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Queensland Maternity and Neonatal Clinical Guideline

Normal birth



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Endorsed by:	Queensland Maternity and Neonatal Clinical Guidelines Program Statewide Maternity and Neonatal Clinical Network Queensland Health Patient Safety and Quality Executive Committee	
Contact:	Email: <u>MN-Guidelines@health.qld.gov.au</u> URL: <u>http://www.health.qld.gov.au/qcg/</u>	

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This Guideline does not address all elements of standard practice and assumes that individual clinicians are responsible to:

- Discuss care with consumers in an environment that is culturally appropriate and which enables respectful confidential discussion. This includes the use of interpreter services where necessary
- Advise consumers of their choice and ensure informed consent is obtained
- Provide care within scope of practice, meet all legislative requirements and maintain standards of professional conduct
- Apply standard precautions and additional precautions as necessary, when delivering care
- Document all care in accordance with mandatory and local requirements



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Flow Chart: Normal birth - Initial assessment



Queensland Maternity and Neonatal Clinical Guideline: MN12.25-V1-R17: Normal Birth - Initial assessment

Flow Chart: Normal birth – First stage



Queensland Maternity and Neonatal Clinical Guideline: MN12.25-V1-R17: Normal Birth - First stage

Flow Chart: Normal birth – Second stage



Queensland Maternity and Neonatal Clinical Guideline: MN12/25-V1-R17: Normal Birth - Second stage

Flow Chart: Normal birth – Third stage



Queensland Maternity and Neonatal Clinical Guideline: MN12.25-V1-R17: Normal Birth - Third stage

Flow Chart: Normal birth – Fourth stage



Queensland Maternity and Neonatal Clinical Guideline: MN12.25-V1-R17: Normal Birth - Fourth stage

Abbreviations

ACM	Australian College of Midwives
ARM	Artificial rupture of membranes
BP	Blood pressure
CS	Caesarean section
FHR	Fetal heart rate
FIGO	International Federation of Gynecology and Obstetrics
GBS	Group B Streptococcus
HR	Heart rate
ICM	International Confederation of Midwives
IM	Intramuscular
IV	Intravenous
MCWP	Maternity Care Working Party
NHMRC	National Health and Medical Research Council
PHR	Queensland Government pregnancy health record
PPH	Postpartum haemorrhage
RR	Respiration rate
SROM	Spontaneous rupture of membranes
SSC	Skin-to-skin contact
TENS	Transcutaneous electrical nerve stimulation
US	Ultrasound scan
VE	Vaginal examination
WHO	World Health Organization

Definition of terms

Collaboration	As per National Health and Medical Research Council (NHMRC) guidance: Is a process where two or more professionals work together with the woman to achieve common goals by sharing knowledge, learning and building consensus. ¹
Consult	Reflecting variances from normal pregnancy, birth and postnatal physiological processes, as defined by the Australian College of Midwives (ACM) National Midwifery Guidelines for Consultation and Referral ² :
	Consult with a medical or other health care provider
	• The individual situation of the woman will be evaluated and agreements in consultation with the woman will be made about the responsibility for maternity care ²
	• Wherever possible the woman should be involved in the consultation process
Continuity of care	Describes a situation where a woman is cared for by a group of professionals who share common ways of working and a common philosophy. ¹
Continuity of carer	Care provided, or supervised, over time by the same trusted carer (usually including backup arrangements). ¹
Continuity of midwifery carer Where the woman has a named / known midwife and sees the same midwife of small* group of midwives during her pregnancy, at birth, and postnatally. ³ [*Queensland Perinatal data collection definition is 2-4 midwives ⁴]	
Continuous support	See supportive one-to-one care.

Definition of terms

	Reflecting variances from normal pregnancy, birth and postnatal physiological processes as defined by the ACM National Midwifery Guidelines for Consultation and Referral ² :	
Discuss	 Discuss the situation with a colleague – midwife, and/or with a medical colleague or other health care provider 	
	• The responsibility for maternity care remains with the health care professional initiating the discussion	
	Wherever possible the woman should be involved in this process	
Informed choice	When a woman has the autonomy and control to make decisions about her care after a process of information exchange that involves providing her with sufficient, evidence-based information about all options for her care, in the absence of coercion by any party and without withholding information about any options. ¹	
Informed consent	When a woman consents to a recommendation about her care after a process of information exchange that involves providing her with sufficient, evidence-based information about all the options for her care so that she can make a decision, in the absence of coercion by any party, that reflects self-determination, autonomy and control. ¹	
Informed refusal	When a woman refuses a recommendation about her care after a process of information exchange that involves providing the woman with sufficient, evidence-based information so that she can make a decision that reflects self-determination, autonomy and control. ¹	
Low risk pregnancy	When no risk factors have been identified pre-pregnancy, antenatally or during the intrapartum period.	
Maternal bearing down	Also known as physiologic bearing down; refers to the second stage – short pushes without breath holding. 5	
Maternity care professionals	Registered clinicians who provide care for women during antenatal, intrapartum or postnatal stages of maternity care (e.g. midwives, GP obstetricians, obstetricians and GPs). ¹	
Mixed management (third stage)	During the third stage of labour, movement from physiological management to active management.	
Models of care How maternity care is organised. ⁶		
Newborn	Refers to the infant in the first few minutes to hours following birth. ⁷	
ObstetricianLocal facilities may, as required, differentiate the roles and responsibile assigned in this document to an "Obstetrician" according to their spect practitioner group requirements; for example to General Practitioner Obstetricians, Specialist Obstetricians, Consultants, Senior Registrars Fellows or other members of the team as required.		
Refer	Reflecting variances from normal pregnancy, birth, and physiological processes as defined by the ACM National Midwifery Guidelines for Consultation and Referral ² :	
	• Refer when medical care is required at a secondary or tertiary level for as long as the situation exists ²	
	• Care is provided by an obstetrician, with ongoing midwifery care and support	
Skin-to-skin contact	Involves placing the naked newborn prone on the mother's bare chest. ⁸	
Supportive one- to-one care	The continuous presence and support either by husband / partners, midwives or other birth supporters during labour and childbirth. ⁹ Also known as continuous support.	
Woman centred care	Is focused on the woman's individual, unique needs, expectations and aspirations, rather than the needs of institutions or maternity service professionals. This type of care recognises the woman's right to self determination in terms of choice, control and continuity of care. ¹	

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1 Introduction

The purpose of this Normal birth guideline is to protect, promote and support normal birth through woman centred, collaborative care.

1.1 Woman centred care

Woman centred care includes the affordance of respect and dignity, by supporting the woman to be central and active in her own care¹⁰ through¹¹:

- Holistic care taking account of the woman's physical, psychosocial, cultural, emotional and spiritual needs
- Focussing on the woman's expectations, aspirations and needs, rather than the institutional or professional needs
- Recognising the woman's right to self determination through choice, control and continuity of care from a known or known caregivers
- Recognising the needs of the baby, the woman's family and significant others

1.2 Defining normal birth

Normal birth is defined by the World Health Organization as¹²:

- Spontaneous in onset
- Low-risk at the start of labour
- Remaining low-risk throughout labour and birth
- The newborn is born:
 - o Spontaneously
 - o In the vertex position
 - Between 37 and 42 completed weeks gestation
- After birth, the woman and newborn are in good condition

With the WHO providing a foundation definition, the United Kingdom (UK) Maternity Care Working Party (MCWP) established working criteria for normal delivery¹³ [refer to Table 1]. The UK criteria encompass broader criteria than what is recognised for a 'physiological' or 'natural' birth definition. Criteria, such as augmentation, were included to support and enable progression towards normal birth. Exclusive of augmentation with Oxytocin, complications and continuous electronic fetal monitoring in low risk women, the Normal birth guideline recognises the normal delivery criteria as criteria for 'normal birth' in women, at 37-42 weeks gestation [refer to Table 1]. However, due to the spectrum of birth experiences, the Normal birth guideline or aspects thereof may be applicable to women and newborns that have or develop risk factors. Therefore consider the principles of protecting, promoting and supporting normal birth for all women.

1.2.1 Statistics

In Queensland in 2010, the percentage of births involving a¹⁴:

- Gestational age of 37-41⁺⁶ weeks was 90.8%
- Spontaneous onset of labour was 57.1%
- Non-instrumental vaginal birth was 56.9 %
- Normal birth (37-41⁺⁶ weeks*) was 27.4%¹⁵ [for normal birth criteria refer to Table 1]
- Caesarean section was 33.6%
- Induction of labour was 22.3%

[*Data for 41⁺⁶ weeks included, due to data collection limitations, rather than the preferred 42⁺⁰ weeks gestation]

1.2.2 Normal birth criteria

Table 1. Normal birth criteria

Criteria	UK MCWP Normal delivery ¹³	Normal birth guideline: 37-42 weeks	
	 Spontaneous onset, progression (without medications) and birth 	• Spontaneous onset, progression and birth in the vertex position	
	Augmentation	 Augmentation – artificial rupture of membranes (ARM) 	
Births included	Nitrous oxide	Nitrous oxide	
(except when	Opioids	Opioids	
exclusion criteria also met)	Electronic fetal monitoring	Intermittent fetal auscultation	
	 Managed third stage 	 Physiological, modified active and active third stage management 	
	 Complications: Antenatal Intrapartum Immediate postnatal 	 Complications and risk factors are not included – however consider initiatives to protect, promote and support normal birth where possible 	
Births excluded	 Induction of labour 	Induction of labour	
	An epidural or spinal	 Augmentation – Oxytocin infusion 	
	General anaesthetic	• An epidural, spinal or general anaesthetic	
	 Forceps or ventouse 	 Forceps or ventouse 	
	 Caesarean section 	Caesarean section	
	Episiotomy	Episiotomy	

1.3 Supporting normal birth

The guideline recognises birth as a normal physiological event which is supported by:

- A positive philosophy of care¹³ [refer to Section 1.3.1]
- Clear communication¹³ [refer to Table 2]
- Continuity of carer programs^{3,16,17,18}
- Providing continuous support^{9,19,17,20}
- One-to-one midwifery care^{9,17,21-23}
- Providing a suitable environment for birth²⁰
- Maintaining the minimal level of intervention^{9,19} which is compatible with safety
- Freedom of movement^{9,19}
- Food and fluid intake^{9,20,24}
- In second stage:
 - Enabling the woman's choice of position^{25,26}
 - Encouraging spontaneous pushing in non-supine positions^{9,19}
- Keeping mothers and babies together after birth with support for breastfeeding initiation^{9,19}
- Asking two key questions:
 - Is the care woman centred?¹⁷
 - Is the care safe?¹⁷

1.3.1 Communication culture

A positive philosophy of care, towards normal birth, demonstrated by a professional culture with clear communication is essential to the delivery of high quality care, which avoids unnecessary perinatal morbidity and mortality, and improves normal birth rates¹³ [refer to Table 2].

Communication culture		
Woman centred	 Present information in a manner that promotes normal birth³ 	
	• Share and discuss information with the woman to enable informed choice and consent ²⁰ :	
	 Respect the woman's right of informed refusal⁹ and choice of care: 	
	 Refer to ACM National Midwifery Guidelines for Consultation and Referral² 	
	 Providing emotional and physical support to the woman 	
	$\circ~$ Use supportive language to build confidence in the birthing woman	
	Respect and implement birth plan	
	• Involve the woman in clinical handovers, including referral to another clinician or at the end of a shift	
	 Collaboration [refer to the NHMRC National Guidance on Collaborative Maternity Care¹] 	
	 A shared positive attitude towards normal birth¹³ 	
	• A shared trust and respect between disciplines ^{1,13}	
Professional	 Positive leadership¹³ and organisational support¹ 	
culture	Commitment to evidence-based practice ^{1,13}	
	 Integration of service network^{1,13} 	
	 An ability to manage change¹³ and conflict 	
	• Timely support for junior maternity care professionals ¹³	
	Ensure contemporaneous record-keeping	
	• Examples of multidisciplinary communication tools include Queensland Government:	
	 Pregnancy Health Record (PHR)²⁷ 	
	 Antenatal assessment form 	
Documentation	 Early labour record 	
	 Intrapartum record [refer to Appendix A]: 	
	 The intrapartum record should remain in close proximity to the woman 	
	\circ Vaginal birth clinical pathway	
	 Neonatal clinical pathway 	
	 Personal Health Record 	

1.3.2 Antenatal planning

Planning for birth occurs antenatally and is associated with improved outcomes for the woman and her newborn.²⁸ To promote normal birth:

- Provide antenatal care as per the PHR²⁷
- Discuss and provide written information, when available, on:
 - The benefits of and factors promoting normal birth³ [refer to Sections 1.3 and 1.3.1]
 Available models of care^{27,18}:
 - Wherever possible provide continuity of carer close to the woman's home¹⁷
 - Place of birth⁹
 - Birth plans²⁷ and preferences
 - Cultural requirements for birth²⁹
 - Support person(s)²⁷
 - Pain management support^{9,27}
 - Previous birth experience

1.3.3 Indications for additional care

During the normal birth process, it is necessary to be able to competently assess maternal and fetal well-being and also assess progress. Indications for additional care [refer to Appendix B] can emerge at any point in time and some indications may not be readily identified. Subtle and separate clinical changes, indicating an unexplained variance from the normal birth process, may be symptoms of a high risk condition such as pre-eclampsia. Unexpected emergency situations may also develop and it is necessary to be prepared for these. When indications for additional care are identified and / or there is concern regarding progress:

- Increase frequency of recommended observations as required
- Discuss, consult, refer and manage according to:
 - The local risk management framework¹⁷
 - Scope of professional guidelines:
 - ACM National Midwifery Guidelines for Consultation and Referral² approved for use by Queensland Health 2011
 - The Royal Australian and New Zealand College of Obstetricians and Gynaecologists Standards of Maternity Care in Australia and New Zealand²³ and Guideline: Suitability Criteria for Models of Care and Indications for referral within and between Models of Care, College Statement: C-Obs 30³⁰
- Document details, including communication
- It may not be appropriate to continue following the Normal birth guideline. However, within the context of safety, measures should be taken to support and promote normal birth where possible.

1.4 Service requirements

Refer to the Clinical Services Capability Framework for Public and Licensed Private Health Facilities version 3.0 for service level criteria and essential considerations for Queensland Maternity¹⁷ and Neonatal Services.³¹

2 Initial assessment

Initial assessment enables appropriate planning for ongoing care. The initial assessment is important to identify the phase and stage of the birth process. Ensure the woman is settled and comfortable in the environment before commencing the assessment [refer to Table 3 to Table 5].

If indications for additional care [refer to Appendix B] are found – refer to Section 1.3.3.

2.1 Initial maternal assessment

Table 3. Initial maternal assessmer	Table 3.	le 3. Initia	l maternal	assessmer
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Element	Maternal assessment		
	Reason for presentation		
	 Verbal history⁹ including: 		
	 ○ Fetal movement 		
	 Care provided by health practitioners, including complementary medicine 		
	practitioners, not recorded in the PHR or medical notes		
	 PHR, confirming birth plan and support person(s)⁹ 		
	 Gestational age – review PHR for the estimated due date, check ultrasound scan (US) dates²², the last normal menstrual period and fundal height 		
	• Past history – obstetric, gynaecological, medical, surgical ²² , psychosocial ⁹		
History	 Medications²² – including complementary medicines 		
	Allergies		
	 Pregnancy complications²² 		
	• Investigation results ²² :		
	\circ US – note placental site fetal growth amniotic fluid index		
	 Group B streptococcus (GBS) status – if assessed 		
	 Blood Group and antibody screen 		
	• Full blood count (FBC)		
	 Glucose challenge test – if applicable 		
	 Infectious disease screen 		
Contractions	• Time commenced and contraction pattern – assess duration, strength,		
Contractions	frequency and resting tone for 10 minutes		
	Temperature, pulse, respiration rate (RR), BP		
Physical	 Assess nutritional and hydration status 		
	General appearance		
	 Fundal height – appropriate for gestational age?⁹ 		
A.L. J	 Lie, position, presentation and engagement⁹ 		
Abdominal	Observe for abdominal scarring ²⁵		
assessment	 Contractions⁹ [refer to Contraction row above] 		
	 Fetal heart rate (FHR) auscultation [refer to Table 4] 		
Vaginal loss	 Nil, show, liquor, blood⁹ – note volume 		
	 If membranes have ruptured – observe colour, odour, consistency 		
VE	 Refer to Table 5. Vaginal examination (VE) 		
	Response to contractions ²⁵		
Discomfort and	 Discuss options, including advantages and disadvantages; 		
pain	 Reassure, promote and reinforce coping strategies⁹ 		
P	• Note preference for pain relief – refer to birth plan		
	Consider history available support current stressors ³² and behavioural factors		
Psychosocial	Soarch Unborn Child High Dick Alort Degister or Toolkit		
	Search Onborn Child High Risk Alert Register of Toolkit		
	Date, time and reason for presentation Assessment and care using appropriate forms, for example:		
Documentation	 Assessment and care using appropriate forms, for example. If not in labour – Antenatal assessment form 		
	 I not in labour – Antenatal assessment form I atent first stage – Early labour record 		
	\circ Active labour – Intrapartum record		
	Date and time contractions commenced		
	Date and time active first stage commenced ^{9,25}		
	Date and time of spontaneous rupture of membranes		
	Communication, including consultation and referral, and management plan		
L			

2.2 Fetal assessment

Table 4. Fetal assessment

Element	Fetal assessment
Clinical practice points	 Admission cardiotocography is not recommended in low risk pregnancy⁹ Assess fetal movement during initial assessment²⁵ Auscultate FHR: Towards the end of and for at least 30 seconds after the contraction has finished²² Following spontaneous rupture of membranes Differentiate from maternal pulse⁹ Using a handheld Doppler ultrasound²² Refer to Guideline: Intrapartum fetal surveillance³³

2.3 Vaginal examination

Table 5. Vaginal examination

Element	Maternal assessment
Indication	May assist in deciding stage of labour:
	 Seek maternal consent to attend within 4 hours of admission
	Maternal consent not obtained
	Antepartum haemorrhage
Contraindication	 Ruptured membranes and not in labour²² – refer to:
Contraindication	 Guideline: Early onset Group B streptococcal disease³⁴
	 Guideline: Induction of labour³⁵
	Placenta praevia
	Review history ³⁶
	 Review the most recent US results³⁶
Prior to vaginal	• Consider ⁹ :
examination	 Is a VE necessary?
examination	 Will a VE aid in decision-making?
	 If indicated, explain the reason and process⁹ and seek informed consent⁹
	 Perform abdominal examination and FHR auscultation³⁶
	 Protect privacy, dignity and comfort⁹
	 Communicate with the woman³⁶
	Observe non-verbal cues ³⁶
	Perform VE between contractions
	 Assess general appearance of perineal area
	Note:
	 Position of cervix – posterior, mid, anterior
During vaginal	o Dilatation
examination	• Effacement
	 Consistency – soft, medium, firm Application of proceeding part
	 Application of presenting part Membranes intact / no membranes felt
	 Liquor – colour, amount, odour
	 Presenting part
	• Station (-3 to +3)
	 Caput and moulding
	 Position-sutures, fontanelles and attitude of presenting part
Following vaginal	 Explain findings and their associated significance⁹ (if not explained during VE)
examination	Auscultate FHR
	Document findings

3 Supportive care

Aspects of intrapartum supportive care are considered in Table 6 and Table 7.

Table 6. Supportiv	e care
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Element	Consideration
Discomfort and pain	Refer to Section 4 Discomfort and pain
Environment	 The environment impacts on the experience of normal birth^{37,38} Maintain professional collaborative relationships Home like settings have been associated with³⁷: Improved outcomes including: Increased likelihood of spontaneous vaginal birth Less analgesia Increased maternal satisfaction Increased breastfeeding rates at 6-8 weeks When safe – alter lighting and noise level as per woman's wishes³⁹ To support the woman's ability to feel in control, factors for consideration include⁴⁰: Minimal⁴⁰ or concealed 'medical' equipment in the room Appropriate use of fetal surveillance⁴⁰: Refer to Guideline: Intrapartum fetal surveillance³³ Room equipment designed to promote mobility and active position change⁴⁰: Consider positioning bed to a less centralised position as able Supporting the woman's choice of complementary therapies⁴⁰ [refer to Section 4.1.2] Respecting the woman's right to privacy⁴⁰ Ensuring the woman feels safe and non-inhibited ⁴⁰
Mobilisation and position	 Minimising unnecessary interruptions⁴⁰ Mobilisation may increase the woman's sense of control through self-regulated distraction⁴¹ Encourage the woman to walk freely during the first stage²⁵ Walking and upright positions compared to supine positions in the first stage are associated with²⁶: Reduction in the length of the first stage by approximately 1 hour Decreased use of epidural analgesia Encourage the woman to find positions that are comfortable and avoid long periods supine²⁶ Birth balls may assist in finding a comfortable position, promoting optimal fetal position and non weight bearing mobility⁴² For each stage, support the woman's choice of position (left lateral, squatting, kneeling, standing supported by support person)²⁵
Nutrition	 For second stage considerations [refer to Table 19] There are wide variations in women's wishes for food and oral fluid during the birth process²⁴ For women at low risk, restricting oral fluid and food intake has shown no improvement on birth, maternal or fetal outcomes,^{9,24} therefore: Support the woman to eat and drink as she chooses^{9,24} Offer frequent sips of water or preferred oral fluid between contractions Intrapartum isotonic and carbohydrate drinks: May not be more beneficial than drinking water²⁴ Were associated with an increased caesarean section rate in one study⁴³ If opioids are administered, consider prophylactic antiemetics⁴⁴

3.1 Support person

Table 7. Support person

Element	Consideration
Continuous support	 Continuous support during labour has shown⁴⁵: Women were less likely to: Use intrapartum analgesia Report dissatisfaction Have an instrumental vaginal or caesarean section (CS) birth Require regional analgesia Have a newborn with a low 5 minute Apgar score Labours were shorter (by 0.58 hours) Is more effective when provided: By a woman (e.g. a doula) who is not part of the woman's social network or hospital staff, and also has experience and training in providing birth support and advocacy In settings where epidural analgesia is not readily available Increased maternal satisfaction when support is provided by a chosen family member or friend
Professional	 Support midwifery continuity of carer programs.^{3,17,21} It has been shown: Women were less likely to experience²¹: Regional analgesia Episiotomy Instrumental birth, although no statistical difference in CS birth Women were more likely to experience²¹: No intrapartum analgesia / anaesthesia Spontaneous vaginal birth Feeling in control during childbirth Attendance at birth by a known midwife Initiation of breastfeeding There was no statistical differences in overall fetal / neonatal death²¹ Newborns were likely to experience a shorter length of hospital stay²¹ Ensure supportive one-to-one care⁹ Except for short periods, or at the woman's request, a woman in established labour should not be left alone⁹ Attend to the physical and emotional needs of the woman⁹ Ensure collaboration [refer to the NHMRC National Guidance on Collaborative Maternity Care¹]

4 Discomfort and pain

Information and discussion on discomfort and support strategies to manage and work with pain in the antenatal period enables informed choices prior to labour beginning [refer to Section 3]. Discuss the benefits and risks of all strategies (non-pharmacological and pharmacological) to enable informed choice and consent.

During labour, it is important to recognise and respond appropriately to changes in the woman's ability to manage her discomfort and pain. Communication, including positive language and encouragement, and a flexible approach are necessary to enable the woman to feel in control.

4.1 Non-pharmacological support

For a non-comprehensive list of non-pharmacological methods of discomfort and pain management refer to Table 8 to Table 10. For considerations of supportive care refer to Table 6 and Table 7.

Therapy	Consideration
Breathing and relaxation	May significantly reduce pain ⁹
	 Does not adversely affect maternal or newborn outcomes⁹
Complementary and alternative therapy	 Refer to Table 10. Complementary and alternative therapy
Heat therapy	 Superficial heat can be obtained from hot packs, hot moist towels, heated silica gel packs, warm towels, baths and showers Application of perineal warm packs in the second stage may assist in relieving pain and discomfort⁴⁶ [refer to Guideline: Perineal care⁴⁷] Cautions: Be aware of contraindications to heat application (e.g. impaired circulation) Ensure close and regular monitoring to avoid burning Provision of heat aids and regulation of temperature as determined by local practice guidelines
Hydrotherapy	Consider warm showersRefer to Table 9. Water immersion
Massage	 Examples include firm sacral pressure; effleurage; shoulder, back and foot massage⁴⁸ Significantly reduces intrapartum pain^{9,49} Women in the first stage report less anxiety with massage⁴⁹ No effect found in⁴⁹: Duration of labour Satisfaction with birth experience Maternal or newborn outcomes⁹ Support person should ideally be instructed in massage Refer to Guideline: Perineal care⁴⁷ for perineal massage considerations
Mobilisation and position	Refer to Table 6. Supportive care
Sterile water injections	 Intradermal injection into the lower sacral region is associated with intense stinging⁹ at the injection site lasting for approximately 2 minutes⁵⁰ Associated with reduced pain measurement scores, for 10 minutes to 2 hours, for lower back pain^{50,51} May be repeated as required⁵² Single sterile water injection may be as effective as the 4 injection technique^{50,51,53,54} May be associated with lower CS rates⁵⁵ Injections should be administered by maternity care professionals assessed as competent as per local policy⁵²
Transcutaneous electrical nerve stimulation (TENS)	 Women may report experiencing less severe pain, however the evidence is inconsistent⁵⁶ May be helpful for women in latent first stage⁹ Has not been found to be helpful for women in active first stage⁹ No effect on analgesia use or pain scores⁵⁶ The majority of women would choose to use TENS again⁵⁶

Table 8. Non-pharmacological support

4.1.1 Water immersion

Table 9. Water immersion

Water immersion	
	 Significantly reduces epidural / spinal analgesia requirements⁵⁷
	 No significant effect on labour duration, operative birth rates or neonatal
	Potential for unintended water birth ⁵⁸
Benefit / risk	 Benefits of water immersion may be confounded by the⁵⁷.
	 Associated woman centred environment and
	 The interaction of the woman and caregiver who is providing one-to-one
	care
	• The inclusion criteria ⁵⁹ are similar to the WHO definition for normal birth ²⁵
	• Antenatal:
	 Low risk pregnancy⁵⁹
	 Cephalic presentation⁶⁶ Creater than 37 completed weeks⁵⁹
	 Singleton⁵⁹
Inclusion criteria	 Body mass index less than 35 at term⁵⁹
	• Intrapartum ⁵⁹ :
	 Remaining low-risk throughout the birthing process
	• Not contraindicated ⁵⁹ :
	 Positive Group B streptococcus swabs
	\circ Ruptured membranes greater than 18 hours, if IV antibiotic course has
	commenced
	Written informed consent, obtained antenatally is encouraged ³³
	 To avoid delay in progress, ensure labour is established (preferably greater than 5 cm) prior to entering the water^{57,59}
	 Ensure the woman has not received narcotic analgesia within previous 4 hours⁵⁹
	• Maternity care professionals, assessed as competent by the local facility and
	woman ⁵⁹ throughout water immersion
Clinical practice points	 Monitor maternal and water temperature hourly⁹ – other observations as per guideline:
•	\circ Water temperature should not be above 37.5 $^{\circ}C^{9}$, aiming for 35-37 $^{\circ}C^{59}$
	 If a risk factor develops, assist the woman to leave the water⁵⁹
	 Be prepared for possible unintended water birth⁵⁸:
	 Ensure a second birth attendant is immediately available, as two attendants required to attend to woman experiencing a water birth⁵⁹
	 Ensure bath and birthing pool is cleaned appropriately^{9,59}
	 Assess outcomes using ongoing audit and evaluation⁵⁹
	Refer to Table 21. Water birth

4.1.2 Complementary and alternative therapy

Table 10. Complementar	y and alternative	therapy
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Acupressure • May not reduce pain of labour ⁴⁹ • No difference in use of pharmacological pain relief ⁴ • Associated with reduction in use of ^{4,49} • Acupuncture • Associated with a shorter labour duration ⁴⁹ • Acupuncture • Associated with a shorter labour duration ⁴⁹ • Associated with a shorter labour duration ⁴⁹ • Obes not adversely affect maternal or newborn outcomes ^{9,49} • Does not adversely affect maternal or newborn outcomes ^{9,49} • Commonly used essential oils include bergamot, jasmine, lavender, peppermint, rose, and lernom ⁶⁰ • Avoid inappropriate perfusion of essential oils into surrounding areas: • Encurage localised vapour or dermal administration rather than use of oil vaporisers: • Use according to manufacturer's and aromatherapist's directions oil vaporisers: • Use according to manufacturer's and aromatherapist's directions of trais of premature labour • Support the woman's choice ⁹ • Insufficient evidence to support effectiveness ⁶¹ • Insufficient evidence to support effectiveness ⁶¹ • Insufficient evidence to support effectiveness ⁶² • Insufficient evidence to support effectiveness ⁶² • Identified as the most commonly used complementary therapy in overseas studies ^{63,64} Homeopathy • Aromatherapity • A commonly used therapy includes Caulophylum ⁶⁹ which has been associated with shorter labour duration ⁶⁶	Complementary and alternative therapy considerations	
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Acupuncture • Pharmacological pain relief • Augmentation • Associated with a shorter labour duration ⁴⁹ • Does not adversely affect maternal or newborn outcomes ^{9,49} • Does not adversely affect maternal or newborn outcomes ^{9,49} • Commonly used essential oils include bergamot, jasmine, lavender, peppermint, rose, and lemon ¹⁰ • Avoid inappropriate perfusion of essential oils into surrounding areas: • Encourage localised vapour or dermal administration rather than use of oil vaporisers: • Use according to manufacturer's and aromatherapist's directions • Ensure appropriate use of clary sage (Salvia sclarea) as may increase strength of uterine contractions ⁹⁰ • May adversely affect other women in birth suite with a uterine scar and / or at risk of premature labour • Support the woman's choice ⁹ Biofeedback • Insufficient evidence to support effectiveness ⁹¹ • Insufficient evidence to support effectiveness ⁹² • Identified as the most commonly used complementary therapy in overseas studies ^{83,54} • A commonly used therapy includes Caulophyllum ⁶⁵ which has been associated with shorter labour duration ⁶⁶ • Any have a positive effect on anxiety, although evidence not strong ⁶⁸ • May have a positive effect on anxiety, although evidence not strong ⁶⁸ • May have a positive effect on anxiety, although evidence not strong ⁶⁸ • No evidence to support or deny the use in labour ⁸⁰ • Antenatal preparation requiref ⁴⁹ • Associated with marker requiref ⁴⁹ • Associated with marker requiref ⁴⁹ • Associated with requeref ⁴⁰ • No evidence to support or deny the use in labour ⁸⁰ • Antenatal preparation requiref ⁴⁹ • Antenatal preparation requiref ⁴⁹		 Associated with reduction in use of^{9,49}
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• Does not adversely affect maternal or newborn outcomes ⁴⁴⁻⁹ • Insufficient evidence to support effectiveness ⁴⁹ • Commonly used essential oils include bergamot, jasmine, lavender, peppermint, rose, and lemon ⁶⁰ • Avoid inappropriate perfusion of essential oils into surrounding areas: • Encourage localised vapour or dermal administration rather than use of oil vaporisers: • Use according to manufacturer's and aromatherapist's directions • Ensure appropriate use of clary sage (Salvia sclarea) as may increase strength of uterine contractions ⁶⁰ • Support the woman's choice ⁹ Biofeedback • Insufficient evidence to support effectiveness ⁶¹ • Insufficient evidence to support effectiveness ⁶¹ • Insufficient evidence to support effectiveness ⁶² • Identified as the most commonly used complementary therapy in overseas studies ^{53,64} • Acommonly used therapy includes Caulophyllum ⁶⁵ which has been associated with shorter labour duration ⁶⁹ [refer to Table 11] Mind-body interventions • Aim of alleviating the fear-tension-pain cycle by preventing or treating anxiety ⁶⁷ • Include autogenic training, auto-suggestion, biofeedback, hypnosis, imagery, meditation, prayer, relaxation therapy, tai chi and yoga ⁶⁶ • Music and Audio • Whilst there is no evidence to support use as a primary pain relief ⁶⁹ , it may decrease the distress and sensation associated with pain ⁹ and therefore should be supoported if the woman choosee music therapy ⁴ </th <th></th> <td>Associated with a shorter labour duration⁴⁹</td>		Associated with a shorter labour duration ⁴⁹
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Aromatherapy Encourage localised vapour or dermal administration rather than use of oil vaporisers: Use according to manufacturer's and aromatherapist's directions Ensure appropriate use of clary sage (Salvia sclarea) as may increase strength of uterine contractions⁶⁰		Avoid inappropriate perfusion of essential oils into surrounding areas:
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Support the woman's choice ⁹ Biofeedback• Insufficient evidence to support effectiveness ⁶¹ Homoeopathy• Insufficient evidence to support effectiveness ⁶² • Identified as the most commonly used complementary therapy in overseas studies ^{63,64} Homoeopathy• A commonly used therapy includes Caulophyllum ⁶⁵ which has been associated with shorter labour duration ⁶⁶ [refer to Table 11]Mind-body 		 May adversely affect other women in birth suite with a uterine scar and / or at risk of premature labour
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Homoeopathy• Identified as the most commonly used complementary therapy in overseas studies ^{63,64} • A commonly used therapy includes Caulophyllum ⁶⁵ which has been associated with shorter labour duration ⁶⁶ [refer to Table 11]Mind-body 		Insufficient evidence to support effectiveness ⁶²
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Mind-body interventions• Include autogenic training, auto-suggestion, biofeedback, hypnosis, imagery, meditation, prayer, relaxation therapy, tai chi and yoga68Music and Audio• May have a positive effect on anxiety, although evidence not strong68Music and Audio• Whilst there is no evidence to support use as a primary pain relief49, it may decrease the distress and sensation associated with pain9 and therefore 		 Aim of alleviating the fear-tension-pain cycle by preventing or treating anxiety⁶⁷
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Self-hypnosis • Associated with reduction in use of ⁴⁹ : • Pharmacological pain relief including epidural • Oxytocin augmentation • Associated with increased rate of vaginal birth ⁴⁹ • Can be used alone or as an adjunct to enhance other analgesics ⁴⁹ • Hypnobirthing ⁷⁰ : • Involves self-hypnosis with guided imagery • Use of positive terminology and thoughts, music and visualisation to promote relaxation Clinical practice points		Antenatal preparation required ⁴⁹
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Self-hypnosis • Associated with increased rate of vaginal birth ⁴⁹ • Can be used alone or as an adjunct to enhance other analgesics ⁴⁹ • Hypnobirthing ⁷⁰ : • Involves self-hypnosis with guided imagery • Use of positive terminology and thoughts, music and visualisation to promote relaxation Clinical practice points		 Oxytocin augmentation
 Can be used alone or as an adjunct to enhance other analgesics⁴⁹ Hypnobirthing⁷⁰: Involves self-hypnosis with guided imagery Use of positive terminology and thoughts, music and visualisation to promote relaxation Clinical practice points Refer to Table 11. Complementary and alternative therapy – clinical practice points 	Self-hypnosis	 Associated with increased rate of vaginal birth⁴⁹
 Hypnobirthing⁷⁰: Involves self-hypnosis with guided imagery Use of positive terminology and thoughts, music and visualisation to promote relaxation Clinical practice points Refer to Table 11. Complementary and alternative therapy – clinical practice points 		• Can be used alone or as an adjunct to enhance other analgesics ⁴⁹
O Involves self-hypnosis with guided imagery O Use of positive terminology and thoughts, music and visualisation to promote relaxation Clinical practice points • Refer to Table 11. Complementary and alternative therapy – clinical practice points		• Hypnobirthing ⁷⁰ :
 Use of positive terminology and thoughts, music and visualisation to promote relaxation Clinical practice points Refer to Table 11. Complementary and alternative therapy – clinical practice points 		 Involves self-hypnosis with guided imagery
Clinical practice points • Refer to Table 11. Complementary and alternative therapy – clinical practice points		 Use of positive terminology and thoughts, music and visualisation to promote relaxation
points points points	Clinical practice	Refer to Table 11. Complementary and alternative therapy – clinical practice
	points	points

4.1.3 Complementary and alternative therapy – clinical practice

Complementary and alternative therapy	
Evidence	 Evidence supporting complementary and alternative therapies are either limited by size and / or insufficient scientific study⁴⁹
Clinical practice points	 Women may independently choose complementary and alternative therapy as a pain management option Although therapy may not be supported by rigorous scientific research, support the woman's choice of these pain / fear / anxiety reducing strategies It is important the woman and maternity care professional are aware of the composition and possible interactions of chosen therapies and of the possible impact on the fetus / newborn Document therapy and effect Complementary or alternative therapy providers should be: Registered (e.g. Australian Register of Homoeopaths), or trained (not applicable to music and audio therapy), and / or Accredited / recognised by the local facility Use pre-approved equipment as per local requirements

Table 11. Complementary and alternative therapy – clinical practice points

4.2 Pharmacological

Assess the woman prior to prescribing and administering analgesia. Recognising cervical dilation may not be predictable or linear, individual circumstances (including the woman's coping ability, weight and stage of labour) and the birth plan need to be considered [refer to Table 12 and Table 13].

4.2.1 Nitrous oxide

Table 12. Nitrous oxide

Nitrous oxide (N ₂ O	
Benefit / risk	 Acts quickly⁹ and is rapidly eliminated⁷¹ Does not affect fetus^{9,71} Can be used with water immersion⁵⁹ May reduce pain sensation^{9,71} Associated with nausea, vomiting, dizziness, euphoria, disorientation, generalised tingling and sedation⁷¹ Effectiveness is variable⁷²
Clinical practice points	 Avoid use of oil based lubricants and alcohol based substances on equipment used to deliver the N₂O⁷¹ Assess for contraindications (e.g. B₁₂ deficiency⁷¹) Self administered – only the woman to hold mouthpiece or mask Careful coaching to³⁹: Commence breathing N₂O with early onset of contraction or 30 seconds prior when possible Breathe deeply at a normal rate Cease breathing N₂O when the contraction eases Commence with 50% N₂O mixed with 50% oxygen (O₂)⁷¹: Monitor effect and titrate according to pain level and gas sensitivity N.B. The maximum strength of 70% N₂O is generally associated with obstetrical anaesthesia rather than analgesia⁷¹ Observe for signs of overdose (e.g. decreased respiratory effort) Caution with the use of an opioid – the woman may more readily become unconscious^{71,72} Maternity care professionals should seek further information and be aware of indications, contraindications, administration, adverse effects, storage and operating requirements, the risks associated with the prolonged exposure and the precautions and actions to be taken in an emergency

4.2.2 Opioids – Morphine and Pethidine

Table 13. Morphine and Pethidine analgesia

Morphine and Pethidine considerations	
Benefit / risk	 Provides limited pain relief during labour^{9,73}
	 Side-effects of maternal drowsiness, nausea and vomiting^{9,73}
	 Newborn – no clear evidence of adverse effects⁷³, however:
	 The newborn may have respiratory depression and drowsiness which may interfere with breastfeeding^{9,74,48}
	 Morphine preferred to Pethidine^{39,48}, as the metabolite of IM Pethidine has a longer half life in the newborn, (up to 62 hours^{74,48}) compared to IM Morphine (up to 13.9 hours⁷⁴)
	 Pethidine has been associated with impaired breastfeeding behaviour^{74,48,75,76}
Clinical practice points	 Review birth plan – the woman may wish to initiate the request for pharmacological pain relief – offering an opioid may undermine the woman's plan to birth without analgesia⁷⁴ Administrative with an anti-ametic⁹
	 Due to duration of action – avoid administration if birth is anticipated within 4 hours⁴⁸
	 Water immersion is not recommended within 4 hours of opioid administration⁵⁹ or if feeling drowsy⁹
	• Following administration – observe woman and newborn for side effects ⁷⁴

5 First stage

There are two identified phases of the first stage of labour⁹:

- Latent phase [refer to Table 14]
- Active or Established labour [refer to Table 15]

The onset, progress and duration of the two phases of the first stage of labour are variable.^{9,77} This contributes to applied definitions that will not be relevant to all women.

5.1 Latent phase

During the latent phase, the woman may present to her intended birthing place or telephone the midwifery service or obstetrician for assessment and advice.

Table 14. Latent phase	Table	14.	Latent	phase
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Element	Consideration
Onset	 A period of time, not necessarily continuous, associated with: Painful contractions^{9,77}, and Some cervical change, including cervical effacement and dilatation up to 4⁹- 5^{77,78} cm
Progress	 Early labour presentation to hospital has been associated with increased birth suite admission rates of 10-30%; women becoming disappointed with progress, more likely to be admitted, and a higher likelihood of intervention⁷⁹ Women perceive a longer first stage when compared with the midwifery assessment of first stage duration⁸⁰: That is, women perceive different markers, such as the commencement of irregular contractions, as the commencement of active labour The woman may have a preference for being admitted to hospital on initial presentation⁸¹ Requesting the woman to return home may contribute to a negative experience⁸¹ There is conflicting evidence regarding subsequent intervention rates for delayed admission to hospital⁸¹: Although not detecting a difference in CS rates, later admission to birth suite has been associated with lower rates of augmentation, epidural anaesthesia and episiotomy⁸² Later admission in labour associated with an increased rate of spontaneous vaginal birth in nulliparous women⁸³
Duration	 Nulliparous women: 1.7-15 hours⁹ Generally for multiparous women, the duration is less well-defined
Clinical practice points	 Prior to discharge home – ascertain if low risk, ensure vertex presentation Offer individualised support⁹: Ensure information and reassurance needs are met⁸² Provide coping strategies for pain and discomfort⁹ – warm showers and baths¹⁰, massage and back rubs¹⁰, TENS machine¹⁰ Analgesia as required⁹ – consider Paracetamol (1 gram 6 hourly¹⁰ or 1 gram 4 hourly to a maximum of 4 grams/24 hours⁸⁵ orally) Encourage to remain at / return home⁹ – reassure latent phase is normal¹⁰ Discuss comfort strategies – resting¹⁰, hydration¹⁰, nutrition¹⁰, mobilisation¹⁰ If discharged home, provide clear instructions incorporating available support and also information on when to return to the birthing facility: Increased frequency and duration of contractions If pain or discomfort increases²⁵ and assistance with pain relief is required Vaginal bleeding²⁵ Membranes rupture²⁵ Reduced fetal movements Document assessment and instructions – commence Early labour record Telephone assessments should be available to assist with ongoing care⁸²

5.2 Active first stage

The onset of active labour has traditionally been seen as the point of cervical dilatation acceleration, associated with regular painful contractions.⁷⁷ For onset, progress, duration and diagnosis of delay refer to Table 15.

Table 15.	Progress	of active	first stage
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Consideration
Onset with:
 Regular painful contractions^{9,77}, and
 Progressive cervical dilatation from 4⁹-5^{77,78} cm
Consider all aspects of progress [refer to Clinical practice points row below]
 Cervical dilatation of 2 cm every 4 hours is acceptable^{9,86}
 This means 0.5 cm dilatation/hour is generally acceptable
 N.B. Figures concerning rates of cervical dilatation assume a normal distribution which is not applicable to labour duration⁹:
 Primiparous women dilate at an average rate of 1.2 cm/hour⁷⁷ Multiparous women dilate at a median rate of 1.9 cm/hour⁸⁶:
 The 5th percentile of multiparous women have been found to dilate at 0.5 cm/hour⁸⁶
 However physiological progress is individual:
 In multiparous⁸⁶ and primiparous⁷⁷ women, the rate of cervical dilatation tends to increase over time, alternatively
 At less than 7 cm dilatation, there may be no change in dilatation for greater than 2 hours.⁷⁷ Therefore, in a woman with no complications, physiological progress may be slower than the accepted rate of progress of 0.5 cm/hour
 At the transitional phase of 8-10 cm the woman's supportive needs increase. The woman may exhibit a number of features including shakiness, irritability, nausea and vomiting⁸⁷
Completed at full cervical dilatation ⁹
 Usually longer in nulliparous women⁹
 Increasing maternal age is associated with increased duration and incidence of prolonged labour⁸⁸
• For nulliparous women ⁹ :
 The average duration is 8 hours and is unlikely to exceed 18 hours
• For multiparous women ⁹ :
 The average duration is 5 hours and is unlikely to exceed 12 hours
Consider supportive measures to promote labour progress. Refer to:
 Section: 1.1 Woman centred care
 Section: 1.3 Supporting normal birth
 Section: 3 Supportive care
 Section: 4 Discomfort and pain
 Identify and aim to alleviate factors (e.g. fatigue, dehydration, anxiety and fear) that may interfere with the progress of labour³⁹
 Consider the maternal and fetal condition [refer to Table 16] and all aspects of progress including:
• Cervical dilatation and rate of change – 2 cm in 4 hours is acceptable ^{9,25}
• Descent and rotation of the fetal head [®]
 Strength, duration and frequency of contractions* Pority
\circ rainy
\sim Slowing of progress in the multiparous woman ⁹
Refer to Table 17. First stage diagnosis of delay

5.2.1 Active first and second stage ongoing assessment

In addition to Table 15, further assessment and care considerations are found in Table 16. Alter the frequency of observations as indicated by maternal and fetal assessment. Refer to Section 2 Initial assessment for further points related to each element and Appendix A for Partogram information.

Element	First stage	Second stage
FHR (Differentiate from maternal pulse)	Latent: • 4 hourly (if admitted to hospital) <u>Active</u> : • Intermittent auscultation ⁸⁹ • ¹ ⁄ ₄ - ¹ ⁄ ₂ hourly ^{39,89}	Passive • ¼ hourly ³⁹ <u>Active</u> • ≤5 minutely ⁸⁹ • With every contraction ⁸⁹
Physical		
Temperature	• 4 hourly ^{9,25}	• 4 hourly
Water immersion	 Hourly maternal temperature⁵⁹ Hourly water temperature⁵⁹ 	 Continuous water temperature⁵⁹ Document ½ hourly⁵⁹
Pulse / RR	Latent: • 4 hourly ²⁵ (if admitted to hospital) <u>Active</u> : • ½ hourly	 ¹/₂ hourly When indicated (e.g. to differentiate from FHR with suspected fetal bradycardia)¹⁰
BP	4 hourly	• 4 hourly
Abdominal palpation	 If indicated (e.g. concerns regarding progress) Prior to VE⁹⁰ 	If indicated
Contractions	 <u>Latent</u>: 4 hourly (if admitted to hospital) <u>Active</u>: ¹/₂ hourly for 10 minutes⁹ Expect 3-5 contractions in 10 minutes, lasting 60 seconds, with ideally 60 seconds of muscle relaxation 	Continuous assessment
Vaginal Examination	• 4 hourly ^{9,25} / if indicated (e.g. concerns regarding progress)	 If indicated (e.g. concerns regarding progress)
Vaginal loss	Hourly	Hourly
Nutrition and hydration	Ongoing assessment of hydrationOffer oral fluids regularlyFood as desired	 Ongoing assessment of hydration Offer oral fluids between contractions
Bladder	 Monitor and encourage 2 hourly emptying 	Monitor and encourage emptying
Discomfort and pain	Ongoing assessmentCoping strategiesEncourage positioning and mobility	Ongoing assessmentCoping strategiesConsider maternal position
Supportive care	 Ongoing⁹ with one-to-one support by support person / midwife 	 Ongoing assessment⁹ and one-to one midwifery care
Documentation	 Time active labour commenced Time of rupture of membranes noting colour²⁵, odour, consistency, volume Observations 	 Time second stage, passive and active, commenced Birth attendees
	 Communication including consultation a Name and time of persons entering and 	nd referral leaving room

Table 16. Normal birth care and observations

5.2.2 Active first stage indications for additional care

Indications for additional care may occur in the first stage of labour [refer to Section 1.3.3 and Appendix B].

Detection of delay in labour is important as primary postpartum haemorrhage (PPH) and infection are associated with long labours.⁹¹ Diagnosis of delay in the first stage is considered further in Table 17.

Table 17. First stage diagnosis of delay

Indication	Consideration
Diagnosis of	 Consideration Consult with the multidisciplinary team / obstetrician² Consider if clinical intervention is required. Assess: All aspects of progress⁹ [refer to Table 15] Maternal condition Fetal condition: Refer to Guideline: Intrapartum fetal surveillance³³ The woman's emotional state No clinical intervention is required when the progress of labour falls within normal maternal and fetal observations and assessment⁹ Considerations to support progress towards normal birth include:
delay	 Birthing environment [refer to Table 6] Mobilisation and upright positions²⁶ [refer to Table 6] Ensuring continuous support⁹ Ensuring effective pain relief⁹ Water immersion [refer to Table 9] Artificial rupture of membranes (ARM) and associated implications [refer to Appendix C] Advise repeat VE in 2 hours If, as per local policy, an intrapartum record / partogram incorporating alert and action lines is used – refer to Appendix A

6 Second stage

There are two identified phases of the second stage, passive and active. Refer to Table 18 for progress of the second stage.

Table 18.	Progress	of second	stage
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Element	Consideration
Onset	 Full dilatation The passive phase⁹ is defined by: Full dilation of cervix, and an Absence of involuntary, expulsive contractions The active stage⁹ is defined by: Full dilatation of cervix, and Expulsive contractions
Progress	 Progress in the second stage includes flexion, rotation and descent of the fetal head²²
Duration	 Completed with birth of the baby [refer to Section 8] The mean duration of second stage is increasing⁵ It is important to note that the duration of the second stage figures are based on standard deviation calculations. This assumes a normal distribution, which is not applicable when considering durations of the stages of labour⁹ Nulliparous women: From commencement of the active second stage: Birth is expected within 2½ hours⁹ Multiparous women: From commencement of the active second stage: Birth is expected within 1 hour⁹
Clinical practice points	 Consider measures to protect, promote and support normal birth. Refer to: Table 19. Second stage care and assessment: Rather than time limits, base care on: Maternal and fetal condition Progress and descent of the fetal head Delay pushing if there is no urge to push⁹² Continue ongoing assessment [refer to Table 16] Passive phase – reassess and consult² obstetrician^{9,22} if no urge to push in: Nulliparous woman – 1 hour⁵ Or if no evidence of progress and descent of the head in one hour Multiparous woman – 1 hour⁹ Active stage – reassess and consult² obstetrician^{9,22} if birth is not imminent in: Nulliparous woman – 2 hours⁹ Multiparous woman – 1 hour⁹ Total duration of second stage – reassess and consult² obstetrician^{9,22} if birth is not imminent after: Nulliparous woman – 3 hours^{5,9} Multiparous woman – 2 hours^{5,9}

6.1 Birthing

Aspects for support of the woman in the second stage are considered in Table 19 to Table 21. Oneto-one midwifery care is essential during the second stage.¹⁷ As a safety requirement, a second clinician should be immediately available at the time of birth.¹⁷

6.1.1 Care aspects in second stage

Table 19. Second stage care and assessment

Element	Consideration
Environment	Refer to Table 6. Supportive care
Maternal position	 Encourage the woman to find a comfortable position^{9,25}, which enhances pushing efforts⁵ Discourage from lying supine or semi-supine⁹ Use of an upright or lateral position compared with a supine or lithotomy position is associated with⁹³: A shorter second stage Fewer assisted births Fewer episiotomies and assisted vaginal births An increase in second degree perineal tears Reduced reporting of severe pain Fewer non-reassuring FHR patterns Increased estimated blood loss greater than 500mls: This may be associated with more accurate measurement due to positioning Encourage frequent changes of position in the situations of⁵: Slow descent of the presenting part Fetal malpresentation
Maternal bearing down / pushing	 Delay pushing until the woman has the urge to push⁹² In presence of a reassuring maternal and fetal condition and with progress and descent of the presenting part, pushing may be delayed in⁵: Nulliparous woman for up to one hour Multiparous woman for up to one hour Ensure bladder is empty²⁵ Encourage spontaneous pushing Support the woman's involuntary bearing down efforts²⁵ Directed pushing incorporating the Valsalva manoeuvre should not occur due to associated adverse effects (e.g. impaired maternal fetal gas exchange)^{5,94} If pushing ineffective, offer support, encouragement and position change Consider minimising active pushing around the time of crowning⁴⁷
Nuchal cords	 Are rarely associated with neonatal mortality or morbidity⁹⁵ Handling and stretching the cord may: Interrupt the normal physiology of birth⁹⁶ Stimulate the umbilical arteries to vasoconstrict and reduce blood flow to the newborn⁹⁷
Observations	Refer to Table 16. Normal birth care and observations
Perineal care	 Refer to Table 20. Perineal care – second stage Refer to Guideline: Perineal care⁴⁷
Water birth	Refer to Section 6.1.3 Water birth

6.1.2 Perineum

Table 20. Perineal care – second stage

Second stage perin	neal considerations
	 Hands-on: The accoucheur's hands are used to provide light pressure on the baby's head, [to gauge and control rapid expulsion], to facilitate increased flexion, to support ('guard') the perineum, and to use lateral flexion for the birth of the shoulders⁹⁸
Approach	 Hands-poised (or off): The accoucheur's hands are poised, prepared to provide light pressure on the baby's head in case of rapid expulsion but not to touch the head or perineum otherwise and to allow spontaneous delivery of the
	 shoulders⁹⁸ Selection of 'hands-on' or 'hands-off' approach is decided by the woman and accoucheur Hands-off / hands-poised approach:
	 If rapid expulsion is occurring, slow by applying light pressure to the newborn's head There is insufficient evidence to support one approach in preference to the other [refer to Guideline: Perineal care⁴⁷]
Protective factors	 Factors found to be protective against severe perineal trauma include^{99,100}: Warm compress use May also alleviate pain and provide comfort⁴⁶ Intrapartum perineal massage For techniques associated with perineal massage and perineal warm packs – refer to Guideline: Perineal care⁴⁷ Controlled birth of the head between contractions may reduce risk of perineal injury¹⁰¹ Not recommended⁹: Lidocaine spray Routine episiotomy²²

6.1.3 Water birth

There is no evidence of increased adverse effects on the woman or fetus / newborn from second stage immersion in water or waterbirth.⁵⁷ Whilst there is no clear, adequately powered, evidence to advocate water birth, there is also no clear evidence to not support a woman's choice of birthing in water.^{9,57} Considerations for water birth are included in Table 21.

Table 21. Water birth

Water birth conside	erations
	 Immersion in water has been associated with increased maternal satisfaction with pushing (5% versus 21%)⁵⁷
Evidence	 When compared to birthing on land, there were no significant differences in: Duration of second stage⁵⁷ Perineal trauma including⁵⁷: Intact perineum Episiotomy Second degree tears Third / fourth degree tears Incidence of low apgar scores or cord arterial blood pH^{57,102} Maternal and neonatal infection rates¹⁰²
Clinical practice points	 Maintain temperature at 37°C and no more than 37.5°C⁵⁹ Check water temperature continuously – document ½ hourly⁵⁹ To avoid underwater stimulation of newborn respiration⁵⁹: Practice a 'hands-off' birth to minimise tactile stimulation Immediately after birth, ensure baby is completely submerged and gently brought head first and face down to the surface Do not cut / clamp cord under water The accoucheur is assessed as competent⁵⁹ as per local policy A second attendant is required to assist during birth⁵⁹ Refer to Table 9. Water immersion for applicable water immersion considerations including recommended observations

6.2 Second stage indications for additional care

Deviation from normal birth indicates a need for collaborative care and possible intervention [refer to Section 1.3.3 and Appendix B]. Refer to Table 22 for care considerations in the second stage diagnosis of delay.

Table 22. Second stage diagnosis of delay

Indication	Consideration
Diagnosis of delay	 Consult with the multidisciplinary team / obstetrician² Before intervention, assess: Progress and descent of the presenting part⁵ Maternal condition⁵ Fetal condition⁵: Refer to Guideline: Intrapartum fetal surveillance³³ Analgesia – previously administered and current need Maternal position [refer to Table 19] Bladder – ensure adequate emptying Environment [refer to Table 6] Refer to Appendix C for ARM considerations

6.3 Initial newborn care

Refer to Section 8.1 Newborn assessment and care.

7 Third stage

Third stage care includes the choice of physiological or active management [refer to Table 24, Table 25, and for third stage evidence refer to Appendix D]

Element	Consideration		
Definition	• The third stage includes the time from the birth of the newborn to expulsion of the placenta and membranes		
Newborn care	Refer to Section 8.1 Newborn assessment and care		
Physiological and active management	 Third stage management and evidence should ideally be discussed with the woman in the antenatal period²²: Refer to Table 24. Physiological management Refer to Table 25. Active and modified active management Refer to Appendix D: Third stage evidence As part of the informed discussion include: Active management is recommended for all women by recognised professional bodies^{9,22,25,103,104} However, evidence is emerging to support physiological management in women with the following criteria¹⁰⁵⁻¹⁰⁸: At low risk of bleeding Following a physiologically normal first and second stage With care provided by clinicians skilled in the physiological process 		
Environment	 Provide an environment that promotes physiological adaptation^{109,106} Maintain minimal interference in maternal newborn bonding and skin-to-skin contact 		
Signs of placental separation	 The placenta is usually delivered following the signs of placental separation: The uterus rises in the abdomen The uterus becomes firmer and globular (ballotable) Trickle / gush of blood Lengthening of the umbilical cord 		
Maternal observations	 Close observation of general physical condition including⁹: Colour Respiration Vaginal blood loss Woman's self-report If clinically indicated, frequent observations may be required⁹ Refer to Table 29. Third stage indications for additional care 		
Document	 Intrapartum care record / Vaginal birth clinical pathway Details of indications for additional care and intervention Communication with woman and other health professionals Refer to Table 33. Fourth stage maternal assessment and care 		

Table 23. Third stage care and assessment

7.1 Physiological management

Table 24. Physiological	management
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Element	Consideration		
	No routine use of uterotonic drugs ⁹		
Definition	 Clamping of the cord after pulsation has ceased⁹ 		
	 Birth of the placenta by maternal effort⁹ and gravity¹⁰⁵ 		
Holistic psycho- physiological care ¹⁰⁶	 Birth of the placenta by maternal effort⁹ and gravity¹⁰⁵ A holistic approach whereby the maternity care professional engages with and supports integration of the woman's spirit, mind and body in her childbearing process¹⁰⁹ Essential elements of the third stage include: A physiologically normal pregnancy, labour and birth The 'right' environmental conditions for optimal physiological functioning – the woman needs to feel safe, secure, cared about and trusting that her privacy is respected. Care includes: 		
Prolonged	When not completed within 60 minutes – consult obstetrician ⁹		
Prolonged Clinical practice points	 Knowledgeable midwire, confident in optimising psychophysiology When not completed within 60 minutes – consult obstetrician⁹ Support the woman at low risk of bleeding who chooses physiological management⁹: Preferably following a physiologically normal first and second stage with care provided by clinicians skilled in the physiological process^{106,108} Consider environmental factors that may support successful physiological management including warmth, safety, security, minimal distraction and promotion of endogenous oxytocin production^{106,109} Encourage SSC¹⁰⁶ and breastfeeding / nipple stimulation In the upright position, gravity may assist in the birth of the placenta¹¹⁰ Ensure the woman's bladder is empty No manipulation or palpation of the fundus¹¹⁰ Estimate blood loss – document Water immersion⁵⁹: The cord is not clamped Once cord pulsation ceases, spontaneous expulsion of the placenta and membranes should occur into the water In situation of physical compromise or suspected PPH, with 2 attendants present, assist the woman to leave the water immediately Changing from physiological to active management is indicated with:		

7.2 Active and modified active management

Active management, despite variations in definition¹⁰⁵, is recommended by numerous professional bodies.^{9,22,25,103,104} Active management as recommended by the International Federation of Gynaecologists and Obstetricians (FIGO) and the International Confederation of Midwives (ICM) is defined in Table 25. This definition and variations (e.g. delayed prophylactic uterotonic and / or delayed cord clamping), are also known as mixed¹⁰⁵ and / or modified active management.

Element	Definitions and considerations		
Active	 FIGO / ICM¹⁰³ Routine administration of uterotonic drugs – Oxytocin recommended¹⁰³ Controlled cord traction with uterine stabilisation – once pulsation has ceased¹⁰³ Uterine massage as required after delivery of the placenta¹⁰³ 		
	 National Institute of Clinical Excellence Routine administration of uterotonic drugs [usually with birth of the anterior shoulder] Early clamping and cutting of the cord Controlled cord traction [with uterine stabilisation] 		
Modified active	Consistent with FIGO / ICM definition, except uterotonic is administered after cord pulsation has ceased		
Prolonged	When not completed within 30 minutes – consult obstetrician ⁹		
Clinical practice points	 Refer to Appendix B for evidence considerations Offer SSC Oxytocin administration: Within one minute of the birth of the baby¹⁰³ Palpate the abdomen to rule out presence of an additional baby¹⁰³ Preferably Oxytocin¹⁰³ (Syntocinon®) 5-10 units IM or 5 units IV¹¹² Adverse effects of Ergometrine or Ergometrine with Oxytocin (Syntometrine®) include nausea, vomiting and hypertension¹¹³ Controlled cord traction: Observe for signs of placental separation Ensure the uterus is contracted but do not manipulate the fundus Once cord pulsation ceases, clamp the cord close to the perineum – hold in one hand¹⁰³: Earlier cord clamping when the newborn requires extensive resuscitation measures^{7,104,114} Place the other hand just above the woman's pubic bone and stabilise the uterus by applying counter-pressure during controlled cord traction (2-3 minutes)¹⁰³ With a strong uterine contraction and still applying counter pressure – gently pull the cord downward¹⁰³ If the placenta does not descend during 30-40 seconds of controlled cord traction¹⁰³. Do not continue to pull on the cord Gentty hold the cord and wait until the uterus is well contracted again With the next contraction, repeat controlled cord traction with counter-pressure 		

Table 25. Active and modified active management

• No injections to be given while the woman is in the water

7.3 Third stage ongoing assessment and care

Ongoing close visual observation of the woman and newborn is required while maintaining minimal interference in maternal newborn bonding. Alter the frequency of observations as clinically indicated.

Element	Ongoing assessment and care	
Newborn	Refer to Table 30 for newborn assessment and care	
Maternal observations	 Refer to Table 23 for third stage care and assessment Following birth of the placenta: Assess maternal temperature¹⁰, pulse¹⁰, RR, BP¹⁰, blood loss / lochia¹⁰ Gently palpate fundus and massage, if required, to maintain tone¹⁰³ Examine the placenta and membranes⁹ [refer to Table 27] Assess the perineum¹⁰ [refer to Table 28] Refer to Table 33. Fourth stage maternal assessment and care 	

Table 26. Third stage ongoing assessment and care

7.3.1 Placenta and membrane examination

Carefully examine the placenta and membranes [refer to Table 27].

Placenta and mem	brane examination	
Cord	 2 arteries and 1 vein Insertion site Anomalies 	
Membranes	 es 1 amnion and 1 chorion Blood vessels Succenturiate lobes Cotyledons and membranes complete Obvious clots Presence of calcification and / or infarction Evidence of abruption, or oedema Offensive odour 	
Placenta		
Clinical practice points	 Negative blood group – cord blood test required If incomplete, consult obstetrician² If offensive – collect culture swab from maternal and fetal surface If abnormality is present, consult or consider request for histopathology Educate the woman to advise if clots occur or if there is an increase in vaginal blood loss 	

7.3.2 Perineal examination

Refer to the Guideline: Perineal care⁴⁷ for detailed considerations of perineal examination.

Table 28.	Perineal	examination
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Perineal examinati	on	
Indication	To identify presence of and degree of perineal or genital trauma	
	 Should not interfere with mother infant bonding⁹ / SSC 	
	 The woman should remain nil by mouth until an assessment of tear and decision on anaesthetic requirement 	
	Obtain woman's consent	
	 Discuss and offer pain relief⁹ 	
Consideration	 Position the woman as comfortably as possible, whilst still being able to view genital structures⁹ 	
	 Ensure good lighting⁹ 	
	Water birth:	
	 Delay suturing by up to one hour after the woman leaves the water – to enable perineal tissue to revitalise following water immersion⁵⁹ 	
	• Perform a systematic perineal assessment [refer to Guideline: Perineal care ⁴⁷]	
	 Following assessment, explain to the woman: 	
Assessment	○ Findings	
	 Plan for repair (if indicated) 	
	• Ongoing self care	
	Woman's informed consent	
Document	Assessment techniques	
	 Findings on a diagram [refer to QHealth Intrapartum record] 	
	Repair including:	
	 Suture material and anaesthetic used 	
	 Rectal examination 	
	Name and designation of clinician performing the repair	
	Pain relief medication ordered	

7.3.3 Third stage indications for additional care

Deviation from normal birth indicates a need for collaborative care and possible intervention. Discuss, consult, refer and manage according to the local risk management framework¹⁷ and scope of professional guidelines. Refer to Table 29 for a non-exhaustive list of indications.

Indication	Comment	
Prolonged	Consult ² obstetrician ^{9,22}	
Third or fourth	Refer to obstetrician ²	
degree tear	 Refer to Guideline: Perineal care⁴⁷ 	
Other indications	Heavy bleeding / PPH [refer to Guideline: Postpartum haemorrhage ¹¹⁵]	
	Retained placenta	
	Uterine inversion	
	Shock	
	Refer to Section 8.1.2 for indications for additional newborn care	

Table 29. Third stage indications for additional care

7.3.4 Requests concerning care of the placenta

Due to cultural and / or personal reasons the woman may request to take her placenta home¹¹⁶ or have a Lotus birth [refer to Appendix E].

8 Fourth stage

For this guideline, fourth stage includes the first two hours following birth of the placenta. Newborn assessment and care, for the first two hours following birth, are also included in this section. Fourth stage considerations include supporting physiological adaptation and maternal newborn bonding:

- Enable SSC contact⁸
- Ensure the mother and baby are not separated²⁵
- Consider the environment [refer to Section 3]

It is important to recognise that the woman will still require additional support due to potential exhaustion, pain, undergoing a perineal repair and / or experiencing the effects of opioids or narcotics:

• Ensure the woman and her baby are not left alone²⁵, that is, a personal or professional support person is present at all times in the two hours post birth

8.1 Newborn assessment and care

It is important to note, the mother and her support person may not recognise when a newborn's appearance and behaviour are outside the normal parameters [refer to Table 30].

Element	Newborn assessment and ca	ire
Initial assessment and care	 Place the newborn in SSC with their mother immediately following birth¹¹⁷ Assess tone¹¹⁸, breathing¹¹⁸, heart rate¹¹⁸, colour and reflex irritability Apgar score at 1 and 5 minutes⁷ Refer to Guideline: Examination of the newborn baby¹¹⁹ Peter to Guideline: Nonatel resuscitation¹¹⁸ 	
Skin-to-skin contact and breastfeeding	 Encourage uninterrupted SSC – for a minimum of one hour^{120,117} (irrespective of feeding choice) and until after the first breastfeed¹²¹ Explain to the mother and support person, the importance of supporting the newborn's head and neck in the neutral position, to enable airway patency^{7,118} Cover the newborn's back with a warm blanket⁸ Encourage the mother to recognise when her newborn is ready to breastfeed, offering help if needed¹¹⁷ Observe general condition, attachment and effort during initial breast feed Support mother's choice of newborn feeding Refer to Guideline: Breastfeeding initiation¹²¹ – includes SSC 	
Observations	 Ensure adequate lighting for o Newborn observations Observations Position, airway patent Respiratory status Colour Heart rate Temperature 	 bservation of colour Frequency for the first 2 hours 1⁄4 hourly 1⁄4 hourly 1⁄4 hourly 1⁄4 hourly Within 1 hour of birth Within 1 hour of birth
Non-urgent	 Measure weight, length and head circumference Administer Phytomenadione (Vitamin K₁ / Konakion®) with maternal consent: 1 mg IM is recommended¹²² Administer Hepatitis B vaccine with maternal consent – administration is able to be delayed in certain circumstances¹²³ – refer to the current Australian Immunisation Handbook 	
Documentation	Refer to Table 31. Newborn documentation	

Table 30. Newborn assessment and care

8.1.1 Newborn documentation

Table 51. Newborn documentation	Table 31.	Newborn	documentation
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Element	Newborn assessment and care	
Documentation	 Record in the newborn's record(s): Date and time of birth Assessment and care [refer to Table 30] Any indications for additional care and intervention provided Identification – checked and attached, own unique record number Communication with parents and other health professionals Complete Newborn Summary (Intrapartum Record) Commence Neonatal Clinical Pathway Commence Personal Health Record Refer to Table 33. Fourth stage maternal assessment and care 	

8.1.2 Indications for additional newborn care

When additional newborn care is indicated, discuss, consult, refer and manage according to the local risk management framework and scope of professional guidelines. Refer to Table 32 for a non-exhaustive list of indications and associated Queensland maternity and neonatal clinical guidelines.

Indication	
Respiratory distress	 Refer to Guideline: Neonatal resuscitation¹¹⁸ Refer to Guideline: Management of neonatal respiratory distress incorporating the administration of continuous positive airway pressure (CPAP)¹²⁴
Early onset GBS disease / infection risk factors	• Refer to Guideline: Early onset Group B streptococcal disease ³⁴
Examination of the newborn baby – findings outside normal	 Refer to Guideline: Examination of the newborn baby¹¹⁹ Arrange referral as indicated
Feeding – has not fed by 2 hours post birth	Refer to Guideline: Breastfeeding initiation ¹²¹
Hypoglycaemia	• Refer to Guideline: Neonatal hypoglycaemia and blood glucose monitoring ¹²⁵
Hypothermia	Refer to Guideline: Neonatal resuscitation ¹¹⁸

Table 32. Fourth stage indications for additional newborn care

8.2 Fourth stage maternal assessment and care

Table 33. Fourth stage maternal assessment and care

Element	Maternal	assessment and care		
	 Provide an environment that promotes physiological adaptation^{106,109} SSC [refer to Guideline: Breastfeeding initiation¹²¹] Placenta and membranes [refer to Section 0] 			
	Observa	ations – alter frequency	۔ of observations if clinically indicated:	
		Observation	Frequency for the first 2 hours	
		Temperature	Within the first hour	
		Pulse	Once – after birth of placenta	
		Respiration	Once – after birth of placenta	
		• BP	Once – after birth of placenta	
Initial assessment and care		Uterus (firm and round)	 After birth of placenta ¹/₄ - ¹/₂ hourly 	
		Lochia	 After birth of placenta ¹/₄ - ¹/₂ hourly 	
		Perineum	After first set of maternal observations	
			Reassess if indicated (e.g. increased lochia or pain)	
		• Pain	 Initial assessment 	
			Review if indicated	
		 Urine output 	Within the first two hours	
	Discuss, offer, organise and administer pain relief as required			
	Nutrition Conside	n and hydration – encou	rage the woman to eat, drink and res	it
	Observe	e emotional and psychol	onical response to labour and hirth ⁹	
	o Di	scuss and provide supp	ort if indicated	
Poviow	Venous	thromboembolism risk a	assessment and ordered treatment	
Keview	Rh negative blood group – Kliehauer / cord blood test required			
	 Intrapar 	tum care record / Vagina	al birth clinical pathway	
	Details of indications for additional care and intervention			
Decumentation	Communication with woman and other health professionals			
Documentation	Perinatal data report / Birth register Pirth registration form			
	Centreli	nk / Family Tax benefit f	orms	
	Copy of	the PHR to the mother		

8.2.1 Fourth stage indications for additional maternal care

Refer to Section 1.3.3 for a non-exhaustive list of indications for additional care includes:

- Heavy bleeding / PPH [refer to Guideline: Postpartum haemorrhage¹¹⁵]
- Haematoma formation
- Postnatal manifestation of preeclampsia
- Thromboembolism [refer to Guideline: Venous thromboembolism (VTE) prophylaxis in pregnancy and the puerperium¹²⁶]
- Inadequate psychosocial support³²
- Difficulties with maternal-newborn interaction³²

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Appendix A: Partogram The WHO recommends the use of the partogram.¹²⁷ Considerations for partogram use are summarised below.

Element	Consideration
Benefit	 Tool to guide practice¹²⁷ Pictorial overview of progress¹²⁸ Ease of use¹²⁸ Time resourcefulness¹²⁸ Continuity and transference of care¹²⁸ Educational assistance¹²⁸ Worldwide use¹²⁷ Assumes first stage progress is linear
Risk	 May restrict clinical practice¹²⁸ May reduce midwife autonomy¹²⁸ Can potentially limit the flexibility to treat each woman as an individual¹²⁸ The above three factors can impact on clinical and psychological outcomes¹²⁸ Assumes all women, nulliparous and multiparous, will progress at the same rate¹²⁸
Evidence	 WHO partogram research has been undertaken in developing, low resource, countries¹²⁹ When comparing partogram use versus no partogram use in a high resource country, no difference was shown in⁹¹: Duration of labour Oxytocin augmentation Amniotomy Caesarean section Instrumental vaginal birth Apgar score less than 7 at 5 minute Removal rather than the introduction of the partogram may produce different results to above dot point⁹¹ The WHO recommendation of the use of a 4 hour compared to a 2 hour action line is consistent with^{9,91}: Decreased oxytocin augmentation Similar perinatal outcomes Introduction of action lines in high resource settings has highlighted early and inconsistent timing of interventions across settings. Interventions (e.g. Oxytocin augmentation and amniotomy) were often performed prior to the action line being reached¹³⁰
Alert line	 Draw the alert line: 2 hours to the right of the initial assessment of a cervical dilatation of 4 cm or greater in active first stage¹²⁷, and At the rate of 1 cm per hour to full dilatation¹²⁷
Action line	 Draw the action line: 4 hours to the right of the initial assessment of a cervical dilatation of 4 cm or greater in active first stage^{9,91,127} At the rate of 1 cm per hour to full dilatation¹²⁷
Clinical practice points	 If used as per local policy, commence alert and action lines in active first stage, that is, after 4 cm cervical dilatation²⁵ Progress which moves to the right of the alert line should be flagged – consider local circumstances,, including resources and support In the context of low risk birth, with the appropriate resources and support, no intervention should be required until the 4 hour action line has been passed Once action line is reached consult² with the multidisciplinary team / obstetrician In general if progress moves to the right of the action line consider intervention¹²⁷

Appendix B: Maternal and fetal assessment – indications for collaborative care

Element	Indication for additional care
	 Preterm labour – less than 37 weeks²
	• Preterm pre-labour rupture of membranes before 37 weeks ²
	 Pre-gestational diabetes and gestational diabetes mellitus
	Gestational hypertension ²
History	Polyhydramnios
-	• Placenta praevia ²
	Fetal growth restriction
	Severe anaemia
	Active genital herpes in late pregnancy ²
	Abnormal uterine contraction pattern
Contractions	Suspected placenta abruption ²
	Obstructed Jabour
	• Fylexid
	Diastolic BP greater than 90 mm Hg on two measurements using the same
Physical	arm ³⁹
-	• Systolic BP of greater than or equal to 160 mmHg or diastolic BP of greater
	than or equal to 110 mmHg ³⁹
	Pre-eclampsia ²
	Abnormal lie
	Malpresentation
Abdominal	 Nulliparous woman – contracting and not engaged²
assessment	 Fundal height not consistent with gestational age
	Multiple pregnancy ²
	Non-reassuring FHR patterns ²
	Inability to obtain FHR
ГПК	Possible fetal death
	Refer to Guideline: Intrapartum fetal surveillance ³³
	Vaginal bleeding ³⁹
Manimal Isaa	Meconium stained liquor ²
vaginai loss	 Prolonged rupture of membranes – greater than 18 hours²
	 Suspected placenta abruption and / or vasa praevia²
	Abnormal presentation ²
Maninal	Malpresentation
vaginai	Breech presentation ²
	Prolapsed cord or cord presentation ²
	Active genital herpes ²
Discomfort and pain	Inability to relieve pain with non-pharmacological support
Psychosocial	Significant social isolation and lack of social support ^{2,32}
	 Serious psychological disturbance²

Appendix C: Artificial rupture of membranes

Element	Consideration	
	Active first stage – diagnosis of delay ⁹ [refer to Table 17]	
	Active second stage [refer to Table 22]:	
	 Nulliparous woman: 	
Indication	Inadequate progress after 1 hour ⁹	
	 Multiparous woman: 	
	 When birth is not imminent after 1 hour – this is consistent with the diagnosis of delay – consult² obstetrician^{9,22} 	
	 ARM has been shown to significantly reduce the incidence of dysfunctional labour¹³¹ Comparing routine ARM intervention with no ARM, no significant differences 	
	 Maternal satisfaction 	
	• Use of pain relief	
	 Oxytocin augmentation and dosage used Instrumental vaginal birth 	
Evidence	 Postpartum haemorrhage 	
	 Serious maternal morbidity or death 	
	 Fetal / newborn outcomes including admissions to the neonatal nursery, FHR tracing, meconium aspiration syndrome, acidosis, serious neonatal morbidity or perinatal death 	
	 Comparing routine ARM intervention with no ARM in the sub-group of primiparous women¹³¹: 	
	 ARM minimally shortened the second stage 	
	 Newborns had an increased risk of an apgar score less than 7 at 5 minutes if an ARM is not performed 	
	 Conflicting studies either show a decrease by approximately one hour⁹ or no decrease¹³¹ in the duration of first stage 	
	• Potential risk from ascending infection in the presence of Hepatitis B,	
	Hepatitis C, Herpes Simplex Virus and Human Immunodeficiency Virus ²²	
Contraindication	Malpresentation – risk of cord prolapse	
	Antenatal suspicion of vasa praevia ²²	
	Placenta praevia	
	• ARM should not be used routinely as part of normal birth management and care ^{9,131}	
	 Provide evidence to woman antenatally¹³¹ 	
	Before ARM:	
	 Explain the procedure to the woman⁹ 	
	 Abdominal palpation to determine descent²² 	
	• Consult obstetrician if the head is not engaged	
Clinical practice	• After ARM:	
points	 Observe amniotic fluid colour, odour and consistency 	
	• Assess FIIR	
	 Discuss consult or refer if indicated 	
	\circ Active first stage – advise repeat VE in 2 hours ⁹	
	• Document:	
	 Time of ARM 	
	 VE findings, including amniotic fluid 	
	 Maternal and fetal observations 	

Appendix D: Third stage evidence

Element	Consideration	
Delayed cord clamping	 As currently recommended by WHO¹¹⁴ may: Improve the iron status of the newborn¹¹⁴ for up to 6 months¹³² Not increase the risk of PPH^{114,132} Increase the risk of jaundice requiring phototherapy¹³² 	
Oxytocic administration	 No clear evidence for the most effective timing¹³³ Usually administered after the birth of the baby¹³⁴ Before or after expulsion of the placenta did not significantly affect incidence of PPH, rate of placental retention or length of the third stage¹³³ 	
Placenta cord drainage	 No evidence that this intervention prevents PPH¹⁰⁴ Evidence of reduction in the duration of the third stage is limited to women who did not receive oxytocin as part of the management of the third stage¹⁰⁴ Not enough evidence to recommend routine use¹⁰⁴ 	
Active versus physiological (in women with a low risk of PPH)	 No significant average differences in¹⁰⁵: Severe primary haemorrhage (greater than 1000 mLs in 24 hours) Maternal haemoglobin less than 9 g/dL at 24-48 hours Active management may reduce risk of primary PPH (500-1000 mLs)¹⁰⁵ and mean maternal blood loss, although more recent less robust data has shown the opposite: Observational data for normal birth in New Zealand has shown physiological management resulted in less blood loss and a lower incidence of postpartum haemorrhage of greater than 500 mLs¹⁰⁷ Results from a cohort study in New South Wales have shown a seven to eight fold increase in PPH for an active management group when compared to a 'holistic psychophysiological care' group¹⁰⁶ Active management has been associated with a¹⁰⁵: Significant average decrease in newborn's birth weight¹⁰⁵: Associated with lower blood volume from early cord clamping Significant average increases in: After-pains and use of analgesia Increased BP Postnatal maternal mean haemoglobin Women returning to hospital for bleeding Shortened third stage¹⁰⁷ Apart from Oxytocic administration, studies are yet to establish if the other two elements of the active management definition contribute significantly to a reduction in PPH, compared to physiological management¹¹¹ 	
Physiological	 Interference in the natural release of oxytocin, by administration of synthetic Oxytocin or narcotic analgesia in first or second stage may affect the effectiveness of physiological third stage³⁸ 	

Appendix E: Requests concerning care of the placenta

Request to take placenta home	
Consideration	Cultural and personal perspectives ¹¹⁶
	 The woman has the right to take her placenta home
Information	 Ensure the woman is aware of her responsibility with respect to the potential infection risk including:
	 The associated transport, storage and disposal requirements as per local guidelines
	 Transport in a cooled, sealed container
	 Short-term storage – store in the fridge or otherwise freeze
	 Ingestion of the placenta is not recommended particularly:
	 Due to the risk of known and unknown blood borne infections, if it is not their own placenta
	$\circ~$ If the placenta has not been stored in a fridge or freezer
	 If the placenta has been sent for pathology examination – the placenta is likely to have been immersed in formaldehyde solution
	• Ensure appropriate washing of pots and pans – due to the risk of infection
	 Refer to local council for guidance in the planting of the placenta or scattering of placental ashes
Clinical practice points	Consider aesthetics related to the transport and storage of the placenta
	 Provide verbal and written information as above
	Documentation:
	 Consider obtaining and filing a signed copy of information provided to the woman in her medical record – provide the woman with the duplicate

Lotus birth considerations		
Definition	• The baby remains attached to their placenta until the cord separates naturally ¹³⁵	
Clinical practice points	 Not recommended due to limited research in the area Support the woman's request The woman to prepare the required materials prior to birth Placenta is dried¹³⁵, salted¹³⁵ and wrapped in leak-proof material Change bag as required Avoid spillage Avoid strain on umbilical cord Provide information to parents regarding signs of infection Refer to associated information: Request to take placenta home [in above Table] 	

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Working Party Clinical Lead

Dr Lee Minuzzo, Deputy Director Obstetrics, Royal Brisbane and Women's Hospital & Queensland Regional Chair, Royal Australian and New Zealand College of Obstetricians and Gynaecologists Ms Jocelyn Toohill, Lecturer, Master of Midwifery Program Convenor, School of Nursing and Midwifery, Griffith University

Working Party Members

Ms Sally Basu, Nurse Unit Manager, Redland Hospital Ms Hazel Brittain, Midwifery/Nursing Director and Co-Chair, Women and Children's Division, Logan Hospital Ms Dee Cridland, Physiotherapist, Nambour Hospital Ms Penelope Dale, Midwifery Policy Officer, Office of the Chief Nursing Officer, Queensland Health Dr Mark Davies, Neonatologist, Royal Brisbane and Women's Hospital Ms Sandra Eales, Midwife, Mareeba Hospital Ms Jennifer Fry, Midwife Educator, Darling Downs West Moreton District Health Service Ms Lisa Gierke, Midwife, Toowoomba Hospital Miss Tania Gilmore, Midwife, Royal Brisbane and Women's Hospital Ms Danielle Gleeson, Midwifery Lecturer, Griffith University Ms Sue Hampton, Midwife, Royal Brisbane and Women's Hospital Ms Inez Hansen, Queensland Vice President, Australian Homeopathic Association Ms Karen Hayes, Midwife, Royal Brisbane and Women's Hospital Ms Renée Heath, Principal Project Officer, Maternity Unit, Primary Community and Extended Care Branch, Queensland Health Ms Rowan Hill, Senior Physiotherapist, Royal Brisbane and Women's Hospital Ms Louise Homan, Midwife, Cairns Base Hospital Ms Bec Jenkinson, Consumer Representative, Maternity Coalition Ms Michelle Kelly, Midwife, Mater Health Services, Brisbane Assoc. Prof. Rebecca Kimble, Obstetrician, Royal Brisbane and Women's Hospital Dr Christopher King, Obstetrician, Mount Isa Health Service District Ms Sarah Kirby, Midwife, Royal Brisbane and Women's Hospital Ms Meredith Lovegrove, Midwife, Rockhampton Hospital Dr Belinda Maier, Midwifery Advisor, Nursing and Midwifery Office and Primary Community and Extended Care Branch, **Queensland Health** Mr Bruce Maybloom, Medical Student, Bond University Ms Debbie McConnel, Clinical Nurse Educator, Bowen Hospital Ms Anne Moore, Midwifery Project Officer, Gold Coast Hospital Ms Gloria O'Connor, Midwife, Redcliffe Hospital Ms Stephanie Oliver, Midwife, Gold Coast Hospital Ms Linda Pallett, Midwife, Nambour Hospital Dr Di Poad, Obstetrician, Mater Health Services, Brisbane Ms Rachel Reed, Lecturer, Master of Midwifery Program, University of the Sunshine Coast Ms Susan Rumble, Midwife, Caboolture Hospital Ms Pamela Sepulveda, Clinical Midwifery Consultant, Logan Hospital Ms Alecia Staines, Consumer Representative, Maternity Coalition Dr. Mohan Swaminathan, Neonatologist, Mater Health Services, Brisbane Ms Rhonda Taylor, Clinical Midwifery Consultant, Townsville Hospital Ms Mary Tredinnick, Senior Pharmacist, Royal Brisbane and Women's Hospital Ms Angela Van Beek, Nurse, Hervey Bay Hospital Ms Kay Wilson, Midwife, Director Birth Suites and Ambulatory Services, Mater Health Services, Brisbane **Program Team** Associate Professor Rebecca Kimble, Program Director, Queensland Maternity and Neonatal Clinical Guidelines Program

Ms Jacinta Lee, Manager, Queensland Maternity and Neonatal Clinical Guidelines Program

Ms Jackie Doolan, Program Officer, Queensland Maternity and Neonatal Clinical Guidelines Program

Ms Lyndel Gray, Program Officer, Queensland Maternity and Neonatal Clinical Guidelines Program

Mr Keppel Schafer, Program Officer, Queensland Maternity and Neonatal Clinical Guidelines Program [until August 2011]

Ms Catherine van den Berg, Program Officer, Queensland Maternity and Neonatal Clinical Guidelines Program [until February 2011]

Steering Committee, Queensland Maternity and Neonatal Clinical Guidelines Program

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