MAMSS: Models for Access to Maternal Smoking cessation Support

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Aims of presentation

- Background to MAMSS
- Evidence base
- MAMSS project
- Other approaches to tackle maternal smoking

MAMSS: Models for Access to Maternal Smoking cessation Support
Why the Early Years?

• Children need a healthy start, parental nurturing and the right social environment in which to grow.
• Strong evidence base to support the need for a life course (stages of life) approach
• The foundations for health, social and economic outcomes in adulthood lie in the early years, beginning with pregnancy.
GOAL: To drive forward improvement in early years health and social outcomes

1. Measuring and tracking health and wellbeing
2. Evidence synthesis
   a. What should we be doing?
   b. What will the impact be?
3. Communication and engagement
4. Driving forward improvement (implementation)
Findings from evidence review on smoking in pregnancy
Smoking in pregnancy

Percentage who smoked before or during pregnancy
Percentage who smoked throughout pregnancy

Source: Infant Feeding Survey 2010 Early Results
<table>
<thead>
<tr>
<th>Outcomes associated with cigarette smoking during pregnancy</th>
<th>Population attributable risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ectopic pregnancy</td>
<td>8%</td>
</tr>
<tr>
<td>Low birth weight</td>
<td>10%</td>
</tr>
<tr>
<td>Preterm birth</td>
<td>13%</td>
</tr>
<tr>
<td>Premature rupture of the membranes</td>
<td>11%</td>
</tr>
<tr>
<td>Placenta praevia</td>
<td>14%</td>
</tr>
<tr>
<td>Placental abruption</td>
<td>13%</td>
</tr>
<tr>
<td>Low birth weight (continued)</td>
<td>10%, 27%</td>
</tr>
<tr>
<td>Small for gestational age</td>
<td>25%</td>
</tr>
<tr>
<td>Stillbirth</td>
<td>4-7%</td>
</tr>
<tr>
<td>Sudden Infant death syndrome</td>
<td>26%</td>
</tr>
<tr>
<td>Respiratory distress</td>
<td>10%</td>
</tr>
</tbody>
</table>

Source: Jones et al (2012)
What works?

Smoking cessation interventions during pregnancy:

- 3-6% reduction in smoking in late pregnancy
- Reduced low birth weight RR 0.83 (95% CI 0.73 to 0.95)
- Reduced preterm births RR 0.86 (95% CI 0.74 to 0.98)

Ref: Lumley et al Cochrane Database of Systematic Reviews 2009
## Effectiveness of interventions - SMALL EFFECTS

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Absolute Risk Reduction</th>
<th>NNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoking in late pregnancy</td>
<td>1.9%</td>
<td>53</td>
</tr>
<tr>
<td>Low birth weight</td>
<td>1.7%</td>
<td>60</td>
</tr>
<tr>
<td>Preterm birth</td>
<td>1.0%</td>
<td>100</td>
</tr>
</tbody>
</table>

Ref: Lumley et al Cochrane Database of Systematic Reviews 2009
Recommendations for midwives at booking and subsequent appointments:
- CO monitor
- Discuss health risks, benefits of stopping
- Refer all pregnant smokers
- Training

Recommendations for NHS Stop Smoking services:
- Attempt to contact woman twice and follow up with letter
- See women during routine antenatal appointments if cannot contact by phone
- Address barriers to smoking cessation (e.g. home visits)
- Feedback to midwives
- Intensive interventions and on-going support
- Discuss risks and benefits of NRT
- Flexible, client centred approach

MAMSS: Models for Access to Maternal Smoking cessation Support
But, need more evidence on...

- NRT during pregnancy
- Financial incentives (RR 0.76, 95% CI 0.71 – 0.81)
- Site/setting/staff delivering intensive interventions
Areas to address in Wales

- Use **CO monitors** routinely
- Improve **referral systems and processes**
- Provide **support throughout pregnancy** and after delivery
- Provide **feedback to midwives** about individual clients
- Establish consistent **data recording and collection**
- Increase **flexibility** in the model of support for pregnant women (e.g. Home visits)

**MAMSS: Models for Access to Maternal Smoking cessation Support**
How do we increase uptake of smoking cessation services by pregnant women in Wales?

- National pilot project
- Implementation of NICE guidance & piloting different models service delivery in 4 Health Board areas
- Guide development of effective smoking in pregnancy services

MAMSS: Models for Access to Maternal Smoking Cessation Support
Models for Access to Maternal Smoking cessation Support (MAMSS)

- Evaluation of 4 pilot projects across 4 Health Boards:
  - Cwm Taf
  - Betsi Cadwaladr
  - Aneurin Bevan
  - Abertawe Bro Morgannwg

- Pilot v. Usual care
Evaluation Question

Which model of service delivery is most effective in:

• Engaging pregnant women who smoke?
• Supporting pregnant women to quit smoking?
The Intervention

• CO monitor all pregnant women
• Opt-out smoking cessation referral pathway
• Improved data collection systems
• Flexible, woman-centred approach
• On-going support throughout pregnancy
Models of service delivery

- **ANEURIN BEVAN**
  - Dedicated Smoking and Pregnancy Advisor (SSW)

- **CWM TAF**
  - Maternity Support Worker (Health Board)

- **BETSI CADWALADR**
  - Midwife (Health Board)

- **ABERTAWE BRO MORGANNWG**
  - Maternity Support Worker (Health Board)
Primary outcome measure

Pregnant smokers who engage with specialist smoking cessation services (at least one face to face therapeutic contact).

MAMSS: Models for Access to Maternal Smoking cessation Support
Data sources for evaluation

- All Wales Maternity Record data items
- Stop Smoking Wales Quit Manager database and referral information
- Child Health System

Public Health Wales Data Warehouse

Evaluation team for analysis

MAMSS: Models for Access to Maternal Smoking cessation Support
Sample Size

Assumptions:

• Current % of pregnant smokers who engage = ~10%
• Expected % of pregnant smokers to engage = ~25%

Sample size required in each group: 171
MAMSS: Models for Access to Maternal Smoking cessation Support
MAMSS is just part of the solution

- Population wide strategies
- Reduce initiation of smoking amongst young people
- Prevent sales of tobacco products to young people
- Prohibition of smoking in all public places
- Increases in tobacco taxation
- Workplace smoking cessation programmes
- Bans on tobacco sponsorship
Acknowledgements

MAMSS Project Management Team:

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Carol Owen  Public Health Wales / Stop Smoking Wales
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Rachel Lewis  Public Health Wales / BCUHB
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Is my future bright?