

South Australian Perinatal Practice Guideline

Delays in the Second Stage of Labour

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Note:

This guideline provides advice of a general nature. This statewide guideline has been prepared to promote and facilitate standardisation and consistency of practice, using a multidisciplinary approach. The guideline is based on a review of published evidence and expert opinion.

Information in this statewide guideline is current at the time of publication.

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Health practitioners in the South Australian public health sector are expected to review specific details of each patient and professionally assess the applicability of the relevant guideline to that clinical situation.

If for good clinical reasons, a decision is made to depart from the guideline, the responsible clinician must document in the patient's medical record, the decision made, by whom, and detailed reasons for the departure from the guideline.

This statewide guideline does not address all the elements of clinical practice and assumes that the individual clinicians are responsible for discussing 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,
- Advising consumers of their choice and ensuring informed consent is obtained,
- Providing care within scope of practice, meeting all legislative requirements and maintaining standards of professional conduct, and
- Documenting all care in accordance with mandatory and local requirements

Explanation of the aboriginal artwork:

The Aboriginal artwork used symbolises the connection to country and the circle shape shows the strong relationships amongst families and the Aboriginal culture. The horse shoe shape design shown in front of the generic statement symbolises a woman and those enclosing a smaller horse shoe shape depicts a pregnant woman. The smaller horse shoe shape in this instance represents the unborn child. The artwork shown before the specific statements within the document symbolises a footprint and demonstrates the need to move forward together in unison.



Australian Aboriginal Culture is the oldest living culture in the world yet Aboriginal people continue to experience the poorest health outcomes when compared to non-Aboriginal Australians. In South Australia, Aboriginal women are 2-5 times more likely to die in childbirth and their babies are 2-3 times more likely to be of low birth weight. The accumulative effects of stress, low socio economic status, exposure to violence, historical trauma, culturally unsafe and discriminatory health services and health systems are all major contributors to the disparities in Aboriginal maternal and birthing outcomes. Despite these unacceptable statistics the birth of an Aboriginal baby is a celebration of life and an important cultural event bringing family together in celebration, obligation and responsibility. The diversity between Aboriginal cultures, language and practices differ greatly and so it is imperative that perinatal services prepare to respectfully manage Aboriginal protocol and provide a culturally positive health care experience for Aboriginal people to ensure the best maternal, neonatal and child health outcomes.

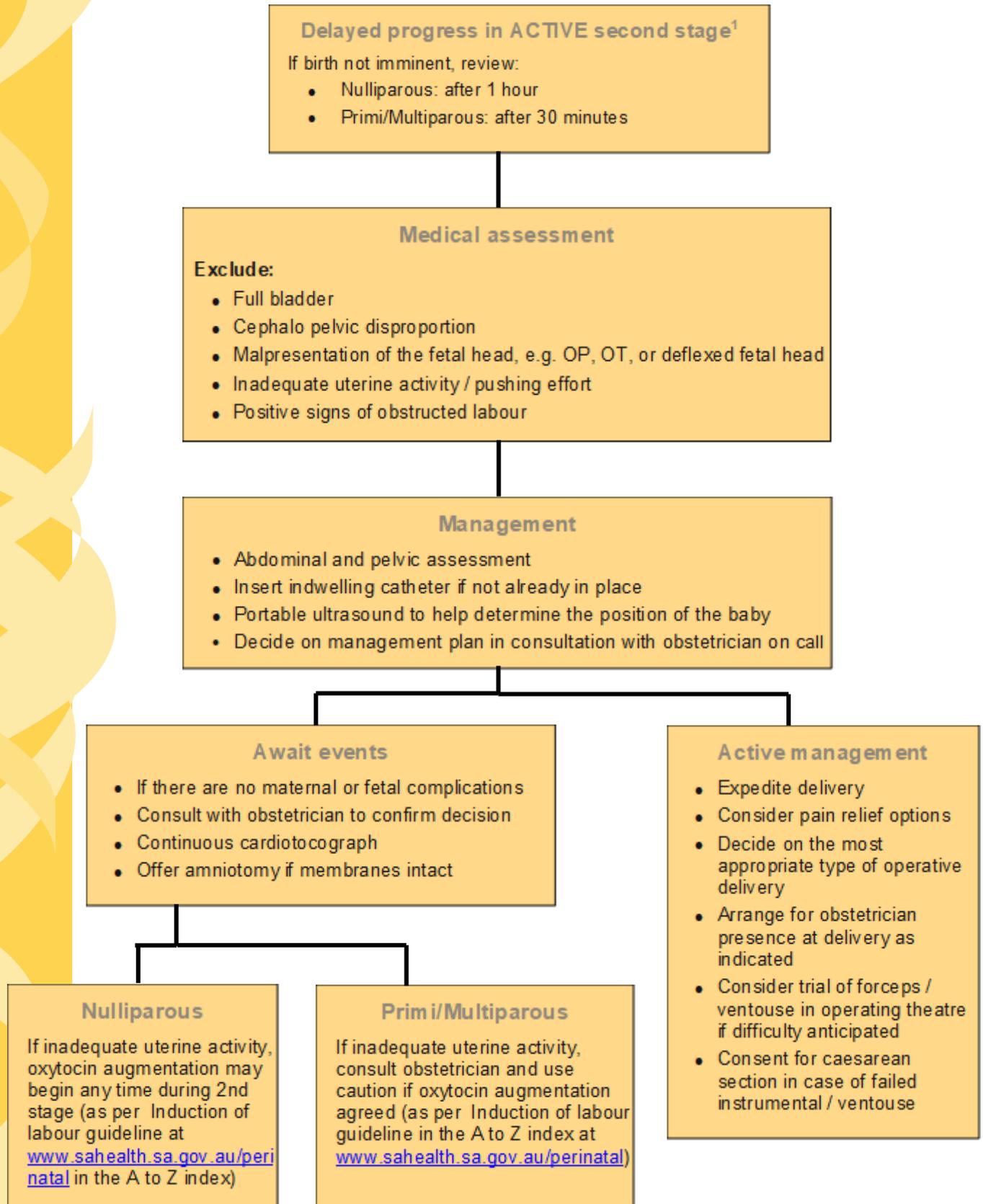
Purpose and Scope of Perinatal Practice Guideline (PPG)

This guideline provides clinicians with information for the assessment and management of delays in the second stage of labour.



Delays in the Second Stage of Labour

Flowchart: Management of delayed second stage



Delays in the Second Stage of Labour

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Summary of Practice Recommendations

Routine directed Valsalva pushing (prolonged pushing with a closed glottis) should be avoided.

If the woman has no urge to push 1 hour after diagnosis of full dilatation, perform a vaginal examination and clinical assessment.

Consider measures to facilitate progress and descent in second stage such as maternal positioning, care and analgesia.

A prolonged second stage of labour warrants clinical reassessment of the woman, fetus and expulsive forces.

Observe for signs of obstructed labour.

Assess uterine activity and consider augmentation with oxytocin if indicated.

Perform continuous fetal heart rate monitoring in the active phase of second stage of labour if pushing has progressed beyond 1 hour, and birth is not imminent.

Provided there are no maternal or fetal complications, in consultation with an obstetrician, consideration should be given to waiting.

If there is a reason for the second stage to be expedited, decide on the most appropriate type of instrumental birth and consider a trial in theatre if difficulty is anticipated.



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Abbreviations

ACOG	American College of Obstetricians and Gynecologists
CTG	Cardiotocograph
et al.	And others
e.g.	For example
OA	Occipito anterior
OP	Occipito posterior
OT	Occipito transverse
IOL	Induction of labour
LSCS	Lower segment caesarean section
NICE	National Institute for Health and Care Excellence
POP OUT	Persistent Occipito-Posterior: Outcomes following manual rotation
PPG	Perinatal Practice Guidelines
RANZCOG	The Royal Australian and New Zealand College of Obstetricians and Gynaecologists
SFH	Symphyseal fundal height
USS	Ultrasound

Definitions

For the purpose of this guideline, the following definitions of labour are recommended:

Passive second stage of labour	The finding of full dilatation of the cervix before (or in the absence of) involuntary expulsive contractions ⁵ . During this phase the fetal head progressively descends through the maternal pelvis, and internal rotation and flexion occurs.
Active second stage of labour	Expulsive contractions with a finding of full dilatation of the cervix. Active maternal effort following confirmation of full dilatation of the cervix in the absence of expulsive contractions ⁵
Nulliparous	A woman has not given birth to a baby after 20 weeks gestation
Primiparous	A woman who has given birth to one baby after 20 weeks gestation
Multiparous	A woman who has given birth to two or more babies after 20 weeks gestation

Introduction

The guideline for management of delays in second stage of labour is intended for women at term with low risk pregnancies and reassuring maternal and fetal status. It is not suitable for women with multiple gestation or women attempting vaginal birth after caesarean section, because in these clinical situations there is very little evidence on best practice, and management is individualised.

Literature Review

Length of second stage is not associated with neonatal morbidity.^{2,3,4}

Increased maternal morbidity in women with prolonged second stage may be partially attributed to the higher rate of operative procedures and should not be solely based on the elapsed time after full dilatation.²

The effect of prolonged second stage of labour on pelvic support and urinary and faecal continence requires further investigation.

Extremely prolonged second stage (> 4 hours) is associated with increased incidence of postpartum haemorrhage, shoulder dystocia and caesarean section.^{3,11}

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Measures to facilitate progress and descent in second stage

For further information refer to the *Perineal care* available at www.sahealth.sa.gov.au/perinatal

<p>Maternal positioning</p>	<ul style="list-style-type: none"> • Encourage and support the woman to adopt the position in which she is most comfortable (usually upright)^{6,7} • In women without epidural anaesthesia, use of any upright or lateral position, compared with supine or lithotomy positions, is associated with reduced duration of second stage of labour⁶ <ul style="list-style-type: none"> ○ Upright positions, including hands-knees, kneeling, standing or squatting, have several theoretical benefits (e.g. increase in pelvic dimensions, good fetal alignment), but are associated with an increased risk of blood loss over 500 mL⁶ • Encourage changes in position if descent is slow <ul style="list-style-type: none"> ○ Side lying and hands-knees may be the best positions for birth to minimise perineal trauma¹¹ ○ Avoid the supine position because of the risk of aortocaval compression⁶ • In women with an epidural, there is insufficient data to draw conclusions on the effect of position in second stage⁷
<p>Pushing technique</p>	<ul style="list-style-type: none"> • The optimum pushing technique is unclear⁸ • Pushing and bearing down methods and fetal and maternal outcomes (e.g. on pelvic floor structures and bladder function) are the subject of a Cochrane protocol that will aim to compare directed pushing during the second stage with supporting the woman's instinctive responses¹⁰ • The woman should be allowed to bear down when she feels the need (i.e. spontaneous pushing or involuntary pushing), unless epidural anaesthesia has inhibited the bearing down sensation⁸ • Encourage the woman's efforts and observe the perineum for swelling • If pushing is ineffective or if requested by the woman, strategies to assist birth can be used, such as support, change of position, emptying of the bladder^{8,10} • Routine directed Valsalva pushing (prolonged pushing with a closed glottis) should be avoided, especially if the perineum is very swollen⁸ • Changing from spontaneous to coached pushing techniques (without prolonged Valsalva), may be of use when expeditious birth is indicated and the woman is not yet pushing spontaneously¹⁰



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<p>Maternal care</p>	<ul style="list-style-type: none"> • Encourage a calm, safe and private environment • Offer fluids and ice chips • Offer massage and encourage leg exercises if the woman experiences leg cramps • Warm perineal compresses and perineal massage are associated with a reduction in the incidence of 3rd and 4th degree tears¹¹ • Offer sponging of the woman's face and hands • If no epidural in place, offer aids to assist pushing, e.g. birth stools, birthing ball, birthing mat, mirror, birthing bar
<p>Fetal observations</p>	<ul style="list-style-type: none"> • If intermittent fetal heart rate monitoring, listen to the fetal heart every 5 minutes during active pushing and document (listen toward the end of the contraction and for at least 30-60 seconds after each contraction)⁹ • Perform continuous fetal heart rate monitoring in the active phase of second stage of labour if pushing has progressed beyond 1 hour, and birth is not imminent⁹
<p>Analgesia</p>	<ul style="list-style-type: none"> • If no epidural, observe if the woman is able to push effectively without additional analgesia. Offer additional analgesia if unable to push effectively • If epidural is in place, continue epidural top-ups / infusion as required • There is no evidence that discontinuing epidural analgesia to improve a woman's ability to push will reduce the incidence of operative vaginal delivery, but there is evidence that it increases the woman's pain¹⁵

Length of second stage

The length of 2nd stage varies according to^{4,5}:

- Maternal positioning
- Position of the fetus
- Station at completion of first stage
- Quality of the uterine contractions
- Use of oxytocin augmentation
- Pushing efforts of the woman
- Type of analgesia

The beginning of second stage (diagnosis of complete cervical dilation) is difficult to determine as it depends on the timing and indication for vaginal examination.

The evidence suggests that, in controlled circumstances (where fetal and maternal wellbeing is established), allowing women in second stage to rest and await fetal descent has beneficial effects including:

- Reduced maternal fatigue in nulliparous women
- Less fetal heart rate decelerations
- Reduced pushing time for both nulliparous and primi/multiparous women⁹

However, if the woman has no urge to push 1 hour after diagnosis of full dilatation, perform a vaginal examination and clinical assessment and discuss with the medical obstetric team.

There is no evidence for setting a time limit for active (pushing) phase of second stage **unless there is a lack of descent**¹⁴

Individual practitioners need to take into account their own capabilities and local practices when determining how long to leave a woman in the second stage before deciding on expediting birth.



Delays in the Second Stage of Labour

Nulliparous women

Normal length of second stage is 30 minutes to 3 hours (median duration: 50 minutes).

Practitioners may wish to review progress after 1 hour to assess whether additional support is required:

- Consultant obstetrician
- Procedural general practitioner
- Theatre staff

Or if anything can be done to improve efforts to achieve a vaginal birth e.g.:

- Amniotomy
- Ensure adequate uterine activity
- Bladder empty
- Analgesia appropriate

Prolonged second stage should be considered when active second stage exceeds:

- 3 hours with regional anaesthesia
- 2 hours if no regional anaesthesia is used¹³

Medical review should be requested after active second stage has lasted 2 hours if birth is not imminent. Amniotomy should be offered if the membranes are intact.

Primiparous and Multiparous women

Normal length of second stage is 5 – 30 minutes (median duration: 20 minutes)

Practitioners may wish to review progress after 30 minutes to assess whether additional support is required:

- Consultant obstetrician
- Procedural general practitioner
- Theatre staff

Or if anything can be done to improve efforts to achieve a vaginal birth e.g.:

- Amniotomy
- Ensure adequate uterine activity
- Bladder empty
- Analgesia appropriate

Prolonged second stage should be considered if active second stage exceeds:

- 2 hours with regional anaesthesia
- 1 hour if no regional anaesthesia is used¹³

Medical review should be requested after active second stage has lasted 1 hour if birth is not imminent. Amniotomy should be offered if the membranes are intact.

Delayed descent in second stage

A prolonged second stage of labour warrants clinical reassessment of the woman, fetus and expulsive forces.

Assess fetal size, adequacy of the pelvis, fetal wellbeing, and maternal pushing efforts.

Exclude the following:

- Full bladder
- Cephalo-pelvic disproportion
 - Careful review of the notes, including recent scan results and SFH measurements
 - Abdominal palpation
 - Vaginal examination including a pelvic assessment, examination of the fetal head for caput and moulding
- Malpresentation of the fetal head, e.g. occipito-posterior or occipito-transverse, or deflexed fetal head
- Inadequate uterine activity

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Occiput posterior fetus in the second stage

Evidence from the PEOPLE study suggests that delayed pushing when the fetus is occipito posterior (OP) may increase the chance for a spontaneous vaginal birth without the need for rotational or instrumental intervention¹⁴.

Manual rotation of the fetal head from occipito posterior to occipito anterior has also been shown to be a successful intervention that can reduce the incidence of caesarean section and vacuum extraction.¹⁵

- A national collaborative study 'Persistent Occipito-Posterior: Outcomes following manual rotation (POP OUT)' is currently in progress to determine the effectiveness of elective manual rotation in the management of occipito posterior and occipito transverse position early in the second stage of labour

Although positioning and movement may help, no randomised controlled trials to date have found these interventions to have a significant effect on fetal position.¹¹

Observe for the following possible indicators of obstructed labour

- Maternal and fetal tachycardia
- Hypertonus with frequent, strong contractions
- Vaginal bleeding
- Haematuria
- Maternal temperature
- Constant severe abdominal pain
- Physiologic retraction ring (Bandl's ring)

Actions:

- Catheterise the bladder
- Abdominal and pelvic assessment
- Ultrasound can improve the accuracy of determining the position of the baby
- Provided there are no maternal or fetal complications, in consultation with an obstetrician, decide whether there is any advantage to waiting
- If there is a reason for the second stage to be expedited, decide on the most appropriate type of instrumental birth, e.g. simple forceps, rotational forceps or ventouse
- Consider trial of forceps / ventouse in operating theatre if difficulty is anticipated

Oxytocin augmentation in the second stage

Oxytocin augmentation in the second stage for a nulliparous woman is a safe option to overcome inadequate uterine activity. Extreme caution should be exercised in a primiparous/multiparous woman.¹³

Oxytocin administration can begin at any time during the second stage, particularly in nulliparous women with epidural anaesthesia, OR where contractions are assessed to be inadequate OR there is lack of progress.¹⁶

Women who are already receiving oxytocin at the onset of the second stage should continue to receive it during the second stage.



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