Section 2 of 7 - Institutional Perinatal Mortality Audit

2.1 Introduction ......................................................................................................................................... 33
2.2 Recommendations and rationale ...................................................................................................... 33
2.2.1 Implementation of the guideline ....................................................................................................... 33
2.2.2 Perinatal mortality review committees ............................................................................................. 33
2.2.3 Review of a perinatal death ............................................................................................................... 35
2.2.4 Data collection, documentation and reporting ................................................................................ 35
2.2.5 Communication and feedback .......................................................................................................... 36
2.2.6 Definitions for registration of births and perinatal deaths ............................................................. 37
2.3 References .......................................................................................................................................... 38

Appendix 1 Perinatal Mortality Audit Package ........................................................................................ 40
Appendix 2 Instructions on taking clinical photographs ........................................................................ 51
Appendix 3 Autopsy clinical summary form ............................................................................................. 54
Appendix 4 Perinatal Mortality Classifications - quick reference sheet .................................................. 55
SECTION 2  INSTITUTIONAL PERINATAL MORTALITY AUDIT

2.1 Introduction

The purpose of this section is to provide guidance for clinicians at maternity hospitals in the conduct of high quality audit of perinatal deaths to determine an accurate cause of death and issues surrounding the death for the purposes of discussion with the parents; planning of future pregnancies; practice improvement; and to improve the quality of data available for monitoring and research activities aimed at reducing perinatal death. Practice recommendations are supplemented by data collection forms and checklists in the Perinatal Mortality Audit Package (Appendix 1) to assist clinicians in implementing the guideline recommendations.

In the development of this section an attempt was made to obtain all existing national and international guidelines and protocols on perinatal mortality review. The following guideline/policy statements were used as a basis for development of this guideline:

2. NSW Health Department. Hospital Procedures for review and reporting of perinatal deaths. In; 2000(2).

2.2 Recommendations and rationale

2.2.1 Implementation of the guideline

The PSANZ Clinical Practice Guideline for Perinatal Mortality Audit should be implemented in all institutions where births occur.

Strategies to assist in the uptake of the guideline into practice at the hospital level should be implemented. These strategies may include: identifying and addressing local barriers to uptake; ongoing structured and unstructured education for clinical staff including clinical leader advocacy; and implementing an audit and feedback mechanism on compliance with guideline recommendations.

The implementation of best practice is often not simple and the lack of evidence for optimal approach to assist in this process remains elusive(4). Although clinical practice guidelines are a promising tool in improving the quality of care, it is important for guidelines to be accompanied by a program for implementation and dissemination to ensure their use in clinical practice(5). Although the evidence is unclear, interventions which may assist in the uptake of guidelines into practice include: professional education, audit and feedback, reminders and a multidisciplinary teams approach(6, 7). The development of evidence-based practice support units within hospitals and clinical research implementation networks have been proposed as a means of effecting change to improve clinical care across the healthcare system(8).

A recent survey of maternity hospitals in ANZ indicated less than optimal awareness and use of the guidelines(9). The Australian and New Zealand Stillbirth Alliance and the PSANZ Perinatal Mortality Group have developed an educational program to aid in the implementation of the guidelines across Australia and New Zealand (www.stillbirthalliance.org/anz). It is hoped that this program will be used widely to address the problem of implementation.

2.2.2 Perinatal mortality review committees

(i) Format

A format for review of perinatal deaths needs to be developed in each institution, taking into account principles of confidentiality and impartiality. All perinatal deaths should be reviewed by the Perinatal Mortality Committee, including deaths of infants born within the service but who died elsewhere. Maternity services (particularly smaller hospitals) may choose to combine the functions of the perinatal mortality review committee with another hospital committee or regional mortality review committee.
(ii) **Purpose**

The functions of the Perinatal Mortality Committee should include:

- the review of all stillbirths and neonatal deaths;
- the classification of perinatal deaths according to the Perinatal Society of Australia and New Zealand (PSANZ)-Perinatal Death Classification (PDC) and Neonatal Death Classification (NDC);
- evaluation of the circumstances surrounding the death including a consideration of contributing factors; and
- on the basis of such considerations, the development of recommendations for improving the processes of care, ensuring feedback to clinicians;
- implementation of action required based on these recommendations;
- provision of a confidential case summary to the relevant agency within the jurisdiction’s Health Department; and
- coordination of care for parents following a perinatal death, including follow-up.

(10) **Membership:**

The Perinatal Mortality Committee meetings should include multidisciplinary involvement, including those who are familiar with the circumstances of the perinatal death.

Membership of the Perinatal Mortality Committee should include representatives from: obstetrics, neonatology/paediatrics, pathology (preferably a perinatal/paediatric pathologist), midwifery, neonatal nursing, social workers, and other relevant medical specialists and allied health professionals.

Review by a multidisciplinary team has been shown to increase the yield from mortality review. Multidisciplinary involvement provides an opportunity for all members of the team providing care to participate in a comprehensive assessment of the standards of care and strategies for care improvement where necessary. Multidisciplinary perinatal death review is advocated by international groups and is incorporated in most Health Departments perinatal mortality review in Australia. Some Health Departments in Australia currently recommend multidisciplinary review by hospital committees with some evidence of implementation.

(iv) **Protection for committee members**

It is the responsibility of each institution’s management to ensure that committee members and their deliberations are indemnified while undertaking this kind of audit on their behalf.

The aim of the perinatal mortality committee is to provide an atmosphere of confidence and security that will encourage health care providers and managers to communicate openly and honestly with their colleagues. In order to do this, assurance should be sought by the administration of the institution that the information and discussion arising from the formal review cannot be used in legal proceedings. As mechanisms for establishing perinatal mortality committees with the appropriate protection differs across Australia and New Zealand (ANZ), committees should seek advice from their respective Health Departments.

(v) **Timing of the review**

The review should take place as soon as possible after the death, once results of core investigations are available.

The review should be undertaken in a timely manner so that it is within recent memory of those involved and also to enable information from the review to be incorporated into the discussion with the parents at the follow-up visit. The review should take place as soon as results are available from the initial investigations. A further review of the death by the mortality committee, once the results of all investigations are available, may be necessary to finalise the cause of death and to ensure further follow-up is arranged as required. Timely review of the death may also assist in providing counselling and support for staff.
2.2.3 Review of a perinatal death

(i) **Cause of death and associated factors**

The review should take place as soon as possible after the death, once results of core investigations are available.

The main cause of death and associated maternal/fetal/neonatal conditions, if present, should be classified according to the PSANZ-PDC for all perinatal deaths and in addition for all neonatal deaths and the PSANZ-NDC.(15).

(Please see Section 7 Perinatal Mortality Classifications for full details of the classifications and also Section 2; Appendix 4 for the Classification Quick Reference sheet.)

(ii) **Potential contributing factors**

The review of each perinatal death should include consideration to the presence of contributing factors in three main areas:

- maternal/social i.e. factors relating to the woman including her social situation;
- infrastructure/service organisation i.e. factors relating to the setting in which the care was provided; and
- professional care delivery i.e. factors relating to the clinical care provided.

The determination that contributing factors (also referred to as sub-optimal or avoidable factors) were present does not imply that the death could have been prevented if these factors were not present, rather that the risk of death may have been reduced.

Contributing factors can be classified by the type of factor: maternal/social; infrastructure/service organisation; and professional care delivery and may be further classified by timing: antenatal; intrapartum; and neonatal. This system is based on that described by the Confidential Enquiry into Stillbirths and Deaths in Infancy (CESDI)(12) and later adapted for use in the EuroNatal study(16).

Sub-optimal care factors have been identified in approximately 30-50% of stillbirths(17-20). Similarly, the EuroNatal study involving ten European countries showed sub-optimal factors were possibly or likely to have contributed to the death in about half of the 1619 perinatal deaths reviewed. Although there is limited information available in Australia on the contribution of sub-optimal care to perinatal death, the Consultative Council on Obstetric and Paediatric Mortality and Morbidity in Victoria reported the presence of Suspected preventable factors in perinatal deaths in approximately 30% of perinatal deaths(21).

(Please see Section 2 Appendix 1.5 for a recommended format for review of contributing factors)

(iii) **Other aspects of care - Communication and investigation**

At review of each perinatal death, consideration should be given to the adequacy of communication with parents and between health care professionals and the investigations undertaken.

To ensure ongoing practice improvement, a review of the adequacy of communication around the time of death and investigations undertaken should be undertaken at the time of committee review of the death. CESDI identified sub-optimal care around the time of stillbirth in the following areas relating to communication and investigation: incomplete investigation of a stillbirth; staff not discussing the possibility of a post-mortem with parents, or not presenting adequate information about the different levels of examination which could be carried out; discussion about the post-mortem often undertaken by junior staff; not undertaking a post-mortem when consent was obtained and incompleteness of post-mortem reports. Bereavement support was also criticised. The report identified several cases where bereavement support was not provided and where written communication was described by the panel members as insensitive(12).

2.2.4 Data collection, documentation and reporting

(i) **Medical record**

Clinicians should ensure that all relevant clinical details are documented clearly and accurately in the medical record at the time of the event and that all relevant documentation is completed according to local policy.

(ii) **Death certificate**
The Medical Certificate of Perinatal Death should be completed by, or under the supervision of, the Consultant responsible for care with due consideration to presence and significance of all perinatal conditions and complications. A revised Medical Certificate of Perinatal Death should be submitted, following review by the Perinatal Mortality Committee, where required.

The Royal College of Pathologists Australasia (RCPA) recommend that the death certificate be issued by the senior clinician responsible for care\(^\text{22}\). As Perinatal Death Certificates are often issued prior to the results of an autopsy becoming available and, as perinatal autopsy may identify significant information about the cause of death\(^\text{23}\), the completion of death certificates without consideration of autopsy findings may result in significant error in cause of death data\(^\text{24-26}\). Review by a multidisciplinary clinical group has also been shown to increase the value of post-mortem examination in determining an accurate cause of death. Therefore, it is essential that for all perinatal deaths the details on the death certificate are reviewed by the perinatal mortality committee including the full results of the autopsy when available\(^\text{11}\).

As the process of revising the death certificate may differ across regions, it is recommended that all perinatal mortality committees become familiar with the process within their region and that a process is implemented to ensure that a revised death certificate is submitted when required.

(iii) **Confidential clinical summary**
A comprehensive confidential clinical summary should be completed for every perinatal death to facilitate local audit and, if required, forwarded to the relevant agency within the jurisdiction’s Health Department.

A standardised data set should be collected for all perinatal deaths. This data set includes all significant family, medical and obstetric history; all major pregnancy complications including whether the pregnancy was terminated; and investigations undertaken around the time of the death including placental histopathology and autopsy.

*The PSANZ Perinatal Mortality Audit Package (Section 2; Appendix 1) is recommended for data collection and perinatal mortality review.*

2.2.5 **Communication and feedback**

(i) **Feedback to clinicians**
Notification of the death to the General Practitioner and other relevant care providers should be undertaken as soon as possible after the death. This should be followed by a comprehensive clinical summary promptly after review of the death.

A process of feedback to clinicians needs to be in place so that individual practices and hospital policy can be improved as a result of the review process. This includes standards in relation to perinatal mortality investigation, documentation and communication.

(ii) **Follow-up consultation for parents**
A follow-up consultation service should be provided for all parents following a perinatal death.

The follow-up meeting should involve the senior clinician who provided care and be scheduled at a suitable time after all relevant test results are available and following hospital perinatal mortality committee review where possible.

In cases of a congenital abnormality it may be appropriate to discuss the need for genetic counselling with a geneticist prior to the follow-up appointment with the senior clinician who provided care. The geneticist can then either attend the follow-up consultation or a further appointment can be offered at the time.

Depending on the results of the initial investigation, it may also be necessary to arrange further tests such as investigations for thrombophilia.

*(Please see Section 5 Investigation of stillbirths and Section 6 Investigation of neonatal deaths for further details.)*
2.2.6 Definitions for registration of births and perinatal deaths

The following definitions and examples are provided for clarification of the requirements for registration of births and perinatal deaths.

(i) 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 400 gms 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 beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles.

A Perinatal Death Certificate is required by the Australian Bureau of Statistics (ABS) for all stillbirths according to the above definition. This definition applies regardless of the known or presumed timing of the death in utero. Examples are provided here of circumstances which may require clarification.

Example 1: Fetus papyraceus
In the case of a birth after 20 weeks gestation where the birth weight is less than 400 gms and where the Intrauterine Fetal Death (IUFD) may have occurred some time before the birth, the birth is considered a stillbirth except in the case of fetus papyraceus where the fetus is not readily recognisable.

Example 2: Multiple pregnancy
In the case of a twin pregnancy with an IUFD of Twin 1 at 19 weeks and spontaneous onset of labour and delivery at 23 weeks gestation where Twin 2 is live born weighing 550 gms and Twin 1 weighs 200 gms, Twin 1 is registered as a stillbirth and Twin 2 as a livebirth.

In the case of a twin pregnancy with a fetal death and spontaneous delivery of Twin 1 at 19 weeks weighing 200 gms and subsequent fetal death and delivery of Twin 2 at 21 weeks weighing 300 gms, Twin 1 is not required to be registered, however Twin 2 is.

(ii) Neonatal death

Livebirth: A livebirth is 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 other evidence of life, such as 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; each product of such a birth is considered liveborn\(^{(27)}\).

Neonatal death: is defined as death of a liveborn baby within 28 days of life.

A Perinatal Death Certificate is required by the ABS for all neonatal deaths according to the above definition. This definition applies regardless of the birthweight or gestational age and also for resuscitated stillbirths.

Example 1: Resuscitated stillbirth
Where an infant is stillborn and, following active resuscitation, a heart beat is detected, the birth is required to be registered as a livebirth. If the infant subsequently dies up to 28 days of age registration as a neonatal death is necessary.
2.3 References

Perinatal Mortality Audit Package

THE PERINATAL SOCIETY OF AUSTRALIA AND NEW ZEALAND

Perinatal Mortality Group
http://www.psanz.org.au

1.1 Stillbirth investigations
1.2 Neonatal death investigations
1.3 Accoucheur placental examination and preparation for pathology
1.4 Clinical examination of baby checklist
1.5 Perinatal mortality confidential case summary
   Part a  Perinatal death clinical summary
   Part b  Perinatal Mortality Committee review
### 1.1 Stillbirth investigations

#### CORE INVESTIGATIONS

<table>
<thead>
<tr>
<th>At diagnosis of IUFD</th>
<th>Performed</th>
<th>Comments/Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please place ✓ (Yes) or X (No) in boxes provided</td>
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**Mother**
- Medical & obstetric history
- Ultrasound
  - Amniocentesis
    - Performed
    - Sample for microbiology
    - Sample for chromosomes

**Vaginal culture**
- Low vaginal/Peri-anal culture
- Blood tests
  - Full blood exam
  - Group & antibody screen
  - Kleihauer
  - Renal function
  - Liver function
  - HbA1c
  - Thyroid function test
  - CMV
  - Toxoplasma
  - Parvo
  - Rubella
  - Syphilis serology
  - Anticardiolipin antibodies
    - Lupus anticoagulant
    - APC resistance
    - Other

**Other**

<table>
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<th>Signature</th>
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**At birth**

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<th>Performed</th>
<th>Comments/Results</th>
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<td>Please place ✓ (Yes) or X (No) in boxes provided</td>
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</table>

**Baby**
- Clinical examination
- Clinical photographs
- Babymat
- Swabs of ear & throat

**Autopsy**
- Not approached
- Refused
- Partial
- Full
- Genetic autopsy

**Cord/Cardiac blood samples**
- Full blood count with smear (nucleated red count)
- Newborn Screening Test

**Placenta, membranes and cord**
- Macroscopic examination
- Placental swabs for microbiology
- Biopsy of placenta & amnion for chromosomal analysis
- Placental histopathology

**Placental histopathology**
- for chromosomal analysis

**Other**

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<th>Signature</th>
<th>Date</th>
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#### FURTHER INVESTIGATIONS

**8-12 weeks Postpartum**

<table>
<thead>
<tr>
<th>Performed</th>
<th>Date/ Results</th>
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<td>Please place ✓ (Yes) or X (No) in boxes provided</td>
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**Thrombophilia**
- Anticardiolipin antibodies
- Lupus anticoagulant
- APC resistance
- Fasting homocysteine
- Protein C deficiency
- Protein S deficiency
- Prothrombin G20210A
- Factor V Leiden mutation
- MTHFR

**Other**

<table>
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<th>Comments</th>
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### 1.2 Neonatal death investigations

#### AT BIRTH OF HIGH RISK INFANT

<table>
<thead>
<tr>
<th>Mother</th>
<th>Baby</th>
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<tbody>
<tr>
<td>Medical &amp; obstetric history</td>
<td>Clinical examination</td>
</tr>
<tr>
<td>Vaginal culture</td>
<td>Clinical photographs</td>
</tr>
<tr>
<td>Low vaginal/Peri-anal culture</td>
<td>Baby gram</td>
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<tr>
<td>Blood tests</td>
<td>Swabs of ear &amp; throat</td>
</tr>
<tr>
<td>Full blood exam</td>
<td>Urine</td>
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<tr>
<td>Group &amp; antibody screen</td>
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<tr>
<td>Kleihauer</td>
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<td>Renal function</td>
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<td>Liver function</td>
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<td>HbA1c</td>
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<td>CMV</td>
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<td>Toxoplasma</td>
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<td>Parvo</td>
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<td>Rubella</td>
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<td>Syphilis serology</td>
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<td>Lupus anticoagulant</td>
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<td>APC resistance</td>
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<td>Other</td>
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<tr>
<td>Placenta, membranes and cord</td>
<td>Autopsy</td>
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<tr>
<td>Macroscopic examination</td>
<td>Not approached</td>
</tr>
<tr>
<td>Placental swabs for microbiology</td>
<td>Refused</td>
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<tr>
<td>Biopsy of placenta &amp; amnion for chromosomal analysis</td>
<td>Partial</td>
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<tr>
<td>Placental histopathology</td>
<td>Full</td>
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<td>Other</td>
<td>Genetic autopsy</td>
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#### Other

- Transferrin isoforms
- Newborn Screening Test
- C Reactive Protein
- Neutrophil count
- Cord blood sample
- Clinical examination
- Clinical photographs
- Baby gram
- Swabs of ear & throat
- Urine
- Autopsy
- Not approached
- Refused
- Partial
- Full
- Genetic autopsy
- Cord blood sample
- Full blood count with smear (nucleated red count)
- Other bloods
- Group DCT
- Culture
- Chromosomes
- Neonatal screen
- C Reactive Protein
- Newborn Screening Test
- Transferrin isoforms
- Other

### Maternal Sticker

(LInc Name, DOB, UR, Address, Telephone Number)

- Singleton
- Multiple
- Baby number

### FURTHER INVESTIGATIONS

#### 8-12 weeks Postpartum

<table>
<thead>
<tr>
<th>Thrombophilia</th>
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<tbody>
<tr>
<td>Anticardiolipin antibodies</td>
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<tr>
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#### Other

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1.3 Accoucheur placental examination and preparation for pathology

**Please complete details as required**

**Maternal Sticker**

(Inc Name, DOB, UR, Address, Telephone Number)

<table>
<thead>
<tr>
<th>Singleton</th>
<th>Multiple</th>
<th>Baby number............ (e.g. Twin 1)</th>
</tr>
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</table>

**Step 1**

**Placental cultures**

Using aseptic technique and being careful not to cross contaminate, swab in between the amnion and chorion.

**Step 2**

**Accoucheur examination of the placenta, membranes and cord using sterile gloves**

- Cord insertion (Circle)  
  - Eccentric / Central / Marginal / Velamentous / Other

- Cord appearance (Circle)  
  - Thin / Thick / Meconium Stained / Other

- No of cord vessels

- Total cord length

- Cord knots (Circle)
  - Yes / No

- Placental dimensions

- Placental weight

- Placental odour

- Maternal surface (Circle all that apply)
  - Intact / Incomplete / Gritty / Fatty Infarcts / Retroplacental Clot / Succenturiate / Circumvallate / Bipartite

**Step 3**

**Tissue sampling for chromosomal analysis**

Prior to sending the placenta to pathology, a sample of umbilical cord should be collected using aseptic technique as outlined below. If there are any clinical indications of placental mosaicism, then a placental sample may be required as well.

- Collect a 1cm³ sample of the middle of the umbilical cord, using a sterile surgical knife and dissecting forceps.

- Place in either a designated cytogenetics bottle or a sterile container, with either sterile saline solution or Hank’s solution. Then seal the bottle and label with maternal name, medical record number, date and time of collection and twin number if appropriate.

**Step 4**

**Send Placenta, Membrane and Cord to the Pathology fresh and unfixed for histopathological examination**
### Clinical examination of baby checklist

**Baby measurements**
1. Crown – heel (stretched) ................. cms  
2. Head circumference ......................... cms  
3. Weight ......................................... gms

**If Stillbirth**  
**Estimated date of IUDF:** ...........  
**Maceration degree**  
- Fresh; no skin peeling .................  
- Slight; focal minimal skin slippage .................  
- Mild; some skin sloughing, moderate skin slippage .................  
- Moderate; much skin sloughing but no secondary comprehensive changes or decomposition .................  
- Marked, advanced .................

**HEAD AND FACE**

**Head**  
- Relatively normal  
- Anencephalic  
- Abnormal shape  
- If abnormally shaped, describe: .................

**Eyes**  
- Normal  
- Prominent  
- Sunken  
- Straight  
- Far apart  
- Close together  
- Upslanting  
- Downslanting  
- Globes normal  
- Absent  
- Eyes very small  
- Very large  
- Lens opacity  
- Corneal opacity  
- Eyelids fused  
- Other  
- If other, describe: .................

**Nose**  
- Normal  
- Abnormally small  
- Asymmetric  
- Abnormally large  
- If other, describe: .................

**Nostrils**  
- Apparently patent  
- Obstructed  
- Single nostril  
- Other  
- If other, describe: .................

**Mouth**  
- Normal  
- Large  
- Small  
- If other, describe: .................

**Upper Lip**  
- Intact  
- Cleft  
- If cleft, location: .................  
- Left  
- Right  
- Bilateral  
- Midline  
- Palate  
- Intact  
- Cleft  
- If other, describe: .................

**Mandible**  
- Normal  
- Large  
- Small  
- Other  
- If other, describe: .................

**Ears**  
- Normal  
- Preauricular tags  
- Lowset  
- Preauricular pits  
- Other  
- Posteriorly rotated  
- If other, describe: .................

**NECK**  
- Normal  
- Mass  
- Describe: .................

**CHEST**  
- Normal  
- Long & narrow  
- Short & broad  
- Other  
- If Spina bifida, describe: .................

**ABDOMEN**  
- Normal  
- Flattened  
- Distended  
- Hemia  
- Omphalocele  
- Gastrochisis  
- If Spina bifida, describe: .................

**BACK**  
- Normal  
- Spina bifida  
- If Spina bifida, describe: .................

**SPINAL BIFIDA**  
- Scoliosis  
- Kyphosis  
- If other, describe: .................

**GENITALIA**  

**Anus**  
- Normal  
- Imperforate  
- Other  
- If other, describe: .................

**Male**  
- Penis  
- Normal  
- Very small  
- Hypospadias  
- Chordee  
- Hypospadias, level of opening  
- Scrotum  
- Normal  
- Abnormal  
- If abnormal, describe: .................

**Female**  
- Urethral opening  
- Present  
- Absent/identifiable  
- Vaginal introitus  
- Present  
- Absent/identifiable  
- Clitoris  
- Present  
- Unidentifiable  
- Enlarged  
- Other  
- If other, describe: .................

**HANDS**  
- Normal  
- Asymmetric  
- Missing parts  
- If other, describe: .................

**FEET**  
- Normal  
- Abnormal  
- If abnormal, describe: .................

**LIMBS**  
- Length  
- Normal  
- Short  
- Long  
- If Short, what segments seem short  
- Form  
- Normal  
- Asymmetric  
- Missing parts  
- If other, describe: .................

**Fingers**  
- Number present: .................
- If not 4 + 4, describe: .................
- Unusual form of fingers  
- Unusual position of fingers  
- Abnormal webbing or syndactyly  
- If abnormal, describe: .................

**Thumbs**  
- Number present: .................
- If not 1 + 1, describe: .................
- Unusual position  
- Looks like a finger  
- If abnormal, describe: .................

**Finger nails**  
- All present  
- If not describe: .................

**TOES**  
- Number present: .................
- If not 5 + 5 describe: .................
- Spacing: Normal  
- Abnormal  
- If abnormal, describe: .................

**Toe nails**  
- All present  
- If not describe: .................

**Revised gestational age** .................
- Based on .................

**Examined by: ......................... (Print name)**  
**Date: ..........................**

**Summary of key findings:** .................

---

**Maternal Sticker**  
(Inc Name, DOB, UR, Address, Telephone Number)
## 1.5 Perinatal mortality confidential case summary

**Part A - Clinical summary**

*Form to be completed by Hospital of birth*

Please tick appropriate box and complete details as required

### Maternal details

- **Country of birth:**
- **Ethnicity:**
- **Education:** High school  □  High school completed  □  Tertiary completed  □
- **Occupation:** Mother  □  Father  □
- **Marital Status:** Never married  □  Married  □  De facto  □  Widowed  □  Divorced  □  Separated  □

### Medical and obstetric history

- **Family history:** Venous thromboembolism  □  Hypertension  □
- **Congenital abnormalities:**  □
- **Other relevant:**  □

### Maternal medical history

- **Cervical surgery:**  □
- **Venous thromboembolism:**  □
- **Uterine abnormality:**  □

### Previous pregnancy outcomes (numbers)

<table>
<thead>
<tr>
<th>Miscarriages</th>
<th>Terminations</th>
<th>Stillbirths</th>
<th>Live births</th>
<th>Neonatal deaths</th>
<th>Postnatal deaths</th>
</tr>
</thead>
</table>

### Obstetric history

<table>
<thead>
<tr>
<th>Baby number</th>
<th>Sex</th>
<th>GA</th>
<th>Birth weight</th>
<th>Delivery method</th>
<th>Baby outcome</th>
<th>Complications</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Current pregnancy

- **Gravida:**
- **Parity:**
- **Plurality:** Singletons  □  Multiples  □
- **Charge status:** Public  □  Private  □

### Adverse social factors

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
</table>

### Type of antenatal care

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
</table>

### Intended place of birth

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
</table>

### Maternal height

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
</table>

### Maternal weight at booking visit

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
</table>

### BMI

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
</table>

### Antenatal medications

- **Corticosteroids:**
- **Tocolytics:**
- **Folic acid:**
- **Antibiotics:**
- **Methadone:**
- **Dosing:**
- **Other:**

### Substance use

- **Tobacco Smoking:**
  - At first visit  □
  - Average number of cigs
  - Never smoked  □
  - Quit in last 12 months  □
  - Quit before 1st visit  □
  - Smoker  □
  - Unknown  □

- **Alcohol:**
  - Nil  □
  - Nil  □
  - Units per day  □
  - Units per week  □
  - Unknown  □

- **Other:**
  - Cannabis  □
  - Amphetamines  □
  - Heroin  □
  - Cocaine  □
  - Hallucinogens  □
  - Ecstasy  □
  - Comments  □

---

## 1.5 Perinatal mortality confidential case summary

### Part A - Clinical summary continued

*Please place ✓ (Yes) or X (No) in boxes provided*

### Antenatal (AN)

<table>
<thead>
<tr>
<th>EDC by USG</th>
<th>EDC by LMP</th>
<th>Type</th>
<th>Morphology USS</th>
<th>Gest</th>
<th>Total No. USS</th>
<th>Gestation at 1st antenatal visit</th>
<th>Total No. of antenatal visits</th>
</tr>
</thead>
</table>

**Screening/Diagnostics/Monitoring**

- Chorionic villus sampling
- Nuchal translucency
- Amniocentesis
- Cordocentesis
- CTG
- Doppler studies
- Group B strep screen
- Vaginal culture (HVS)

### Labour and Delivery

<table>
<thead>
<tr>
<th>Labour onset</th>
<th>Spont</th>
<th>Induced</th>
<th>No labour</th>
<th>Labour duration (hrs/mins)</th>
<th>1st stage</th>
<th>2nd stage</th>
<th>Fetal monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Induction reason</td>
<td>Amniotic fluid</td>
<td>Clear</td>
<td>Meconium</td>
<td>Nil</td>
<td>Intermittent auscultation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Induction method</td>
<td>Oxytocin</td>
<td>Prostaglandis</td>
<td>ARM</td>
<td>Other</td>
<td>Cardiotocography</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Method of delivery</td>
<td>Labour complications</td>
<td>- On admission</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spont vag</td>
<td>Vacuum</td>
<td>Fetal distress</td>
<td>Chorioamnionitis</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forcips</td>
<td>C.S. emerg</td>
<td>C.S. elect</td>
<td>PPH</td>
<td>- Clinical signs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reason for Operative Delivery</td>
<td>Other</td>
<td>Placental pathol</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Presentation**

<table>
<thead>
<tr>
<th>Cephalic</th>
<th>Breech</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please state</td>
<td>Other</td>
<td></td>
</tr>
</tbody>
</table>

**Analgesia**

<table>
<thead>
<tr>
<th>None</th>
<th>Nitrous oxide</th>
<th>IMI narcotic</th>
<th>Epidural</th>
<th>Spinal</th>
<th>Other</th>
</tr>
</thead>
</table>

**Anaesthesia**

<table>
<thead>
<tr>
<th>None</th>
<th>General</th>
<th>Spinal</th>
<th>Epidural</th>
<th>Pudendal</th>
<th>Other</th>
</tr>
</thead>
</table>

### Relevant obstetric events summary

<table>
<thead>
<tr>
<th>Date</th>
<th>Gestation</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

---

## 1.5 Perinatal mortality confidential case summary

### Part A - Clinical summary continued

*Please complete Clinical Examination of Baby Form (Appendix 1.4)*

### Baby Details

<table>
<thead>
<tr>
<th>UR number:</th>
<th>Birth order</th>
<th>Sex</th>
<th>Gestational age</th>
<th>Birthweight</th>
<th>Date &amp; Time of birth:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

**Type of death:**
- [ ] Fetal
- [ ] Antepartum death
- [ ] Unknown
- [ ] Yes

**Place of birth:**

**Resuscitation:**

- [ ] None
- [ ] Suction
- [ ] Oxygen therapy
- [ ] IPPV - bag and mask
- [ ] IPPV - intubation
- [ ] External cardiac massage

**Who performed resuscitation?**
- [ ] Not done
- [ ] Neonatologist
- [ ] Paediatrician
- [ ] Obstetrician
- [ ] Neonatal nurse

**Resuscitation medications**
- [ ] None
- [ ] Narcotic antagonist
- [ ] Sodium bicarbonate
- [ ] Adrenaline
- [ ] Other

**Neonatal death:**

- [ ] Admitted to SCN
- [ ] Admitted to NICU
- [ ] Mech. Vent

**Main reason for admission:**

**Other morbidity:**

### Relevance neonatal events summary

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Postnatal age</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
</tbody>
</table>

**Maternal Sticker**

(Maternal Sticker: Inc Name, DOB, UR, Address, Telephone Number)
### 1. Classification of Cause of Death

(i) PSANZ Perinatal Mortality Classification cause of death

<table>
<thead>
<tr>
<th>Category No.</th>
<th>Category Description:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Perinatal Death Classification (PSANZ-PDC)

<table>
<thead>
<tr>
<th>Category No.</th>
<th>Category Description:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

b. Neonatal Death Classification (PSANZ-PDC)

<table>
<thead>
<tr>
<th>Category No.</th>
<th>Category Description:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(ii) Cause of death recorded on Medical Certificate

a. Main disease or condition in fetus or infant:

<table>
<thead>
<tr>
<th>Category No.</th>
<th>Category Description:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

b. Other diseases or conditions in fetus or infant:

<table>
<thead>
<tr>
<th>Category No.</th>
<th>Category Description:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

c. Main maternal disease or condition affecting fetus or infant:

<table>
<thead>
<tr>
<th>Category No.</th>
<th>Category Description:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

d. Other maternal diseases or conditions affecting fetus or infant:

<table>
<thead>
<tr>
<th>Category No.</th>
<th>Category Description:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
e. Other relevant circumstances

### 2. Classification of associated conditions

(i) Perinatal Mortality Classifications associated conditions 1

<table>
<thead>
<tr>
<th>Category No.</th>
<th>Category Description:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Perinatal Death Classification (PSANZ-PDC)

<table>
<thead>
<tr>
<th>Category No.</th>
<th>Category Description:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

b. Neonatal Death Classification (PSANZ-NDC)

<table>
<thead>
<tr>
<th>Category No.</th>
<th>Category Description:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(ii) Perinatal Mortality Classifications associated conditions 2

<table>
<thead>
<tr>
<th>Category No.</th>
<th>Category Description:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Perinatal Death Classification (PSANZ-PDC)

<table>
<thead>
<tr>
<th>Category No.</th>
<th>Category Description:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

b. Neonatal Death Classification (PSANZ-NDC)

<table>
<thead>
<tr>
<th>Category No.</th>
<th>Category Description:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 3. Congenital abnormality

Was congenital abnormality present? Yes ☐ No ☐ Unknown ☐ If unknown, are results of investigations pending? Yes ☐ No ☐ ...... If yes, please state abnormality:

<table>
<thead>
<tr>
<th>abnormality:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

If yes, please state tests awaiting:

<table>
<thead>
<tr>
<th>tests awaiting:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

### 4. Fetal / Neonatal infection

Did infection contribute to the death? Yes ☐ No ☐ .......... If yes state organism: .......... Culture site: .......... Date & time: ........../:.../....; ..:..:..

### 5. Termination of pregnancy

Was the pregnancy terminated? Yes ☐ No ☐ .......... If yes, was the pregnancy terminated due to:

<table>
<thead>
<tr>
<th>reason:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

Maternal Sticker

(Inc Name, DOB, UR, Address, Telephone Number)
1.5 Perinatal mortality confidential case summary

Part B - Perinatal Mortality Committee review continued

Please tick appropriate box and complete details as required

6. Factors relating to care

(i) Potentially contributing factors:
Were any potentially contributing factors relating to care access or provision thought to be present? Yes ☐ No ☐
If yes, please complete below:

<table>
<thead>
<tr>
<th>Factor</th>
<th>Antenatal</th>
<th>Intrapartum</th>
<th>Postnatal</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Factors relating to the woman/ her family/ social situation:</td>
<td>Yes ☐ No ☐</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor 1:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor 2:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) Factors relating to access to care:</td>
<td>Yes ☐ No ☐</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor 1:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor 2:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(c) Factors relating to professional care:</td>
<td>Yes ☐ No ☐</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor 1:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor 2:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(ii) Other factors (e.g. counselling, communication, investigation)
Were any other factors present relating to care? Yes ☐ No ☐
If Yes, please state factors: ..............................................................................................................
........................................................................................................................................................
........................................................................................................................................................

7. Practice improvement recommendations:

Were any areas identified for practice improvement? Yes ☐ No ☐
If yes, please complete Practice Improvement Recommendations below.

Recommendation 1:
Action required: ..............................................................................................................................
Action to be reviewed by (date): .......... / .......... / ..........  Person responsible: .................................................................

Recommendation 2:
Action required: ..............................................................................................................................
Action to be reviewed by (date): .......... / .......... / ..........  Person responsible: .................................................................

Recommendation 3:
Action required: ..............................................................................................................................
Action to be reviewed by (date): .......... / .......... / ..........  Person responsible: .................................................................

8. Other discussion relevant to practice improvement or educational aspects
........................................................................................................................................................
........................................................................................................................................................
........................................................................................................................................................

(Inc Name, DOB, UR, Address, Telephone Number)
9. Follow-up visits for parents

Obstetrician: ..................................................................................................................  Date arranged: ...…… / …...… / ………….

Neonatologist: ................................................................................................................  Date arranged: ...…… / …...… / ………….

General Practitioner: .....................................................................................................  Date arranged: ...…… / …...… / ………….

Other ...............................................................................................................................  Date arranged: ...…… / …...… / ………….

GP notified of the death?  Yes ☐ No ☐ Date General Practitioner was notified ..............................................................................................................................

Genetic counselling required?  Yes ☐ No ☐ Date arranged: ...…… / …...… / ………….

Further investigations required?  Yes ☐ No ☐ If yes, please state ..........................................................................................................................

10. Administrative Details

Hospital of birth name: ..................................................................................................................

Date of committee review: ...…… / …...… / …......

Review finalised: No ☐ Yes ☐

If no, specify outstanding areas for finalisation of this review: ..............................................................................................................................

If yes, date finalised: ...…… / …...… / …......

Name of person completing this form: ..................................................................................

Contact person for additional information: ..........................................................................

Phone number: ..................................................................................................................

Signed ..............................................................................................................................
Section 2: Appendix 2 Instructions on taking clinical photographs

High quality medical photographs are preferred; however, Polaroid pictures are better than no pictures at all. Ideally digital photographs should be taken which will allow the clinician to check each photograph after it is taken. These photographs should be taken in addition to bereavement photographs.

Consent:
Parental consent is necessary prior to taking clinical photographs. Due to their clinical nature it is strongly recommended that the parents are not offered copies, but specific bereavement photographs are taken instead.

Background:
Plain white or surgical drapes (other backgrounds may create glare or alter skin tone).

Scale:
- Place a paper tape measure next to the baby (a plastic ruler will create glare)
- Ensure zero is aligned at the base of the foot or crown of the head.
- Use sticky tape to ensure the tape is straight; and
- Measure should be on the bottom of the frame or the left.

Identification:
Write the baby’s UR number on the paper tape measure for identification. Don’t write any other identifying information in case the photographs are ever mislaid.

Setting:
Photographs should be taken in a private area away from the parents.

Technique:
The photographs should be taken from directly above the baby. Consequently it is best to place the baby on the floor, in order to get sufficient height above the baby.

Magnification:
Use a 50 mm lens/magnification for the whole body photographs, and maintain a consistent distance. Use a 100 mm lens/magnification (except for digital) for the facial photographs, filling the whole frame.

Baby:
The baby should be naked for all the photographs.

Position:
- AP view – whole body frontal including limbs
- PA view – whole body back including limbs
- Lateral view of the body
- Lateral views of the face
- Frontal view of the face
- Photographs of any abnormalities
Section 2; Appendix 2 Instructions on taking clinical photographs *continued*

**AP View – Whole body frontal including limbs**
- Tape measure to the left
- Palms facing up

**PA View – Whole body back including limbs**
- Keep the baby in this position for the minimum time possible.
- Tape measure to the left
- Palms facing down

**Lateral view of the body**

**Frontal view of the face**

To stabilise:
- Pull underneath arm forwards
- Legs in ‘running position’
- Top arm and leg will fall forward which will aid stability.
- Keep the tape measure to the left

- Ensure tape measure is in the frame
Section 2 Appendix 2 Instructions on taking clinical photographs *continued*

Lateral views of the face

- Right lateral
- Left lateral

- Keep tape measure to the left of the frame to aid easy identification of the side being viewed.

If there are any specific abnormalities these should be photographed individually, with a scale in view and the photograph labelled with the baby’s UR number.
Section 2; Appendix 3 Autopsy clinical summary form

Please attach the following:

- copy of the death certificate;
- copies of all antenatal ultrasound reports; and
- copy of amniocentesis report if available

Baby Details

<table>
<thead>
<tr>
<th>Baby number</th>
<th>Sex</th>
<th>Gestational age</th>
<th>Birthweight</th>
<th>Date &amp; Time of birth</th>
<th>Place of birth</th>
</tr>
</thead>
</table>

Type of death:

- Fetal
- Antepartum death
- Unknown
- Yes
- No

Neonatal (NND):

- Yes
- No

Death Certificate completed:

- Yes
- No

Treatment or condition likely to cause hazard at autopsy

- Hepatitis B Pos
- Tuberculosis
- HIV (Aids Virus)
- Other

Clinical summary (including details to be clarified at autopsy)

Provisional clinical diagnosis (to be completed by physician requesting autopsy)

1

2

3

4

Please list doctors to receive report

<table>
<thead>
<tr>
<th>Name</th>
<th>Address</th>
</tr>
</thead>
</table>

Consultant

Clinical contact

(Please print)

Signature (person completing this form)

Date / / 

Print name