Perinatal Death (stillbirth or neonatal death) has significant personal, professional and community impacts which require due consideration.

This package is designed to provide information on perinatal loss using guidelines and principles developed by the Perinatal Society of Australia and New Zealand (PSANZ) and King Edward Memorial Hospital (KEMH), Perth WA.

This package is self-directed. Each module introduces a different perinatal loss topic. It is recommended that you navigate through the modules in sequential order to gain a logical perspective of the perinatal loss process. Revisiting important slides within the module is possible by using the tab or the drop down menu.

Each slide of the package loads when you click the button. Some slides take longer to load than others dependent on the images/links on the slides. If the slide appears to freeze there may be a problem with a picture or a link on this slide, click the button, the page will load without the image.

Close each module by using the button and open the next module from the webpage.

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Aim:

To provide background knowledge and information on perinatal loss.

Objectives:

Following completion of this e-learning package you will be able to:

1. Develop an in-depth understanding of perinatal death.
2. Understand the investigations recommended for perinatal deaths.
3. Identify the statutory and documentary requirements for perinatal deaths.
4. Understand perinatal autopsy procedures to facilitate informed discussion with parents.
5. Understand the perinatal mortality classification and audit process.
6. Recognise the clinical considerations and psychosocial aspects of providing perinatal loss care.
The following definitions will be used:

**Livebirth**

"The complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of the pregnancy which, after such separation, breathes or shows any evidence of life such as a beating of the heart, pulsation of the umbilical cord or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached." [2]

**Stillbirth/Fetal death**

"Death prior to the complete expulsion or extraction from its mother of a product of conception of 20 or more completed weeks of gestation or of 400g or more birthweight. The death is indicated by the fact that after such separation the fetus does not breathe or show any other evidence of life such as a beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles." [2]

**Neonatal Death**

"The death of a liveborn infant within 28 days of birth." [2]

**Autopsy**

"A surgical procedure postmortem, which involves the examination of body tissues (including internal organs), often to determine cause of death." [3]

**Postmortem**

"After death. Hence a postmortem examination may or may not include an autopsy" [3]

The following abbreviations will be used in this package:

- **PSANZ**: Perinatal Society of Australia and New Zealand
- **PSANZ PDC**: PSANZ Perinatal Death Classification
- **PSANZ NDC**: PSANZ Neonatal Death Classification
- **ANZSA**: Australian and New Zealand Stillbirth Alliance
- **KEMH**: King Edward Memorial Hospital for Women, Perth Western Australia
- **PIMC**: Perinatal and Infant Mortality Committee of WA
"In Australia, all fetal and neonatal deaths of at least 400gms birthweight, if birthweight is unavailable, a gestational age of at least 20 weeks should be registered." [1]

The table below demonstrates the different definitions of perinatal deaths. [1]

<table>
<thead>
<tr>
<th>Institution</th>
<th>Perinatal Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fetal Deaths</td>
</tr>
<tr>
<td></td>
<td>Birthweight (bw)</td>
</tr>
<tr>
<td>WHO -international comparisons</td>
<td>1000gms</td>
</tr>
<tr>
<td>-national reporting</td>
<td>500gms</td>
</tr>
<tr>
<td>Australian Bureau of Statistics (ABS)</td>
<td>400gms</td>
</tr>
<tr>
<td>National Perinatal Statistics Unit (NPSU)</td>
<td>400gms</td>
</tr>
</tbody>
</table>

"Perinatal and infant mortality rates have continued to decline, due to significant reductions in the neonatal and post-neonatal mortality rates, but there has not been a significant reduction in the stillbirth rate in the last two decades. “ [2]

The table below demonstrates the number of perinatal deaths in Australia 2006. [1]

<table>
<thead>
<tr>
<th>Type</th>
<th>NSW</th>
<th>Vic</th>
<th>Qld</th>
<th>WA</th>
<th>SA</th>
<th>Tas</th>
<th>ACT</th>
<th>NT</th>
<th>Aus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Live Births</td>
<td>92,176</td>
<td>69,230</td>
<td>56,317</td>
<td>38,455</td>
<td>18,662</td>
<td>6,101</td>
<td>5,185</td>
<td>2,792</td>
<td>280,078</td>
</tr>
<tr>
<td>Fetal deaths</td>
<td>592</td>
<td>626</td>
<td>391</td>
<td>309</td>
<td>140</td>
<td>42</td>
<td>50</td>
<td>41</td>
<td>2,091</td>
</tr>
<tr>
<td>Neonatal deaths</td>
<td>223</td>
<td>228</td>
<td>223</td>
<td>64</td>
<td>37</td>
<td>13</td>
<td>28</td>
<td>n.s.</td>
<td>919</td>
</tr>
<tr>
<td>Perinatal deaths</td>
<td>815</td>
<td>554</td>
<td>514</td>
<td>373</td>
<td>177</td>
<td>55</td>
<td>78</td>
<td>n.a.</td>
<td>2,907</td>
</tr>
<tr>
<td>Total Births</td>
<td>92,768</td>
<td>69,858</td>
<td>56,708</td>
<td>38,828</td>
<td>18,802</td>
<td>6,143</td>
<td>5,185</td>
<td>3,743</td>
<td>282,165</td>
</tr>
<tr>
<td>Fetal deaths</td>
<td>6.4</td>
<td>3.0</td>
<td>6.9</td>
<td>7.3</td>
<td>7.4</td>
<td>6.8</td>
<td>5.1</td>
<td>11.0</td>
<td>7.4</td>
</tr>
<tr>
<td>Neonatal deaths</td>
<td>2.4</td>
<td>3.3</td>
<td>4.0</td>
<td>2.2</td>
<td>2.0</td>
<td>2.1</td>
<td>5.2</td>
<td>n.a.</td>
<td>3.0</td>
</tr>
<tr>
<td>Perinatal deaths</td>
<td>8.8</td>
<td>12.2</td>
<td>10.8</td>
<td>9.5</td>
<td>9.4</td>
<td>9.0</td>
<td>14.2</td>
<td>n.a.</td>
<td>10.3</td>
</tr>
</tbody>
</table>
The rates of perinatal death in WA 2002-2004 using the PSANZ Perinatal Death Classification code are available in the table below.

<table>
<thead>
<tr>
<th>PSANZ perinatal death classification code (PDC)</th>
<th>Type of death</th>
<th>Total deaths</th>
<th>Perinatal death %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Stillbirth</td>
<td>Neonatal death</td>
<td>Post-neonatal death</td>
</tr>
<tr>
<td>1 Congenital abnormality</td>
<td>145</td>
<td>38</td>
<td>22</td>
</tr>
<tr>
<td>2 Perinatal infection</td>
<td>23</td>
<td>12</td>
<td>2</td>
</tr>
<tr>
<td>3 Hypertension</td>
<td>38</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>4 Antepartum Haemorrhage</td>
<td>40</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>5 Maternal conditions</td>
<td>20</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>6 Specific perinatal condition</td>
<td>42</td>
<td>11</td>
<td>3</td>
</tr>
<tr>
<td>7 Hypoxic peripartum death</td>
<td>17</td>
<td>15</td>
<td>2</td>
</tr>
<tr>
<td>8 Fetal growth restriction</td>
<td>37</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>9 Spontaneous preterm birth</td>
<td>85</td>
<td>67</td>
<td>6</td>
</tr>
<tr>
<td>10 Unexplained antepartum death</td>
<td>100</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>11 No obstetric antecedent</td>
<td>0</td>
<td>11</td>
<td>57</td>
</tr>
</tbody>
</table>

Click to read the list of agencies providing support to staff and families following perinatal loss (WA, other).

Support agencies

It may be useful to liaise with Consultant Obstetrician / Perinatal Loss Service (KEMH [WA]) prior to arranging transfer.

Consider local support services eg GP, Social Work, Psychology, Pastoral Care, SIDS and Kids WA.
Perinatal Loss E-learning Package

Introduction

The modules in this package include:

Investigations
- Medical history
- Ultrasound scan
- Amniocentesis
- Swabs
- Blood tests

Documentation
- Birth Registration
- Bereavement Payment
- Medical Certificate of Cause of Stillbirth or Neonatal Death
- Death in Hospital
- Cremation
- AIMS (Advanced Incident Monitoring System)
- Postmortem

Postmortem and Placental examination
- External examination of the baby
- Clinical photographs
- Postmortem purpose, consent, arrangements, guidelines, reporting
- Alternatives
- Placental examination

Perinatal mortality audit and classification
- Perinatal mortality audit purpose, format, structure, aims
- Perinatal death review
- Causes of perinatal death
- Communication, investigation, documentation, feedback, data collection
- Perinatal mortality classification purpose, perinatal death classification, neonatal death classification

Clinical considerations and psychosocial aspects of care
- Grief response
- Key recommendations
- Respect
- Provision of information
- Birth options
- Creating memories
- After care
- Funeral arrangements
- Health care professionals
- Follow-up and support