28 July 2020

WHANGANUI
DISTRICT HEALTH BOARD
Te Poari Hauora o Whanganui

100 Heads Road, Private Bag 3003
Whanganui 4540, New Zealand

Mel Theodore

Via email: meltheodore2015@gmail.com

Dear Mel

Official Information Act Request – Policies and Procedures in Place in 2015

On 30 June 2020, under section 12 of the Official Information Act, you requested the following information from Whanganui District Health Board (WDHB):

I wish to please view Whanganui Hospital Policies and Procedures that were in place 2015 for the following:

- Artificial Rupture of Membranes during labour
- Administration of Syntocinon during labour
- Monitoring of both Mother and Fetus during labour
- Vaginal Assisted Birth (Ventouse/Vacuum Extraction)
- Emergency Caesarean
- New born monitoring post emergency caesarean up until discharge from WDHB Maternity Ward.

Whanganui District Health Boards response:

Please find attached copies of:

- **Caesarean Section Guideline**
- **Electronic Fetal Monitoring in Labour Guideline**
- **Induction of Labour**
- **Management of temperature Control of the Preterm Newborn at Resuscitation Guideline**
- **Observation of Mother and Baby in the Immediate Postpartum Period**
- **Pre Labour Rupture of Membranes at Term Guidelines**
- **Trial of Instrumental Delivery in Operating Theatre Guideline**

Should you have any further queries about the above information, please contact our OIA co-ordinator Anne Phoenix at anne.phoenix@wdhb.org.nz

Yours sincerely

Russell Simpson
Chief Executive

Whanganui District Health Board

CAESAREAN SECTION GUIDELINE	
Applicable To: Whanganui District Health Board	**Authorised By:** Maternity Service Improvement Committee
	Contact Person: Maternity Services

1. PURPOSE

To initiate timely and appropriate surgical response to the identified at risk mother and baby (mandatory handover to secondary care).

2. SCOPE

This guideline applies to all Whanganui District Health Board (WDHB) employees (permanent, temporary and casual), Lead Maternity Carers with current Access Agreements.

3. DEFINITION

RANZCOG CATEGORY 1 (IMMEDIATE CAESAREAN SECTION)
Urgent threat to the life of a woman or fetus
Possible indication for a Category 1 caesarean section:

1. Cord Prolapse
2. Severe Antepartum Haemorrhage with immediate fetal or maternal compromise
3. Delivery of a second twin where vaginal delivery is not possible
4. Scar dehiscence or uterine rupture.
5. Failed forceps or Ventouse
6. Any other indication as determined by the Obstetrician

RANZCOG CATEGORY 2 (EMERGENCY CAESAREAN SECTION)
Maternal or fetal compromise but not immediately life threatening
Possible indications for a Category 2 caesarean section:

1. Obstructed labour / lack of progress.
2. Malpresentation and unsuitable for vaginal delivery
3. Ante-Partum Haemorrhage
4. Breech presentation in labour
5. abnormal CTG
6. Any other indication as determined by the Obstetrician

RANZCOG CATEGORY 3 (SEMI-ELECTIVE CAESAREAN SECTION)
Needing earlier than planned delivery but without currently evident maternal or fetal compromise

In each individual case the **Consultant Obstetrician will define the time frame**.

Possible indications for a Category 3 caesarean section:

1. A Client who is booked for an elective Caesarean Section and who now presents in labour and the same indication for the elective Caesarean Section still applies.

2. Acute Maternal illness / infection e.g. genital herpes posing a risk to fetal wellbeing.
3. Failed induction of labour presuming indication for induction still exists.
4. Any other indication as determined by the Obstetrician.

RANZCOG Category 4
At a time acceptable to both the woman and the caesarean section team, understanding that this can be affected by a number of factors

4. ROLES AND RESPONSIBILITIES

DOCUMENTATION IS TO BE COMPLETED FOLLOWING DELIVERY

Midwife in Attendance (with clinical responsibility)
- Birth notification /data collection form
- Labour summary sheet
- Mothers progress notes
- Medication administration and prescription sheets (for both mother and baby).
- Complete top section of Infant Care sheet.
- Infant Progress notes
- Complete Maternal & infant care plan(s)
- Discharge / transfer form

If Baby in Postnatal Ward
- Complete Maternal & infant care plan(s)
- Complete initial examination of the infant as soon as is appropriate within 24 hours of birth.
- Report and Record all findings

Obstetrician / RMO in Attendance
- Check medication administration / prescription and fluid prescription sheets.

LMC – If Baby in Postnatal Ward
- Complete Maternal & infant care plan(s)
- Complete initial examination of the infant as soon as is appropriate within 24 hours of birth.
- Report and Record all findings

Designated Paediatric RMO – If Baby in Special Care Baby Unit (SCBU)
- Complete initial examination of the infant as soon as is appropriate
- Report and Record all findings
- Complete Caesarean Section Audit – infant section at the appropriate time

Note: If/when no junior medical staff the responsibilities designated to them will be completed by senior medical staff

RANZCOG CATEGORY 1 – URGENT THREAT TO THE LIFE OF A WOMAN OR FETUS

MIDWIVES' RESPONSIBILITIES:

- Dial 8000 State IMMEDIATE C/S Midwife asks operator to request urgent attendance of on-call obstetrician (if not already at maternity)
- Administer Sodium Citrate 30mls p.o.
- NO time should be wasted inserting catheter / shave
- Transfer Client immediately to Theatre with or without an Orderly
- Listen to fetal heart prior to commencement of surgery
- Receive infant from obstetrician
- Assist consultant paediatrician with neonatal resuscitation.

OPERATOR RESPONSIBILITIES:

Call Immediate C/S Team:

- call duty O&G & RMO to delivery suite
- notify
  - Theatre staff
  - On-call Anaesthetist
  - Paediatrician
  - Designated Paediatric RMO

  To attend directly to theatre
  - Special Care Baby Unit
  - **Duty Nurse Manager**

Note: In circumstances where the midwife is not available to receive the baby from the Obstetrician at delivery either the second RMO or the Paediatrician will receive the baby

DESIGNATED OBSTETRIC/DUTY RMO RESPONSIBILITIES:

FIRST RMO

- Arrive at Delivery Suite
- Insert IV/Take bloods for haemoglobin and
- cross match (if not already done by Midwife)
  NB: If IV Access is not gained immediately, this can be achieved in Theatre by Anaesthetist.
- Obtain written informed consent
- Notify Laboratory
- Help transport Client to Theatre
- Scrub to assist Obstetrician

SECOND RMO

- Check:
  - Resuscitaire
  - O_2
  - Suction
  - Laryngoscope / ET tubes available
- Assist consultant paediatrician with neonatal resuscitation.

CONSULTANT PAEDIATRICIAN RESPONSIBILITIES:

- Lead Infant Resuscitation

CONSULTANT OBSTETRICIAN RESPONSIBILITIES

- Arrive at Delivery / Theatre Suite
- Attends Client and provides a brief and concise explanation regarding the decision making process and indication for Caesarean Section.
- Obtain signed informed consent for surgery and transfusion.

OPERATING THEATRE STAFF RESPONSIBILITIES:

NURSING:

- Notify Maternity Unit upon arrival after hours.
- Check list and handover from Midwife
- Set up theatre and anaesthetic equipment.
- Scrub
- Assist with positioning Client.

ANAESTHETIST:

- Insert IV – if not done
- Administer anaesthetic – General / Spinal

THEATRE ASSISTANT:

- Collect transport incubator from Maternity Unit
- Collect bed from Maternity Ward

NOTE:

- During Theatre Hours (Mon - Fri 08.15 – 23.00hrs): Transfer Client immediately without an Orderly.
- After Hours and Statutory Holidays: Transfer Client once Theatre staff have notified Delivery Suite of their arrival.

RANZCOG CATEGORY 2 – MATERNAL OR FETAL COMPROMISE BUT NOT IMMEDIATELY LIFE THREATENING

MIDWIVES' RESPONSIBILITIES:

Contact on-call Consultant Obstetrician and Duty/Obstetric RMO. Both to attend Delivery Suite immediately.

- Prepare Client for Theatre
- Reassure Client / family / whanau – appropriate explanation and discussion.
- Commence and complete pre-op check list.
- Administer Sodium Citrate 30mls p.o.
- Shave surgical site
- Insert indwelling catheter.
- Administer pre-medication as charted.
- Oxygen therapy may be required.
- Notify Special Care Baby Unit (SCBU)
- Notify Duty Nurse Manager
- Escort Client to Theatre.
- Listen to Fetal Heart prior to commencement of surgery.
- Receive infant from obstetrician
- Assist with neonatal resuscitation

Note: In circumstances where the midwife is not available to receive the baby from the Obstetrician at delivery either the second RMO or the Paediatrician will receive the baby

DESIGNATED OBSTETRIC RMO RESPONSIBILITIES:

- Answer pager
- Report to Delivery Suite
- Contact and inform Theatre "*category 2 Caesarean*"
- Theatre to confirm time with Consultant Obstetrician / Midwife.
- Contact / inform:
- On-call Anaesthetist – to attend direct to Theatre
- Designated Paediatric RMO to discuss indications for the C. Section.
- Take blood for cross match and FBC
- Insert IV
- NB: If IV Access is not gained immediately, this can be achieved in Theatre by Anaesthetist.
- Inform Laboratory
- Scrub and assist in Theatre.

NB: The fetal / maternal condition may dictate at anytime that the C/S becomes an **Category 1** Caesarean section

DESIGNATED PAEDIATRIC RMO RESPONSIBILITIES:

- Liaise with Paediatrician on duty re attendance.
- Check:
  - Resuscitaire
  - O_2
  - Suction
  - Laryngoscope / ET tubes available
- Lead infant resuscitation

CONSULTANT OBSTETRICIAN RESPONSIBILITIES:

- Inform on-call Paediatrician and discuss most appropriate attendance at C. Section – either Paediatrician RMO or Consultant Paediatrician.
- The Consultant Obstetrician will involve the Client and her family / whanau in the decision making process and indications for Caesarean Section.
- Obtain signed informed consent for surgery and blood transfusion.

CONSULTANT PAEDIATRICIAN RESPONSIBILITIES:

- Confirm with Paediatric RMO who will attend.

SEMI ELECTIVE CAESAREAN SECTION

MIDWIVES' RESPONSIBILITIES:

- Prepare Client for Theatre
- Reassure Client / family whanau – appropriate explanation and discussion.
- Administer Sodium Citrate 30mls p.o.
- Commence and complete pre-op check list.
- Complete pubic shave
- Insert indwelling catheter
- Notify Special Care Baby Unit (SCBU)
- Escort Client to Theatre
- Listen to fetal heart prior to commencement of surgery.
- Receive infant from obstetrician
- Assist with infant resuscitation

Note: In circumstances where the midwife is not available to receive the baby from the Obstetrician at delivery either the second RMO or the Paediatrician will receive the baby

DUTY RMO RESPONSIBILITIES:

- Answer pager
- Report to Delivery Suite
- Confirm time with Consultant / Midwife
- Contact and inform Theatre
- Semi Elective C/S with timeframe as defined by Obstetrician.
- Theatre to confirm time
- Inform on-call Anaesthetist
- Contact / inform:
- Paediatric RMO
- Insert IV/Take blood for cross match and FBC
- Inform Laboratory (after hours)
- Scrub and assist in Theatre.

NOMINATED PAEDIATRIC/DUTY RMO RESPONSIBILITIES:

- Inform on-call Paediatrician and discuss possible attendance as needed.
- Check:
  - Resuscitaire
  - O_2
  - Suction
  - Laryngoscope / ET tubes available
- Lead infant resuscitation

CONSULTANT OBSTETRICIAN RESPONSIBILITIES:

- Inform on-call Paediatrician and discuss most appropriate attendance at C. Section – either Paediatrician RMO or Consultant Paediatrician.
- The Consultant Obstetrician will involve the Client and her family / whanau in the decision making process and indicators for Caesarean Section..
- Obtain signed informed consent for surgery and blood transfusion

CONSULTANT PAEDIATRICIAN RESPONSIBILITIES:

- Confirm with Paediatric/duty RMO who will attend.

NB: The fetal / maternal condition may dictate at anytime that the C/S becomes an **IMMEDIATE** Caesarean section

5. APPENDIX

Appendix 1: Maternity/Paediatric Practitioner's receiving Infant At Caesarean Section

6. KEY WORDS

Caesarean section, RANZCOG Category 1,2,3,4

APPENDIX 1:

MATERNITY/PAEDIATRIC PRACTITIONER'S RECEIVING INFANT AT CAESAREAN SECTION

Process: Receiving infant from surgeon during Caesarean section:

To prevent contamination of the surgical team sterile technique and universal precautions must be adhered to. When receiving the infant:

- Remove all rings and watches.
- Wash hands thoroughly using theatre scrub brushes.
- Dry with sterile flannels (opened by theatre staff).
- Don sterile gloves (remember to maintain sterility)
- The scrub nurse will place a sterile drape over the arms and chest of the staff member receiving the infant. Tip: grasp the sterile drape firmly to ensure you keep the infant secure
- Approach the surgeon to receive the infant ensuring nothing comes in contact with the surgeon except the drape/sterile gloves.

Other responsibilities:

- Correct theatre attire must be worn i.e. all hair contained
- Surgical clamps must be removed from the cord before the infant leaves the operating room. (Do not place back on sterile field)
- Placenta must not leave theatre until the final surgical instrument count is done.
- Dispose of any 'sharps' used
- To assist theatre documentation please advise the circulating nurse names of the attending obstetric/Paediatric staff
- Photographs may be taken with consideration for other staff present.

Whanganui District Health Board

GUIDELINE

ELECTRONIC FETAL MONITORING IN LABOUR GUIDELINE	
Applicable To: Maternity Services Whanganui District health Board	**Authorised by:** Maternal and Perinatal Review Committee
	Contact Person: Lucy Pettit, Midwifery Educator

1. PURPOSE

To ensure that all women who are assessed as having potential antenatal risk factors or develop intrapartum risk factors receive appropriate fetal monitoring. This applies to all women who are within the secondary care facility.

Risk factors are those defined by the RANZCOG guidelines (**Appendix 1**) or after consultation with the on call obstetrician.

2. SCOPE

All Whanganui District Health Board (WDHB) employed midwives and doctors and Lead Maternity Carers (LMC) who have current access agreement with WDHB.

3. ROLES AND RESPONSIBLITIES

All practitioners referring to/reading a Cardiotocograph (CTG) should be competent in the recording methodology and basic interpretation. Handbooks for the CTG machines are located with each machine.

Be familiar with RANZCOG Clinical guidelines for intrapartum fetal surveillance and refer to the RANZCOG algorithm. (**Appendix 1)**

All Midwives should be familiar with the New Zealand College of Midwives (NZCOM) consensus statement on 'Fetal monitoring in labour' (NZCOM consensus statement handbook, 2006) available on the website (http://www.midwife.org.nz).

4. DEFINITIONS

CTG	Cardiotocograph – printed graph record
FHR	Fetal Heart Rate
EFM	Electronic Fetal Monitoring
IA	Intermittent Auscultation
FSE	Fetal Scalp Electrode
bpm	beats per minute

5. PREREQUISITES

- Informed consent from the woman

- Appropriate CTG machine with relevant electrical safety certification
- Paper speed should be set to 1 cm per minute
- The internal clock with correct time and date
- Aquasonic gel
- Elastic belts
- Comfortable, safe positioning of the woman
- CTG machine with two ultrasound transducers when monitoring of twins is required
- Each monitoring strip should have documented on it:
  a. Women's I.D sticker (Bradma)
  b. Date, time and gestation
  c. Maternal pulse
  d. Name of person conducting EFM

6. GUIDELINE

Fetal Heart Rate (FHR) monitoring is fundamental in labour care. An informed choice between Intermittent Auscultation (IA) and Electronic Fetal Monitoring (EFM) will be made once the initial assessment of risk factors has been completed. There is insufficient evidence at the present time to recommend routine admission EFM for low-risk women.

Intermittent Auscultation And/Or Intermittent EFM

In the absence of any identifiable risk factors IA/intermittent EFM may be used as follows with the fetal heart and maternal pulse documented either on the partogram or clinical notes:

- Fetal heart auscultation should be performed at least every 15-30 minutes during the active phase of the first stage of labour
- At least every 5 minutes or after each contraction with active pushing in the 2nd stage of labour
- IA is undertaken immediately after a contraction and the fetal heart is auscultated for 1 minute. This rate is compared with the maternal pulse to ensure that the fetal heart rate has been accurately identified. Both recordings should then be immediately documented
- Continuous EFM should commence as soon as risk factors become identifiable during any stage of labour. Inform the obstetrician immediately

Electronic Fetal Monitoring

A good quality CTG tracing should be obtained with minimal disruption to the mother. Certain criteria are required to ensure that the recording obtained is an accurate assessment of the fetal heart.

Gestational Age

CTG monitoring is potentially indicated from 24 weeks gestation. CTG monitoring for the preterm fetus can be difficult to achieve (due to fetal activity) and careful interpretation is required.

Ante Natal

All women who are believed to have an antenatal risk factor (**Appendix 2**) which may increase the risk of fetal compromise in labour, are expected to have a CTG performed at the time of their initial

assessment/admission and thereafter as dictated by the guideline relevant to the clinical problem or as requested by the obstetrician.

Intra Partum

The WDHB Maternity Services Department does not support routine intra partum admission CTG monitoring **unless** the woman has identified risk factors (**Appendix 2**) or on discussion with the on-call obstetrician, or when an intrapartum risk factor develops. Women identified as having risk factors or who develop risk factors should have continuous EFM monitoring.

Considerations

- Each individual baby should be identified on the recording, and their positions recorded in a multiple pregnancy. All multiple pregnancies must have the babies heart beats recorded simultaneously. The practitioner must ensure that the CTG machine is programmed to separate the individual baby's heartbeat by 20 bpm (refer to the CTG Handbook for instructions). Practitioners are reminded that interpretation and documentation of the FHR must take this artificial elevation into consideration

- Any event that may effect the FHR should be noted on the CTG trace, signed and the date and time noted

- Any staff member who is asked to provide an opinion on a trace should note their findings on both the trace and in the maternal case notes, together with the time and their signature

- The CTG must record both the FHR and the uterine contraction pattern (tocograph)

- The CTG should be stored securely within the maternal notes at the end of the monitoring process

- In some instances where the Obstetrician is not on site he/she may request that a CTG be faxed for their interpretation. In this instance the **faxed** CTG is disposed of, by the Obstetrician, in a manner that does not compromise patient confidentiality. The midwife faxing the CTG must document in the clinical notes that this request was made and the communication by fax completed

- Interpretation of the CTG is in line with the Guidelines laid down by the RANZCOG (**Appendix 3** and **Appendix 4**)

- All non-reassuring traces **must** be discussed with the On-Call obstetrician and a non-reassuring FHR should be responded to with measures which may improve uterine blood flow and/or reduce uterine contractions

- When there has been a concern about the FHR in labour, an arterial cord pH is essential – after the baby is born.

Standard Procedure

- Explain the purpose and likely duration of the procedure to the woman and her family and gain consent

- Position the woman comfortably to avoid supine hypotension

- Perform an abdominal palpation to determine lie and position of the fetal back

- Auscultate the fetal heart

- Place gel on the transducer and switch on the machine, locate the transducer over the fetal back adjusting the location of the transducer until the green monitor light appears constantly. Stabilise the transducer with an elastic belt

- Adjust the volume as necessary
- Place the pressure transducer on the fundus. Stabilise with an elastic belt
- Calibrate the tocograph to the level of 20 when there is no contraction present
- Switch on the record button
- Record and document maternal pulse on the CTG tracing
- Ensure that the CTG is dated, timed and identified with the patient details
- Give the women the fetal movement monitor and ask her to press it each time she feels the baby move
- Watch the trace for the first 5-10 minutes. If there is no abnormality it is not necessary to stay in attendance. The CTG tracing must be checked at least every 15 to 30 minutes for women receiving continuous CTG monitoring (Guideline 3 RANZCOG)
- Before leaving the room ensure the call bell is within easy reach and explain initial tracing to woman and her family
- Record the FHR for as long as is clinically required
- Terminate the tracing, switch of the machine and remove the transducers and belts
- Sign the trace on completion
- Explain results of the trace to the women and her family
- Ensure that the CTG is reviewed and interpreted using the CTG assessment sticker before filing in the case notes

Indications For Application Of A Fetal Scalp Electrode For EFM In Labour

A FSE can be applied to increase the reliability of detection of the fetal heart – see **Appendix 2**

7. REFERENCES

RANZCOG Clinical guidelines: Intrapartum fetal surveillance – Second Edition 2006

CTG machine manuals/handbooks

New Zealand College of Midwives Consensus Statements, October 2007, *Fetal monitoring in labour*

8. RELATED WDHB DOCUMENTS

6.01 Difficult Auscultation of Fetal Heart WDHB-7071
http://www.contentedcms.co.nz/clientfiles/whanganui-district-health-board/documents/difficult-ausculation-of-fetal-heart.pdf

6.02 Management of Pre-term Labour and Use of Nifedipine Tocolysis WDHB-7060
http://www.contentedcms.co.nz/clientfiles/whanganui-district-health-board/documents/pre-term-labour-and-the-use-of-nifedipine-tocolysis.pdf

6.04 Management protocol for the Care of Hypertensive Disorders of Pregnancy WDHB-7081
http://www.contentedcms.co.nz/clientfiles/whanganui-district-health-board/documents/care-of-hypertensive-disorders.pdf

6.05 Antepartum Haemorrhage WDHB-7080
http://www.contentedcms.co.nz/clientfiles/whanganui-district-health-board/documents/ante-partum-haemorrhage.pdf

6.08 Induction of Labour WDHB-7079
http://www.contentedcms.co.nz/clientfiles/whanganui-district-health-board/documents/induction-of-labour.pdf

6.31 Pre-term Ruptured Membranes – 37 Completed Weeks WDHB-2296

WDHB Epidural Policy WDHB-1520

9. APPENDIX

Appendix 1:RANZCOG Clinical guidelines: Intrapartum fetal surveillance algorithm

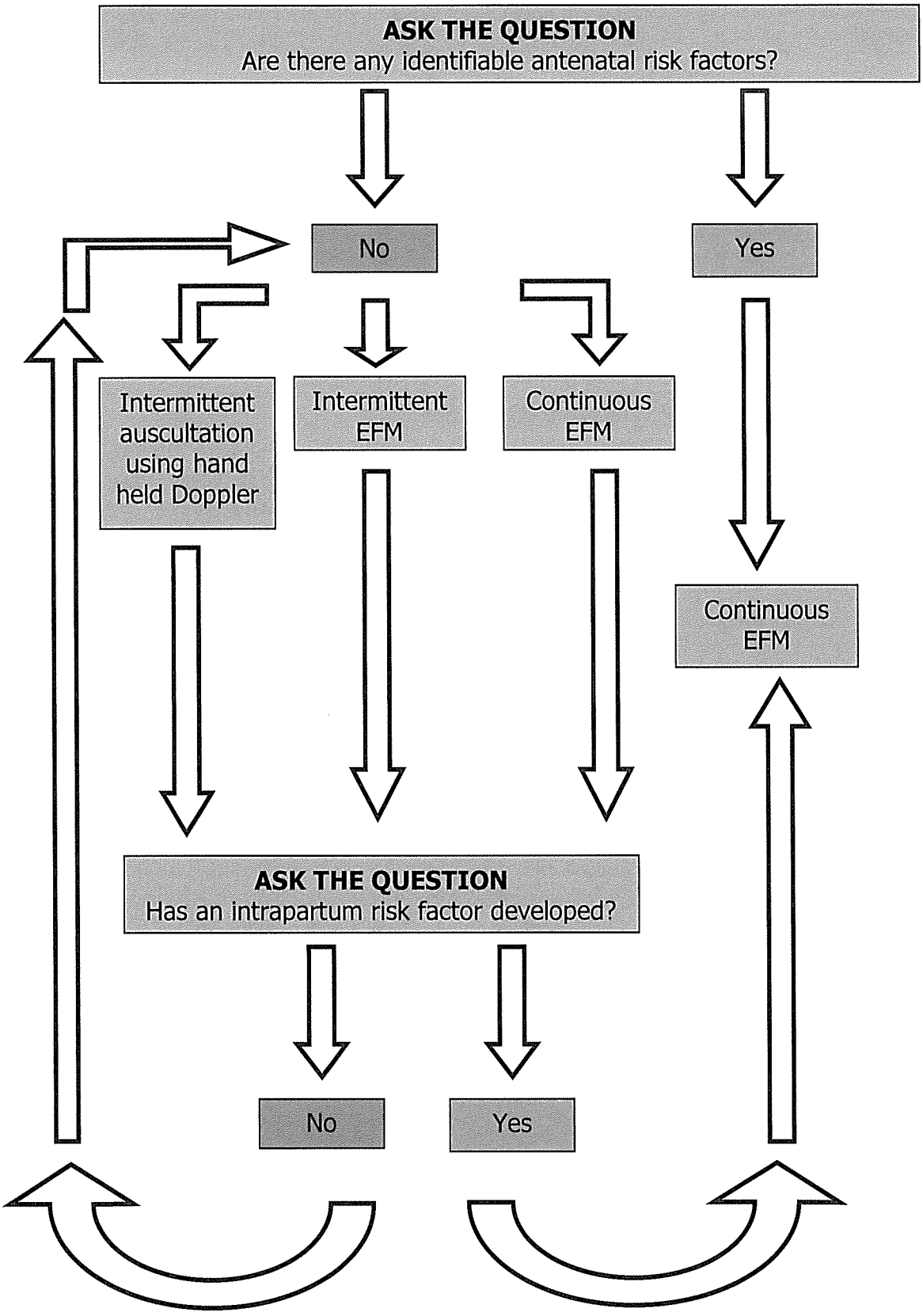
Appendix 2:Indication For Electronic Fetal Monitoring In Labour

Appendix 3: Description Of Fetal Heart Rate Patterns

Appendix 4: Interpretation of CTG

Appendix 5:CTG Assessment Sticker

Appendix 1: RANZCOG Clinical Guidelines: Intrapartum Fetal Surveillance Algorithm



Appendix 2: Indications For Electronic Fetal Monitoring In Labour

Antenatal Risk Factors		Intrapartum Risk Factors		
Maternal	**Fetal**	**Labour**	**Maternal**	**Fetal**
▪ Hypertension ▪ Pre-eclampsia ▪ Diabetes ▪ Antepartum Haemorrhage ▪ Other medical disorder which constitute a significant risk of fetal compromise	▪ Suspected IUGR ▪ Prematurity ▪ Oligo or anhydramnios ▪ Abnormal Doppler ▪ Abnormal CTG ▪ Rhesus disease ▪ Known fetal anomalies ▪ Multiple pregnancy ▪ Breech presentation ▪ Prolonged pregnancy (>42 weeks)	▪ Previous CS or uterine scar ▪ Prolonged SRM (>24 hours) ▪ Induced labour ▪ Augmented labour ▪ Abnormal CTG ▪ Hypertonic contractions ▪ Active 1st stage of labour >12 hours (regular uterine activity, cervix ≥ 4cm dilated) ▪ Active 2nd stage (i.e. pushing > 1 hour)	▪ Abnormal vaginal bleeding ▪ Sepsis ▪ Epidural ▪ Pyrexia >38°C	▪ Meconium or blood stained liquor ▪ Non-reassuring FHR on auscultation or admission CTG (if performed)

Indications for Fetal Scalp Electrode Application

- Inability to establish good CTG with external tracing e.g. maternal obesity
- Monitoring of the presenting twin.
- Consider when the CTG is non-reassuring (as listed in appendix 4)
- Recognised high risk situations for fetal distress.
- When unable to establish good monitoring of high risk fetus during siting of an epidural.
- When unable to identify a fetal heart or distinguish between maternal pulse.

Contraindications for Fetal Scalp Electrode Application

- Women who are HIV positive or suspected HIV positive
- Women who are Hepatitis B or C positive
- Women with a known herpes infection
- Immune Thrombocytopenia

Appendix 3: Description Of Fetal Heart Rate Patterns

Baseline FHR	**The mean level of the FHR when this is stable, excluding accelerations and decelerations. It is determined over a time period of 5 or 10 minutes and expressed in bpm.**
Normal baseline	110-160 bpm.
Non-reassuring	100-109 or 160-180
Bradycardia	<100 bpm.
Tachycardia	>180 bpm.
Baseline variability	**The minor fluctuations in baseline FHR occurring at three to five cycles per minute. It is measured by estimating the difference in beats per minute between the highest peak and the lowest trough of fluctuation in a 1 minute section of CTG trace.**
Normal	5-25 bpm between contractions.
Reduced	3-5 bpm.
Absent	<3 bpm.
Increased	>25 bpm.
Sinusoidal	Regular oscillation of the baseline long term variability resembling a sine wave. Baseline variability is absent and there are no accelerations.
Accelerations	**Transient increases in FHR of 15 bpm or more above the baseline and lasting for 15 seconds or more. A minimum of 2 in 20 minutes. The significance of no accelerations in an otherwise normal CTG is unclear.**
Decelerations	**Transient slowing in FHR of 15 bpm or more below the baseline and lasting for 15 seconds or more. Late decelerations of less than 15 bpm are significant when associated with no accelerations and reduced variability.**
Early	Uniform, repetitive, slowing of FHR by more than 15bts below baseline. With slow onset early in the contraction lasting for 15 seconds. With slow return to baseline at the end of the contraction.
Late	Uniform, repetitive, slowing of FHR with onset mid to end of the contraction, nadir more than 20 seconds after the peak and return to baseline after the end of the contraction.
Variable (Uncomplicated)	Irregular, Repetitive or intermittent decreasing of FHR with rapid onset and recovery. May occur at any time but most often simultaneously with contraction.
Variable (Complicated)	Variable decelerations with additional features. • Rising baseline rate or tachycardia • Reducing baseline variability • Slow return to baseline FHR at end of the contraction. • Large amplitude (by or to 60 bpm) and /or long duration (60seconds). • Loss of pre and post deceleration shouldering. • Presence of post deceleration smooth overshoot.
Prolonged Decelerations	Decrease of FHR below the baseline of more than 15 bpm for longer than 90 seconds but less than 5 minutes.

Appendix 4:Interpretation of CTG (from RANZCOG Intrapartum Fetal Surveillance, Clinical Guideline, Second Edition)

1. The normal CTG is associated with a low probability of fetal compromise i.e. it is reassuring, and has the following features:
   - **a.** Baseline rate 110 – 160 bpm
   - **b.** Baseline variability 5 – 25 bpm
   - **c.** Accelerations 15 bpm for 15 seconds
   - **d.** No decelerations

All other CTG's are by this definition abnormal i.e. non-reassuring, and require further evaluation, taking into account the clinical picture.

2. The following features are **unlikely** to be associated with significant fetal compromise **when occurring in isolation**:
   - **a.** Baseline rate 100 – 109 bpm
   - **b.** Absence of accelerations
   - **c.** Early decelerations
   - **d.** Variable decelerations without complicating features.

3. The following features **may be** associated with significant fetal compromise and require further action (such as maternal repositioning, rehydration, cessation of syntocinon, administration of tocolytic):
   - **a.** Fetal tachycardia
   - **b.** Reduced baseline variability
   - **c.** Complicated variable decelerations
   - **d.** Late decelerations
   - **e.** Prolonged decelerations (>90 seconds, but < than 5 minutes)

4. The following features are **very likely** to be associated with significant fetal compromise and require immediate management, which may include urgent delivery:
   - **a.** Prolonged bradycardia (<100bpm for >5 minutes)
   - **b.** Absent baseline variability
   - **c.** Sinusoidal pattern
   - **d.** Complicated variable decelerations with reduced baseline variability
   - **e.** Late decelerations with reduced variability

Appendix 5: CTG Assessment Sticker

Initial Risk Factors			
Intrapartum Risk Factors			
Dilation	**Contractions.....10 minutes**		
	Reassuring	**Non-Reassuring**	**Abnormal**
Baseline Rate	110 - 160	100 – 109 161 -180	< 100 > 180
Variability (bpm)	5 bpm or more	< 5 bpm for 40 mins or more but < 90 mins	< 5 bpm > 90 mins
Accelerations	Present	Absent	Absent
Decelerations	None	Early variable single prolonged deceleration up to 3 mins	Repeated variable late or prolonged deceleration >3 mins
Opinion	Normal CTG (all 4 features reassuring)	Suspicious CTG (one non-reassuring feature)	Pathological CTG (two or more non-reassuring or one or more abnormal)
Action			
Date	**Time .....** | **Signature.....** **Status .....**		

Whanganui District Health Board

INDUCTION OF LABOUR	
Applicable To: Whanganui District Health Board	**Authorised By:** Maternal & Perinatal Review Committee
	Contact Person: Midwife Manager

1. PURPOSE

Induction of labour will be undertaken when:

- Continuing the pregnancy is believed to be associated with greater maternal or fetal risk than intervention/delivery.
- Prior consultation with and/or assessment by Specialist Obstetrician and or Registrar has taken place.
- No contraindication to vaginal birth (i.e. placenta praevia or malpresentation)
- Start time for commencement of (routine non urgent) induction of labour will be no later than 08.00hrs, therefore admission to the maternity unit at 07.30hrs (to ensure CTG has been completed prior to commencement of induction)

2. SCOPE

This guideline applies to all Whanganui District Health Board (WDHB) employees (permanent, temporary and casual) and Lead maternity Carers with current Access Agreements.

3. PROTOCOL

Once the Specialist Obstetrician has agreed that the induction of labour is necessary it is the lead maternity carer's responsibility to ensure that:

- The patient has been given all relevant information re induction of labour so she can make **an informed decision/consent**.
- The induction is booked with the maternity unit (in diary). Note: Do not make any entries in the diary unless the induction has been agreed to by an Obstetrician
- The patient is aware that, due to workload, the induction may not take place on the arranged day / time.
- The patient and or lead maternity carer contacts the maternity unit prior to the planned admission time to make sure a bed is available. If no bed available the LMC will notify her client.
- Any special needs to be identified by Specialist Obstetrician/ lead maternity carer and appropriate processes initiated, i.e. Paediatric Dept referral.

The WDHB senior midwife on night/morning duty the day the induction(s) are planned will:

- Assess (06.30hrs) whether the bed state will allow any inductions of labour to proceed being cognisant that the ultimate responsibility for triage is the duty O&G and urgent cases will need to be prioritised/plan of care developed (women may need to come to the maternity unit for assessment but induction be postponed).

- Communicate with the LMC to advise the bed state and postpone admission(s). Note: it is expected that the LMC will communicate with their women and postpone/cancel admission.
- Assist in prioritising the inductions in conjunction with the on call Consultant Obstetrician should the Delivery Suite be overloaded.
- Call Unit patient(s) to advise of postponement of induction of labour

The on call Consultant Obstetrician will

- Triage the booked induction of labour patients for those patients whose induction cannot proceed and decide a plan of care
- Communicate the decision/plan to LMC/Midwife

4. PROSTAGLANDIN VAGINAL GEL

- The purpose of using Prostaglandin Gel (Dinoprostone) is to achieve delivery by aiding cervical softening prior to ARM or onset of regular uterine contractions.

- Contraindicated when:
  - The fetus is distressed.
  - Bishops Score 8+.
  - If evidence of labour or high uterine tone.

- To be used with caution with:
  - Severe pre-eclampsia
  - Previous Caesarian Section / Uterine Scar
  - I.U.G.R.
  - High parity (Gravida 5 or more).

Dosage:

The dose of Prostaglandins to be administered depends on the vaginal assessment/ Bishops Score and the Client's Parity. This table is a guide, if in doubt use a lower dose.

	Bishops Score	Prostin Gel Dose Or Action	Repeat
Primigravida	6 or Less	2mgs	6 hours later give 1mg gel unless ARM is possible
	7 to 8	1mg	
	> 8	ARM	
Multigravida	7 or Less	1 mg	No more than 1 dose in 24 hours
	> 8	**ARM**	

Bishops Score	**0**	**1**	**2**	**3**
Factor:				
Cervix dilation (cm)	<1	1-2	3-4	>4
Length of cervix (cm)	>4	2-4	1-2	<1
Consistency of cervix	Firm	Medium	Soft	-
Position of cervix	Posterior	Mid	Anterior	
Station of head re-spines (cm)	-3	-2	-1 /at spines	1-2cm below spines

NOTE: If surgical induction is not possible 24 hours after Prostaglandin induction and or two doses of Prostaglandin, the client MUST BE reviewed by an Obstetrician.

Observations:
- Record: temperature, BP, pulse and respirations prior to insertion of Gel.
- Prior to Prostaglandin insertion a CTG trace of at least 20 minutes duration **must be** performed. If CTG is interpreted as reassuring, Prostaglandin induction can proceed.
- Continue CTG for a minimum 30 minutes post insertion of Prostaglandins Gel. Further foetal surveillance as indicated per monitoring policy.

After completion of monitoring, the client can mobilize within the hospital campus but must return to Maternity Unit if onset of uterine activity or spontaneous rupture of membranes (SROM).

The client must not leave the hospital complex unless discharged by the duty O&G Consultant

In the presence of uterine activity, observation of foetal heart, pulse, BP and frequency and duration of contractions **must be recorded**.

Comment:
Syntocinon infusion, if indicated, should not be initiated for at least 4-6 hours after prostaglandin administration.

Observations
- BP, pulse, respirations minimum of 4 hourly until in established labour, then at least hourly once in labour. Note: Observations may be required more frequently dependent on client's condition/indication for induction of labour.
- Fetal surveillance and contractions as per surveillance policy

Adverse Effects:
Hypertonic contractions / hyper-stimulated uterus which can affect foetal wellbeing i.e. fetal bradycardia / tachycardia.

5. SURGICAL INDUCTION

Definition:
Surgical induction is an amniotomy or artificial rupture of membranes (ARM) (the 'waters are broken').

Protocol:
- ARM should be carried out using an aseptic technique
- ARM should only be performed when the presenting part is engaged. If the presenting part is unengaged, the Specialist Obstetrician may decide to continue with ARM – this is at his/ her discretion.
- If following ARM, labour fails to establish within the timeframe specified by Specialist Obstetrician (usually one to four hours after ARM) augmentation of labour with a Syntocinon infusion should be commenced.
- Electronic foetal surveillance/CTG is recommended following ARM (20-30 minutes).

6. SYNTOCINON INFUSION (ANTEPARTUM)

Statement:

CONSULTATION WITH AN OBSTETRICIAN IS NECESSARY PRIOR TO COMMENCEMENT OF A SYNTOCINON INFUSION.

Syntocinon infusion is used to stimulate uterine activity, to establish labour or to augment labour. Caution should be used with intact membranes.

Caution should be exercised when using Syntocinon Infusion in the presence of the following high risk situations:

- Uterine Scars
- Multiple pregnancies
- High parity
- Fetal compromise
- Malpresentation.
- Severe pre-eclampsia/ Magnesium Sulphate infusion

Adverse effects:

Hypertonic contractions or hyper-stimulated uterine activity which can compromise foetal wellbeing. Rare: anitdiuretic effect leading to decreased urine output or pulmonary oedema.

Infusion Preparation

Solution for Infusion is prepared using **10**uts of **Syntocinon** diluted in **500mls** of **Normal Saline**. The mixed solution must be 'piggy backed' to a main IV line.

DOSAGE AND ADMINISTRATION
Infusion must be administered via an infusion pump

FORMULA
1 ampoule of Syntocinon contains 10IU/10,000 mU in 1ml
10,000 mU added to 500ml Normal Saline = 20mU per 1ml of fluid
(See conversion chart)

- Commence infusion at 2mU per minute or 6mls per hour. Increase infusion rate at 20 to 30 minute intervals by doubling rate (2mU/min or 6mls/hr , then 4 mU/min or 12 mls/hr, etc) until three strong contractions in 10 minutes; the maximum dose should not exceed 40mU/min or 120mls/hr. If lack of adequate contraction pattern at 32mU/min or 96mls/hr, must contact Specialist Obstetrician to escalate dosing.

NOTE:

- Most Clients will respond to less than 16mU/min i.e. 48mls per hour.

Caution:

It has been clearly shown that if the uterine activity is more than 4 contractions in 10 minutes (no resting time), that foetal cerebral oxygenation will fall. (BJOG, 1994, 101; 808-807. BJOG, 1994, 101; 4448)

The Maternal and Perinatal Review Committee recommend that:

- **Continuous electronic foetal monitoring is used during Syntocinon infusion augmentation.**
- **A partogram must be commenced once the infusion is initiated (if not already in use)**

Optimal range of Syntocinon is a minimal 0.5mU/min and a maximum of 32mU/min.

Conversion Chart	
Milleunits per minute (mU/min)	**Milliliters per hour (mls/hr)**
2mU /min	6mls per hour
4mU/ min	12mls per hour
6mU/ min	18mls per hour
8mU/ min	24mls per hour
10mU/min	30mls per hour
12mU/min	36mls per hour
14mU/min	42mls per hour
16mU/min	48mls per hour
18mU/min	54mls per hour
20mU/min	60mls per hour
22mU/min	66mls per hour
24mU/min	72mls per hour
26mU/min	78mls per hour
28mU/min	84mls per hour
30mU/min	90mls per hour
32mU/min	96mls per hour **(MAXIMUM DOSE)**

Actions in Event of Adverse Effects

- Any deviations from normal or causes for concern with either maternal or foetal response turn off the Syntocinon infusion and notify the duty Specialist Obstetrician. Document any change in orders clearly in the health care records.

The timing of discontinuation of the Syntocinon infusion following the birth of the baby and after the completion of the third stage is at the discretion of the practitioner with clinical responsibility for the patient.

7. BALLOON CATHETER

The balloon catheter is inserted by a practitioner who is competent to carry out the procedure.

Purpose:
Cervical ripening tool/ induction agent for clients with Bishop's score of <5.

Technique:
A 16 or 18 French Foley catheter with a 30ml balloon is inserted through internal os to extra-amniotic space (Cooks double balloon catheter now available) . Its presence stimulates endogenous prostaglandin secretion. Traction is not necessary but may be applied by taping catheter under tension to inside of woman's thigh. A spigot or clamp should be applied to the drainage port of the catheter to prevent leakage.

KIT: speculum/ light source
Cotton balls/ cleanser
20ml syringe
30ml of sterile water
packing or sponge forceps
sterile gloves
spigot/ umbilical cord clamp

References:

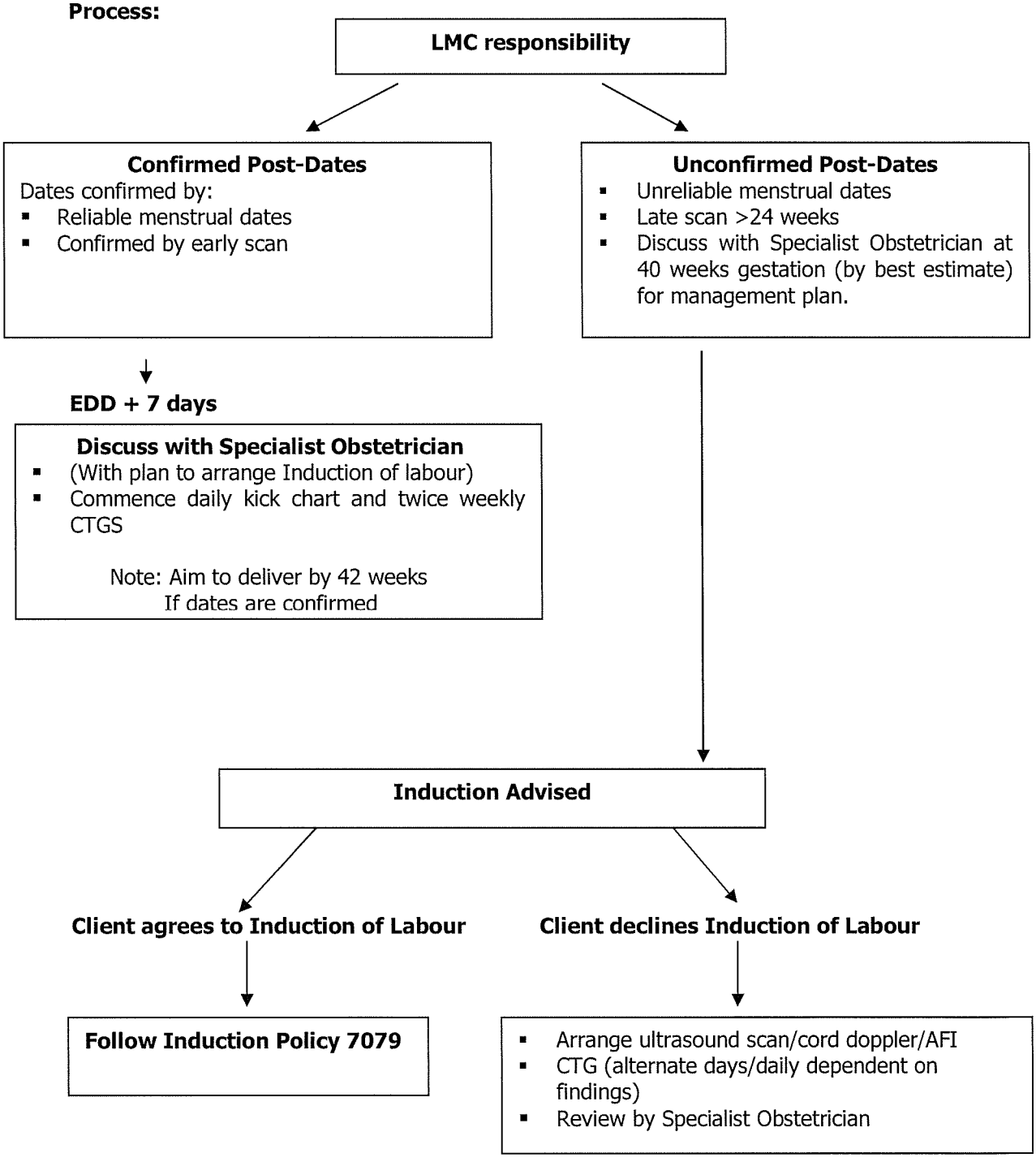
1. Caliskan, et al. "Unsuccessful Labour Induction in women with unfavorable Cervical Scores: Predictors and Management", ANZJOG 44(6), 562-7.
2. American College of Obstetrics & Gynecology. "Induction of Labor", Technical Bulletin #10.
3. Society of Obstetrics & Gynaecology of Canada. Clinical Practice Guidelines for Obstetrics: Induction of Labour, #107, August, pp 1-12.

8. MANAGEMENT PROTOCOL FOR POST DATES

Purpose:
To provide a management protocol for pregnancies that have continued beyond the human gestation of 294 days or forty-two weeks gestation (post dates).

Aim:
To minimise adverse maternal/ perinatal outcomes with timely intervention.

Process:



9. MISOPROSTOL (CYTOTEC) USE IN THE INDUCTION OF LABOUR IN MID - OR EARLY THIRD-TRIMESTER INTRAUTERINE FETAL DEMISE (ALSO REFER STILLBIRTH / SANDS GUIDELINES POLICY 6.22).

Misoprostol is a synthetic Prostaglandin E1 analogue which is rapidly absorbed after oral, vaginal, rectal or sub-lingual administration. It is presented in tablet form and is stable at room temperature.

Comment: Misoprostol was developed to protect the gastric mucosa from excess acid secretion caused by non-steroidal anti-inflammatory drugs. Like other drugs in its class it causes uterine contractions and softening and dilatation of the cervix. Misoprostol has been used since the 1980's to induce abortion and has become one of the most useful drugs in obstetrics and gynaecology. In the distressing situation of second trimester miscarriage it is easy to use, effective, safe and vastly cheaper than alternatives.

Protocol for Use:
Misoprostol is effective in inducing mid-trimester miscarriage in a wide range of dosing regimes. The more advanced the gestational age, the more sensitive the uterus is to medication dosing.

Treatment Regime: ***(Misoprostol must be prescribed by a Specialist Obstetrician)***

- 400 mcg – 600mcg misoprostol per vagina every 6 – 8 hours with gestations up to 28 weeks gestation. From 28 – 36 weeks gestation, lower doses are used and can be prescribed by Specialist Obstetrician. (400 mcg sublingual every 6 hours is an alternative if client declines vaginal application.)
- Consultant review after twenty-four (24) hours if the miscarriage has not been completed.
- Analgesia, including epidural if indicated, and sedation to be prescribed as necessary.

Possible Side Effects:
Side effects are relatively common, but usually not severe if misoprostol is used at the above dose.

- Fever
- Nausea, vomiting, diarrhoea (more common with oral or sublingual dosing)

Observations:
Blood Pressure, Pulse and Temperature prior to administration/commencement of induction, then 4-6 hourly or dependent of client's condition / needs.

Comment:
Allow 4-6 hour time interval post-misoprostol insertion before initiating Syntocinon infusion.

References:

1. Tang, O, et al. Prospective Randomized Comparison of Sublingual and Vaginal Misoprostol in Second Trimester Termination of Pregnancy, BJOG, Sep 2004 (111): pp 1001-5.
2. Golberg, et al, Misoprostol and pregnancy, NEJM (344):1, pp 38-46.
3. Dickinson et al, Optimization of Intravaginal Misoprostol Dosing Schedules in Second Trimester Pregnancy Termination, AJOG, 2002, (186): pp 470-4.

WHANGANUI
DISTRICT HEALTH BOARD
Te Poari Hauora o Whanganui

Guideline

Management of Temperature Control of the Preterm Newborn at Resuscitation Guideline	
Applicable To: Whanganui District Health Board	**Authorised By:** Maternal Perinatal Review Committee
	Contact Person: Maternity Services

1. Purpose

To prevent heat loss in infants born <30 weeks gestation or <1500g by minimising evaporative and convective heat loss by placing all infants below 29 weeks gestation in the neowrap, before proceeding with their stabilization/resuscitation

2. Scope

These best practice guidelines apply to Whanganui District Health Board (WDHB) clinicians, medical/midwifery/nursing and to self-employed LMC's with full and current Access Agreements.

3. Background

A baby exchanges heat with their environment by conduction, radiation, convection and evaporation. Evaporation is the major mechanism of heat loss during resuscitation. The baby will lose 560 cal for every millilitre of water evaporated from the skin.

The preterm baby often needs a period of stabilization or resuscitation. Inspite of being placed under the radiant warmer, several major studies have shown that many of these babies are cold by the time of admission to the neonatal unit. **Admission temperatures of babies with birth weight of <1500gm are inversely related to mortality and late onset sepsis.**

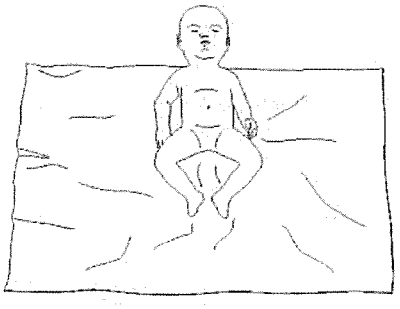
The use of polythene bags/neowrap leaving the head exposed has been found to be useful in reducing transepidermal water and heat losses during resuscitation. **Plastic wraps or bags, keep preterm infants warmer, leading to higher temperatures on admission to neonatal units and less hypothermia.**

4. Guideline

Open the Neowrap TM and lay it down flat on the resuscitaire.
Receive the infant into dry pre-warmed towels

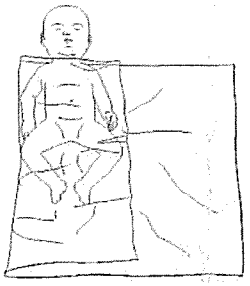
Lay the wet infant on the Neowrap as shown in figure 1

1

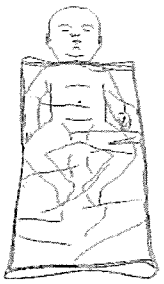


Immediately wrap the wet infant from the shoulders down in the Neowrap under the radiant warmer. A suggested method of wrapping is shown in Figure 2 and 3

2



3



- Dry the exposed head.
- Leave the plastic wrap on and additionally wrap the baby in warm blankets prior to transfer to the nursery
- Apply a cap to infant's head
- The infant is transported to the neonatal unit on the resuscitaire, alternatively transfer baby in the transport incubator.
- On arrival in the unit, the baby is weighed and then placed in a warm humidified incubator before the neowrap is removed.
- Auxiliary temperature is then measured using an electronic thermometer.

Note:
Neowrap is a single use product only
Do not place the neowrap over the infants face
Do not wrap the infant too tightly
Do not use the neowrap for > 24hours

5. References

A J Lyon and B Stenson, Cold comfort for babies, Arch. Dis. Child. Fetal Neonatal Ed., Jan 2004; 89: F93.
A Lyon, Temperature control in the neonate, Paediatrics and Child Health. Vol 18:4 April 2008.
McCall EM, Alderdice FA, Halliday HL, Jenkins JG, Vohra S. Interventions to prevent hypothermia at birth in preterm and/or low birthweight infants. Cochrane Database Syst Rev. 2008 Jan 23;(1):CD004210. Review.

Observation of Mother and Baby in the Immediate Postpartum Period	
Type: Guideline	**HDSS Certification Standard**
Issued by: Regional Women's Health Service (RWHS) Document Review Committee	**Version:** 1
Applicable to: RWHS	**Contact person:** Regional Midwifery Director, Regional Clinical Director
Lead DHB: MidCentral Health	

Purpose:

- The purpose of this guideline is to maximize the safety of mother and baby in the first hours following birth. Sudden Unexpected Early Neonatal Deaths (SUEND) is an increasingly recognised problem. Risk factors include unsupervised skin-to-skin contact, inexperienced mothers and mothers being left unsupervised in the immediate postnatal period.[1] It is informed by the Ministry of Health document 'Observation of mother and baby in the immediate postnatal period: consensus statements guiding practice' (2012).

Scope:

- MidCentral District Health Board (MDHB) & Whanganui District Health Board (WDHB) medical and midwifery staff (permanent, temporary, casual and locum).
- All Lead Maternity Carers (LMC) with current access agreements.

Definitions:

- The 'immediate postnatal period' is defined as the first one to two hours after the birth, although this time may extend beyond this as required.

Roles and Responsibilities:

- All maternity practitioners providing care in the immediate postnatal period must understand the importance of, and undertake, ongoing assessment of both the mother and baby. This includes situations where non-midwifery personnel are providing care outside the delivery unit (eg, in a post-operative recovery unit).
- There is an expectation that all staff caring for mother and baby (including those outside of Women's Health) are educated and competent in recognising any departure from normal. All staff must be competent in providing emergency intervention for both the mother and the baby and know how to obtain assistance from a midwife or doctor if there are concerns.

[1] Becher JC, Bhushan SS, Lyon AJ. 2012. Unexpected collapse in apparently healthy newborns – a prospective national study of a missing cohort of neonatal deaths and near-death events. *Arch Dis Child Fetal Neonatal Ed* 97(1): 30–4.

Guideline content:

Patient Safety

The principles of safe sleeping must be maintained which involves placing the baby to sleep so that the baby remains face up, with face clear and in a smoke-free environment at all times. Mother, father and family/whānau are provided with education and encouraged to follow safe sleeping practices during the immediate postnatal period and on an ongoing basis.

- All mothers and their babies must receive active and ongoing assessment in the immediate postnatal period, regardless of the context around their birth. During this time, the mother and baby should not be left alone – even for a short time. It is recognised that the mother with her family/whānau may need a time of privacy after the birth. Observation of the baby may be transferred to family/whānau if this is deemed clinically appropriate. The baby must be well, the mother alert and the family/whānau be responsible for the time specified. During this time the mother and her family/whānau must understand that they are ensuring the baby's nose and mouth are clear and are able to observe the baby's colour and respirations. They must also be aware to note excess bleeding or a change in the mother's condition during this time. They must know when it is necessary to call for help and how to do so if they are concerned.
- Ongoing assessment is for a minimum of one hour. Assessment will be longer than one hour if the mother or baby has experienced factors that increase their risk of adverse outcomes.
- Care during this time supports the physiological processes of the mother's transition to motherhood and the baby's transition to independent life.
- To assist these transitions there is ongoing observation of both the mother and baby's wellbeing, promotion of skin-to-skin contact, and support and oversight of the first breastfeed. Supporting these processes promotes the psychological attachment essential to the baby's wellbeing within a safe and secure environment.
- Monitoring the baby's wellbeing includes ongoing assessment of the baby's colour, tone and respirations at all times, with particular care during periods of skin-to-skin contact. If there is any question about the baby's wellbeing a full assessment should be carried out.
- Babies are more at risk of respiratory difficulties from a compromised airway where their mother or family/whānau have been or are exposed to medications, drugs, alcohol and/or smoking.
- If there are any concerns regarding the baby's ability to transition to independent life, there must be follow up with a review by paediatric staff as soon as possible. Urgency will be dictated by the clinical situation.
- It is important to note that mothers are less able to ensure a safe environment for breastfeeding or sleeping when they have experienced a long or complicated labour and

birth, are under the influence of medications, drugs or alcohol, or have some medical conditions. Family/whānau are also less able to ensure a safe environment for mother and baby when they are tired after supporting the mother through a long or complicated labour and birth.

References:

Ministry of Health, 2012. 'Observation of mother and baby in the immediate postnatal period: consensus statements guiding practice'.

Related Documents:

MDHB-3127 Breastfeeding guideline
MDHB-5994 Formula feeding policy
MDHB-5557 Bed sharing by mothers and babies in WHU
WDHB-3126 Breastfeeding policy
WDHB-7096 Artificial feeding for the non-breastfeeding mother baby guideline
WDHB-6201 Safe infant sleep policy

Keywords for searching: [up to four words, to assist staff in finding document]

1. Birth
2. Immediate postnatal
3. Baby Safety

Guideline

WHANGANUI
DISTRICT HEALTH BOARD
Te Poari Hauora o Whanganui

Pre-Labour Rupture Of Membranes At Term Guidelines	
Applicable To: Whanganui District Health Board	**Authorised By:** Maternity Services
	Contact Person: Midwife Manager

1. Purpose

To minimise and reduce the risk of infection to women and the neonate who have confirmed ruptured membranes at term. To set an agreed management plan of care with the women and clinicians.

The Whanganui District Health Board (WDHB) Maternal and Perinatal Review Committee recommend that non-labouring women at term (≥37 completed weeks) should be commenced on antibiotics according to the following criteria (Centre for Disease Control Recommendations, 2002);

- low risk: 18 hours post rupture of membranes
- high risk: six hours post rupture of membrane

All cases classed as 'High Risk' should also be discussed with an Obstetrician as soon as SRM is confirmed. Please see the algorithm (Appendix 1).

2. Scope

Applies to WDHB clinicians and lead maternity carers (LMC) with current access agreements.

3. Background information

Pre-labour rupture of membranes occurs in 6-19% of all term births. Research demonstrates that most women will go into labour soon after the membranes rupture and birth within 48hrs of membrane rupture. A small percentage of women do not establish in labour. Once the membranes have ruptured the key area of risk to the mother and the neonate is **infection**. (The Cochrane Database, 2009; Enkin et al 2002)

4. Definition

Pre-labour rupture of membranes is defined as spontaneous rupture of the membranes before the onset of regular uterine contractions.

5. Guideline

Confirmation of ruptured membranes must be assured before implementation of this guideline. This can be done by either one of the following examinations:

- **Visual and sensory detection i.e. see and or smell liquor. 'Parting the labia' can help confirm the presence of 'liquor' as opposed to urinary incontinence.**
- **Sterile speculum examination (pooling of liquor at the back of the vault, or liquor trickling or 'squirting' from the cervix (enhanced by a little cough)).**

- Nitrazine test amnistix. Note: the test has a 15% false positive rate
- Ferning test: use the microscope kept in the maternity unit
- If the results above are all negative, but the suspicion of SRM persists (a compelling history), the woman may be asked to lie flat (on her side) for one to two hours, so that the sterile speculum exam can be repeated. She should also have a fresh and dry pad on. Remember to ask the woman to empty her balder before lying down to prevent her wanting to go to the loo during the period of waiting.
- Ultrasound examination for assessment of amniotic fluid volume. This is not definitive and should not be necessary in most cases. If required, consideration should be made to first use the portable ultrasound scanner kept on labour ward (is the amniotic fluid significantly low?).

Please note that if there is 'obvious liquor draining', or when any one of the techniques above confirms SRM, there is no need to carry out another test (as some of the tests increase risks while providing no additional benefit).

All women with suspected ROM must have a vaginal swab taken for an infection screen. This can be a low vaginal swab (where there hasn't been a speculum done). When a speculum is needed, a high vaginal swab should be taken.

Digital vaginal examination in the presence of ruptured membranes increases the risk of infection and should be avoided unless clinically indicated (e.g. if the woman appears to be in labour and the cervix cannot be visualized, etc). An obviously closed cervix does not need to be felt: cervical effacement, softness, etc, do not add any useful information at this stage.

Conduct a full maternal and fetal assessment. Baseline observations of the mother's temperature, pulse, blood pressure, urine analysis and collect FBC (WCC & CRP).

Fetal assessment - 20- 30 minute CTG must be carried out.

Check vaginal swab results from earlier in pregnancy.
Check with client for any known allergy to penicillin/other drugs, document in notes and ensure alert bracelet in situ.
Discuss care options with woman and gain informed consent for any treatments or procedures. This must include discussion regarding the the risk of chorioamnionitis in regards to immediate induction of labour versus expectant management.

The following require special consideration: (the woman should be considered High Risk)

- known Group B Streptococci positive
- maternal pyrexia or tachycardia present, or the CTG is considered suspicious e.g. a fetal tachycardia is present
- if meconium is present or the liquor is off colour or offensive
- if there is a history of active herpes during this pregnancy
- if there is a history of maternal HIV, or Hepatitis C carriage or recent maternal exposure to chicken pox
- if there is any question regarding the diagnosis of membrane rupture, or if the presentation of the baby is uncertain

Discuss findings with duty on call Specialist Obstetrician and discuss plan and ongoing obstetric management of care options.

Options will include prompt induction of labour management with oral and or IV antibiotics or expectant management with oral antibiotics at 18 hours.

Antibiotic Prophylaxis

Following rupture of membranes, low risk women opting for expectant management should be commenced on antibiotic therapy at 18 hours. GBS positive women should commence oral antibiotics immediately/as soon as practicable, and go on to IV antibiotics once established in labour (or at labour induction). Other high risk women should be managed on a case by case basis.

Oral Erythromycin 400mg and convert to IV Benzyl Penicillin or Clindamycin once in labour

IV antibiotic therapy as per regime below:

Benzyl penicillin 1.2g IV for initial loading dose followed by 0.6g IV four hourly until birth of infant

Alternatively for women with hypersensitivity or with high-risk of anaphylaxis:

Clindamycin 900mg IV every eight hours until birth of infant

N.B. during the antenatal assessment a history of penicillin allergy should be obtained and documented. Intrapartum antibiotics are associated with rare but serious side effects.

Please note that presence of infection (Choreoamnionitis) requires treatment with broad spectrum antibiotics (including GBS cover).

Outpatient Management (>37 Weeks Gestation)

Full assessment of maternal/fetal wellbeing by LMC/Midwife inclusive of TPR, fetal heart auscultation and colour/odour of liquor – daily

Temperature and pulse to be taken by the women four hourly (during the day – before bed and on waking)

Admissions to hospital should occur:

- if the mother is unable to take her temperature or measure her pulse rate, or monitor fetal movements
- if the mother/LMC/Midwife notes meconium, maternal temperature >37.5C, increased pulse rate > 100/min, or reduced fetal movements.

In hospital observations: minimum of 4 hourly observations until labour commences, then at least hourly once in labour.

CTG: this must be used in all cases identified as high risk.

See Appendix 1. Algorithm

6. Related WDHB documents

Management of Group B Streptococcus WDHB-7073

7. References

- CDC Recommendations and Reports: August 16, 2002 / 51(RR11); 1-22. Prevention of Perinatal Group B Streptococcal Disease
- *Cochrane Database of Systematic Reviews*, Issue 1, 2009 Planned early birth versus expectant management (waiting) for prelabour rupture of membranes at term (37 weeks or more)
- Guideline for Consultation with Obstetric and Related Specialist Medical Services (referral guidelines)
- PPROMPT Trial – Multicentre internal study. Prof Caroline Crowther lead researcher, University of Adelaide. (local coordinator Dr Nasser Shehata). Information sheet and related documents in the folder in Delivery Suite

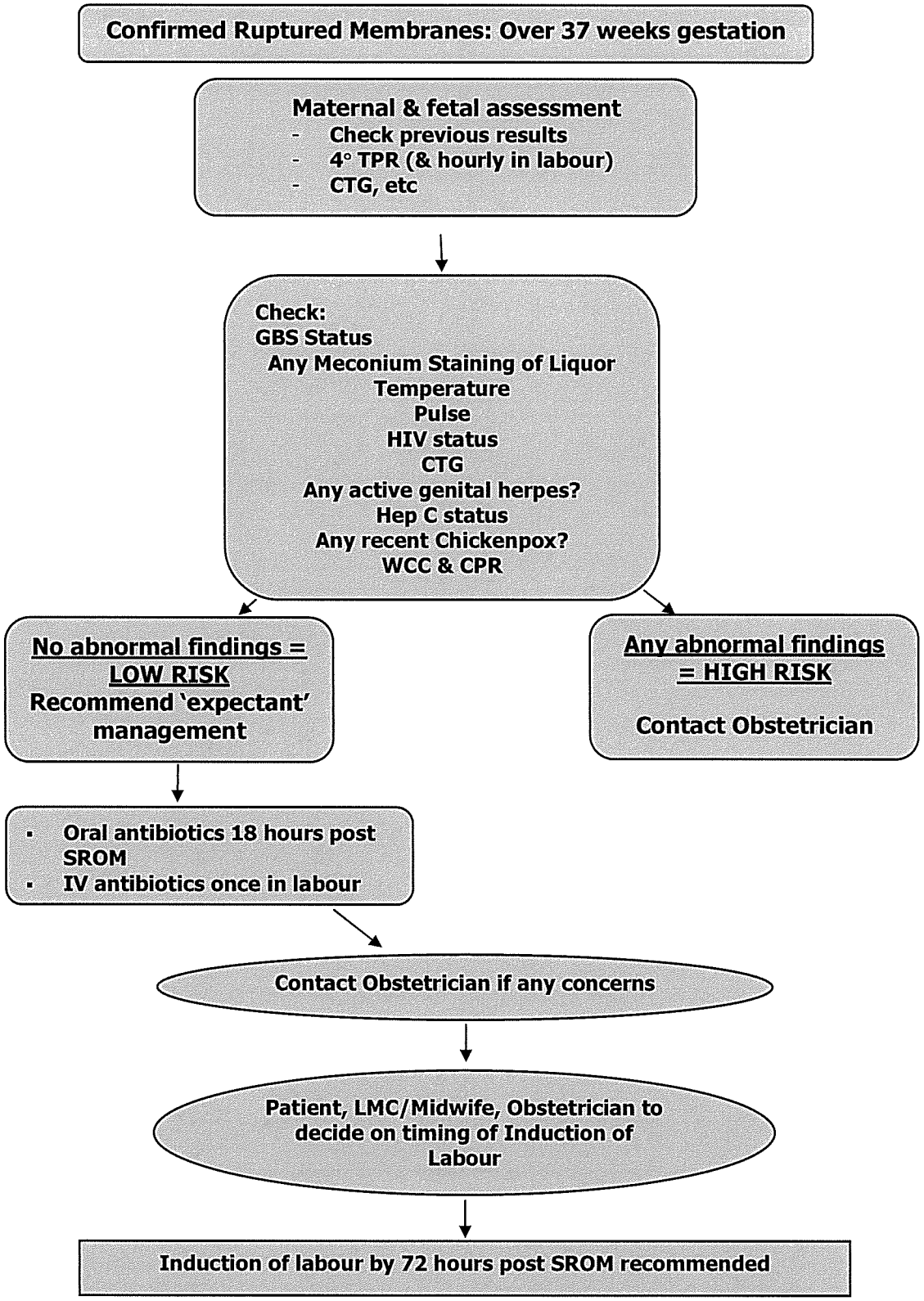
8. Appendices

Appendix One: Confirmed Ruptured Membranes

9. Key words

confirmed ruptured membranes

Appendix One:



WHANGANUI
DISTRICT HEALTH BOARD
Te Poari Hauora o Whanganui

GUIDELINE

Trial of Instrumental Delivery in Operating Theatre	
Applicable To: Whanganui District Health Board	**Authorised By:** Maternity Service Improvement group
	Contact Person: Maternity Services

1. AIM

To initiate timely and appropriate surgical response to the identified at risk mother and baby.

2. SCOPE

This guideline applies to all Whanganui District Health Board (WDHB) employees (permanent, temporary and casual), Lead Maternity Carers with current Access Agreements.

3. PROTOCOL

- The women will be fully informed and consented by the Consultant Obstetrician for both the instrumental delivery and a caesarean section, in accordance with Whanganui District Health Board Informed Consent Policy.
- In order for this procedure to be carried out, an anaesthetist must be present in theatre.
- Hand over to Secondary Care for this Procedure is **MANDATORY**.
- The Midwife responsible for the ongoing midwifery care of this client will act as Coordinator (can be the LMC or if handed over, a core midwife).
- If instrumental delivery is successful the mother and baby can be transferred to the maternity unit as and when condition of mother/baby is stable.
- If an instrumental delivery is performed under a general anaesthetic the normal Operating Theatre and Recovery Room protocols will be followed.
- Midwife is encouraged to promote skin to skin if the baby's condition is stable, the Paediatric staff / Midwife will escort baby to SCBU/ Maternity Ward.
- If the procedure is to progress to Caesarean Section then that process is followed.

4. ROLES AND RESPONSIBILITIES

MIDWIFE'S RESPONSIBILITIES:

- Notify obstetric RMO (if not already present)
- Notify SCBU
- Commence pre-operative check list
- Ensure the woman and her family are fully aware that a support person may be with her throughout the procedure. However if a general anaesthetic is required then the support person will be asked to leave.
- Escort the woman to Operating Theatre and remain with the woman throughout the procedure.
- Mid cavity forceps must be taken from maternity to Theatre for the procedure
- Kiwi cup must be taken from maternity to Theatre for the procedure

- Portable Entonox (small cylinder) must be taken with the woman as Theatre do not have this internally piped in the pre-operative areas.

RESIDENTIAL MEDICAL OFFICER (RMO) RESPONSIBILITIES:

- Notify Anaesthetist
- Notify Theatre
- Notify Paediatrician – ensure Paediatric RMO is present in Theatre
- I.V. line / take bloods FBC Group and hold / X Match if required.
- Assist Obstetrician in Theatre

5. KEY WORDS

Instrumental, forceps, ventouse