MATERNITY SERVICES

TITLE: Management of Intrauterine Death and Stillbirth

SCOPE: All midwives, nurses, obstetricians and paediatricians involved in the care and management of women and their family/whanau who experience an intrauterine death/stillbirth.

AUTHOR: Midwife Educator & Quality Coordinator

PURPOSE: To meet a high standard of care for all women and whanau/family experiencing an intrauterine death or stillbirth.

DEFINITIONS

Important definitions in terms of the Birth, Death and Marriages Registration Act 1995 are as follows:

``Birth'' *includes a still-birth; but does not include a miscarriage.*

``Dead fetus'' *means a fetus that, whether or not the umbilical cord had been severed or the placenta had detached, at no time after issuing completely from its mother breathed or showed any other sign of life (such as beating of the heart, pulsation of the umbilical cord, or definite movement of the voluntary muscles).*

``Delivery'' *means a birth or a still-birth.*

``Miscarriage'' *means the issue from its mother, before 20+0 weeks of pregnancy, of a dead fetus weighing less than 400g.*

``Still-born child'' *means a dead fetus that:*

a/ Weighed 400g or more when it issued from its mother; or

b/ Issued from its mother after 20+0 weeks of pregnancy.

``Neonatal death'' *refers to a live born infant irrespective of gestational age, dying within 28 days of birth.*

"Intrauterine fetal death (IUFD)" *means the death of a fetus in utero after 20+0 weeks of pregnancy or weighing at least 400gr at the time of birth.*

Important definitions in terms of the Perinatal and Maternal Mortality Review Committee (PMMRC) are as follows:

Perinatal Death – defined as "the death of any fetus or baby from 20+0 weeks gestation (or over 400grams if gestation is not known) until less than 7 days of age". All perinatal deaths are reportable to the PMMRC.

Perinatal related mortality – includes deaths of any fetus or baby born from 20+0/40 (or weighing over 400grams at the time of birth if gestation is not known) and up to 28 days of age.

Contents

GUIDELINE

The checklist at Appendix 1 is to be completed for each IUD/stillbirth and placed in the woman's notes.

Referral of mother:

According to the "Guidelines for Consultation with Obstetric & Related Medical Services" (Referral Guidelines) this is a Consultation referral condition in which the Lead Maternity Carer (LMC) must recommend to the woman that a consultation with a specialist is warranted. The decision regarding ongoing clinical roles/responsibilities will involve a three way discussion between the specialist, the LMC and the woman concerned.

Management of labour

Management of labour is to be planned by the consultant obstetrician together with the core midwife, LMC, the mother and her whanau/family.

- Confirmation of intrauterine death to be made by ultrasound scan by O&G/qualified Ultrasonographer.
- The consultant obstetrician and midwife/LMC will document the plan of care for the Induction of Labour (IOL) and birth in the clinical notes to include:

Topics to be discussed	**Points to cover**
Mode of delivery	• Vaginal birth • Caesarean section
Options for IOL	• Prostaglandins • Cervidil • Mifepristone and/or Misoprostol (with caution and consent – unlicensed medication in NZ) • ARM (depending upon gestation) • Syntocinon infusion
Timing of induction of labour	• When do they wish the IOL to commence? • Who do they wish to be present? • If parents wish to birth at home – please discuss this with the obstetrician
Pain relief options	• TENS • Pool • Continuous support from a known caregiver • Massage • Nitrous oxide • Morphine • Epidural

Management of the birth	• Lighting / noise
	• Arrangements once baby is birthed regarding:
	  ○ Parents seeing their baby (to be encouraged)
	  ○ Parents holding their baby
	• Third stage management – active management recommended
	• Cutting of the cord
	• Washing baby
	• Dressing baby
	• Photographs of baby
	• Religious support if desired by woman or whanau

For all stillbirths

1. At diagnosis of fetal death
   - Comprehensive maternal and family history
   - If possible an ultrasound scan to detect possible fetal abnormalities and to assess amniotic fluid volume (this is especially helpful if a post-mortem is not consented)

2. Process at time of labour/induction
   - If induction of labour is necessary, family made aware of process and that it can take some time.
   - Family counselled re post-birth processes and support available.
   - Religious support to be organised if desired from a denomination chosen by family or by hospital chaplain.
   - Give information pack for Stillbirth and Neonatal Death Support (SANDS) group in Gisborne. Contact details can be found in Maternity. Have a Sands "transportation of a Deceased Baby" pamphlet available.
   - During labour and birth the mother may wish to have her partner and other support people present. Birthing suite 5 has its own en-suite, allowing more privacy.
   - At an appropriate time the issue of post-mortem should be discussed. The family should be made aware that the best chance of finding out what caused the IUFD is usually a post-mortem (placenta and/or placental biopsy for micro-array chromosome analysis (see the guideline: Perinatal post-mortem and placental histopathology for procedure and important forms).
   - The family may take a stillborn baby home with them for burial as long as it is to be buried in consecrated ground. If they want a funeral director to be involved, contact is to be made with Evans Funeral Services. The family will need to contact the Funeral Services to identify their option, such as burial or cremation, and make arrangements. The funeral home does not charge for a funeral, however, they do ask that contact be made within office hours and callouts will be for exceptional circumstances only. If a post-mortem is consented to, call the funeral service to arrange transporting the baby (and placenta) to Auckland as soon as possible. If the placenta only is for examination the funeral home does not need to be contacted.
   - Practical issues: what baby may look like at different gestations, colour and state of skin, appearance in certain conditions.

3. Maternal laboratory testing at time of labour/induction

   - Blood tests. Go to the lab –ordering/profiles/IUFD. This will order CBC and diff, Kleihauer, HbA1c, Blood group and antibody screen, cardiolipin antibodies, lupus anticoagulant syphilis serology and placental culture.
   - Consider ordering additional tests if the following is suspected:
   - Pre-eclampsia – PET labs
   - Cholestasis – bile salts
   - Maternal infection – blood cultures, urine culture, vaginal and cervical swabs.
   - SGA or placental disease – maternal thrombophilia screen (Protein S and Protein C at 6 weeks postpartum).
   - Fetal intracranial haemorrhage – maternal alloimmune antiplatelet antibodies.

E-Lab order will stipulate amount and colour of blood tubes needed. Call ext. 8177 for advice if needed.

4. At the birth

These women are at greater risk of having retained placenta: active management of the third stage is recommended.

5. Following the birth

- Cultural/spiritual support
- Blessing/naming ceremony
- Parents should be encouraged to spend as much time as they want with their baby. The parents may request that the baby be washed – if possible bathe and dress the baby in the presence of the woman/whanau. A gentle sponge may or may not be more appropriate depending on the condition of the baby's skin. The parents may wish to dress the baby in something of their own or should be offered the option of choosing something from the SANDS baskets of differing sizes available in Maternity to lay the baby in. The baby can go to the Funeral Director in the basket (the basket does not need to be returned).
- Creating memories: lock of hair, memory box, hand and foot prints, photographs, first set of clothes/blanket. Hand and footprints pack available in Maternity. Also a camera available in NNU for parents to take photos and have them printed immediately. Alternatively the midwife may offer to take photographs.
- Practical issues: Keeping baby cool/cold if for prolonged periods. Have a warm blanket when people want to hold baby.
- Have information available for bereaved parents, families and whanau (books, DVDs, groups, agencies).

6. Fetal investigations

- External examination of the baby (by a paediatrician where possible in daylight hours with parental consent) see appendix 2;
- Measurements of baby: crown/heel, head circumference, weight;
- Clinical photographs as appropriate, if post-mortem not consented to – these are in addition to photographs for the parents and should only be taken with informed and documented consent;
- An ID band should be attached to the baby's ankle if possible, with the following details: name of mother, mother's NHI number, date and time of birth, sex and weight of infant;
- Ear and throat swabs for aerobic and anaerobic bacterial culture;
- Cord blood to be taken as soon as possible following the birth for infection screen. CBC with differential, nucleated red cell count, group and antibody screen and chromosomal analysis.

7. Placental Investigations.

- Clinical examination (See appendix 4)
- Microbiology culture (take a swab from placental surface between amnion and chorion)
- The placenta should accompany the baby for post-mortem examination if this is consented to.
- Ask consent to send placental biopsy for chromosome analysis (microarray). This should be recommended for: unexplained stillbirths, women with recurrent miscarriages or IVF pregnancies, fetal abnormalities (no previous karyotype), previous abnormal child in family, preterm births (after discussion with obstetrician), other cases as requested by obstetrician or paediatrician.
- If parents agree to chromosomal analysis, full-thickness biopsy of placenta, 1cm x 1cm should be placed in pink transport medium. If using e-Lab ordering, access additional tests, type in microarray. Send to our lab, they will direct the specimen appropriately to Auckland.

Ensure that pink transport medium is available in refrigerator on Maternity for transport should placenta biopsy be agreed to. Ask the lab for RPMI tissue medium for transport.

- 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 other baby investigations are required.

Post-mortem examination

A post-mortem examination full or partial **(see separate guideline)** should be recommended to parents following a stillbirth by and at the request of the consultant obstetrician, with informed consent from the parents documented in the clinical notes. Please give information leaflet *'Panui for post-mortem examination'* and the *'Perinatal and Maternal Mortality Review Committee'* to the woman and her partner/family.

- The consultant may wish to contact the perinatal pathologist to discuss any preparatory work that may be necessary with the following contact details: Dept of Forensic Pathology, Level 1 Lab Plus, Auckland Hospital. Phone 021 667 595.
- It is estimated that the post-mortem report should be back within two to three months.
- The placenta should accompany the baby for a post-mortem examination if this is consented to.
- If consent for only a partial post-mortem examination is obtained (placenta only) the placenta should be sent to TLAB for detailed macroscopic examination of placenta and cord and placental histology. This should be clearly documented on the histology form.

[Refer to organisational policy on Whenua/Placental management (of disposal) re consent for histology and Perinatal post-mortem and Placental histopathology guideline].

Ensure that all appropriate laboratory forms are completed. Ensure that information is included notifying the laboratory where to return the baby and placenta. Ensure that pink transport medium is available in refrigerator on Maternity for transport should a placental biopsy be necessary.

Note that a fetus under 20+0 weeks gestation is regarded as a specimen for histology, a fetus ≥ 20+0 weeks gestation would be for post-mortem examination.

If post mortem (either full or partial placenta only) is declined by parents, or not requested by the obstetrician, obtain the following**:**

- Examination by an experienced clinician
- Consider a babygram (full body x-ray):
  The radiologist can be contacted between 08:30 – 16:30hrs. Out of these hours the baby must not be wrapped. Position the baby flat with its limbs away from the body. This is especially important with bone deformities requiring assessment for genetic counselling in future pregnancies.
  Try to keep the baby at room temperature, unless not appropriate, then leave in the mortuary.
- Ultrasound if not performed prior to the birth and head and/or renal tract abnormality or trauma suspected.
- An MRI if available may be considered.

- Clinical photographs should be encouraged where possible for later review. These should be clearly labelled and filed in the medical record.

- If no consent obtained to send placenta for histology, take a swab from between amnion and chorion and send for culture.
- Sample for cytogenetics –If post-mortem examination of the baby and/or placenta is declined suggest a placental biopsy for chromosomal analysis. Consent must be obtained for this. (see *Perinatal post-mortem & placental histopathology* guideline).

If cause of death not known:

- Discuss implications with obstetric specialist and consider requirements to notify police/coroner. The specialist is to discuss the case with these people prior to alerting the families concerned. **Note that consent for post-mortem is not required if a post-mortem is required by the coroner.**

Cases to be discussed with the Coroners include:

- Babies dead on arrival at hospital or within 24 hours of admission;
- Unattended stillbirth;
- Death within 24 hours of an operation, anesthetic or invasive procedure,;
- Deaths as a result of an accident;
- Unnatural, criminal or suspicious deaths, e.g. neglect, abuse poisoning;
- Deaths caused by drugs, prescribed or not;
- Deaths as a result of a medical mishap;
- Deaths in which the doctor is uncertain of the cause of death, and unable to confidently complete the death certificate;
- Unexpected death on the ward.
- *See post-mortem guideline.*

Options open to family/whanau:

- Baby may be placed in stillborn area at cemetery.
- Baby may be placed in plot with past family member.
- Baby may be placed in Children's lawn at Taruheru cemetery.
- According to the Burial/Cremation Act 1964, the body must be buried in consecrated ground. If relatives wish assistance from the Funeral Director (without obligation of a funeral) a casket may be obtpsained from funeral directors. This is not essential by law. Parents wishing to bury their baby at home prior to 20 weeks cannot involve the funeral directors.

Creating Memories

- Hand and foot prints. Print pad available in Maternity, according to parent's wishes.
- Photographs. There is a camera available in NNU for the parents to take photos and have them available immediately, and they should be encouraged to do so. Alternatively the midwife could offer to take photos.
- Complete and offer baby's ID band and cot card if appropriate.
- Suggest lock of hair if available.
- Memory box.
- Spiritual or cultural support.
- Blessing or naming ceremony.
- Visiting by family.

Documentation:

Medical Certificate – The midwife/LMC/obstetrician must complete a Medical certificate of cause of fetal death & neonatal deaths (HP4721 stored at the back of reception).

The form has two copies. The white copy goes to admissions to be collected by the funeral director; the yellow copy remains or is filed in the mother's clinical notes.

- Enter information in Delivery Register in maternity, and in MCIS (not baby's details).

- Infants not born alive **are allocated a NHI number**. Once weighed admit the baby through admissions who will notify NZHIS of the issue of the NHI which can then be placed on any specimens from the baby.
- Midwife/LMC to ensure that labour, birth and infant page are completed in the maternity information system. Also **ensure that the '*mothers discharge summary*' states that the baby was stillborn.**

COMPLETE DISCHARGE CHECKLIST (APPENDIX 1) FOR INTRAUTERINE DEATH OR STILLBIRTH AND PLACE IN THE WOMAN'S NOTES.

Follow up and discharge:

Discharge can be made on the same day, should the woman and her family wish, depending upon the clinical condition of the woman.

Discussion should be held with the consultant obstetrician and paediatrician regarding any follow appointments in the postnatal period. The appointment should be scheduled for a Gynaecologic clinic and should be arranged prior to discharge taking into account the length of time for the return of post-mortem results.

APPENDICES

1. Checklist for intrauterine death and stillbirth *(photocopy and put in mums notes)*
2. Clinical examination of baby checklist
3. Instructions on taking clinical photographs
4. Placental examination and preparation for pathology
5. Induction of labour for second and third trimester foetal demise
6. Patient information sheet: Misoprostol
7. Consent for Misoprostol

Authorised By (Head of Department Obstetrics)

Authorised By (Clinical Care Manager Woman, Child & Youth)

Date of Approval: April 2019

Next Review Date: April 2022

ASSOCIATED HAURORA TAIRAWHITI DOCUMENTS:

- Consent for use of Misoprostol
- Patient information sheet Misoprostol
- Postpartum Haemorrhage guideline
- Retained placenta guideline
- Syntocinon IVI for induction or augmentation of labour guideline
- The Management of Intrauterine Death and Stillbirth guideline
- Organisational policy: Whenua/Placental management (of disposal)
- Organisational Policy Care of Human Tissue (including care of deceased)
- Woman, Child and Youth Maternity guideline - Perinatal post mortem & placental histopathology

ASSOCIATED DOCUMENTS

- Information about the Perinatal and Maternal Mortality Review Committee (2007)
- PMMRC – Panui for post mortem examination leaflet (2009)
- Misoprostol Use and Administration of

Acknowledgement goes to National Women's Health for sharing their Termination of Pregnancy – 2nd & 3rd Trimester guideline (2011)

REFERENCES:

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- Perinatal Society of Australia and New Zealand perinatal Mortality Audit Guideline: Section 2: Institutional Perinatal Mortality Audit: Appendix 4 (accessed 31st October 2013) via http://www.stillbirthalliance.org.au/doc/Section_2_Version_2.2_April_2009.pdf
- Perinatal Society of Australia and New Zealand Clinical Practice Guideline for Care Around Stillbirth and Neonatal Death, Third Edition, March 2018
- Ninth Annual report of the Perinatal and Maternal Mortality review Committee: Reporting Mortality 2013 (June 2015) Health Quality & Safety Commission, Wellington
- ACOG Practice Bulletin No. 102 – Management of Stillbirth (2009)
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- Ho PC, Ngai SW, Liu KL, Wong CG, Lee SW. Vaginal Misoprostol compared with oral Misoprostol in termination of second-trimester pregnancy. Obstet *& Gynecol.* 1997;90(5):735-8 rd
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- National Women's Health Guideline: Termination of Pregnancy – 2nd and 3rd trimester (2011)
- Review of procedures in RCOG Evidence-Based Guidelines No7. *The Care of Women requesting Induced Abortion.* Published March 2000. Ashok PW, Templeton, A. Non-

surgical mid trimester termination of a pregnancy: a review of 500 consecutive cases. *Br J Obstet Gynaecol.* 1999; 106(7):706-1 0.

- Schuurmans, N et all (2000), Prevention and Management of Postpartum Haemorrhage, Journal of Society Obstetrica Gynaecologica, Canada Vol 22 (4) p271-281.
- UpToDate Diagnosis and Management of Stillbirth (2013)
- Webster D, Penney GC, Templeton A. A comparison of 600 and 200mg Mifepristone prior to second trimester abortion with the prostagiandin Misoprostol. *Br J Obstet Gynaecol* 1996; 103:223-7.
- Webster D, Templeton A. Use of Mifepristone prior to second trimester abortion with prostaglandin drugs. Contemp Rev Obstet Gynaecol 1996;8:223-7.
- Wong KS, Ngai CS, Yeo EL, Tang LC, Ho PC. A comparison of two regimes of intravaginal Misoprostol for termination of second trimester pregnancy: A randomised comparative trial. *Human Reproduction.* 2000;15(3):709-12.

APPENDICES

APPENDIX 1

CHECKLIST FOR INTRAUTERINE DEATH or STILLBIRTH

(please print out and use for each stillbirth and file in records)

PRE-ADMISSION:

Action	Completed	Date	Signature
Prepare room – BS 5 most suitable as toilet facilities not shared			
Notes in order and relevant – obtain medical records from main file			
SANDS booklets given prior to admission if possible (kept in store room in ward 1 behind PN room 4)			
O & G notified of pending admission			

ON ADMISSION:

Action	Completed	Date	Signature
Orientation to the facilities			
Begin birth register (check current address and phone number)			
Notify admissions and obtain previous records			
O & G notified (if not aware)			
LMC notified (if not with woman)			
Availability of whanau room for extended family if required (security pager 95)			
ID/allergy bracelet in place			
Admission assessment and vital signs taken and recorded			
Relevant clinical procedures and blood serology as indicated by O & G and consented to by woman			
Follow procedures in the Perinatal Post-mortems and Placental Histopathology guideline if this has been discussed & consent obtained			
Arrangements for placenta confirmed (histopathology, biopsy for microarray, return to woman if requested as per guideline)			
SANDS booklets available/offered if not already given			
Explanation re care, procedures, pain relief, moment of birth (woman's wishes), encouragement to hold baby, etc.			
Availability of hospital chaplain if desired or own church minister			
Cultural support required identified as needed			

AT SOME TIME:

Action	Completed	Date	Signature
SANDS box (depending on gestation)			
Availability of baby clothing – SANDS boxes made up in maternity store room.			

AFTER THE BIRTH:

Action	Completed	Date	Signature
Take cord blood for CBC differential, nucleated red cell count, group and antibody screen, Guthrie and chromosomal analysis.			
Care of baby: 1. Weight 2. Admit and obtain NHI from admissions in ED (please confirm they are aware this is IUFD/ stillbirth) so relevant notification can be entered 3. Swabs – ear and throat 4. Wash 5. Measure crown/heel, head circumference 6. Dress/wrap as family requests 7. Paediatrician/obstetrician/midwife examination if consented by parents			
Routine PN observations and checks of mother			
Documentation of birth in clinical notes			
Anti-D given as required **within 72 hours**			
Notification as appropriate: 1. LMC 2. Minister 3. Maori Health Liaison officer 4. GP (phone if possible) 5. Well Child to avoid future contact & immunisation appointments 6. **Check & cancel any ANC appts**			
Action	**Completed**	**Date**	**Signature**
Registration: (only if ≥ 20+0 weeks of gestation and/or weighed ≥ 400g). 1. Parents need to Register the Birth please give them the form if applicable 2. Medical certificate of cause of fetal death & neonatal deaths (HP4721 stored at the back of reception) required by undertaker 1. Complete birth register			
Contact Funeral Services in conjunction with family if registration as above (06 867 9150)			
Blessing of room after discharge by hospital chaplain, ***whilst all equipment and linen still in the room*** (pager 036)			
Complete rapid reporting forms for mother & baby either paper copy or on line, within 48 hours of the baby's death (where possible), (www.otago.ac.nz/pmmrc) **Each staff member to create their own user account using the TDH email address.** **Details to PMMRC local coordinator if LMC/Core staff unable to complete**			

FOLLOW UP:

Action	Completed	Date	Signature
Postnatal care plan by LMC completed, including care of breasts re suppression of lactation			
Grief support need and availability identified – SANDS support group information given			
Discuss with O & G when follow up appointment (to be seen at gynaecological not antenatal clinic) is required. Inform woman this appointment will be sent to her if not given prior to discharge. Request this appointment.			
Paediatric appointment made if appropriate			
Debrief for staff involved			

APPENDIX 2

Clinical examination of baby

APPENDIX D: CLINICAL EXAMINATION OF BABY CHECKLIST

Please tick appropriate box and complete details as required

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

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

If Stillbirth
Estimated date of IUFD: ...../...../.....
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 ☐

Singleton ☐ Multiple ☐ Baby number ..... (e.g. Twin 1)

HEAD AND FACE
Head
Relatively normal ☐ Collapsed ☐
Anencephalic ☐ Hydrocephalic ☐
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 ☐

Nostrils
Apparently patent ☐ Obstructed ☐
Single nostril ☐ Other ☐
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 ☐ 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 ☐ Hernia ☐
Omphalocele ☐ Gastroschisis ☐

BACK
Normal ☐ Spina bifida ☐
If Spina bifida, describe: .....
Scoliosis ☐ Kyphosis ☐
Other ☐
If other, describe: .....

GENITALIA
Anus
Normal ☐ Imperforate ☐ Other ☐
If other, describe: .....

Gender
Male ☐ Female ☐ Ambiguous ☐

Male
Penis
Normal ☐ Very small ☐
Hypospadias ☐ Chordee ☐
Hypospadias, level of opening .....
Scrotum
Normal ☐☐ Abnormal ☐
If abnormal, describe .....
Testes
Descended ☐ Undescended ☐
Other ☐
If other, describe: .....

Female
Urethral opening
Present ☐ Absent/unidentifiable ☐
Vaginal introitus
Present ☐ Absent/unidentifiable ☐
Clitoris
Present ☐ Unidentifiable ☐
Enlarged ☐ Other ☐
If other, describe: .....

Ambiguous sex .....

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

HANDS
Length
Appearance: Normal ☐ Abnormal ☐
If abnormal, 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 .....

FEET
Appearance Normal ☐ Abnormal ☐
If abnormal, 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: .....

Perinatal Society of Australia and New Zealand Clinical Practice Guideline for Care Around Stillbirth and Neonatal Death, Third Edition, March 2018

APPENDIX 3

Instructions on taking clinical photographs

APPENDIX H
INSTRUCTIONS ON TAKING CLINICAL PHOTOGRAPHS

Clinical photographs should be taken by an expert trained in perinatal pathology or medical imaging, at the time of postmortem. Occasionally situations may arise where by clinical staff (doctor, midwife, nurse) are required to take clinical photographs. Photographs may be critical to making a diagnosis in a non-examined baby. Reasons for staff taking these photographs may include: family not wanting to be separated from the baby, immediate burial is required thus precluding postmortem examination, or prior to deterioration if there is a delay in postmortem being conducted.

Purpose

High quality medical photographs are necessary as part of the clinical investigation pathway, and ideally digital photographs should be taken. These are most often taken in Perinatal Pathology by trained staff, and/or Medical Imaging may be the appropriate unit in some organisations. There must be a secure process for storage of these images (see local unit policy).

These photographs are in addition to bereavement/social photographs, which are commonly taken by midwives in attendance in the Labour and Birth Suite. There are a number of volunteer organisations who will provide professional bereavement photographs to bereaved parents, often at no charge, and all institutions should be aware of local availability of such a service. There must be a process in place for providing these photographs to parents (see local unit policy).

Consent

Parental consent is necessary prior to taking clinical photographs (see local unit policy on 'Consent for Taking Clinical Photographs' or similar). If there is no consent policy or consent proforma, ensure that the consent process is documented in the maternal medical record. A generic 'consent' form may be considered if there is no specific consent form available. Documentation should include: information provided on benefit/need for clinical photographs, who will be using the photographs, how photographs are stored, and the purposes for which the photographs can be used, options include for visual examination, for presentation, for publication etc.

Bereavement photographs may require verbal agreement that they are taken and provided (see local unit policy).

Identification

The baby must be identified in the photographs. Write the baby's medical record number, if available, depending on status at birth, place of birth and local unit policy. If there is no individual medical record number, write the maternal medical record number with the babies date and time of birth. This identifying information should be written on the paper tape measure for identification, some local policy will allow a baby leg/arm band to be used as identification.

Stillborn babies often do not have a medical record number, then use the mother's medical record number and the baby's date and time of birth to identify the body.

If photographs are being used for publication or presentation, it is important that no identifying features are seen.

1

Perinatal Society of Australia and New Zealand Clinical Practice Guideline for Care Around Stillbirth and Neonatal Death, Third Edition, March 2018

Setting

Photographs should be taken in a private area away from the parents, with sensitivity, however. Some parents may request the photographs be taken in their presence.

The setting should comply with Occupations Safety and Health regulations, such as Infection Control Guidelines, Work Place design, etc.

Scale

Place a paper tape measure next to the baby (a plastic ruler will create glare) for scale. Ensure zero is aligned at the base of the foot or crown of the head; and extend lengthways. You can use sticky tape to ensure the tape is straight (rigid); and measure should be on the bottom of the frame or the left.

Technique

A hard surface with a blue background is best when taking clinical photos.

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

Magnification

Use a digital camera to take the photographs, do not use the zoom to get a close up, however, do make sure you move the camera closer to the body. This will produce better quality photographs that may be enlarged for presentation.

Baby

The baby should be naked for all the photographs.

Position

- Anterior Posterior (AP) view – whole body frontal including limbs
- Posterior Anterior (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.

General Comments

Additionally, staff should

- Refer to local unit policy/guidelines
- Document processes and actions
- Ensure a documentation trail for storage.

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

To stabilise:

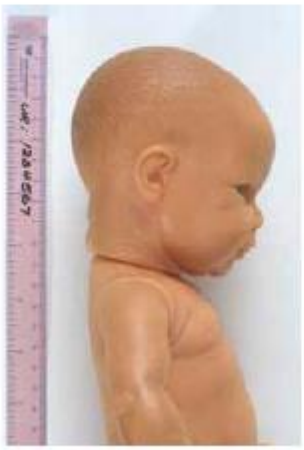
- Pull underneath arm forwards
- Legs in 'running position'
- Top arm and leg will fall forward which will aid stability
- Keep the tape measure to the left

Frontal view of the face

- Ensure tape measure is in the frame.

Right lateral views of the face

Left lateral views of the face



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

Note: If there are any specific abnormalities these should be photographed individually, with a scale in view and the photograph labelled with the baby's identification.

APPENDIX 4

PLACENTAL EXAMINATION AND PREPARATION FOR PATHOLOGY

Please complete details as required

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

Singleton Multiple Baby number……(e.g. Twin 1)

Step 1 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**……..cm **Cord knots (Circle)** Yes / No
Placental dimensions ……cm **Placental weight** ……gms **Placental odour**…….
Maternal surface (*Circle all that apply*) Intact / Incomplete / Gritty / Fatty Infarcts / Retroplacental Clot / Succenturiate / Circumvallate / Bipartite

Step 2 Tissue sampling for chromosomal analysis/cytogenetics

Prior to sending the placenta to pathology, a sample of solid tissue (placenta, cord and skin are all suitable for analysis) should be collected using aseptic technique as outlined below. Where possible please send two or more types of tissue.

- Specimens should be as fresh as possible and kept at ambient temperature.
- Collect a 1cm3 sample using a sterile surgical knife and dissecting forceps.
- Place in a designated cytogenetics bottle with pink medium (stored in placenta fridge in maternity) or in a sterile container with sterile saline solution. Then seal the bottle and label with maternal name, NHI number, date and time of collection.

Step 3 Request correct test using Lab e-Ordering system

Log into HealthViews and identify the correct patient, then select the “additional” tab and in the search bar type “microarray”; chose the “Cytogenetics Spec for Send awa(y)” and print the specimen label (please note this can only be done using one of the computers with a lab label printer attached). Send the cytogenetics sample in the pink medium together with the fresh and unfixed placenta, membranes and cord to the T-lab for forwarding to the perinatal pathologist for histopathological examination.

The consultant may wish to contact the perinatal pathologist to discuss any preparatory work that may be necessary with the following contact details: Dept of Forensic Pathology, Level 1 Lab Plus, Auckland Hospital. Phone 021 667 595.

APPENDIX 5

TITLE:

Induction of labour for second and third trimester fetal demise

SCOPE: All midwives and obstetricians working in Maternity

AUTHOR: Midwife Educator & Quality Coordinator and Consultant Obstetrician

PURPOSE: To provide the indications, contraindications, dose, route, and cautions in the use of Mifepristone, Misoprostol, and Syntocinon for the induction of labour following intrauterine death in the second and third trimester.

GUIDELINE:

MIFEPRISTONE

Indications Mifepristone is a synthetic steroid with antiprogestational action that antagonises the endometrial and myometrial effects of progesterone. It sensitises the myometrium to the contraction-inducing action of prostaglandin, making it a useful tool in induction with misoprostol (a prostaglandin) for second and third trimester deaths. Individualised treatment plans are required based on gestational age and obstetrical history. Mifepristone and Misoprostol may be prescribed only after consultation with an Obstetrician

Dose 200 mg stat oral dose – individualized misoprostol dosing to follow 36-48 hours later

Contra-indications

- Asthma (severe or uncontrolled)
- Adrenal suppression (may require corticosteroids)
- Known hypersensitivity to prostaglandin
- History of haemorrhagic disorder (or receiving anticoagulants)
- Significant anaemia
- Porphyrias
- Long-term steroid therapy or current use
- Myocardial infarction
- Chronic renal failure
- Any doubt about the gestation of location of the pregnancy, e.g. ectopic
- Inadequate access to emergency services

Caution as safety and efficacy has not been established

- Smokers over 35 years (increased risk of cardiovascular events)
- IUCD in situ
- Cardiovascular disease
- Coagulation disorders
- Uterine scars
- Insulin-dependent diabetics (may have altered insulin requirements)
- Avoid Aspirin and NSAIDS for analgesia due to increased risk of bleeding

Possible adverse reactions

- Headache
- GI disturbance – nausea, vomiting, diarrhoea
- Hot flushes or chills
- Dizziness

Potential risks

- Retained products of conception
- Haemorrhage
- Uterine rupture and DIC
- Sepsis

Drug interactions No drug interaction studies have been performed. Mifepristone is metabolised by the CYP3A4 pathway and medications that use or block the same pathway could potentially increase or decrease this drug's metabolism rate.

MISOPROSTOL

Indications Misoprostol is a prostaglandin E1 Analogue marketed as Cytotec and is registered for use to prevent gastric ulcers resulting from chronic use of NSAIDS. Since it also induces contractions, it is used in obstetrics & gynaecology. For the purpose of this guideline, Misoprostol is used in conjunction with Mifepristone, to induce labour following second or third trimester foetal death with written patient consent.

Consent At present, Misoprostol is not registered for the purpose of inducing labour. Therefore an authorized prescriber must obtain consent from the patient and complete the **"Consent for use of Misoprostol"** form after the woman has been given the **"Patient information sheet – Misoprostol".**

Contraindications

- History of allergy to Misoprostol or other prostaglandin.

Cautions

- Over distended or scarred uterus (risk of uterine rupture)
- History of epilepsy
- History of asthma
- Predisposition to diarrhoea
- Renal failure
- Dosing varies according to clinical indication and is individualized

Possible adverse reactions

- GI disturbance – nausea, vomiting, diarrhoea, constipation, flatulence, or dyspepsia
- Headache
- Dizziness
- Fever, chills, or shivering. Chills are common, fever less so. If fever persists longer than 24 hours, infection should be excluded.

Drug interactions

- Antacids – high levels of antacids decrease bioavailability of Misoprostol.

Follow the steps below when administering Mifepristone and Misoprostol

- Explain to the woman the proposed plan of management and procedure for administration
- Give the woman the Patient Information Sheet – Misoprostol (Appendix) and discuss with her
- Obstetrician to obtain informed consent on Consent For Use of Misoprostol form (Appendix)
- Blood group and Rhesus status must be established
- Baseline observations
- Consent for Misoprostol must be signed
- Refer to the Management of Intrauterine Death and Stillbirth Guideline and use checklist (Appendix)
- Secure appropriate counselling/family/whanau/chaplaincy/kaiatawhai support
- Administer Misoprostol.
  a) 14+0wks – 24+0wks, 800 micrograms is inserted into the posterior vaginal fornix, followed by 400 micrograms given orally at three hourly intervals until labour has established or a maximum of five doses (1 x 800 and 4 x 400) has been administered.
  b) 24+1 – 34+0 weeks: 200 micrograms pv followed by 200 micrograms orally three hourly x 4 doses orally for a maximum of 5 doses (1 dose vaginally and 4 orally)
  34+1 weeks onwards: 100 micrograms pv followed by 100 micrograms orally three hourly x 4 doses orally for a maximum of 5 doses (1 dose vaginally and 4 orally)
  c) **Previous low transverse caesarean section (if not using transcervical catheter and/or Syntocinon)**,
  20+1wks – 24+0wks: use Misoprostol as above
  24+1 – 28+0weeks: 200 micrograms pv followed by 200 micrograms three hourly x 4 doses orally for a maximum of 5 doses (1 dose vaginally and 4 orally)
  28+1 weeks onwards: 50 micrograms pv followed by 50 micrograms three hourly x 4 doses orally for a maximum of 5 doses (1 dose vaginally and 4 orally). Contact Pharmacy who will quarter a 200 micrograms tablet to obtain the correct dose. Please pay particular attention to how small the tablet becomes and can be easily lost within bed sheeting during insertion
- Once administration has been commenced, it is **not** to be interrupted at any time prior to the birth without consulting the obstetrician first.
- The vaginal examination does not need to be a sterile procedure except in the presence of ruptured membranes. Further vaginal examinations are not necessary.
- If labour has not established after 24 hours, the woman is to be reviewed by the obstetrician for further management

Follow the steps below for management of the woman receiving Misoprostol and refer to the management of intrauterine death & stillbirth guideline, checklist (Appendix 3)

- Blood group and Rhesus status must be established.
- Baseline observations (pulse, BP, Temp, PV Loss)
- Consent for Misoprostol must be signed.
- Obstetrician or midwife to commence Misoprostol regimen as below.
- For women who have not birthed, after 4th dose of oral Misoprostol obstetric review is required.

- Consider an overnight wait to allow woman to rest.
- Expect 90% to deliver within 6-8 hours of commencement of Misoprostol.
- Management of the 3rd stage is to be agreed with the woman, care needs to be taken if CCT is applied as the cord can be friable and snap easily.
- Women receive appropriate counselling/family/whanau/chaplaincy/kaiatawhai support.

SYNTOCINON INFUSION

Syntocinon is a synthetic form of oxytocin. When syntocinon is used by IV infusion for the induction of labour, its administration at excessive doses may result in uterine overstimulation which may cause hypertonicity, tetanic contractions or rupture of the uterus. Therefore the minimum effective dose should be used.

Syntocinon infusion may be administered for pregnancies from 20+0 weeks gestation, especially if the woman has an IUFD and a prior uterine scar and we want to be careful with prostaglandins. Syntocinon infusion may be administered to:

- augment/establish labour in these women when appropriate
- control/reduce heavy bleeding post birth (refer to PPH guideline)
- increase contractions to aid expulsion of a retained placenta (refer to retained placenta guideline).

Prescription & Administration of Syntocinon Infusion for Labour

- The infusion must be given via an infusion pump.
- The infusion is to be prepared as 10 units of syntocinon in 500 ml normal saline.
- The dosage is increased until labour is established.
- **1/ Routine augmentation or IOL - Syntocinon 10IU in 500mls of Normal Saline - increase rate every 30 minutes, if a good response increase with smaller doses**

Rate (mls/hour)	Dose (mIU/minute)
6	2
12	4
18	6
24	8
30	10
36	12
42	14
48	16
54	18
60	**20 - maximum**

- **2/ Low dose for <u>PARA 4+ OR PREVIOUS C/S</u> - Syntocinon 10IU in 500mls of Normal Saline. Increase rate every 30 minutes, if a good response increase with smaller doses**

Rate (mls/hour)	Dose (mIU/minute)
3	1
6	2
9	3
12	4
15	5
18	6
21	7
24	8
27	9
30	**10 – maximum**

<u>3/ High concentration for fluid restriction</u> - Syntocinon 20IU in 500mls of Normal Saline. Increase rate every 30 minutes, if a good response increase with smaller doses

Rate (mls/hr)	Dose (mIU/minute)
3	2
6	4
9	6
12	8
15	10
18	12
21	14
24	16
27	18
30	**20 - maximum**

Observations & Documentation:

- Blood group and Rhesus status must be established.
- The woman's baseline recordings (temperature, blood pressure, pulse) are taken prior to commencement of infusion.
- Pulse and blood pressure are taken at each dose increase until labour is established.
- Half hourly recordings then continue.
- No further dose increase once labour is established.

- Vaginal loss, contractions, and recordings are documented in the Clinical Record.
- A fluid balance is maintained
- Blood urea and electrolyte levels are checked if syntocinon continues for more than 24 hours.
- Management of the 3rd stage is to be agreed with the woman, care needs to be taken if CCT is applied as the cord may be friable and snap easily.
- Woman to receive appropriate counselling/family/whanau/chaplaincy/kaiatawhai support.

Post Delivery Care following use of Mifepristone/Misoprostol or Syntocinon

Recommended Best Practice

Follow the steps below to ensure physical and emotional care and documentation is completed for episode of care:

- Administer Anti-D if required.
- Discuss contraceptive needs. Prescribe PRN.
- Ensure thorough discharge advice and follow-up.
- Clinical summary of discharge advice.

Documentation Requirements

Refer to the Management of Intrauterine Death and Stillbirth guideline for management of the baby and placenta and the required documentation and reporting & checklist (Appendix 3).

- SANDS leaflets.
- Complete PMMRC online forms for national database & notify local PMMRC coordinator.

ASSOCIATED HAUORA TAIRAWHITI DOCUMENTS:

- Consent for use of Misoprostol
- Patient information sheet Misoprostol
- Postpartum Haemorrhage guideline
- Retained placenta guideline
- Syntocinon IVI for induction or augmentation of labour guideline
- The Management of Intrauterine Death and Stillbirth guideline
- Organisational policy: Whenua/Placental management (of disposal)
- Organisational Policy Care of Human Tissue (including care of deceased)
- Woman, Child and Youth Maternity guideline - Perinatal post mortem & placental histopathology
- Misoprostol Use and Administration of

Acknowledgement goes to National Women's Health for sharing their Termination of Pregnancy – 2nd & 3rd Trimester guideline (2011).

Type	Title/Description
Clinical Guideline	RCOG clinical guidelines: The care of women requesting induced abortion- Sept 2004 http://www.RCOG.org.uk/

Clinical Guideline	Abortion Supervisory Committee (2004). ***Guidelines for the use of Mifepristone for Medical Abortion in New Zealand*.** Retrieved from http://www.abortion.gen.nz/docs/ASC_Technical_Committee_Report_24_Aug04.pdf
Consensus statement	RANZCOG college statement (2009). *The use of mifepristone for medical termination of pregnancy*. Retrieved from http://www.ranzcog.edu.au/publications/statements/C-gyn21.pdf
Consensus statement	RANZCOG college statement (2007). *The use of misoprostol in obstetrics and gynaecology*. Retrieved from http://www.ranzcog.edu.au/publications/statements/C-obs12.pdf
Leaflet	PMMRC – Panui for post mortem examination leaflet (2009)
	Information about the Perinatal and Maternal Mortality Review Committee (2007)
Report	Report of a Standards Committee to the Abortion Supervisory Committee (2009) ***Standards of care for women requesting induced abortion in New Zealand.*** Retrieved from http://members.apganz.org.nz/wp-content/uploads/2010/01/nz-standards-of-care-for-women-requesting-induced-abortion1.pdf
Systematic Review	Dodd JM, Crowther CA (2010*).* Misoprostol for induction of labour to terminate in the second or third trimester for women with a fetal anomaly or after intrauterine death. *The Cochrane Library* 2010, Issue 4.

ASSOCIATED DOCUMENTS

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APPENDIX 6

PATIENT INFORMATION SHEET – MISOPROSTOL

Medicines are generally registered in New Zealand for specific purposes. Although Misoprostol is a registered medicine, licensed in New Zealand for the treatment of stomach ulcers, it is not specifically licensed for use in pregnancy or childbirth. However, it is known to cause the uterus to contract strongly and is therefore often prescribed by gynaecologists for pregnancy related complications such as incomplete miscarriage, postpartum bleeding and foetal demise.

There are more than 200 trials worldwide involving over 35,000 women where Misoprostol has been given for obstetric or gynaecological indications. Misoprostol has been used for this purpose effectively at National Women's Hospital since 1996 and is recognised as having fewer side effects than other similar products.

We recommend Misoprostol tablets to be taken by mouth, vagina or rectum as per the specialist's recommendations.

The most common side effect is nausea. Less common is mild diarrhoea, abdominal cramps and vaginal bleeding.

Misoprostol has been found to be both effective and safe; however we require your consent to use it for any obstetrical purpose.

If you have any queries, please ask a member of staff involved with your care.

APPENDIX 7

CONSENT FOR USE OF MISOPROSTOL

Interpreter: Yes No	**Name:**	**Language:**

I (name) ……

of (address)……

hereby consent to the use of Misoprostol

I acknowledge that Misoprostol is not registered for this use in New Zealand. I have read the information sheet and agreed to the use of Misoprostol. I acknowledge that the risks and side effects have been explained to me. I have had adequate opportunity to ask questions and have received all the information I want. I understand that I am welcome to ask more information if I wish.

SIGNED: …… (Woman)

SIGNED: …… (Interpreter)

DATE: ……

This consent was discussed by me with the signatory, who acknowledges having understood it fully and has had an opportunity to ask questions and have them answered.

SIGNED: …… (Doctor)

DATE: ……