The Royal Australian and New Zealand College of Obstetricians and Gynaecologists

Excellence in Women's Health

Management of breech presentation at term

This statement has been developed and reviewed by the Women's Health Committee and approved by the RANZCOG Board and Council.

A list of Women's Health Committee Members can be found in Appendix A.

Disclosure statements have been received from all members of this committee.

Disclaimer This information is intended to provide general advice to practitioners. This information should not be relied on as a substitute for proper assessment with respect to the particular circumstances of each case and the needs of any patient. This document reflects emerging clinical and scientific advances as of the date issued and is subject to change. The document has been prepared having regard to general circumstances.

First endorsed by RANZCOG: February 2001
Current: July 2016
Review due: July 2019

Objectives: To provide health professionals and women with information regarding the benefits and risks of their options when a breech presentation is diagnosed at term.

Target audience: Health professionals providing maternity care, and patients.

Values: The evidence was reviewed by the Women's Health Committee (RANZCOG), and applied to local factors relating to Australia and New Zealand.

Background: This statement was first developed by Women's Health Committee in February 2001 and reviewed in July 2016.

Funding: The development and review of this statement was funded by RANZCOG.

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1. Patient summary

Breech presentation means the baby is lying longitudinally with its bottom and/or feet presenting first to the lower part of the mother's uterus.

For babies with the breech presenting, labour and birth carry increased risk of harm,(due to trauma or lack of oxygen), compared to the risk carried by those babies labouring with the head presenting. Caesarean section is often recommended as a safer method of birth for the breech baby, but carries risks for the mother both immediately and for future pregnancies. While vaginal breech birth may be safely completed, patients need to be carefully selected for their suitability , thoroughly counselled and labour and birth where appropriate facilities and personell are available

External Cephalic Version (ECV), a procedure to turn the baby from a breech to a cephalic presentation, can reduce the incidence of breech presentation in labour and should be offered to some mothers late in the pregnancy.

The risks of birth as a breech and the conditions required for consideration of vaginal breech birth are discussed in this statement.

2. Summary of recommendations

Good Practice Point	Grade
All caregivers providing antenatal care should be experienced in palpation of the pregnant abdomen, including identification of the presenting part to diagnose breech presentation. The caregiver should have ready access to ultrasound to confirm presentation where he/she has any doubt regarding the presentation.	Good Practice Point
Recommendation 1	**Grade**
For women with suspected breech presentation in late third trimester, an ultrasound should be performed to confirm the examination findings. If breech presentation is confirmed, a detailed obstetric ultrasound should be performed to determine whether any fetal or maternal finding predisposing to malpresentation is present (such as a fetal anomaly, or undiagnosed placenta praevia) .	Consensus-based recommendation
Recommendation 2	**Grade**
Women with a breech presentation at or near term should be informed about external cephalic version (ECV) and offered it if clinically appropriate.	Consensus-based recommendation
Recommendation 3	**Grade**
ECV should only be performed by suitably trained health professionals where there is facility for emergency caesarean section. Each institution should have its own documented protocol for offering and performing ECVs.	Consensus-based recommendation

Recommendation 4	
Absolute contraindications for ECV that are likely to be associated with increased mortality or morbidity: • where caesarean delivery is required • antepartum haemorrhage within the last 7 days • abnormal cardiotocography • major uterine anomaly • ruptured membranes • multiple pregnancy (except delivery of second twin). Relative contraindications where ECV might be more complicated: • small-for-gestational-age fetus with abnormal Doppler parameters • proteinuric pre-eclampsia • oligohydramnios • major fetal anomalies • scarred uterus • unstable lie.	1
Recommendation 5	**Grade**
Where there is maternal preference for vaginal birth, the woman should be counselled about the risks and benefits of planned vaginal breech delivery in the intended location and clinical situation.	Consensus-based recommendation
Recommendation 6	**Grade**
Contraindications to vaginal breech delivery include: • Cord presentation • Fetal growth restriction or macrosomia • Any presentation other than frank or complete breech • Extension of the fetal head • Clinically inadequate maternal pelvis • Fetal anomaly incompatible with vaginal delivery	Consensus-based recommendation
Recommendation 7	**Grade**
Planned vaginal breech delivery must take place in a facility where appropriate experience and infrastructure are available: : • Continuous fetal heart monitoring in labour. • Immediate availability of caesarean facilities. • Availability of a suitably experienced obstetrician to manage the delivery, with arrangements in place to manage shift changes and fatigue arrangements.	Consensus-based recommendation
Recommendation 8	**Grade**
When breech presentation is first recognised in labour, the obstetrician should discuss the options of emergency caesarean section or proceeding with attempted vaginal breech birth with the woman, explaining the respective risks and benefits of each option according to her individual circumstances. Wherever practicable, point-of-care ultrasound should be performed when breech presentation is first diagnosed in labour.	Consensus-based recommendation

3. Introduction

Between three and four per cent of singleton fetuses will present by the breech beyond 37 weeks of gestation, with the majority of these presentations being detected prior to labour.[2] The issue of how to manage and plan delivery in this situation has been controversial, with much of the debate centred around a study by Hannah and colleagues, the 'Term Breech Trial'. This trial described below, has changed clinical practice with as many as 90 per cent of breech presentations at term now delivered by caesarean section. [3]

3.1 Evidence summary and basis for recommendations

The most widely quoted study regarding the management of breech presentation at term is the so-called 'Term Breech Trial.'[2] Published in 2000, this trial compared a policy of planned vaginal delivery with planned caesarean section for selected breech presentations. It reported that perinatal mortality and serious neonatal morbidity were significantly lower in the planned caesarean section group (1.6 per cent) compared to the planned vaginal birth group (5 per cent) (RR 0.33, $p<0.0001$). Perinatal death occurred in 0.3 per cent of planned caesarean births and 1.3 per cent of all planned vaginal births (RR 0.23, $p=0.01$), while serious neonatal morbidity occurred in 1.4 per cent of planned caesarean births versus 3.8 per cent of planned vaginal births (RR 0.36, $p=0.0003$). Serious maternal morbidity showed no difference between the two groups. Subsequent follow-up data on a subset of survivors failed to show long-term differences in death and neurodevelopmental delay between the two groups at 2 years of age.[4] However, because of the small number of patients involved, those long term outcomes are not suitable endpoints.[4]

At least one study published in the wake of the Term Breech Trial is consistent and has shown an association between the increased use of planned caesarean section for breech presentation at term and improvements in perinatal outcome (including halving perinatal mortality and even greater reductions in the incidence of birth trauma).[5]

Rietberg et al (2005) in their paper "The effect of the Term breech Trial on medical intervention behaviour and neonatal outcome in the Netherlands: an analysis of 35,453 term breech deliveries" calculated that 175 caesarean sections would be required to avoid one fetal death. [6].

The benefits of Caesarean section reducing newborn morbidity must be balanced against the immediate and longer term risks of Caesarean delivery. The downstream risks relating to future births include the potential for scar rupture in labour, the surgical risks of repeat caesarean section and placenta accreta. (See RANZCOG Statement Birth after Previous Caesarean Section C-Obs 38).

A further consequence of the practice of performing caesarean section to deliver breech presenting babies is a limitation of the opportunities for training and experience of vaginal breech birth for obstetricians and midwives.

The Term Breech Trial has been criticised on methodological grounds [7-10] thereby making its generalisability and applicability to appropriately staffed and resourced Australian and New Zealand hospitals uncertain.

A recent meta-analysis conducted by Berhan and Haileamlak (2016) that included observational, non-randomized data calculated absolute risks of perinatal mortality in the planned vaginal and planned caesarean section groups of about 1 in 333 and 1 in 2,000 respectively.[11] While this difference in perinatal outcomes was statistically significant, the authors of the metaanalysis argued that the the absolute risks were very small (almost equivalent to a cephalic presentation at term) and the practice of individualised management of breech presentation could be substantiated by their study. However, the accompanying editorial did not concur with this interpretation, and stated that "Informed parents may of course continue to choose vaginal delivery, but it is no longer justifiable for obstetricians to claim that in their hands there is no increased fetal risk from vaginal birth".[12]

Some expert groups consider that with adherence to strict criteria before and during labour, planned vaginal delivery of the singleton breech at term may be an option to offer to appropriately counselled and selected women where appropriate personnel and infrastructure to support such a birth are in place.[7]

Where vaginal breech delivery is to be considered, the suggested minimum requirements for management are provided in Recommendation 8 below, to ensure the safest possible conduct of vaginal breech delivery for appropriately experienced Fellows.

4. Discussion and recommendations

4.1 Diagnosis of a Breech Presentation in the late third trimester

Where the diagnosis of breech presentation has been made late in the third trimester, ultrasound should be performed by a suitably-experienced practitioner to determine whether any fetal or maternal findings predisposing to malpresentation are present (such as a fetal congenital anomaly, or undiagnosed placenta praevia, for example). Ultrasound is also used to locate the placenta, quantify the liquor volume, estimate the fetal weight, and diagnose adverse fetal findings such as hyperextension of the fetal head, or cord or footling presentation.

Good Practice Note	Grade
All caregivers providing antenatal care should be experienced in palpation of the pregnant abdomen, including identification of the presenting part to diagnose breech presentation. The caregiver should have ready access to ultrasound to confirm presentation where he/she has any doubt regarding the presentation.	Good Practice Point
Recommendation 1	**Grade**
For women with suspected breech presentation in late third trimester, an ultrasound should be performed to confirm the examination findings. If breech presentation is confirmed, a detailed obstetric ultrasound should be performed to determine whether any fetal or maternal finding predisposing to malpresentation is present (such as a fetal anomaly, or undiagnosed placenta praevia) .	Consensus-based recommendation

4.2 External Cephalic Version

External Cephalic Version (ECV) has an important role in the management of term breech presentation, and should be offered to all women in whom it is appropriate.[7] ECV is inappropriate where a caesarean section is indicated on other grounds. ECV is associated with a reduction in caesarean section for non-cephalic presentation. The use of scoring systems will allow prospective counselling on the chance that attempted ECV will be successful.

ECV should only be performed by suitably trained health professionals where there is facility for emergency caesarean section if needed and according to appropriate institutional protocols that define the place of cardiotocography, ultrasound, and tocolysis.

When performed in appropriate clinical settings, ECV has a low rate of serious adverse outcomes. It is important to note ECV is not without potential hazards, and large series reveal that about one in 200 attempts will require emergency caesarean section for a serious adverse outcome such as placental abruption, cord prolapse, or acute fetal compromise. Minor complications (transient CTG abnormalities, rupture of membranes and small antepartum haemorrhage) were reported to occur in 48 (4.3%) of 1121 patients undergoing ECV at a tertiary centre in Sydney (Ref 10). Studies have not been sufficiently powered to estimate the frequency of uterine rupture, perinatal death or long term morbidity associated with ECV but case reports exist of these outcomes.[11, 12]

The success rate of ECV has been reported as 40 percent in nulliparous women and 60 per cent in multiparae, but these depend on case selection and experience of the clinical staff.[12]

Recommendation 2	Grade
Women with a breech presentation at or near term should be informed about external cephalic version (ECV) and offered it if clinically appropriate.	Consensus-based recommendation

4.2.1 Relative contraindications to ECV

Relative contraindications to ECV include: oligohydramnios, antepartum haemorrhage, multiple pregnancy (other than after delivery of the first twin), some fetal anomalies, fetal hypoxia, a restrictive nuchal cord, uterine structural anomalies, a uterine scar, and hyperextension of the head.

Recommendation 3	Grade
ECV should only be performed by suitably trained health professionals where there is facility for emergency caesarean section. Each institution should have its own documented protocol for offering and performing ECVs.	Consensus-based recommendation

Recommendation 4	Grade
Absolute contraindications for ECV that are likely to be associated with increased mortality or morbidity: • where caesarean delivery is required • antepartum haemorrhage within the last 7 days • abnormal cardiotocography • major uterine anomaly • ruptured membranes • multiple pregnancy (except delivery of second twin). Relative contraindications where ECV might be more complicated: • small-for-gestational-age fetus with abnormal Doppler parameters • proteinuric pre-eclampsia • oligohydramnios • major fetal anomalies • scarred uterus • unstable lie.	Consensus-based recommendation 1

4.3 Individualise management

Almost 90 per cent of fetuses presenting by the breech at term are now delivered by caesarean section.[3] However, with careful case selection and intrapartum management, in an institution with adequate experience and infrastructure, it is possible to plan for attempted vaginal delivery in some cases. This will depend upon the experience of the clinical team, and the infrastructure available.

4.4 Contraindications to vaginal breech delivery include:

a) Cord presentation

b) Fetal growth restriction or macrosomia

c) Any presentation other than frank or complete breech

d) Extension of the fetal head

e) Clinically inadequate maternal pelvis

f) Fetal anomaly incompatible with vaginal delivery

Many women will request planned caesarean delivery, and it is essential that women who request a trial of vaginal delivery are counselled about the potential risks and benefits of vaginal breech delivery, giving due regard to the experience of the clinical team and the infrastructure available.

Where a vaginal delivery of a breech presentation is planned, appropriate infrastructure must include:

- Continuous electronic fetal heart monitoring in labour.
- Immediate availability of skilled anaesthetic staff, facilities for immediate caesarean section, and paediatric resuscitation.
- Availability of a suitably experienced obstetrician for all of labour with arrangements in place to manage shift changes and fatigue arrangements.

Recommendation 5	Grade
Where there is maternal preference for vaginal birth, the woman should be counselled about the risks and benefits of planned vaginal breech delivery in the intended location and clinical situation.	Consensus-based recommendation

Recommendation 6	Grade
Contraindications to vaginal breech delivery include: a) Cord presentation b) Fetal growth restriction or macrosomia c) Any presentation other than frank or complete breech d) Extension of the fetal head e) Clinically inadequate maternal pelvis f) Fetal anomaly incompatible with vaginal delivery	Consensus-based recommendation

Recommendation 7	Grade
Planned vaginal breech delivery must take place in a facility where appropriate experience and infrastructure are available: • Continuous fetal heart monitoring in labour. • Immediate availability of caesarean facilities. • Availability of a suitably experienced obstetrician to manage the delivery, with arrangements in place to manage shift changes and fatigue arrangements.	Consensus-based recommendation

4.5 Management of the Breech Presentation that is first diagnosed in labour

Breech presentation may be first diagnosed in labour, without the recommended assessment and counselling having been undertaken. In determining the preferred mode of delivery in this circumstance, the accoucheur should still consider all of the factors in Recommendation 8 above and ideally, intrapartum ultrasound should be performed at diagnosis.

In some cases, the diagnosis of breech presentation will be made near to delivery, especially when a labour is progressing rapidly. This will allow only a very small window for decision-making regarding the mode of delivery. Increased fetal risks of vaginal breech delivery exist where there is a possibility of undiagnosed congenital abnormalities or undiagnosed hyperextension of the fetal head.

In the situation of first diagnosis of breech in labour, the obstetrician should discuss the options for mode of birth with the woman, explaining the balance of the fetal and maternal risks and benefits for that woman's individual circumstances. The fundamental principles of informed consent should be observed.

Recommendation 8	Grade
When breech presentation is first recognised in labour, the obstetrician should discuss the options of emergency caesarean section or proceeding with attempted vaginal breech birth with the woman, explaining the respective risks and benefits of each option according to her individual circumstances. Wherever practicable, point-of-care ultrasound should be performed when breech presentation is first diagnosed in labour.	Consensus-based recommendation

5. References

1. Royal College of Obstetricians and Gynaecologists. EXTERNAL CEPHALIC VERSION AND REDUCING THE INCIDENCE OF BREECH PRESENTATION. 2010.

2. Hannah ME, Hannah WJ, Hewson SA, Hodnett ED, Saigal S, Willan AR. Planned caesarean section versus planned vaginal birth for breech presentation at term: a randomised multicentre trial. Term Breech Trial Collaborative Group. Lancet. 2000;356(9239):1375-83.

3. Australian Institute of Health and Welfare (AIHW). Australia's Mothers & Babies Report 2012 [Perinatal Statistics Reports]. Available from: http://www.aihw.gov.au/WorkArea/DownloadAsset.aspx?id=60129550054.
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5. Goffinet F, Carayol M, Foidart JM, Alexander S, Uzan S, Subtil D, et al. Is planned vaginal delivery for breech presentation at term still an option? Results of an observational prospective survey in France and Belgium. American journal of obstetrics and gynecology. 2006;194(4):1002-11.
6. Rietberg CC, Elferink-Stinkens PM, Visser GH. The effect of the Term Breech Trial on medical intervention behaviour and neonatal outcome in The Netherlands: an analysis of 35,453 term breech infants. BJOG : an international journal of obstetrics and gynaecology. 2005;112(2):205-9.
7. Daviss BA, Johnson KC, Lalonde AB. Evolving evidence since the term breech trial: Canadian response, European dissent, and potential solutions. Journal of obstetrics and gynaecology Canada : JOGC = Journal d'obstetrique et gynecologie du Canada : JOGC. 2010;32(3):217-24.
8. Kotaska A. Inappropriate use of randomised trials to evaluate complex phenomena: case study of vaginal breech delivery. Bmj. 2004;329(7473):1039-42.
9. Lawson G. The term breech trial ten years on: primum non nocere? . Birth. 2011;39(3).
10. Glezerman M. Five years to the term breech trial: the rise and fall of a randomized controlled trial. American journal of obstetrics and gynecology. 2006;194(1):20-5.
11. Berhan Y, Haileamlak A. The risks of planned vaginal breech delivery versus planned caesarean section for term breech birth: a meta-analysis including observational studies. BJOG : an international journal of obstetrics and gynaecology. 2016;123(1):49-57.
12. Thornton JG, . The term breech trial results are generalisable. BJOG : an international journal of obstetrics and gynaecology. 2016;123(1):58.

6. Other suggested reading

The Society of Obstetricians and Gynaecologists of Canada (SOGC) Clinical Practice Guideline: Vaginal Delivery of Breech Presentation. June 2009; No. 226: 557-566. Available at: http://www.sogc.org/guidelines/documents/gui226CPG0906.pdf

7. Links to other College statements

Consent and the Provision of Information to Patients in Australia regarding Proposed Treatment (C-Gen 02a)

Consent and Provision of Information to Patients in New Zealand regarding Proposed Treatment (C-Gen 02b)

Evidence-based Medicine, Obstetrics and Gynaecology (C-Gen 15)

Vaginal birth after previous caesarean section (C-Obs 38)

Appendices

Appendix A Women's Health Committee Membership

Name	Position on Committee
Professor Stephen Robson	Chair and Board Member
Dr James Harvey	Deputy Chair and Councillor
Associate Professor Anusch Yazdani	Member and Councillor
Associate Professor Ian Pettigrew	Member and Councillor
Dr Ian Page	Member and Councillor
Professor Yee Leung	Member of EAC Committee
Professor Sue Walker	General Member
Dr Lisa Hui	General Member
Dr Joseph Sgroi	General Member
Dr Marilyn Clarke	General Member
Dr Donald Clark	General Member
Associate Professor Janet Vaughan	General Member
Dr Benjamin Bopp	General Member
Associate Professor Kirsten Black	General Member
Dr Bernadette White	General Member
Dr Jacqueline Boyle	Chair of the ATSIWHC
Dr Martin Byrne	GPOAC representative
Ms Catherine Whitby	Community representative
Ms Sherryn Elworthy	Midwifery representative
Dr Michelle Proud	Trainee representative

Appendix B Overview of the development and review process for this statement

i. Steps in developing and updating this statement

This statement was developed in July 2016. The Women's Health Committee carried out the following steps in reviewing this statement:

- Declarations of interest were sought from all members prior to reviewing this statement.
- Structured clinical questions were developed and agreed upon.
- An updated literature search to answer the clinical questions was undertaken.
- At the July 2016 face-to-face committee meeting, the existing consensus-based recommendations were reviewed and updated (where appropriate) based on the available body of evidence and clinical expertise. Recommendations were graded as set out below in Appendix B part iii)

ii. Declaration of interest process and management

Declaring interests is essential in order to prevent any potential conflict between the private interests of members, and their duties as part of the Women's Health Committee.

A declaration of interest form specific to guidelines and statements was developed by RANZCOG and approved by the RANZCOG Board in September 2012. The Women's Health Committee members

were required to declare their relevant interests in writing on this form prior to participating in the review of this statement.

Members were required to update their information as soon as they become aware of any changes to their interests and there was also a standing agenda item at each meeting where declarations of interest were called for and recorded as part of the meeting minutes.

There were no significant real or perceived conflicts of interest that required management during the process of updating this statement.

iii. Grading of recommendations

Each recommendation in this College statement is given an overall grade as per the table below, based on the National Health and Medical Research Council (NHMRC) Levels of Evidence and Grades of Recommendations for Developers of Guidelines. Where no robust evidence was available but there was sufficient consensus within the Women's Health Committee, consensus-based recommendations were developed or existing ones updated and are identifiable as such. Consensus-based recommendations were agreed to by the entire committee. Good Practice Notes are highlighted throughout and provide practical guidance to facilitate implementation. These were also developed through consensus of the entire committee.

Recommendation category		Description
Evidence-based	A	Body of evidence can be trusted to guide practice
	B	Body of evidence can be trusted to guide practice in most situations
	C	Body of evidence provides some support for recommendation(s) but care should be taken in its application
	D	The body of evidence is weak and the recommendation must be applied with caution
Consensus-based		Recommendation based on clinical opinion and expertise as insufficient evidence available
Good Practice Note		Practical advice and information based on clinical opinion and expertise

Appendix C Full Disclaimer

This information is intended to provide general advice to practitioners, and should not be relied on as a substitute for proper assessment with respect to the particular circumstances of each case and the needs of any patient.

This information has been prepared having regard to general circumstances. It is the responsibility of each practitioner to have regard to the particular circumstances of each case. Clinical management should be responsive to the needs of the individual patient and the particular circumstances of each case.

This information has been prepared having regard to the information available at the time of its preparation, and each practitioner should have regard to relevant information, research or material which may have been published or become available subsequently.

Whilst the College endeavours to ensure that information is accurate and current at the time of preparation, it takes no responsibility for matters arising from changed circumstances or information or material that may have become subsequently available.