HOW TO INVESTIGATE A PERINATAL DEATH

BOOKLET
Version 7b (January 2014)

Adapted from the
NATIONAL WOMEN’S PERINATAL DEATH INVESTIGATIONS

B O O K L E T

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It is recommended that the following forms are put with this booklet to form a “pack” for use when a baby dies:
Transfer of Charge of Body
Authorisation for Release of Body
Post Mortem Consent Form
Clinical and Specimen Photography
Death Notice Form
Medical Certificate of Causes of Fetal and Neonatal Death
Perinatal Death Report
Labour and Birth Summary
Newborn record
Options for return or disposal of the Placenta
Infection Form
Follow up appointment
Notification of Death for Registration
Registration of Birth
PMMRC – Rapid Reporting Form for Mother
PMMRC – Rapid Reporting Form for Baby
## Perinatal Death Investigations Algorithm

### Core Investigations of All Stillbirths

### AT Diagnosis of Fetal Death

<table>
<thead>
<tr>
<th>Maternal History</th>
<th>Maternal Blood Tests *</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Take full Maternal History</td>
<td>Full Blood Examination &amp; Platelets</td>
</tr>
<tr>
<td>Ultrasound Scan</td>
<td></td>
</tr>
<tr>
<td>Fetal abnormalities</td>
<td>Group and Anti-body Screen (if not already done)</td>
</tr>
<tr>
<td>Amniotic Fluid Volume</td>
<td>Kleihauer</td>
</tr>
<tr>
<td>Amniocentesis</td>
<td></td>
</tr>
<tr>
<td>Microbiological cultures</td>
<td>HbA1c</td>
</tr>
<tr>
<td>Chromosomal analysis</td>
<td>Rubella &amp; syphilis serology (if not already done)</td>
</tr>
<tr>
<td>Swabs</td>
<td></td>
</tr>
<tr>
<td>Low vaginal/peri-anal culture</td>
<td></td>
</tr>
</tbody>
</table>

### Thrombophilia tests

- * Anticardiolipin antibodies
- * Lupus anticoagulant

**Blood tubes:** 1 purple top, 1 gold top, 1 pink top and two blue tops.

### Following Birth

<table>
<thead>
<tr>
<th>Baby</th>
<th>Cord blood (not possible for most stillbirths)</th>
<th>Placenta &amp; Cord (see page 5 for details)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>External examination</td>
<td>Macroscopic examination of placenta and cord</td>
</tr>
<tr>
<td></td>
<td>Photographs</td>
<td>Microbiological Cultures (swab between chorion and amnion)</td>
</tr>
<tr>
<td></td>
<td>Surface Swabs</td>
<td>Cord and placental section for chromosome analysis *</td>
</tr>
<tr>
<td></td>
<td>XRAY/Ultrasound</td>
<td>Placental histopathology</td>
</tr>
<tr>
<td></td>
<td>Post-mortem examination Y/N</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

- **Enter Y/N in each box.**
- **Amniocentesis** will be offered when there is a suspicion of chromosomal abnormality or if infection may be the cause of demise. If karyotyping is considered necessary successful culture is more likely from amniotic fluid than from later placental/cord specimens. A specimen for culture will identify infection as a cause in some cases whereas swabs after birth can be contaminated.
- **All blood investigations** will be necessary in most cases e.g. extreme preterm delivery, unexplained still birth, suspected cord accident.
- In pregnancies that are terminated or where the baby dies with major congenital abnormalities a full range of blood tests and swabs are **not necessary**, however all baby investigations are required.
- **Chromosome analysis (cord and placental section) should be done in:**
  - unexplained stillbirths,
  - women with recurrent miscarriages or IVF pregnancies,
  - fetal abnormalities (no previous karyotype),
  - previous abnormal child in family,
  - preterm births after discussion with MFM specialist/obstetrician
  - other cases as requested by obstetrician, paediatrician, geneticist, MFM specialist
Placental examination and Preparation for pathology

Please complete details as required

For definitions of above terms see users guide.
If any abnormalities are detected please photograph!

Maternal Sticker

Placental weight…………..g
Umbilical Cord
Placental Description: tick all that apply
Normal appearance
Retroplacental clot
Gritty/calcified
Vasapraevia
Offensive odour
Sucenturate lobe
Extrachorial placenta
Bilobate place
Placenta accreta
Not examined

Umbilical Cord
Description: tick all that apply
Normal appearance
True knot/loose
True knot/tight
Cord around neck/loose
Cord around neck/tight
Cord around body/limbs/loose
Cord around body/limbs/tight
Torsion or spring like cord
Marginal/velamentous insertion
Thin cord
Thick cord
Meconium stained
Tear in cord
2 vessel cord
Not examined

Step 2  Clinical examination of the placenta, membranes and cord using sterile gloves

Step 3  Placenta and Cord Section for chromosomal analysis

- Cut a 1 cm section of cord and a 1cm cube of placenta with a sterile blade and forceps.
- The section of placenta needs to include the fetal surface
- Place each specimen into a separate container with cytogenetic solution, sealed and labelled with maternal name, NHI, date and time of collection and twin number if appropriate.
- Send to cytogenetics.

If consent is given, send Placenta, Membrane and Cord to Pathology fresh and unfixed for histopathological examination with clinical details on the form, if baby is not having a post mortem. (Please check for local laboratory preferences)
CLINICAL PHOTOGRAPHS

Instructions on taking clinical photographs

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 NHI 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. It may be best to place the baby on the floor or other low surface, 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
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
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 NHI number.
## 1.4 CLINICAL EXAMINATION OF BABY CHECKLIST

- We recommend that a detailed examination is performed by a senior member of the paediatric team or a geneticist.

### Baby measurements

<table>
<thead>
<tr>
<th>Crown – heel (stretched)</th>
<th>Head circumference</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

If Stillbirth

- 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

### SKIN

- Pale
- Plethoric

If abnormal describe:

### HEAD AND FACE

- Relatively normal
- Collapsed
- Hydrocephalic
- Abnormal shape

If abnormally shaped, describe:

### EYES

- Normal
- Prominent
- Sunken
- Far apart
- Close together

- Upslanting
- Downslanting
- Absent

- Globes normal
- Eyes very small
- Very large
- Lens opacity
- Corneal opacity
- Eyelids fused

If other, describe:

### NOSE

- Normal
- Abnormally small
- Asymmetric
- Abnormally large

### NOSTRILS

- Apparently patent
- Obstructed
- Single nostril

If other, describe:

### MOUTH

- Normal size
- Large
- Small

### UPPER LIP

- Intact
- Cleft

If cleft, location:

- Left
- Right
- Bilateral
- Midline

### PALATE

- Intact
- Cleft

### MANDIBLE

- Normal
- Large
- Small

If other, describe:

### EARS

- Normal
- Preauricular tags
- Lowset
- Preauricular pits
- Other
- Posteriorly rotated

If other, describe:

### NECK

- Normal
- Short
- Other

If other, describe:

### CHEST SHAPE

- Normal
- Abnormal:

If abnormal describe:

### ABDOMEN

- Normal
- Flattened
- Distended
- Hemia

- Gastrochisis
- Omphalocele

If abnormal describe:

### BACK

- Normal
- Spina bifida

If Spina bifida, describe:

### GENITALIA

- Anus

If other, describe:

### FEMALE

- Male
- Female
- Ambiguous

### GENITALIA

- Penis
  - Normal
  - Very small
  - Hypospadias
  - Abnormal

- Scrotum
  - Normal
  - Asymmetric
  - Missing parts

- Testes
  - Descended
  - Undescended

- Urethral opening
- Present
- Absent/unidentifiable

- Vaginal introitus
- Present
- Absent/unidentifiable

- Clitoris
  - Present
  - Unidentifiable
  - Enlarged

- Ambiguous sex

### HANDS

- Appearance:

- Length

- Number present:

- If 4 + 4, describe:

- If other, describe:

### FEET

- Appearance

- Toe nails

- Toes

- Form

- Length

- Number present:

- If other, describe:

- If not describe:

### Revised gestational age

- Based on

- Examine by: (Print name)
- Date:
- Summary of key findings:

Baby Sticker

<table>
<thead>
<tr>
<th>Date</th>
<th>Time of Birth:</th>
<th>Time of Examination:</th>
</tr>
</thead>
<tbody>
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Baby number: (e.g. Twin 1) move back to original position at top of page