National Maternity and Perinatal Audit (NMPA)

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Outline

- Introduction to the NMPA
- Relevance of audit to clinical practice
- Developing maternity care quality indicators
- Looking at and using NMPA results
- Looking forward to 2019 and beyond

The National Maternity and Perinatal Audit

A collaborative project
Acknowledgements

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Women and Families Involvement Group

Rationale for the NMPA

- Rates of stillbirth and maternal mortality are higher than in many European countries
- Growing body of evidence pointing towards variation in outcomes
- Countless inquiries concluding e.g. "the majority of births are safe, but some births are less safe than they could, and should be" Kings Fund (2008)
- £100 million in litigation costs over 10 years – higher than any other clinical specialty
The NMPA has three main elements

- An organisational survey – published August 2017
- A continuous clinical audit – published November 2017 repeated annually
- A programme of periodic sprint audits – x2 to be published in late 2018

Organisation of maternity care 2017 report

www.maternityaudit.org.uk

Trend in maternity unit types 2007-2017 (England)

OU: Obstetric unit
AMU: Alongside midwifery unit
FMU: Freestanding midwifery unit
Birth settings available per trust/board (Jan 2017)

- Home & OU 30 (19.4%)
- Home, OU & AMU 72 (46.5%)
- Home & OU, AMU & FMU 34 (21.9%)
- FMU 1 (0.6%)
- Home & FMU 4 (2.6%)
- Home, DU & FMU 14 (9.0%)

OU: Obstetric unit
AMU: Antenatal midwifery unit
FMU: Freestanding midwifery unit

Care models (Jan 2017)

- 38% of trusts/boards used some form of caseloading
- 44% had some or all midwives working in an integrated way
- 92% had community midwives organised into teams
- Levels of continuity of carer reported were low, regardless of care model

Clinical audit measures 2015/16
First clinical report (covering births between 1st April 2015 and 31st March 2016)

- 96% of trusts/boards contributed data to the clinical report
- 92% of births are ascertained in the dataset
- Selection of measures through a process of evaluation – clinical relevance, power, and feasibility
- Characteristics of women and their babies
- 16 risk-adjusted measures of care, 2 of which were used for outlier reporting

Audit measure category | Measure title | England | Scotland | Wales
---|---|---|---|---
Antenatal care | Proportion of women who were smokers at booking who smoke at the time of birth | | | |
| Proportion of women with recorded blood pressure at booking | | | |
| Proportion of women with a normal booking weight | | | |
| Proportion of women with a normal booking BMI | | | |
| Proportion of women with a normal booking blood pressure | | | |
| Proportion of women with a normal booking weight | | | |
| Proportion of women with a normal booking BMI | | | |
| Proportion of women with a normal booking blood pressure | | | |
| Proportion of women with a normal booking weight | | | |
| Proportion of women with a normal booking BMI | | | |
| Proportion of women with a normal booking blood pressure | | | |
| Proportion of women with a normal booking weight | | | |
| Proportion of women with a normal booking BMI | | | |
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| Proportion of women with a normal booking BMI | | | |
| Proportion of women with a normal booking blood pressure | | | |
| Proportion of women with a normal booking weight | | | |
| Proportion of women with a normal booking BMI | | | |
| Proportion of women with a normal booking blood pressure | | | |

Birth without intervention

- 2015/16 NMPA report:
  "In selecting measures for inclusion in the NMPA, there was a strong desire to recognise the importance not only of measuring rates of medical interventions and of adverse outcomes, but also of measuring the proportion of births that occur without interventions.

Inclusion of such a measure could, in conjunction with other NMPA measures, assist trusts/boards in ensuring that they are finding an appropriate balance between intervening ‘too much, too soon’ and ‘too little, too late’.

- Also shortlisted as a ‘National Maternity Indicator’ in England, following a Delphi consensus exercise in late 2016
**Data quality assessments**

Site level data quality checks:

- Data completeness (more than 70%)
- Plausible distribution (e.g., gestational age mostly term)
- Internal consistency checks (e.g., no C-sections in freestanding midwifery led units)

Analysis in NMPA report is restricted to:

a) Sites that pass NMPA data quality checks
b) Birth records within those sites that contain the required data to construct a measure

The number of sites for which results are available therefore varies from measure to measure, depending on specific data requirements.

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**Experimental definition agreed by NMPA clinical reference group – adapted from 2007 NCT/RCM/RCOG consensus statement definition**

<table>
<thead>
<tr>
<th>Event</th>
<th>% English sites</th>
<th>% Scandinavian sites</th>
<th>% Welsh sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mode of birth</td>
<td>59</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Choice of labour</td>
<td>56</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Augmentation</td>
<td>60</td>
<td>0*</td>
<td>81</td>
</tr>
<tr>
<td>Episiotomy</td>
<td>59</td>
<td>100</td>
<td>82</td>
</tr>
<tr>
<td>Apgar scores during labour and birth</td>
<td>59</td>
<td>100</td>
<td>82</td>
</tr>
</tbody>
</table>

*All sites that pass data quality checks for viability, gestational age, and/or gestational age at delivery are included in the denominator.*

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**Birth without intervention 2015/16**

[Graph showing birth without intervention 2015/16 at sites with adequate data quality for all elements]
Clinical report summary

- High-quality Great Britain dataset with some variables linked for the first time; allowing national analyses never before possible
- Risk adjusted results on key measures in maternity and neonatal care
- Site-specific results available on our website www.maternityaudit.org.uk

Using NMPA data

Third- and fourth- degree tears
What is measured: Of women who give birth vaginally to a singleton baby in the cephalic position between 37+0 and 42+6 weeks of gestation, the proportion who sustained a third or fourth degree tear.

<table>
<thead>
<tr>
<th>Country</th>
<th>England</th>
<th>Scotland</th>
<th>Wales*</th>
<th>Total (Britain)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of mothers included in analysis</td>
<td>341,204</td>
<td>33,903</td>
<td>8,156</td>
<td>383,661</td>
</tr>
<tr>
<td>Proportion overall sustaining third or fourth degree tear</td>
<td>3.6%</td>
<td>3.4%</td>
<td>3.3%</td>
<td>3.5%</td>
</tr>
<tr>
<td>Primiparous women</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spontaneous</td>
<td>7.8%</td>
<td>7.0%</td>
<td>8.5%</td>
<td>7.8%</td>
</tr>
<tr>
<td>Instrumental</td>
<td>1.6%</td>
<td>1.5%</td>
<td>1.4%</td>
<td>1.6%</td>
</tr>
<tr>
<td>Multiparous women</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spontaneous</td>
<td>4.8%</td>
<td>4.4%</td>
<td>5.4%</td>
<td>4.7%</td>
</tr>
<tr>
<td>Instrumental</td>
<td>4.1%</td>
<td>4.1%</td>
<td>4.1%</td>
<td>4.1%</td>
</tr>
</tbody>
</table>

*Only Health Data Health Board and Cwm Taf University Health Board passed the relevant data quality checks for this measure
Of women who give birth vaginally to a singleton baby in the cephalic position between 37+0 and 42+6 weeks of gestation, the proportion who sustained a third or fourth degree tear.

Funnel plots

Interactive website: site overview

[Images and diagrams are not transcribed textually.]

www.maternityaudit.org.uk > Data > Continuous Clinical Audit
Acting on findings

- Investigate variation outside of expected range (data, organisational & operational factors, case mix, guidance changes, clinical practice)
- Collaborate, e.g. through clinical networks, Local Maternity Systems
- Test improvement interventions incrementally
- Feed back to all involved
- Keep monitoring and feeding back

Finding similar maternity services

<table>
<thead>
<tr>
<th>Organisational survey results - maternity and neonatal services details and comparisons</th>
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<tbody>
<tr>
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Some sources of maternity data

Annual:
- National Maternity and Perinatal Audit [www.maternityaudit.org.uk](http://www.maternityaudit.org.uk)
- Public Health Data [https://fingertips.phe.org.uk/profile-group/child-health](https://fingertips.phe.org.uk/profile-group/child-health)

Monthly:
Questions?

Thank you!

www.maternityaudit.org.uk
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