Queensland Clinical Guidelines

Translating evidence into best clinical practice

Maternity and Neonatal **Clinical Guideline**

Normal birth

Queensland Government

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Cultural acknowledgement

The Department of Health acknowledges the Traditional Custodians of the lands, waters and seas across the State of Queensland on which we work and live. We also acknowledge First Nations peoples in Queensland are both Aboriginal Peoples and Torres Strait Islander Peoples and pay respect to the Aboriginal and Torres Strait Islander Elders past, present and emerging.

Disclaimer

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The guideline is not a substitute for clinical judgement, knowledge and expertise, or medical advice. Variation from the guideline, taking into account individual circumstances, may be appropriate.

This guideline does not address all elements of standard practice and accepts that individual clinicians are responsible for:

- Providing care within the context of locally available resources, expertise, and scope of practice
- Supporting consumer rights and informed decision making, including the right to decline intervention or ongoing management
- Advising consumers of their choices in an environment that is culturally appropriate and which enables comfortable and confidential discussion. This includes the use of interpreter services where necessary
- Ensuring informed consent is obtained prior to delivering care
- Meeting all legislative requirements and professional standards
- Applying standard precautions, and additional precautions as necessary, when delivering care
- Documenting all care in accordance with mandatory and local requirements

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Flow Chart: Normal birth–initial assessment

Care is woman centred and includes informed choice, consent, privacy and respectful communication. Contemporaneous documentation is essential.

Pregnant woman with signs of labour at term

Initial contact
- Reason for presentation/contact
- Preferences for labour and birth
- Emotional and psychological needs

Review history
- Verbal
- Pregnancy Health Record/antenatal records
- Obstetric, gynaecological, medical, surgical, social, family history
- Investigations and results
- Medications and allergies
- Pregnancy complications
- Psychosocial, cultural and spiritual

Contractions
- Time commenced
- Duration, strength, frequency and resting tone

Maternal observations
- Temperature, pulse, respiratory rate, BP
- Urinalysis
- Nutritional and hydration status
- General appearance

Abdominal assessment
- Observation and palpation
- Fundal height, lie, presentation, attitude, position, engagement/descent, liquor volume

Fetal wellbeing
- Ask about fetal movements
- Auscultate FHR towards the end of contraction and continue for at least 30–60 seconds after contraction finished
- Differentiate fetal heart beat from maternal pulse

Vaginal loss
- Nil, discharge, liquor, blood
- Note colour, odour, amount, and consistency

Vaginal examination
- If stage of labour uncertain, may assist decision making
- If SROM consider speculum examination

Discomfort and pain
- Reassure, promote, reinforce coping strategies
- Assess response to contractions
- Review birth plan and note preferences
- Discuss advantages/disadvantages of options

Repeat contacts
- Review entire contact history and clinical circumstances with each contact
- Refer/consult/request woman to present for assessment as required

Risk factors?

Yes → **Discuss, consult, refer, manage** as per professional[#] and Queensland guidelines

No → **Triage stage of labour**

- **Not yet in labour** Antenatal assessment
- **First stage** Refer to flow chart: *Normal Birth–First stage*
- **Second stage** Refer to flow chart: *Normal Birth–Second stage*

BP: blood pressure, **FHR:** fetal heart rate, **VE:** vaginal examination, **SROM:** spontaneous rupture of membranes,
[#]Australian College of Midwives: National Midwifery Guidelines for Consultation and Referral. 4th Edition, Issue 3. 2021

Queensland Clinical Guidelines: Normal birth. Flowchart version: F22.25-1-V3-R27

Flow Chart: Normal birth—first stage

Care is woman centred and includes informed choice, consent, privacy and respectful communication. Contemporaneous documentation is essential.

First stage
in the low risk woman at term

Regular painful contractions AND some cervical effacement AND dilatation of at least 4—6 cm?

No

Latent first stage

Irregular painful contractions and some cervical effacement and dilatation less than 4–6 cm

- Complete an initial assessment
- Reassure latent phase is normal
- Offer individualised support about rest, hydration, nutrition
- Advise mobilisation may establish contractions
- Discuss comfort strategies and their risks and benefits
- Involve support people/partner
- Offer admission or return/remain at home according to individual need/circumstances
- Provide information on when to return to hospital and/or notify healthcare professional
  - Increasing strength, frequency, duration of contractions
  - Requiring pain management
  - Vaginal bleeding, rupture of membranes
  - Reduced fetal movement
  - Any concerns
- Plan an agreed time for reassessment

Yes

Active first stage

Supportive care

- Consider measures to promote, protect and support normal birth including:
  - One-to-one midwifery support
  - Review birth plan
  - Environment (privacy, calmness, lighting)
  - Mobilisation and positioning
  - Involve support people/partner
  - Cultural supports, if required
  - Comfort and pain management strategies

Ongoing (following initial) assessment

- Maternal and fetal condition
- Progress and descent of the fetal head
- FHR: every 15–30 minutes intermittent auscultation
  - Differentiate from maternal pulse
- Temperature and BP: 4 hourly
- Maternal pulse: every 30 minutes
- Abdominal palpation: 4 hourly, prior to VE and as required to monitor progress
- Contractions: every 30 minutes for 10 minutes
- Vaginal loss: hourly
- Offer VE: 4 hourly and if indicated
- Nutrition as desired and encourage hydration
- Bladder: monitor/encourage 2 hourly voiding
- Emotional coping, discomfort and pain

Delay in active first stage

- **Protracted labour—cervical dilatation of:**
  - Nulliparous: < 2 cm in 4 hours
  - Multiparous: < 2 cm in 4 hours or a slowing of progress
- **Arrest in labour:** Diagnosed at cervical dilatation of ≥ 6 cm with ruptured membranes and no or limited cervical change for four hours of adequate contractions

Risk factors or diagnosis of delay?

Yes

Discuss, consult, refer, manage
as per professional[#] and Queensland guidelines

No

- Continue care as per active first stage
- Anticipate vaginal birth
- Identify commencement of second stage

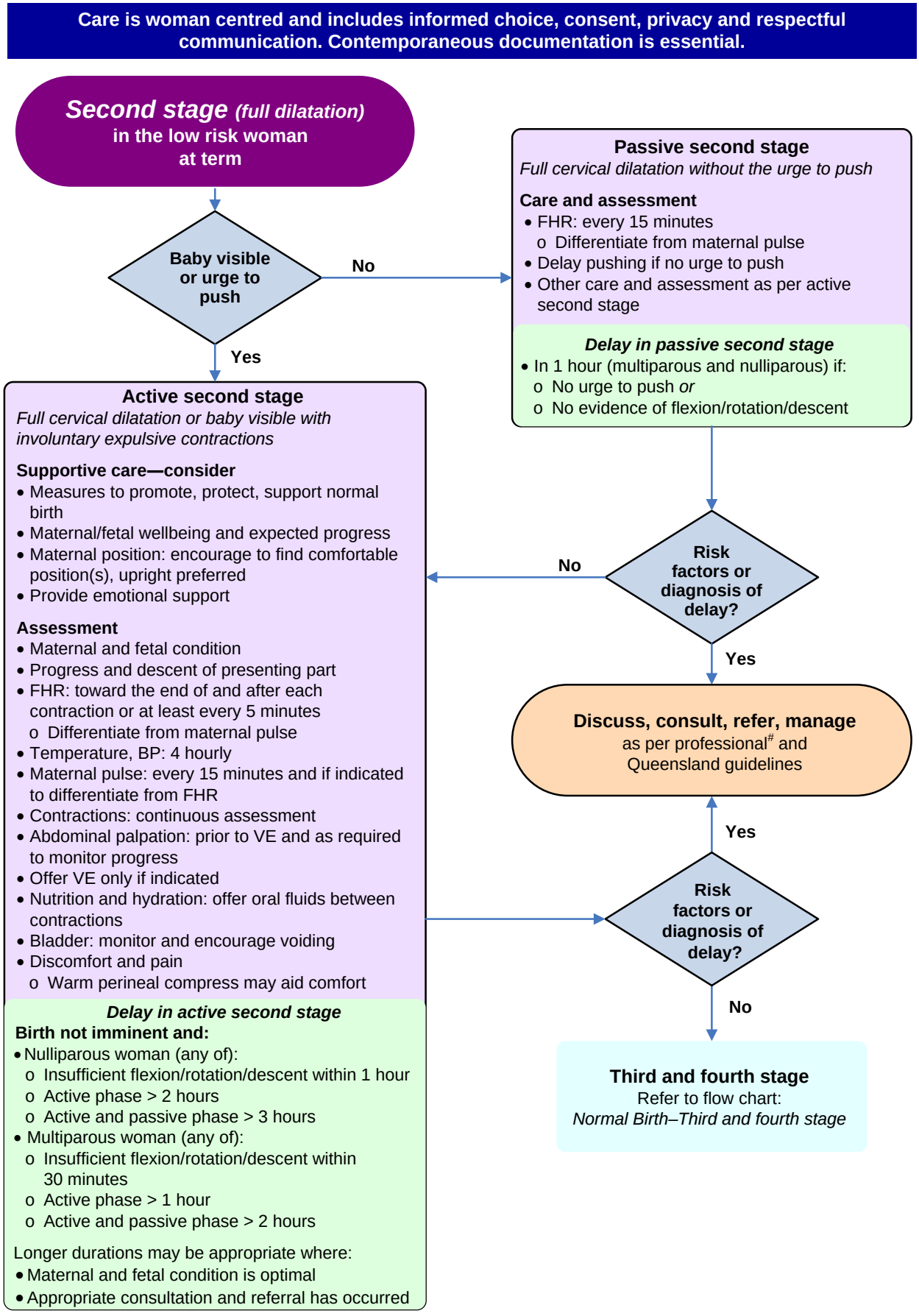
Second stage
Refer to flow chart:
Normal Birth–Second stage

BP: blood pressure, **FHR:** fetal heart rate, **VE:** vaginal examination, **>:** greater than, **≥:** greater than or equal to, **<:** less than

[#]Australian College of Midwives: National Midwifery Guidelines for Consultation and Referral. 4th Edition, Issue 3. 2021

Queensland Clinical Guidelines: Normal birth. Flowchart version: F22.25-2-V3-R27

Flow Chart: Normal birth—second stage



BP: blood pressure, **FHR:** fetal heart rate, **VE:** vaginal examination, **>:** greater than
#Australian College of Midwives: National Midwifery Guidelines for Consultation and Referral. 4th Edition, Issue 3. 2021

Queensland Clinical Guidelines: Normal birth. Flowchart version: F22.25-3-V3-R27

Flow Chart: Normal birth—third and fourth stage

Care is woman centred and includes informed choice, consent, privacy and respectful communication. Contemporaneous documentation is essential.

Third and fourth stage
in the low risk mother and baby

- Environment that promotes newborn physiological adaptation
- Uninterrupted skin to skin contact for at least 1 hour or after first feed
- Woman and baby are not separated or left alone
- Minimal interference in maternal/baby bonding
- Support to breastfeed (if method of choice)

Third stage
From birth of baby to birth of placenta/membranes

Management
- **Modified active**: recommend for all births
  - Oxytocin 10 IU IM after birth of baby
  - Wait at least 1 minute after birth or for cord pulsation to cease and then clamp and cut cord
  - Controlled cord traction and uterine guarding after signs of separation
  - Considered prolonged after 30 minutes
- **Physiological**
  - Suitable for well women without risk factors
  - Placenta birthed by maternal effort/gravity
  - Oxytocin not administered
  - Clamp cord after pulsation ceased
  - No controlled cord traction
  - Considered prolonged after 60 minutes
- **If concern with cord integrity, newborn condition, or FHR:**
  - Clamp and cut the cord

Ongoing care
- Encourage upright maternal position
- Ensure bladder empty
- Maintain calm, warm and relaxed environment
- Support privacy and reduce interruptions
- Encourage to focus on physiological process
- Observe general physical condition

Fourth stage
First 6 hours after birth of placenta/membranes

Supportive care
- Encourage mother to eat, drink and rest
- Discuss and offer pain relief (if indicated)
- Consider personal hygiene needs
- Assess emotional and psychological wellbeing
- If Rh D negative blood group, review indications for Rh D immunoglobulin

Assessment (for the first two hours)
Alter frequency of observations/assessment as indicated.
- Temperature: within the first hour
- Pulse, RR, BP: after birth of the placenta
- Fundus and lochia: after birth of the placenta, then every 15–30 minutes
- Perineum: with first maternal observations
- Pain and discomfort
- Urine output: monitor voiding postpartum
- Examine placenta, membranes and cord
- Support early discharge, as clinically appropriate

Baby

Initial assessment
- Breathing, HR, colour, reflex irritability, tone,
  - Apgar score at 1 and 5 minutes
- Initial brief newborn examination

Supportive care
- Maintain warmth with:
  - Clear visibility and optimal airway position
  - Adequate lighting for observation of colour

Ongoing assessment
- Respiratory rate, colour, positioning for patent airway every 15 minutes for first 2 hours
- Temperature and HR within 1 hour of birth

Non-urgent care (after first feed)
- Weight, length and head circumference
- Recommend phytomenadione (vitamin K/ Konakion®) 1 mg IM
- Offer Hepatitis B vaccine

Discuss, consult, refer, manage
as per professional[#] and Queensland guidelines

Indications for additional care?

Yes

No

Routine care

BP: blood pressure, **FHR:** fetal heart rate, **HR:** heart rate, **IM**: intramuscular, **IU:** international units, **RR:** respiratory rate, **VE:** vaginal examination
[#]Australian College of Midwives: National Midwifery Guidelines for Consultation and Referral. 4th Edition, Issue 3. 2021

Queensland Clinical Guidelines: Normal birth. Flowchart version: F22.25-4-V3-R27

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Abbreviations

ACOG	American College of Obstetricians and Gynaecologists
ARM	Artificial rupture of membranes
BP	Blood pressure
CCT	Controlled cord traction
CS	Caesarean section
CTG	Cardiotocograph
FHR	Fetal heart rate
IU	International units
PHR	Pregnancy health record
PPH	Postpartum haemorrhage
RANZCOG	Royal Australian and New Zealand College of Obstetricians and Gynaecologists
TENS	Transcutaneous electrical nerve stimulation
VE	Vaginal examination

Definition of terms

Augmentation	Intervention after the onset of labour to assist the progress of labour[1]
Collaboration	All members of the healthcare team working in partnership with consumers and each other to provide the highest standards of, and access to, healthcare.[2]
Consultation	The seeking of professional advice from a qualified, competent source and making decisions about shared responsibilities for care provision.[2]
Continuity of care/r	The practice of ensuring a woman knows their care provider(s) and receives care from the same provider or small group of providers, throughout pregnancy, labour, birth and the postnatal period.[3]
Low risk women	The absence of risk factors during pregnancy, labour and birth.
Multidisciplinary team	Membership is influenced by the needs of the parent/carer and baby, availability of staff, and other local resourcing issues. May include a range of multidisciplinary professionals including, but not limited to, nurse/midwife, lactation consultant, Aboriginal and/or Torres Strait Islander liaison healthcare workers, obstetrician, neonatologist/paediatrician, nurse practitioner, other specialist practitioners (e.g. maternal fetal medicine specialist), general practitioner, midwife navigator, pharmacist, social worker/counsellor and allied healthcare professionals from hospital and community services including government and non-government organisations.
Spontaneous vaginal birth	This guideline uses the terminology spontaneous vaginal birth (SVB) to describe birth which is achieved solely by the woman's expulsive efforts requiring no mechanical or surgical assistance.
Woman/women	In QCG documents, the terms *woman* and *women* include people who do not identify as women but who are pregnant or have given birth.

1 Introduction

The purpose of this guideline is to protect, support and promote normal birth through woman centred, collaborative care. This is congruent with international efforts aimed at supporting physiological birth.[4-7] Normal birth is associated with[8]:

- Improved outcomes for mothers and babies
- Reduced healthcare costs
- Fewer iatrogenic events related to overuse of medical interventions
- Improved maternal psychological[9] and physical wellbeing

Although most women in Australia birth vaginally, there is a trend away from normal birth and a rising caesarean section (CS) rate.[10] In 2020, around one in three women gave birth by caesarean section. This is an increase from 32 % in 2010 to 37 % in 2020. Vaginal birth assisted with forceps or vacuum, has remained relatively stable.[11] Supporting normal birth for all women is a particularly important strategy to improve overall outcomes[3,12] and reduce CS rates in Australia.[13]

1.1 Criteria for normal birth in Queensland

Use the following criteria to support the principles of protecting, promoting and supporting normal birth for all women, recognising that aspects may be more or less applicable to women across the broad spectrum of birth experiences and choices.

Table 1. Normal birth criteria

Aspect	Consideration
Context	• The terms '*physiological birth*', *'normal birth*' and '*natural birth'* are often used interchangeably but usually refer to birth which has not been managed by medical intervention[10,14,15] • Other professional organisations have included broader criteria than generally recognised as physiological or normal[7] • In defining normal birth, two factors are taken into consideration[5]: o The risk status of the pregnancy and o The course of labour and birth
Includes	• Occurs between 37+0 and 42+0 weeks completed weeks • Spontaneous onset • Normal labour progress • Vertex presentation • Spontaneous vaginal birth • Intermittent fetal auscultation • Use of nitrous oxide and oxygen • Non-pharmacological pain relief that includes, but not limited to: o Sterile water injections o Water immersion • Third stage management: o Physiological third stage o Modified active third stage (cord clamping after 60 seconds) • No maternal or fetal complications or risk factors
Excludes	• Induction of labour • Augmentation: o Artificial rupture of membranes (ARM) o Oxytocin infusion • Continuous fetal monitoring • Pharmacological pain relief that includes: o Opioids o Epidural or spinal • General anaesthetic • Instrumental birth (forceps or vacuum) • Caesarean section (CS) • Routine episiotomy • Early cord clamping • Complications or risk factors: o At commencement of labour o Intrapartum o Within two hours of birth

2 Supporting normal birth

The perinatal period represents a sensitive time for the woman and baby in relation to hormonal and other biological processes. Supportive care is aimed at minimising maternal stress and anxiety[16] from the negative impact of stress hormones on the labour and birth process.[17]

Table 2. Supporting normal birth

Aspect	Consideration
Benefits of normal labour	• The benefits of normal labour and birth for the woman and baby include[17]: o Enhances labour effectiveness o Promotes fetal readiness for birth o Protects the baby from reduced oxygen during labour o Improves physiological response to labour stress and pain o Promotes maternal and newborn transitions o Helps to minimise maternal bleeding after birth o Promotes optimal mother-infant attachment
Supporting normal birth	• This guideline recognises pregnancy and birth as a normal physiological process[2,13] occurring within a wellness paradigm that is supported by: o A respectful environment that protects the dignity and the individual physical, psychological and emotional wellbeing of the woman o A shared positive birth philosophy of care[5,18] o A clear understanding of the hormonal physiology during labour and birth[17] o Clear communication[4-6,18] o Continuity of care and carer[4-6,18,19] o One-to-one midwifery care[4-6,18] o Optimising the birth environment[20] [refer to Section 2.3 Birth environment] o Ongoing birth preparation during pregnancy[4,21,22] o Maintaining the minimum level of birth intervention[5,18] compatible with safety o Encouraging desired food and fluid intake[23,24] o Freedom of movement and position[6] o Keeping women and babies together after birth with support for breastfeeding[25] o Increasing clinician knowledge to reduce fear associated with low confidence in supporting women towards a normal birth[26]
Supportive care	• A positive philosophy towards normal birth and woman centred care, demonstrated by a professional culture with clear communication is essential to high quality care[5,12] • Communication, including positive language and encouragement, and a flexible approach supporting the woman to feel in control and make informed decisions throughout labour and birth[16] including the decision to decline recommended care • Clear communication and involvement of the woman (and family where appropriate), and the multidisciplinary team may: o Avoid unnecessary perinatal morbidity and mortality o Improve normal birth rates o Facilitate informed consent o Reduce birth trauma
Standard care	• Refer to Queensland Clinical Guideline: *Standard care* for care considered 'usual' or 'standard' • Includes, for example, privacy, consent, decision making, sensitive communication, medication administration, staff education and support, culturally safe and appropriate care

2.1 Continuity of care

Offer women continuity of care that is informed by collaborative relationships and practices.

Table 3. Continuity of carer

Aspect	Consideration
Continuity of carer	• Facilitates the forming of a therapeutic relationship between the woman and chosen care provider[19] • Supports women to have continuity of care with the care provider(s) of their choice—including model of care (e.g. shared care, obstetric, midwifery) • Midwifery led models of continuous care o Increase the woman's satisfaction with their birth experience[27] o Reduce intervention during labour and birth[28] o Improve health system access for those who are likely to experience multiple co-morbidities or poorer social determinants of health[29]
Continuous support	• Facilitates emotional support, coping techniques, comfort measures and advocacy • Continuous one-to-one labour and birth support is associated with improved health outcomes[19]

Table 4. Comparison of continuity of midwifery care with other models of care for low risk women

Outcomes[30]	Model of care (n/total)		Relative risk	Confidence interval (95%)	Comment
	Midwifery led	Other			
Epidural/spinal	2178/9667	2161/8007	0.85	0.78 to 0.92	Less likely
Episiotomy	1816/9667	1802/8007	0.84	0.77 to 0.92	Less likely
Instrumental birth	1176/9586	1133/7915	0.90	0.83 to 0.97	Less likely
Amniotomy	582/1898	569/1355	0.80	0.66 to 0.98	Less likely
Preterm birth	360/7440	367/5798	0.76	0.64 to 0.91	Less likely
Fetal loss < 24 weeks and neonatal death	257/9611	273/7950	0.84	0.71 to 0.99	Less likely
Spontaneous vaginal birth	6485/9181	4937/7506	1.05	1.03 to 1.07	Possibly more likely*
No intrapartum analgesia	1059/6079	692/4420	1.21	1.06 to 1.37	More likely
Attendance at birth by known midwife	2567/3461	351/3456	7.04	4.48 to 11.08	More likely
Caesarean section	1281/9667	1242/8007	*No statistically significant difference*		
Induction of labour	1850/9586	1739/7915	*No statistically significant difference*		
Intact perineum	2159/7438	1544/5748	*No statistically significant difference*		

*Clinical significance uncertain

Table 5. Outcomes associated with continuous support from trained carer versus usual care during labour

Outcomes[19]	Model of care (n/total)		Relative risk	Confidence interval (95%)	Comment
	Continuous support	Usual care			
Spontaneous vaginal birth	5092/7153	4898/7216	1.08	1.04 to 1.12	More likely
Caesarean section	948/7663	1120/7684	0.75	0.64 to 0.88	Less likely
Instrumental birth	1283/7028	1420/7090	0.90	0.85 to 0.96	Less likely
Any analgesia	4455/6173	4699/6260	0.90	0.84 to 0.96	Less likely
Perineal trauma	2339/4057	2396/4063	*No statistically significant difference*		
Low 5 minute Apgar score	62/6327	99/6288	0.62	0.46 to 0.85	Less likely

2.2 Birth preparation

Planning for birth is a continuous process and is associated with improved outcomes for the woman and baby.[4] Birth preparation aims to empower the woman to be an active participant in decision-making, supporting the woman to remain in control of the birth experience.

Table 6. Birth preparation

Aspect	Considerations
About normal birth	• Provide pregnancy care as per the Queensland Pregnancy Health Record (PHR) and other supported documents (e.g. Pregnancy Health Guidelines) or local Hospital and Health Service (HHS) policy • Inform the woman that giving birth is a normal physiological event[4] • Offer information and discussion about: o Benefits of physiological birth o Signs of labour ▪ What to expect in the latent stage of labour ▪ How to differentiate between Braxton Hicks and active labour contractions o Normal vaginal loss ▪ How to recognise amniotic fluid o Pain and support strategies o Informed consent including for vaginal examination o Benefits of uninterrupted skin to skin and breastfeeding in the first hour after birth[31] o Declining recommended care
Psychoeducation	• Provides an opportunity to discuss previous birth experience/s[9] • Reduces fear of birth in women who report high childbirth fear[16,32-35] • May reduce the need for medical interventions during normal labour and birth[36] • Associated with[37,38]: o Increased spontaneous vaginal birth o Reduced CS o Increased positive birth experience
Options for model of care	• Respect and support choice of model of care and caregiver[19] • Aim to provide continuity of carer close to home • Offer information about model of care options and their risks and benefits to facilitate informed decision making[6,39,40] including about: o Place of birth o Pharmacological and non-pharmacological pain management ▪ Refer to Queensland Clinical Guideline*: Intrapartum pain management* o Third stage management • Offer information about ongoing care options if deviations from normal
Birth plan and preferences	• Provide opportunities to develop a birth plan and discuss birth preferences including: o Cultural requirements for birth o Support person(s) o Access to maternity care that is culturally safe and where possible, in their preferred language[13] o Consent to retain a copy of the birth plan • Supports[4]: o Involvement of women in their care o Information sharing o Effective communication o The woman being central to decision-making • The values and beliefs of caregivers can influence the success of a plan[22] • Avoid unidirectional/checklist birth plans[41]
Comfort and support strategies	• Normalising the birth process and encouraging women through labour pain by using non-pharmacological comfort measures in the first instance may support less intervention such as epidural analgesia and caesarean section[42,43] o Support the woman's choice of pain relief options • Refer to Queensland Clinical Guideline: *Intrapartum pain management*

2.3 Birth environment

Aim to create an environment in which the woman feels safe and undisturbed[20] and that supports a sense of control of the experience.[19] Considerations include respecting the woman's choice of birth environment and maintaining[44,45]:

- A sense of calm
- Protection of the woman's privacy
- Provision of support and comfort
- Clinical safety
- A home-like setting that may include:
  - Adjustable lighting and temperature to achieve a calming ambience
  - Discrete positioning of medical equipment
  - Family friendly furnishings and décor
  - Furniture to support upright positions
  - Access to shower and water immersion

Table 7. 'Home like' birth rooms within hospital compared with usual labour ward setting

Outcome associated with 'home like' birth settings[46]	No. of trials	Sample size	Relative risk	95% CI	Interpretation
No intrapartum analgesia	6	8,953	1.18	1.05 to 1.33	Possibly more likely*
Spontaneous vaginal birth	8	11,202	1.03	1.01 to 1.05	Possibly more likely*
Breastfeeding at 6–8 weeks	1	1,147	1.04	1.02 to 1.06	Possibly more likely*
Positive views of care	2	1,207	1.96	1.78 to 2.15	More likely
Epidural	8	10,931	0.80	0.74 to 0.87	Less likely
Labour augmentation	8	11,131	0.77	0.67 to 0.88	Less likely
Instrumental birth	8	11,202	0.89	0.79 to 0.99	Less likely
Episiotomy	8	11,055	0.83	0.77 to 0.90	Less likely

*Clinical significance uncertain

3 Initial maternal assessment

A comprehensive triage and assessment supports planning for ongoing care and normal birth.[6,47] The aim of the initial assessment is to:

- Accurately assess the need for consultation and referral
- Identify the stage of labour
- Provide practical support

3.1 Assessment

Table 8. Assessment

Aspect	Maternal assessment
Initial contact	• Ascertain reason for presentation or contact • Where possible, provide early labour assessment at home according to local HHS policy • Assess emotional and psychological needs • Discuss preferences for labour and birth • Review history, pregnancy notes and screening results[4,47] including: o Gestational age o Past history (medical, obstetric, gynaecological, surgical, social, family) o Medications, allergies o Pregnancy complications o Investigation results (including placental location)
Remote triage	• Initial contact may occur in person or via remote communication modalities (e.g. telephone, video connection) o Accurate and consistent triage and information sharing supports and empowers remaining at home during the latent phase of labour o An assessment of early labour by maternity care providers specifically trained in remote triage can be offered to all women o Incorporate appropriate elements of the initial maternal assessment when triaging by remote modalities
Contractions	• Record time of maternal account of regular, painful contractions[4] • Assess strength, frequency, duration and resting tone for 10 minutes
Maternal observations	• Temperature, pulse, respiratory rate, blood pressure (BP), and urinalysis[4] • Assess nutrition and hydration status and general appearance
Abdominal	• Observation, and palpation[4] including fundal height, fetal lie, attitude, presentation, position, engagement/descent and liquor volume
Fetal wellbeing	• Ask about fetal movements in the last 24 hours[4] • Assess FHR o Use either a Pinard stethoscope or Doppler ultrasound o Auscultate toward the end of a contraction and continue for a minimum of 60 seconds after the contraction has finished[4] o Differentiate between maternal and fetal heart beat [4] • Routine use of cardiotocograph (CTG) for low risk women is not recommended[5] o Refer to Queensland Clinical Guideline: *Intrapartum fetal surveillance*[48]
Vaginal loss	• Assess and record vaginal loss o Discharge—note colour, odour, consistency o Blood—note colour, volume o Liquor—note colour, volume, odour, consistency
Vaginal examination[4]	• If stage of labour uncertain a VE may assist decision making • If active labour is suspected, offer a VE [refer to Table 9. Vaginal examination] • If spontaneous rupture of membranes (SROM) suspected, consider a speculum examination
Pain and discomfort	• Assess pain and discomfort • Refer to Queensland Clinical Guideline: *Intrapartum pain management*
Repeat contacts	• Review contact history and clinical circumstances at each contact • Take into account the interval since initial contact • Refer, consult and/or request that the woman present for assessment as indicated

3.2 Vaginal examination

Where membranes are intact, there is no evidence to support or reject the use of routine VE in labour to improve outcomes for women and babies.[49]

Table 9. Vaginal examination

Aspect	Consideration
Indication	• Aim to keep the number of VE to a minimum[5] • To assist in decision making, offer VE[4,5]: o Within four hours of presentation o Offer every four hours in active labour ▪ If delay in progress suspected, consider increased frequency [47] o If clinical concerns identified
Contraindication to VE	• Refer woman with complex medical conditions to higher level care o Antepartum haemorrhage o Ruptured membranes and not in labour ▪ Refer to Queensland Clinical Guidelines: *Term prelabour rupture of membranes*[50] o Placenta praevia o Placental position unknown o Suspected preterm labour ▪ Refer to Queensland Clinical Guidelines: *Preterm labour and birth*[51]
Prior to VE[4]	• Review history and most recent ultrasound scan result • Explain procedure and gain consent prior to each examination • Acknowledge VE can be distressing to some women • Ensure bladder is empty • Perform abdominal examination and FHR auscultation
During VE[52]	• Maintain privacy, dignity and respect • Keep the woman informed of findings during the examination • Consider the woman's comfort including, but not limited to: o The presence of a chaperone o Woman's preference for gender of care giver, where possible • Perform VE between contractions • Assessment: o Observe general appearance of perineal and vulval area o Position of cervix—posterior, mid, anterior o Dilatation o Effacement o Consistency—soft, medium, firm o Application of presenting part o Membranes intact/no membranes felt o Liquor—note colour, volume, odour o Level of presenting part in relation to ischial spines (- 3 to + 3) o Presence of caput and moulding o Fetal position and attitude
Following VE[4]	• Sensitively explain findings in the context of clinical picture and history • Discuss any potential impact on the birth plan • Auscultate FHR • Document findings

4 First stage

There are two identified phases of the first stage of labour[4]:

- Latent phase—may also be known as early labour
- Active phase—otherwise known as established labour

Progress during first stage relates to cervical dilatation and head descent. The onset, progress, and duration of the two phases of the first stage of labour are variable. The applied definitions may not be relevant to all women. First stage of labour is completed at full dilatation of the cervix.[4]

4.1 Latent first stage

During the latent phase of labour, the woman may present to the intended birthing place, or make contact with the midwifery service or care provider requesting support and advice. Affirm the beliefs of the women regarding labour and provide increased support, if required or requested.

Table 10. Latent first stage

Aspect	Consideration
Onset	• A period of time, possibly intermittent periods, associated with: o Irregular painful contractions[4] **and** o Some cervical effacement and dilatation less than 4 cm[4,53]
Duration	• The duration of latent phase is difficult to measure[6] and can vary [5] • Time to progress to established labour can vary between women o May take six hours to progress from 4–5 cm[53] o May take three hours to progress from 5–6 cm[53] o Multiparous women may dilate more rapidly than nulliparous women after 6 cm
Prolonged latent phase	• Limited high quality evidence to provide a contemporary definition[12] • Historically, limits of more than 20 hours (nulliparous women) and more than 14 hours (multiparous women) were applied to identify prolonged latent phase[12,54] o Limits not recommended as an indication for intervention when maternal and fetal condition are reassuring • If slow progress is suspected, assess to identify:[5] o Developing complications o Reassuring maternal and fetal condition[55] o Emotional and physical needs
Assessment	• Review birth plan and provide individualised support including: o Encourage ongoing resilience and positive self-belief o Rest, hydration, nutrition, mobilisation, support o Reassurance and coping strategies, including analgesia if required
Ongoing support	• Offer choices for ongoing care, consider: o Individual clinical circumstances o Distance and travel time to facility • Latent first stage: o If not requiring one-to-one care, recommend returning home[7] o If one-to-one support needed, recommend hospital admission ▪ Nulliparous women admitted prior to active labour are more likely to experience oxytocin augmentation and caesarean section[56] • Active first stage o Admit for one-to-one labour and birth support o Requesting the woman to return home may contribute to a negative experience • Emphasise the actions of hormones that support physiological birth
Return/remain at home	• If the woman returns or remains at home, provide information on: o Coping strategies o When to return/make contact, including if: ▪ Any concerns ▪ Increased frequency, strength and duration of contractions ▪ Increased pain or discomfort requiring additional support ▪ Vaginal bleeding and//or membrane rupture ▪ Reduced or concern about fetal movements • Plan an agreed time for reassessment at each contact

4.2 Active first stage

The onset of active labour is defined as the point at which the rate of cervical change significantly increases[56] associated with regular painful contractions. Active first stage is completed at full cervical dilation.[4]

Table 11. Active first stage

Aspect	Consideration
Context	• Traditionally defined as commencing between 4 cm[4] and 5 cm[5] of cervical dilatation o Increasing evidence that some women may not be in active labour before 6 cm dilatation[57] • Nulliparous women have longer active labours and slower dilatation than traditionally defined o Refer to Appendix A: Comparisons of labour definitions • Women may o Self-report active labour commenced when uterine activity becomes stronger and more regular o Not have a consistent or linear pattern of active phase of labour[58]
Onset	• Defined in this guideline as when there is[4,16]: o Regular painful contractions **and** o Progressive cervical dilatation of at least 4 cm • If cervical dilatation unknown, use maternal account of regular and painful contractions[16]
Progress	• In active labour, cervical dilatation of 0.5 cm per hour (2 cm in 4 hours) is considered normal[47] • At the transitional phase of 8–10 cm cervical dilatation, supportive needs increase—may exhibit shakiness, irritability, nausea and vomiting • Consider all aspects of progress including: o Maternal behaviour o Fetal condition o Cervical dilatation and rate of change o Descent and rotation of the fetal head o Strength, duration and frequency of contractions o Parity o Previous labour history o Slowing of progress in the multiparous woman
Referral	• During the normal birth process, deviations from normal or concerns with the antenatal period, labour or birthing process may arise • When indicated: o Increase the frequency of recommended observations o Modify care as relevant to individual circumstances while maintaining a focus on supporting the principles of normal birth o Discuss, consult, refer and manage as indicated according to professional[4-6,18] and relevant guidelines[2,40]

4.3 Ongoing care during first stage

Table 12. Ongoing care during first stage

Aspect	Consideration
Partogram	• Commence when active labour is confirmed[59] • Although quality of evidence for clinical benefit is low[5] o Provides a pictorial overview of progress o Facilitates timely transfer of care o May assist in the detection of prolonged labour • If alert lines are used in facilities a four hour action line is recommended for triaging women who may require additional care[5]
Assessment and support	• Continuous one-to-one support required • Routine use of CTG without clinical indication, is not recommended[4] o Refer to Queensland Clinical Guideline: Intrapartum fetal surveillance[48] • Provide ongoing support for coping strategies o Refer to section 2.1 Continuity of care o Refer to Queensland Clinical Guideline: *Intrapartum pain management* • Facilitate involvement of support persons as per woman's wishes
Position and mobilisation	• There is little evidence that any one position is optimal in labour[60] • Avoid supine position as it is associated with adverse effects including[61]: o Supine hypotension o Abnormal FHR • Promote and support adoption of upright (kneeling, squatting or standing) and mobile positions, and support individual choice[4] o Compared to recumbent, lateral or supine positions during first stage of labour, upright positions are associated with a reduction in duration of first stage[61] • Birth ball may be an effective tool to reduce labour pain and optimise fetal position[62]
Nutrition and hydration	• For low risk women, restricting oral intake has shown no improvement on maternal or fetal birth outcomes[61] o Support woman to eat and drink as desired o Offer frequent sips of water • Intrapartum isotonic and carbohydrate drinks are not any more beneficial than drinking water • Oral carbohydrate supplements do not alter labour outcomes[63]

4.4 Delay in active first stage

Table 13. Delay in active first stage

Aspect	Consideration
Categories and diagnosis of delay	• Protracted labour (slower progress than is usual)[12] o Nulliparous—cervical dilatation of less than 2 cm in 4 hours o Multiparous—cervical dilatation of less than 2 cm in 4 hours or a slowing in the progress of labour • Arrest in labour (complete cessation of progress)[12,57] o Diagnosed at cervical dilatation of 6 cm or more with ruptured membranes and no or limited cervical change for four hours of adequate contractions[12]
Consultation and referral	• Consultation and/or referral with midwifery team leader/obstetrician[2] • Consider if clinical intervention is required • Assess: o All aspects of progress o Maternal and fetal condition o Refer to Queensland Clinical Guideline: *Intrapartum fetal surveillance*[48]
Supporting progress toward normal birth	• Refer to: o Section 2 Supporting normal birth Section 2.1 Continuity of care • For multiparous women, review previous labour patterns • Provide information and inform that there is no robust evidence to support or reject ARM with diagnosed prolonged labour[18]

5 Second stage

Defined as full cervical dilatation until the birth of the baby.[4] There are two identified phases of the second stage—passive and active. Progress of labour in the second stage includes flexion, rotation and descent of the fetal head. Refer to Appendix B: Summary position statements.

Table 14. Progress of second stage

Passive second stage	
Onset	• Full cervical dilatation before or in the absence of involuntary expulsive contractions[4]
Progress/delay	• Delay pushing (in the absence of clinical concern) if there is no urge to push[7] • There is no consensus for a defined duration for passive second stage • Reassess[4] and consult with obstetrician if in one hour (multiparous or nulliparous) there is: o No urge to push **or** o No evidence of progress
Active second stage	
Onset[4]	• The baby is visible (head on view) **or** • Full cervical dilatation and expulsive contractions
Progress[4,5]	• Duration of second stage varies from woman to woman[5] o Nulliparous women birth may occur within 3 hours o Multiparous women birth may occur within 2 hours
Delay[4,5]	• If progress is inadequate (e.g. lack of rotation and/or descent of the presenting part) suspect delay after [4] o 1 hour for nulliparous women o 30 minutes for multiparous women • If delay in progress noted and birth not imminent consult and refer with an obstetrician after:[4] o 2 hours for nulliparous women o 1 hour for multiparous women • Longer durations may be appropriate where: o Maternal and fetal conditions are reassuring o Consultation and referral has occurred • Refer to Queensland Clinical Guideline: *Intrapartum fetal surveillance*[48]

5.1 Supporting progress toward normal birth

Table 15. Supporting progress in second stage

Aspect	Consideration
Supportive care	• Continue ongoing assessments • Provide continuous, accurate information to support informed decision making[14,64] • Refer to: o Section 2 Supporting normal birth o Section 2.1 Continuity of care
Duration of second stage	• A specific absolute maximum length of second stage (passive plus active) has not been identified[18] • Rather than rigid time limits, base decision-making on continuing assessment of: o Maternal physical and emotional condition o Fetal condition o Progress of labour o Maternal preferences • Offer information about risks and benefits of longer and shorter duration relevant to individual circumstances • Longer durations may be appropriate in individual women[7,18] where: o Maternal and fetal condition is reassuring o Appropriate consultation and referral has occurred • Refer to: o Appendix A: Comparisons of labour definitions o Appendix B: Summary position statements on length of labour
Duration and uro-gynaecological outcomes for nulliparous women	• There is a paucity of robust evidence regarding uro-gynaecological outcomes associated with prolonged second stage • Increased length of second stage may be associated with increased risk of: o Primary postpartum haemorrhage (PPH)[65] o Pelvic floor injury[66] • If spontaneous vaginal birth duration of second stage is not associated with obstetric anal sphincter injury[67]

5.2 Observations in first and second stage

Increase frequency of observations if clinically indicated.

Table 16. Labour observations

Aspect	Latent first stage (if admitted)	Active first stage[4]	Second stage[4]
FHR[4,68] *(Differentiate from maternal pulse)*	• Four hourly	• Intermittent auscultation • 15–30 minutely[68]	• Passive: 15 minutely • Active[68]: auscultate FHR immediately after a contraction for at least one minute at least every five minutes
Maternal temperature	• Four hourly	• Four hourly	• Four hourly
If water immersion	• Not applicable	• Hourly	• 30 minutely
Pulse, respiratory rate	• Four hourly	• 30 minutely	• Differentiate from FHR • Passive: 30 minutely • Active: 15 minutely • More frequently if indicated
Blood pressure	• Four hourly	• Four hourly	• Four hourly
Abdominal palpation	• If indicated • Prior to VE	• As required to monitor progress • Prior to VE	• As required to monitor progress • Prior to VE
Contractions	• Four hourly	• Every 30 minutes for 10 minutes • Expect three–five in 10 minutes[68], lasting 60 seconds, with minimum 60 seconds resting tone	• Continuous assessment
VE	• Offer if clinical concerns and no contraindications	• Offer four hourly[6] • If clinically indicated to assess progress	• Offer when clinically indicated to aid decision making
Vaginal loss	• Hourly	• Hourly	• Observe continuously
Urinary	• Encourage voiding two hourly	• Encourage and monitor two hourly voiding	• Monitor frequency and encourage voiding

5.3 Birth of baby

Table 17. Birth of the baby

Aspect	Consideration
Maternal position	• Support women to give birth in whatever position they find comfortable[69] while maintaining good visualisation of the perineum • Kneeling and all fours position are associated with increased incidence of intact perineum[70] • Sitting, squatting and birth stool are associated with increased incidence of perineal trauma[70] • Upright position in second stage is associated with (quality of evidence generally low)[71]: o A reduction in pushing by around six minutes o A significant reduction in assisted birth o A reduced incidence of episiotomy o An increased incidence of second degree tears o An increased incidence of blood loss 500 mL or more • Upright position in second stage may reduce the duration of second stage[72] for nulliparous women[71] through facilitating an extension and flexibility of the pelvic outlet[69]
Pushing	• Encourage the woman to push according to own bodily instincts[5] which will usually support pushing with an open glottis[18,73] • Avoid coaching women to push in a prolonged closed glottis effort (Valsalva manoeuvre)[18,73] • Do not check for nuchal cord • Fundal pressure is not recommended to expedite second stage[74]
Perineal care	• Refer to Queensland Clinical Guideline: *Perineal care*[75] • Perineal warm compresses (heat therapy) during second stage[6] may be associated with[76]: o Decreased incidence of third and fourth degree tears o Reduced pain scores o Increased satisfaction and comfort

5.3.1 Water birth

Table 18. Water birth

Aspect	Consideration
Context	• For women choosing to give birth in water there is minimal evidence of increased adverse effects to the woman and/or baby[77-83] • There is a lack of professional consensus about water birth o The Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG), Australian College of Midwives (ACM) and the Royal College of Midwives (RCM) recommend respecting the woman's wishes within the framework of safety and clinical guidelines[77,82,84] o American College of Obstetricians and Gynaecologists (ACOG) and American Academy of Pediatrics recommend birth on land not in water[85]
Hypothesised neonatal mechanisms during water birth	• The mechanism controlling the switch from fetal to extra-uterine breathing is uncertain[86] • Hypothesised triggers to breathing following birth on land include[87]: o Physical stimulation, pain, hypercapnia, hypoxia, chronic endocrine changes, elastic recoil of thoracic tissue and diaphragmatic contraction • Healthy babies born into warm water do not receive all these stimuli and therefore inhibition of breathing in water birth is suggested to be a balance of inhibitory and stimulatory triggers[81]
Benefits	• Birthing in water, when compared to uncomplicated non-waterbirth, is demonstrated to[79]: o Enhance sense of control[83] and autonomy[88] o Lower pain scores[89] o Reduce need for labour augmentation, have episiotomy or receive epidural analgesia[83,89] • No difference in cord pH between babies born after water birth or land birth[90]
Potential risk[90]	• Neonatal infection • Maternal uterine infection[91] • Neonatal water aspiration • Neonatal and maternal thermo-regulation • Management in the event of obstetric or neonatal emergency • Cord avulsion[83]
Facility level systems	• Where water birth is offered, establish local protocols for: o Infection control procedures for cleaning and maintenance of pools/tubs o Monitoring of woman and fetus including water temperature o Early identification and emergency movement out of the water if complications develop[89] o Maintenance of clinical knowledge and expertise
Informed choice	• Provide information[88] to women about the benefits and risks of water birth • Support women who choose water birth, as per local protocols[92]
Care during second stage	• Second health professional in attendance at the time of birth • FHR and maternal observations [refer to Table 16. Labour observations] • If concerns or difficulty in assessment, assist the woman to exit the water[77] • ~~A~~void directed pushing • 'Hands off' birth to avoid stimulation • Bring baby immediately to the surface without undue stimulation
Care during third stage	• If concerns or difficulty in assessment, assist the woman to exit the water[77] • No evidence to contraindicate birthing the placenta in water during physiological third stage[77] • Avoid cord tension and inspect cord integrity immediately[78] • Maintain baby's warmth and continually observe • Refer to Section 6 Third stage • Support early initiation of breastfeeding based on woman's preference

6 Third stage

Commences with the birth of the baby to the birth of the placenta and membranes.[4] Management of third stage is commonly classified in relation to whether specific elements of care are routinely included as a package of care.

- Physiological management (also referred to as expectant management)
- Active management is further classified according to the timing of cord clamping:
  - Delayed cord clamping—also referred to as modified active management (recommended)
  - Early cord clamping—often referred to as 'active management' (not recommended)

Offer the woman information on all options and support decision making. Refer to Appendix C: Third stage evidence

Table 19. Third stage options

Aspect	Consideration
Context	• In the absence of emergency newborn care recommend babies[93]: o Are placed skin to skin with the mother and thermoregulation maintained with a warm wrap and/or towel o Are positioned to maintain airway patency with continual observation of respiratory effort and tone • If *modified active, physiological or lotus birth,* avoid tension on the cord and/or continual palpation of the cord • Insufficient evidence to recommend for or against cut cord milking, or intact cord milking, when delayed cord clamping unable to be performed[94]
Modified active (delayed cord clamping)	• Recommended for births not requiring immediate emergency care[4-6,82,95-97]: o Uterotonic administration immediately after the birth of the baby and before the cord is clamped and cut o Waiting at least one minute or more, after birth of baby or for cord pulsation to cease before clamping and cutting the cord[94] • Use controlled cord traction (CCT) after signs of separation
Physiological	• Suitable for women who[4]: o Have a healthy pregnancy o Have had a normal first and second stage of labour o Have no risk factors for excessive bleeding o Make an informed decision after discussion of the risks and benefits • Routinely includes[4,6]: o No uterotonic o No clamping of the cord until pulsation has ceased or following birth of the placenta o Leave cord unclamped (or if cut, leave clamped) o Placenta births spontaneously by maternal effort o Healthcare provider unobtrusively waits and observes for signs of separation and remains 'hands off' • Recommend intervention with oxytocin if bleeding needs to be controlled[7]
Active (early cord clamping)	• Early cord clamping (within 60 seconds of the birth of the baby) is no longer recommended for routine management of the third stage[4,5] • Routinely includes: o Uterotonic administered with the birth of the anterior shoulder or immediately after birth of baby o CCT after signs of separation
Lotus birth	• Routinely includes[98,99]: o Baby remaining attached to the placenta until cord separates naturally o Placenta is dried, salted and wrapped in breathable material • May increase infection risk to the baby[100] • If a woman chooses lotus birth: o Discuss risks and benefits o Support the woman's request o Ensure the woman has provided appropriate materials prior to birth o Provide information to parents regarding signs of infection o Advise of ongoing care requirements (change bag as required, avoid strain on the umbilical cord)

6.1 Ongoing care in third stage

Table 20. Ongoing care in third stage

Aspect	Consideration
Uterotonic	• When uterotonic required or requested, recommend oxytocin 10 international units (IU) IM injection shortly after birth[5,6] o Associated with fewer side effects compared to oxytocin plus ergometrine combinations[6] o If risk of PPH, refer to Queensland Clinical Guidelines *Primary postpartum haemorrhage*[101] • Timing of administration[96]: o Can be administered before or after the cord is clamped and cut o Administration before cord clamping is unlikely to impact on placental transfusion to baby o No significant difference in incidence of PPH when given before or after birth of placenta[102]
Cord clamping	• In the absence of emergency newborn care, cord clamping after 60 seconds (modified active management) is recommended o Refer to section 6 Third stage o Refer to Queensland Clinical Guidelines: *Neonatal resuscitation*[103] • Document time the cord is clamped[4] and type of management[96]
Prolonged third stage	• Birth of the placenta and membranes may be considered prolonged when not completed within:[4] o 30 minutes of the birth with active management o 60 minutes of the birth with physiological management
Placental separation	• Signs of placental separation include:[104] o The uterus rises in the abdomen o The uterus becomes firmer and globular (ballotable) o Trickle or gush of blood is observed from the vagina o Lengthening of the umbilical cord is observed o Cord does not retract with suprapubic pressure o Woman may feel the urge to bear down o Placenta may become visible at the vagina • Observe blood loss and avoid repeated palpation of uterus[5]
Controlled cord traction	• Ensure the uterus is well contracted and the placenta separated before controlled cord traction is applied[6] • Perform after cutting the cord[4] • Guard the uterus—gently pull downwards on the cord while maintaining counter-traction above the pubic bone • Cord traction follows the curve of Carus[105] • As placenta delivers, hold in both hands and gently turn to twist the membranes • Slowly tease out membranes to complete birth • Immediately following birth of placenta assess uterine tone
Maternal care	• Close observations of general physical condition including: o Colour, respirations, vaginal blood loss, woman's self-report • Frequency of observations as clinically indicated • Maintain a private, calming and relaxing environment • Keep mother and baby warm • If woman's choice of feeding, support breastfeeding o Refer to Queensland Clinical Guideline: *Establishing breastfeeding*[106]
Rh D negative maternal blood group	• Cord blood test for group and direct antiglobulin test (Coombs) • Maternal Kleihauer • Follow local protocols for collection
Physiological care	• Aims to optimise hormonal balance by[17]: o Sustaining skin to skin contact and avoiding unnecessary separation for at least one uninterrupted hour after birth o Encouraging a focus on physiological processes and environment o Encouraging support people to remain focused on woman and baby • Involve support persons in care for mother and baby

6.1.1 Indications for additional care

Table 21. Indications for additional care

Aspect	Consideration
Indications for oxytocin (if physiological management)	• If physiological management, recommend oxytocin where[4]: o Placenta not birthed within 60 minutes of the birth of the baby o The woman wishes to shorten the length of third stage o Increasing blood loss
Indications for consultation or referral	• Concerns regarding heavy bleeding o Refer to Queensland Clinical Guideline: *Primary postpartum haemorrhage*[101] • Maternal pyrexia • Retained placenta • Maternal collapse • Uterine inversion • Maternal observations outside of recommended Queensland Maternity Early Warning Tool (QMEWT) parameters • Any clinical concerns

6.2 Placenta and membrane examination

Perform a thorough examination of the placenta and membranes.

Table 22. Examination of placenta and membranes

Aspect	Consideration
Placenta	• General shape and appearance • Calcification or infarctions • Evidence of abruption • Missing cotyledons • Succenturiate lobe/s
Membranes	• One amnion and one chorion • Complete or ragged • Presence of vessels
Cord	• Cord insertion site • Two arteries and one vein • Velamentous insertion o Vessels noted in membranes
Indications for consultation or referral	• Placenta suspected or diagnosed as incomplete[4] • Offensive odour—collect culture swab from maternal and fetal surface • If abnormality or clinical concerns detected during pregnancy or labour, consider request for histopathology

6.3 Requests concerning care of the placenta

A woman may request to take the placenta home. In some cultures the manner in which the placenta is handled is thought to impact on the wellbeing of the woman and baby.

Table 23. Requests concerning care of the placenta

Aspect	Consideration
Context	• Respect cultural and personal perspectives • The woman has the right to take the placenta home • Provide information relevant to the circumstances
Transport, storage and disposal	• Recommend transport in cooled, sealed, leak-proof container o Short term storage in fridge o Longer term storage in freezer • Follow local protocols regarding storage and transport • Refer woman to local council guidance regarding burial or disposal of the placenta on private or public property
Ingestion	• Ingestion of the placenta is not recommended[107] due to limited research[108], particularly: o If it is not their own placenta (due to the risk of blood borne infections) o If the placenta has not been stored in a fridge or freezer o If the placenta has been sent for pathology examination (likely to have been immersed in formaldehyde solution)

6.4 Perineal examination

Aim is to identify presence of and degree of perineal or genital trauma. Refer to Queensland Clinical Guideline: *Perineal care*[75] for detailed consideration of perineal examination.

Table 24. Perineal care

Aspect	Consideration
Environment[4]	• Maintain private environment for woman and preferred support person • Aim to minimise interference with bonding/skin to skin care • Recommend no food or drink until after assessment and decision regarding anaesthetic requirement • Discuss and offer adequate pain relief prior to and/or during assessment • Facilitate comfortable position in which the genital structures can be clearly observed • Ensure adequate lighting • Promote comfort and warmth • If water birth, and where possible and clinically appropriate, delay suturing for one hour after leaving the water to enable perineal tissue to revitalise
Assessment	• Recommend systematic perineal assessment (may include vaginal and/or rectal examination, as clinically indicated) • Following assessment, explain to the woman: o Findings o Recommended plan for repair (if required) o Ongoing self-care
Indications for consultation or referral	• Repair outside of the clinician's level of competency and credentialling[2] • Inadequate pain relief reported • Adequate visualisation and assessment are not possible

7 Fourth stage

This guideline defines fourth stage as the first six hours immediately following the birth. Fourth stage considerations include supporting physiological adaptation and bonding.[17] Facilitate:

- An optimal environment [refer to Section 2.3 Birth environment]
- Uninterrupted skin to skin contact[109] [refer to Table 25. Newborn care and assessment]
- Avoidance of unnecessary separation or interruption[25]
- Continuous ongoing support and observation for the first two hours (i.e. do not leave the woman and baby alone in the first two hours post birth)
- Inclusion of family/partner, where possible and appropriate

7.1 Observations

Recommended maternal and newborn observations following normal labour and birth are outlined in Table 25. Newborn care and assessment and Table 26. Maternal care and assessment.

7.2 Newborn care and assessment

Table 25. Newborn care and assessment

<table>
<tr><th>Element</th><th colspan="2">Consideration</th></tr>
<tr><td>Initial care and assessment</td><td colspan="2">• Place the baby skin to skin immediately following birth[25]
• Maintain warmth by drying baby and with pre-warmed towels or blankets
• Assess and record Apgar score at 1 and 5 minutes
o Assess tone, breathing, heart rate, colour and reflex irritability[4]
• Refer to Queensland Clinical Guidelines:
o Routine newborn assessment[110]
o Neonatal resuscitation[103]</td></tr>
<tr><td>Skin to skin contact and breastfeeding</td><td colspan="2">• Encourage and support uninterrupted skin to skin contact[25]:
o For a minimum of one hour[4]
o Until after the first breastfeed (if feeding choice)[4,109]
• Follow local protocols for supervision during skin to skin contact
o Requires frequent direct visual observation of the baby
• Observe initial breastfeed and offer help if needed
• Refer to Queensland Clinical Guideline: Standard care[106]</td></tr>
<tr><td rowspan="6">Observations</td><td colspan="2">• Ensure adequate lighting for observation of colour
• Perform and record unobtrusive regular newborn observations
• Provide close continuous care
• Record the time from birth to the onset of regular respirations[4]</td></tr>
<tr><td>Observations</td><td>Frequency for first two hours</td></tr>
<tr><td>• Position, patency of airway</td><td>• 15 minutely</td></tr>
<tr><td>• Respiratory rate and effort</td><td>• 15 minutely</td></tr>
<tr><td>• Colour</td><td>• 15 minutely</td></tr>
<tr><td>• Heart rate</td><td>• Within one hour of birth</td></tr>
<tr><td>• Temperature</td><td>• Within one hour of birth</td></tr>
<tr><td>Non–urgent care</td><td colspan="2">• Avoid separation within the first hour of birth[4,25] including for:
o Measurement of weight, length and head circumference
o Administration of phytomenadione (vitamin K) or newborn immunisations</td></tr>
<tr><td>Consider consultation/ referral</td><td colspan="2">• Neonatal resuscitation required
• Any deviations from normal
• Identification of a physical anomaly</td></tr>
</table>

7.3 Maternal care and assessment

Recommended observations following normal labour and birth are outlined below.

Table 26. Maternal care and assessment

<table>
<tr><th>Aspect</th><th colspan="2">Consideration</th></tr>
<tr><td rowspan="9">Observations in the first two hours after birth</td><td colspan="2">• Alter frequency of observations as clinically indicated</td></tr>
<tr><td>Observation</td><td>Frequency for first two hours</td></tr>
<tr><td>• Temperature</td><td>• Within the first hour</td></tr>
<tr><td>• Pulse, respiratory rate, BP</td><td>• Once after birth of the placenta</td></tr>
<tr><td>• Uterus (firm and central)</td><td>• After birth of the placenta
• 15–30 minutely</td></tr>
<tr><td>• Blood loss (lochia)</td><td>• After birth of the placenta
• 15–30 minutely</td></tr>
<tr><td>• Perineum</td><td>• After first maternal observations
• Reassess if indicated</td></tr>
<tr><td>• Pain</td><td>• Initial assessment
• Review if indicated</td></tr>
<tr><td>• Urine output</td><td>• Has desire to pass urine and reports ability to void within the first two hours</td></tr>
<tr><td>Observations after two hours of birth</td><td colspan="2">• Observations as above at least once per eight hours when inpatient and prior to discharge
o Follow local protocol recommendations
• Modify according to changes in clinical circumstances</td></tr>
<tr><td>Physiological care</td><td colspan="2">• Provide an environment that promotes physiological adaptation
• Respond to requests for pain management
• Nutrition and hydration—offer food and drink
• Consider personal hygiene needs
• Observe emotional and psychological response to labour and birth
• Observe response towards the baby
• Assess the mother-infant interaction[9]
• Vigilant unobtrusive observations of the baby [refer to Table 25. Newborn care and assessment]
• Venous thromboembolism (VTE) risk assessment
o Refer to Queensland Clinical Guideline: Venous thromboembolism (VTE) prophylaxis in pregnancy and the puerperium[111]</td></tr>
<tr><td>Rh D negative blood group[112]</td><td colspan="2">• Review cord blood result
• If baby Rh D positive
o Obtain maternal Kleihauer or flow cytometry
o Recommend Rh D immunoglobulin
▪ Quantification of the presence of positive fetal cells will guide need for any subsequent doses (do not delay administration of first dose while awaiting the results of Kleihauer or flow cytometry)</td></tr>
<tr><td>Discharge</td><td colspan="2">• Discuss with the woman and consider in collaboration:
o Appropriate supports available on discharge
o Preferences of the woman for early discharge
o Circumstances and overall clinical, emotional and psychosocial condition of the woman and baby</td></tr>
</table>

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Appendix A: Comparisons of labour definitions

Publication	Friedman[1]	Zhang[2]	NICE[3]
Year/country	1955: USA/500 women	2010: USA/62,415 women	2017:UK
Latent phase	• Nulliparous ≤ 20 hours • Multiparous ≤ 14 hours	• Nulliparous and multiparous o 4–5 cm ≥ 6 hours o 5–6 cm ≥ 3 hours	• Not always continuous period of time • Painful contractions, cervical change and effacement to 4 cm • Duration not defined
Prolonged latent phase	• Nulliparous > 20 hours • Multiparous > 14 hours	Nulliparous • 3–4 cm > 8.1 hours • 4–5 cm > 6.4 hours • 5–6 cm >3.2 hour Multiparous • 4-5 cm > 7.3 hours • 5–6 cm > 3.4 hours	• Not defined
Active first stage			
Onset	• Cervix 4 cm dilated	• Cervix 6 cm dilated	• Regular painful contractions • Progressive cervical dilatation from 4cm
Duration	• Not defined	• 2 hours or less	• Nulliparous 8–18 hours • Multiparous 5–12 hours
Normal progress	• Nulliparous ≥ 1.2 cm/hour • Multiparous ≥ 1.5 cm/hour	• Nulliparous 0.5–0.7 cm/hour • Multiparous 0.5–1.3 cm/hour	• 2 cm in 4 hours
Slow progress	• Based on curved progress • Nulliparous < 1.2 cm/hour • Multiparous < 1.5 cm/hour	• Based on stepped progress Nulliparous • 6–7 cm > 2.2 hours • 7–8 cm > 1.6 hours • 8–9 cm > 1.4 hours • 9–10 cm > 1.8 hours Multiparous • 6–7 cm > 1.8 hours • 7–8 cm > 1.2 hours • 8–9 cm > 0.9 hours • 9–10 cm > 0.8 hours	• Nulliparous < 2 cm in 4 hours • Multiparous < 2 cm in 4 hours or slowing in progress
Labour arrest	• No cervical change for ≥ 2 hours with adequate contractions ≥ 4 cm	• Not defined	• Not defined
Second stage			
Normal duration	• Not defined	• Nulliparous 2.8 hours • Multiparous ≤ 1.3 hours	• Not defined
Passive duration	• Not defined	• Not defined	• Not defined
Active duration	• Nulliparous 3 hours of pushing • Multiparous 2 hours of pushing	• Not defined	• Nulliparous within 3 hours of active second stage • Multiparous within 2 hours of active second stage
Abnormal progress	• Maximum duration not defined • Nulliparous: not until at least 3 hours of pushing • Multiparous not until at least 2 hours of pushing	• Nulliparous > 2.8 hours • Multiparous > 1.3 hours	• 2 hours of active second stage • Suspect delay: o Nulliparous: 1 hour of active second stage o Multiparous: if inadequate progress after 30 minutes of active second stage

Abbreviations: < less than, **≤** less than or equal to, **>** greater than, **≥** greater than or equal to

(1) Friedman E. Primigravid labor: a graphicostatistical analysis. Obstetrics & Gynecology 1955; 6(6); 567-589. **(2)** Zhang J, Landy HJ, Ware Branch D, Burkman R, Haberman S, Gregory KD, et al. Contemporary patterns of spontaneous labor with normal neonatal outcomes. Obstetrics & Gynecology 2010;116(6):1281-7. **(3)** National Institute for Health and Care Excellence (NICE). Intrapartum care for healthy women and babies. Clinical Guideline 190. 2017.

Appendix B: Summary position statements on length of labour

Source	Summary of position
ACOG and The Society for Maternal-Fetal Medicine Consensus Statement[1]	**First stage** • A prolonged latent phase (more than 20 hours in nulliparous women and more than 14 hours in multiparous women) is not an indication for caesarean birth (1B Strong recommendation, moderate quality evidence) • Slow but progressive labour in the first stage is not an indication for caesarean birth (1B Strong recommendation, moderate quality evidence) • Cervical dilatation of 6 cm is considered the threshold for active phase for most women in labour. Before 6 cm, standards of active-phase progress are not applied (1B Strong recommendation, moderate quality evidence) **Second stage** • A specific absolute maximum length of time spent in second stage of labour beyond which all women will undergo operative birth has not been identified (1C Strong recommendation, low quality evidence) • Before diagnosing arrest of labour in second stage, if maternal and fetal conditions permit: o Support at least two hours of pushing in multiparous women (1B Strong recommendation, moderate quality evidence) o Support at least three hours of pushing in nulliparous women (1B Strong recommendation, moderate quality evidence) o Longer durations may be appropriate on an individualised basis as long as progress is being documented (1B Strong recommendation, moderate quality evidence)
RANZCOG[2]	**First stage: failure to progress** • Latent phase: no upper limit to the length of the latent phase of labour • Active phase: o Primiparous: progress less than one cm in one to two hours o Multiparous: progress less than 1.2 cm per hour **Second stage: failure to progress** • Passive and active second stage not defined o Primiparous: two hours of second stage o Multiparous: one hour of second stage
SOGC[3]	**First stage** • Dystocia should not be diagnosed prior to the onset of the active phase of the first stage of labour or before the cervix is at least four cm dilated (II-2D) • Definition of dystocia in active first stage: o Greater than 4 hours of less than 0.5 cm per hour or no dilatation for two hours **Second stage** • Delayed pushing is preferred when the woman has no urge to push, particularly if the presenting part is above station +2 and/or in a non-occiput anterior position, assuming the fetus does not display abnormal monitoring and the pregnant woman's status is satisfactory (I-A) • Duration of passive stage: nulliparous two hours, multiparous one hour • Total duration of second stage: nulliparous three hours, multiparous two hours • Definition of dystocia in active second stage: o Greater than one hour of active pushing without descent of the presenting part • Operative delivery less than two hours after commencing pushing is not recommended, provided maternal status and fetal surveillance are normal (III-D)
NICE[4]	**First stage** • Inform women that, while the length of established first stage of labour varies between women: o First labours last on average eight hours and are unlikely to last over 18 hours o Second and subsequent labours last on average five hours and are unlikely to last over 12 hours • If delay in the established first stage is suspected, assess all aspects of progress in labour when diagnosing delay, including: o Cervical dilatation of less than two cm in four hours for first labours o Cervical dilatation of less than two cm in four hours or a slowing in the progress of labour for second or subsequent labours o Descent and rotation of the baby's head o Changes in the strength, duration and frequency of uterine contractions **Second stage** • For a nulliparous woman, birth would be expected to take place within three hours of the start of the active second stage in most women o Diagnose delay in the active second stage when it has lasted two hours and refer the woman to a healthcare professional credentialed to undertake an operative vaginal birth if birth not imminent • For a multiparous woman, birth would be expected to take place within two hours of the start of the active second stage in most women o Diagnose delay in the active second stage when it has lasted one hour and refer the woman to a healthcare professional credentialed to undertake an operative vaginal birth if birth is not imminent

(1) American College of Obstetricians and Gynecologists, Society for Maternal Fetal Medicine, Caughey AB, Cahill AG, Guise J-M, Rouse DJ. Safe prevention of the primary cesarean delivery. American Journal of Obstetrics and Gynecology. 2019; 210(3):179-93. **(2)** The Royal Australian and New Zealand College of Obstetricians and Gynaecologists. Provision of routine intrapartum care in the absence of pregnancy complications. 2020. **(3)** Lee,L Dy, J Azzam, H. Management of spontaneous labour in healthy women. Journal of Obstetrics and Gynaecology Canada 2016;(9):843–865. **(4)** National Institue for Health and Care Excellence. Intrapartum care for healthy women and babies. Clinical Guideline 190. 2017.

Appendix C: Third stage evidence

Aspect	Consideration
Context	• It is unclear which component of third stage management (oxytocin, timing of cord clamping, or controlled cord traction) has the greatest effect on reducing PPH[1] • There is no evidence comparing active management with modified active management or modified active management with physiological management for maternal or neonatal outcomes[1]
Modified active management	• The only difference between active and modified active management as defined in this guideline, is in the timing of clamping of the cord (i.e. recommendation to delay cord clamping for one–three minutes after birth in modified active) • Delayed cord clamping allows a physiological transfer of placental blood to the baby[1] • No clear evidence for the most effective timing[2] • For early versus late cord clamping no difference in[2]: o Neonatal mortality o Apgar score less than seven at five minutes o Admission to special care baby unit o Longer term neurodevelopment (Ages and Stages questionnaire scores) • For babies who received late cord clamping, an increase in[2]: o Birth weight o Haemoglobin at 24 to 48 hours (but not subsequently) o Improvement in iron stores at three to six months o Improved maternal and infant health and nutrition outcomes[3] o Jaundice requiring phototherapy[2]
Active management	• Active management compared to expectant management (all women) is associated with significant decrease in[1]: o PPH greater than 500 mL o Maternal blood transfusion o Use of therapeutic uterotonics during third stage or in the first 24 hours o Baby's birthweight (due to lower blood volume from interference with placental transfusion) • Active management compared to expectant management (all women) is associated with increased: o Maternal discomfort[4] o Vomiting after birth[1] o After pains[1] o Maternal diastolic blood pressure[1] o Use of analgesia from birth to discharge[1]
Physiological	• Compared to active management, physiological third stage following physiological labour (low risk women), is associated with no significant difference for: o Severe PPH (greater than 2500 mL)[1] o Manual removal of the placenta[2] o Maternal haemoglobin less than nine g/L at 24 to 72 hours[1]
Controlled cord traction (CCT)	• CCT is associated with reduced incidence of: o PPH[6] o Manual removal of placenta[4] o Shortened duration of the third stage[5] • There are limited benefits of CCT in terms of: o Severe PPH[4],[5] o Need for additional uterotonics[5] o Blood transfusion[5] • Rare but serious complication of CCT is uterine inversion[7] • Omitting CCT at the woman's request is not associated with increased risk of severe PPH but may increase the incidence of manual removal of placenta[4]
Nipple stimulation	• There is insufficient evidence to evaluate the effectiveness of nipple stimulation for reducing bleeding during the third stage of labour[6]

(1) Begley CM, Gyte GML, Devane D, McGuire W, Weeks A, Biesty LM. Active versus expectant management for women in the third stage of labour. Cochrane Database of Systematic Reviews. 2019; Issue 2. Art No.: CD007412.pub5. **(2)** McDonald SJ, Middleton P, Dowswell T, Morris PS. Effect of timing of umbilical cord clamping of term infants on maternal and neonatal outcomes. Cochrane Database of Systematic Reviews. 2015. Issue 7. Art. No.: CD004074. **(3)** World Health Organization. Delayed umbilical cord clamping for improved maternal and infant health and nutrition outcomes. [Internet] 2014. Available from http://www.who.int. **(4)** Hofmeyr GJ, Mshweshwe NT, Gülmezoglu AM. Controlled cord traction for the third stage of labour. Cochrane Database of Systematic Reviews. 2015; Issue 1. Art No.: CD008020.pub2. **(5)** Du Y, Ye M, Zheng F. Active management of the third stage of labor with and without controlled cord traction: a systematic review and meta-analysis of randomized controlled trials. Acta Obstetricia et Gynecologica Scandinavica 2014;93(7):626-33. **(6)** Abedi P, Jahanfar S, Namvar F, Lee J. Breastfeeding or nipple stimulation for reducing postpartum haemorrhage in the third stage of labour. Cochrane Database of Systematic Reviews. 2016; Issue 1. Art No.: CD010845. **(7)** Macones G, Berghella V, Barss V. Puerperal uterine inversion. UpToDate. [Internet] 2022. Available from http://www.uptodate.com.

Appendix D: Position statements on third stage management

Offer women information about the risk and benefits of all third stage management options.

Source	Definition of terms used	Timing of cord clamping	Timing of oxytocic
RANZCOG **(1a)(1b)**	• Active management of the third stage includes oxytocic administration followed by assisted delivery of the placenta and is recommended for all women(1a) • Does not differentiate between early and delayed cord clamping	• No clear evidence to guide practitioners regarding delayed cord clamping in term infants, but infants most likely to benefit are those where maternal iron stores are low, or in infants who will be exclusively breast fed without iron supplementation(1a) • Active management of the third stage of labour (use of prophylactic oxytocics, early cord clamping and controlled cord traction) should be recommended to all pregnant women as this reduces the risk of PPH and the need for blood transfusion(1b)	• No comment about timing of oxytocic
RCOG**(2)**	• Immediate cord clamping within 30 seconds • Deferred cord clamping after two minutes	• Optimal timing is unclear • The cord should not be clamped earlier than is necessary based on clinical assessment of the situation.	• The timing of IM injection of uterotonic drugs before cord clamping is unlikely to have substantive effect on placental transfusion
WHO**(3a)(3b)(3c)**	• Active management: o The administration of uterotonic o No differentiation between early or delayed cord clamping(3a). • Early cord clamping is generally carried out in the first 60 seconds after birth (most commonly in the first 15–30 seconds)(3b) • Delayed (also referred to as "late") cord clamping is generally carried out more than one minute after the birth or when the umbilical cord pulsation has ceased(3b)	• Late cord clamping, performed after 1-3 minutes after birth, is recommended for all births while initiating simultaneous newborn care(3b) • Early cord clamping less than 1 minute after birth is not recommended unless the neonate is asphyxiated and needs to be moved immediately for resuscitation (3a) • Delayed umbilical cord clamping (not earlier than 1 min after birth) is recommended for improved maternal and infant health and nutrition outcomes(3b)	• May be given prophylactically at various moments during the third stage(3c) • Most often administered IM immediately with the delivery of the anterior shoulder, or after delivery of the infant (1996)
NICE**(4)**	• Active management of the third stage involves a package of care that includes: o Routine use of uterotonic drugs o Deferred clamping and cutting of cord o Controlled cord traction after signs of separation of the placenta.	• After administering oxytocin, clamp and cut the cord • Do not clamp the cord earlier than one minute from the birth of the baby unless there is concern about the integrity of the cord or the baby has a heart rate below 60 beats/minute that is not getting faster • Clamp the cord before five minutes in order to perform controlled cord traction as part of active management. • If the woman requests that the cord is clamped and cut later than five minutes, support choice	• For active management, administer oxytocin 10 IU IM injection with the birth of the anterior shoulder or immediately after the birth of the baby and before the cord is clamped and cut
McDonald**(5a)(5b)**	• Early defined as immediate or within 10 seconds**(5b)** • Delayed defined 2–5 minutes, cessation of pulsation, placenta in vagina**(5a)**	• A more liberal approach to delaying clamping of the umbilical cord in healthy term infants appears to be warranted, particularly in light of growing evidence that delayed cord clamping increases early haemoglobin concentrations and iron stores in infants**(5a)(5b)** • Delayed cord clamping is likely to be beneficial as long as access to treatment for jaundice requiring phototherapy is available**(5a)**	

(1) The Royal Australian and New Zealand College of Obstetricians and Gynaecologists. **(1a)** Provision of routine intrapartum care in the absence of pregnancy complications. C-Obs 31. 2017. **(1b)** Management of postpartum haemorrhage. C-Obs 43. (2017). **(2)** Royal College of Obstetricians and Gynaecologists. Clamping of the umbilical cord and placental transfusion. Scientific Impact Paper No. 14 (2015). **(3)** World Health Organization **(3a)** Prevention and treatment of postpartum haemorrhage (2012). **(3b)** Delayed umbilical cord clamping for improved maternal and infant health and nutrition outcomes (2014) **(3c)** Care in normal birth: a practical guide (1996). **(4)** National Institute for Health and Care Excellence (NICE) Intrapartum care for healthy women and babies. Clinical Guideline 190. (2017). **(5a)** McDonald, S Middleton, P Dowswell, T Morris, P Effect of timing of umbilical cord clamping of term infants on maternal and neonatal outcomes. Cochrane Database of Systematic Reviews Issue 7. Art No.: CD004074. (2013). **(5b)** Rabe H, Gyte GML, Díaz-Rossello JL, Duley L. Effect of timing of umbilical cord clamping and other strategies to influence placental transfusion at preterm birth on maternal and infant outcomes (Review). Cochrane Database of Systematic Reviews. Issue 9. Art. No.: CD003248 (2019).

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