum haemorrhage</td>
<td>3</td>
</tr>
<tr>
<td>Venous thrombo-embolism</td>
<td>2</td>
</tr>
<tr>
<td>Pre-eclampsia</td>
<td>4</td>
</tr>
<tr>
<td>Sepsis</td>
<td>4</td>
</tr>
</tbody>
</table>

**Indirect causes**

| Pre-existing medical condition        | 19           |
| Sepsis                                | 7            |
| Intra cranial haemorrhage             | 3            |
| Suicide                               | 19           |
Recommendations

If women unstable or unwell:
- Ensure ability for close observation
- If/when observations abnormal – escalate early and ensure detailed management plan

For women with pre-existing medical conditions:
- Ensure multidisciplinary management – communicated with all care givers
Special note – Puerperal sepsis

- Can occur several weeks following birth
- Often follows coughs/colds in other family members

Risk factors include:

- Obesity, vaginal discharge, prolonged rupture membranes, vaginal trauma, C/S, wound haematoma, anaemia
Obstetric sepsis symptoms
(RCOG 2012)

• Pyrexia >38 degrees
• Tachycardia > 90 bpm
• Breathlessness (resp rate > 20 rpm)
• Diarrhoea and/or vomiting
• Abdominal or chest pain
• Woman is generally unwell, anxious, distressed
• Uterine or renal pain/tenderness
Prompt recognition and referral

(RCOG 2012)

- High index of suspicion
- Can quickly become a critical illness and has a potentially lethal course
- Should be considered in any post partum woman who becomes unwell and has pyrexia, abnormal pain or diarrhoea/vomiting
- Needs immediate assessment and early referral to hospital
Ongoing focus

- Timely registration with a Lead Maternity Carer (LMC) – first trimester
- Maternal smoking – better help for smokers to quit
- Monitor incidence and causes of late preterm births
- Monitor implementation of referral guidelines
- Monitor maternal mental health services
Midwives working with women
Thank you


Royal College of Obstetricians and Gynaecologists. (2012). Bacterial Sepsis following Pregnancy *Green-top Guideline No. 64b.*