All Wales Perinatal Survey

How can we improve current processes?

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Session outline

• Overview of the AWPS
• Stillbirth data in Wales
  – Trend over time
  – Variation between hospitals and geographical areas
  – Risk factors and cause of death
  – Post mortem rates
• The way forward - Discussion
All Wales Perinatal Survey (AWPS)

- Established since 1993
- Funded by Welsh Assembly Government
- Perinatal Survey Office, Dept Child Health, Cardiff University School of Medicine
- Previously worked alongside CEMACE, provided CEMACE with a subset of data
- Ongoing discussions for collaborative working with MBRRACE
AWPS

Aims to

– provide a continuous survey of perinatal and infant mortality in Wales
– collect accurate, complete, comparable data
– describe variations in death rates
– disseminate these data to assist reviews aimed at reducing excess mortality.
Case definitions

- Deaths of babies from 20 weeks to 1 year of age
- Fetal losses from 20 weeks (including therapeutic abortions)
- Stillbirths
- Early neonatal deaths (0 – 6 days)
- Late neonatal deaths (7 – 27 days)
- Post neonatal deaths (28 days - 1 year)

(Mother usually resident in Wales, or baby born in a Welsh hospital)
Data collection

• Unit co-ordinators in 14 units
  – Fill in data collection forms and return to AWPS office

• Other sources of notification
  – Office for National Statistics
  – Pathologist reports
  – Regional CEMACE Managers
  – Newspaper reports

• Validation and checking done by AWPS office
Data items

Maternal
• Socio-demographics
• Height, weight
• Smoking, substance misuse
• Previous obstetric and medical history
• Current pregnancy details
• Birth
  – Onset of labour
  – Intended place of birth at onset of labour
  – Type of birth

Baby
• Gestational age
• Birth weight
• Sex
• Outcome and details
  – Liveborn
  – Spontaneous miscarriage
  – Therapeutic abortion
  – Stillbirth (antenatal / in labour)
• Associated factors and cause of death
• Post mortem
Data Quality

• Completeness of data items

• Case definitions applied with rigour

• Coding criteria

• Timeliness of reporting
Timeliness of reporting

Percentage AWPS forms returned within 8 weeks of death in 2011
Births in Wales between 1993 and 2011

Source: NCCHD

- Registrable births in Wales
- Livebirths
Stillbirth and neonatal mortality three-year rolling average rates in Wales 1993-95 to 2009-11

- Stillbirth rate per 1,000 registrable births
- Neonatal mortality rate per 1,000 livebirths

EXCLUDING LATE TERMINATIONS (24 weeks+)

Source: NCCHD & AWPS
Stillbirth rates in England and Wales 1993-2010

Source: ONS
Stillbirth rate by English region and Wales 2010

North East: 4.6
North West: 5.2
Yorkshire and The Humber: 5.5
East Midlands: 5.3
West Midlands: 5.3
East: 4.7
London: 5.5
South East: 4.7
South West: 4.2
Wales: 5.3
England: 5.1

Source: ONS
Stillbirth rates from 28 weeks gestation (2004)

- Range 1.7 per 1,000 in Slovak Republic to 4.9 per 1,000 in Latvia and France
- Scotland 4.6 per 1,000
- Northern Ireland 3.8 per 1,000
- Wales 4.1 per 1,000

European Perinatal Health Report published in 2008
Stillbirth rate 2007 – 2011 by actual hospital at birth

Rate/1000 registrable births

Total Registrable Births
Stillbirth rate 2007-2011 by Local Authority
Stillbirth rates (excluding late terminations) in Wales by deprivation quintile, five year rolling rate adjusted for maternal age
Risk factors for stillbirth

- Cigarette smoking (7% of all stillbirths in UK)
- Overweight and obesity (BMI > 25 kg/m²)

Source: Major risk factors for stillbirth in high-income countries: a systematic review and meta-analysis. The Lancet, Volume 377, Issue 9774, Pages 1331 - 1340, 16 April 2011
Autopsy rates for stillbirths in Wales

![Graph showing autopsy rates in Wales]

- **Autopsy uptake in Wales**
- **Not requested**
<table>
<thead>
<tr>
<th>Cause of death (CEMACE classification)</th>
<th>N  (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antepartum or intrapartum haemorrhage</td>
<td>65 (13.5%)</td>
</tr>
<tr>
<td>Associated obstetric factors</td>
<td>18 (3.8%)</td>
</tr>
<tr>
<td>Hypertensive disorders in pregnancy</td>
<td>18 (3.8%)</td>
</tr>
<tr>
<td>Infection</td>
<td>15 (3.1%)</td>
</tr>
<tr>
<td>Intra-uterine growth restriction</td>
<td>28 (5.8%)</td>
</tr>
<tr>
<td>Major congenital anomaly</td>
<td>33 (6.9%)</td>
</tr>
<tr>
<td>Maternal disorder</td>
<td>27 (5.6%)</td>
</tr>
<tr>
<td>Mechanical</td>
<td>36 (7.5%)</td>
</tr>
<tr>
<td>No antecedent or associated obstetric factors</td>
<td>211 (44.0%)</td>
</tr>
<tr>
<td>Special fetal conditions</td>
<td>15 (3.1%)</td>
</tr>
<tr>
<td>Specific placental conditions</td>
<td>3 (0.6%)</td>
</tr>
<tr>
<td>Unclassified</td>
<td>11 (2.3%)</td>
</tr>
</tbody>
</table>
The way forward - Discussion

• How can we improve timeliness of reporting?

• Understanding cause of death
  – The role of autopsy data
  – Do we need a confidential enquiry focussed on stillbirths
    • Insights into main causes
    • Identification of avoidable causes
    • Improvements to clinical care and service provision