Maternity - External Cephalic Version

Summary This Guideline describes the procedure and clinical care for external cephalic version (ECV) when a woman presents at or near term with a singleton breech presentation.

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MATERINDY – EXTERNAL CEPHALIC VERSION

PURPOSE
This Guideline describes the procedure and clinical care for External Cephalic Version (ECV) when a woman presents at or near term with a singleton breech presentation.

KEY PRINCIPLES
ECV should be an option for women who have a baby that is in a breech presentation and meet criteria for the procedure to be undertaken safely.

USE OF THE GUIDELINE
This Guideline recommends consistent, evidence-based information regarding the option of ECV be provided to the woman by experienced clinicians.

ECV should be offered as noted in GL2016_018 NSW Maternity and Neonatal Service Capability Framework. Each Tiered Maternity Network in NSW should have consultation, referral and transfer processes in place to ensure all women are provided with the option of ECV in the presence of a term singleton breech presentation. The woman’s management plan should be documented in her medical record.

REVISION HISTORY

<table>
<thead>
<tr>
<th>Version</th>
<th>Approved by</th>
<th>Amendment notes</th>
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<tbody>
<tr>
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<td>New guideline</td>
</tr>
</tbody>
</table>

ATTACHMENT
1. Maternity – External Cephalic Version: Guideline
CONTENTS

1 BACKGROUND ........................................................................................................................................... 1
   1.1 About this document ......................................................................................................................... 1
   1.2 Key abbreviations ............................................................................................................................... 1
   1.3 Related documents ............................................................................................................................. 1
2 PROVISION OF ECV ................................................................................................................................. 2
   2.1 Clinical skills ....................................................................................................................................... 2
   2.2 Access and service availability ........................................................................................................... 2
3 SUITABILITY FOR ECV ............................................................................................................................. 3
   3.1 ECV exclusion criteria ....................................................................................................................... 3
4 PRE ECV DISCUSSION AND GAINING CONSENT .................................................................................. 3
   4.1 Gaining consent ................................................................................................................................. 5
   4.2 Factors associated with ECV success ............................................................................................... 5
   4.3 Complications of ECV ...................................................................................................................... 6
5 PREPARATION PROCESS FOR ECV ..................................................................................................... 6
   5.1 ECV Procedure .................................................................................................................................. 7
   5.2 Performing an ECV ............................................................................................................................ 7
   5.3 Immediately following an ECV attempt ............................................................................................. 8
   5.4 Post ECV antenatal care .................................................................................................................... 8
6 REVIEW AND AUDIT ................................................................................................................................. 9
7 REFERENCES .................................................................................................................................................. 10
8 APPENDICES ................................................................................................................................................ 12
   8.1 Appendix 1: Scoring System to predict success when attempting ECV procedure ...................... 12
   8.2 Appendix 2: Consumer Brochure: External Cephalic Version for Breech Presentation 12
1 BACKGROUND

1.1 About this document

This Guideline describes the procedure and clinical care for external cephalic version (ECV) when a woman presents at or near term with a singleton breech presentation.

Included in the Guideline is the following information for ECV:

- Identification of suitability criteria
- Information for counselling
- Clinical procedure
- Consumer information.

The use of complementary therapies to turn a breech baby to a cephalic presentation is not discussed in this Guideline. Information addressing the use of complementary therapies (e.g. Moxibustion) will be included in the accompanying consumer information brochure attached to this guideline (Appendix 2).

1.2 Key abbreviations

AFI = Amniotic Fluid Index
CTG = Cardiotocograph
ECV = External Cephalic Version
FHR = Fetal Heart Rate
LMP = Last Menstrual Period
U/S = Ultrasound
EFM = Electronic Fetal Monitoring

1.3 Related documents

This document should be read in conjunction with the following most recent revision of:

- NSW Health Midwifery Continuity of Carer Model Toolkit 2012
- NSW State Health Plan: Towards 2021
- NSW Health Maternity - Towards Normal Birth in NSW PD2010_045
- NSW Health Maternity - National Midwifery Guidelines for Consultation and Referral PD2010_022
- NSW Health Maternity - Fetal Heart Rate Monitoring GL2016_001
- NSW Health Maternity - Clinical Risk Management Guideline PD2009_003
2 PROVISION OF ECV

2.1 Clinical skills

ECV should have a co-ordinated team approach to care. The ECV must be performed by a clinician with the appropriate experience and skills, working within their professional scope of practice. For support there should be a clinician present who is able to perform an urgent caesarean section (CS).

Women should be supported with one to one midwifery care throughout the procedure.

For the purposes of education and training, clinicians developing competency in ECV should be supported and supervised by experienced clinicians to perform an ECV.

2.2 Access and service availability

The Australian National Antenatal Care Guidelines Module 2 (2014) recommend all women without exclusion criteria, with a singleton breech pregnancy after 36\(^{+0}\) weeks of gestation be offered ECV. There may be a select group of women where the decision to perform an ECV occurs later in a woman’s pregnancy. This must remain a decision of the individual clinician taking into account the clinical situation. The safety surrounding ECV is enhanced when the procedure is performed in a setting where there is access to a timely CS.

Guidelines from the United Kingdom, the United States and the Royal Australian and New Zealand College of Obstetricians and Gynaecologists support offering ECV when clinically appropriate.

Each Tiered Maternity Network in NSW should have consultation, referral and transfer processes in place to ensure all women are provided with the option of ECV in the presence of a term singleton breech presentation. As noted in the NSW Maternity and Neonatal Service Capability Framework (GL2016_018) an ECV service should be available in Level 5 maternity services and above. In Level 4 maternity services, clinicians should offer ECV or facilitate referral to a service that provides ECV. Level 3 maternity services may consider offering ECV as a consistent service following a robust risk assessment process, or should facilitate referral to a service that provides ECV. The woman’s management plan should be documented in her medical record.
3 SUITABILITY FOR ECV

ECV is an option for women who have a baby that is in a breech presentation and who meet criteria for the procedure to be undertaken safely. Women should be offered an ECV but may not always choose to undergo this procedure.5

3.1 ECV exclusion criteria

The following exclusion criteria2,6 may apply:

- Gestation less than 36+0 weeks
- Ruptured membranes
- Severe hypertension (current pregnancy)
- Multiple pregnancy
- Uterine scar other than a single previous lower segment CS
- Uterine abnormality (excluding resected uterine septum)
- History of placental abruption (current pregnancy)
- Vaginal bleeding in third trimester (current pregnancy)
- Amniotic Fluid Index (AFI < 5 for current pregnancy)
- Non-reassuring fetal welfare (e.g. growth restriction, oligohydramnios, increasing Doppler flow, non-reassuring / abnormal antenatal fetal heart rate pattern)
- Fetal abnormalities of the heart, brain and/or spinal column
- Hyperextension of the fetal head.

The following maternal conditions and the woman’s birth plan should be considered prior to offering ECV:

- Significant cardiac disease
- Uncontrolled hyperthyroidism
- Poorly controlled diabetes mellitus.

4 PRE ECV DISCUSSION AND GAINING CONSENT

Consistent, evidence-based information should be provided to the woman by experienced clinicians, ideally working in a unit that supports the option of ECV. Preferably, women should be seen and counselled before 36+0 weeks gestation, however in some instances this may happen on the day of the procedure.
Throughout this early discussion, women may ask about alternative therapies or treatments that could be used to turn their baby. To ensure women are provided with consistent advice, a consumer information brochure “External Cephalic Version: Information about your options” is available (See Appendix 2).

For women not fluent in English, and for those who are deaf or have impaired hearing, a professional interpreter should be engaged to ensure effective participation in communication and decision making (as per NSW Health PD 2006_053 Interpreters - Standard Procedures for Working with Health Care Interpreters).

Women should be informed of the following at the time of being offered the procedure:

- A description of the ECV procedure
- The rare complications associated with ECV (as discussed in Section 4.3)
- Successful ECV turns the baby into the head-first or cephalic presentation, increasing the likelihood of vaginal cephalic birth and therefore reducing the rate of CS and vaginal breech birth. The National Antenatal Care Guidelines-Module 2 suggest the success rate for vaginal birth following ECV is 71 – 84%. This is slightly lower than the rate of vaginal birth for babies that have been in a cephalic presentation throughout pregnancy.
- A recent Cochrane review suggests 40-50% of ECV procedures are able to turn the baby from a breech to a cephalic presentation. Module 2 of the National Antenatal Care Guidelines suggests the range may be 36–72%. A study by Burgos et al, (2012) provides a predictive index for the outcome of ECV and a success based scoring index for ECV at term (See Appendix 1), which may aid the clinical decision making process
- The incidence of spontaneous version when a baby remains breech following ECV is small and the chance of this occurring diminishes further with increasing gestation
- A spontaneous reversion rate of 3–14% has been reported after 36 weeks. A uterus with a septum will account for a number of these instances. The reversion to breech is lower with increasing gestation
- An ECV procedure only takes a few minutes, but the entire pre and post ECV assessment process can take up to 2 hours
- The possible need for insertion of IV cannula and collections of bloods
- Tocolytics may be administered to relax the uterus and women should be informed of the medication to be used and the associated side effects
- The need for EFM for fetal welfare assessment
• Only moderate abdominal pressure is required to perform an ECV and there should be no more than mild to moderate pain or discomfort during the procedure. Most women reportedly tolerate ECV well because of the short duration and rate the procedure as a satisfactory experience, regardless of outcome.\(^1\) Options for pain relief should also be discussed

• That they have the right to suspend the procedure at any time should the pain become more than they are able to tolerate

• To assess fetal welfare prior to and following the procedure electronic FHR monitoring is essential.\(^{11}\)

The role of regional anaesthesia in ECV is unclear, with no level 1 evidence to support its routine use.

4.1 Gaining consent

Prior to gaining verbal consent for the procedure, consistent evidence-based information should be provided to the woman by experienced clinicians and documented.

4.2 Factors associated with ECV success

According to most studies, successful ECV is more likely with:

• A clinician skilled in performing the procedure\(^{12}\)

• Tocolysis\(^{13,14}\)

• A posterior placenta\(^{12,15}\)

• Multiparous women\(^{1,12}\)

• Liquor volume AFI >10 \(^{1,12}\)

• Greater than 36 weeks gestation\(^{2,16,17}\)

• Complete breech position \(^2\)

• Non-engagement of the presenting part \(^1,7\)

• Head easily felt \(^7\)

• Soft abdomen\(^{16}\)

• Normal BMI\(^1\)

• Fetal spine is lateral or antero-lateral rather than directly anterior or directly posterior.
4.3 Complications of ECV

The rates of complications of ECV are very rare.\textsuperscript{18-21} One of the key challenges facing women and their clinicians regarding ECV is the need to be able to counter the differences between evidence-based information about ECV and some commonly held misbeliefs and fears in the community.

A 2015 Cochrane review notes the following complication rates after ECV\textsuperscript{7}:

- Vaginal bleeding: 0.47%
- Emergency CS: 0.43%
- Cord compression with CTG changes: 0.05%
- Abruption: 0.12%
- Perinatal mortality (most were delayed / unexplained): 0.16%
- Persistent abnormal CTG: 0.37%
- Transient abnormal CTG: 5.7%
- Feto-maternal haemorrhage: 0.5%

There were no cases of cord entanglement or maternal death.

5 PREPARATION PROCESS FOR ECV

Following confirmation of the woman’s breech presentation at 36 weeks or beyond:

- Confirm gestation – review LMP and/or early U/S scans
- Check previously performed ultrasound for exclusion to ECV
- Assess suitability for ECV – refer to Section 3.1 above
- Provide written information “External Cephalic Version for Breech Presentation” and undertake pre ECV counselling as per Section 4
- Gain consent and organise a date and time for the procedure
- Prior to the ECV, confirm the correct procedure is being performed on the correct woman and that the procedure corresponds to the treatment documentation\textsuperscript{22,23}
- Check the woman’s blood group, as per NSW Health Guideline \textit{GL2015 011 Maternity - Rh (D) Immunoglobulin (Anti D)}. RhD IgG 625 IU is indicated post ECV for all Rh negative women\textsuperscript{24}
- Complete the Between the Flags Antenatal Short Stay Observation Chart (ASSOC)
The room should be comfortable and quiet, with appropriate equipment available. Ensure the woman's privacy is maintained during the procedure.

It is recommended the woman is accompanied by a support person/people and a midwife is also present for support throughout the procedure.

5.1 ECV Procedure

- Prepare the woman for the procedure ensuring privacy and comfort
- Palpate the woman’s abdomen and confirm fetal presentation, position, level of engagement
- Perform a bedside U/S to more accurately confirm presentation, attitude of the fetal head, liquor volume and confirm placental location
- Document the U/S and palpation findings and the decision to proceed
- Assess and document fetal wellbeing with a CTG - there should be a reactive antenatal FHR pattern with reassuring features
- Consider need for tocolysis on an individualised basis e.g. Terbutaline
- Consider options for pain relief during the procedure
- Adjust bed to a height comfortable for the clinician performing the procedure
- Assist the woman into this position:
  - Supine
  - Left lateral tilt
  - Lower head of bed at a slight angle that is comfortable for the woman
  - Knees slightly bent.

5.2 Performing an ECV

- Ensure the woman understands the procedure
- With firm pressure, elevate the lower fetal pole out of the maternal pelvis. This may require sustained pressure to obtain elevation of the breech
- Perform version by encouraging the baby to do a forward somersault. Where the head does not cross the midline, a backward roll may be more effective. Some clinicians prefer to attempt to roll in the direction of least distance between head to pelvis. i.e. if the head is to the maternal right of midline, an anticlockwise roll
- During the version, monitor the fetal heart with a Doppler or ultrasound every 30 seconds
• If a fetal heart rate bradycardia occurs, stop the procedure, position the woman in the left lateral and wait 3-4 minutes for FHR to return to a normal pattern before continuing. Fetal bradycardia is a physiological response of a healthy fetus to cord compression. It is nearly always temporary and rarely requires further intervention. If the fetal heart rate does not recover, consider reversing the version. If bradycardia persists, expedite operative delivery.

• Monitor maternal comfort and stop if the woman feels sharp pain or does not want to proceed.

• If there is no success after 10-15 minutes discontinue the procedure.

• Confirm fetal presentation with ultrasound at the end of the procedure.

5.3 Immediately following an ECV attempt

• Rh negative women should be managed according to the NSW Health Guideline Maternity - Rh (D) Immunoglobulin (Anti D). For Rh negative women, a Kleihauer test should be performed following the procedure.

• Perform post-procedure fetal heart rate monitoring for at least 30 minutes. Do not remove the CTG until all antenatal FHR features are reassuring. Escalate the FHR findings as necessary according to the antenatal algorithm (see NSW Health Guideline GL 2016_001 Maternity - Fetal Heart Rate Monitoring).

• The woman should not be discharged home until the CTG is normal. Investigate reasons for persistently abnormal or non-reassuring FHR pattern and action appropriately.

• Document observations on the ASSOC and the procedure details in the woman’s medical record.

5.4 Post ECV antenatal care

• Post ECV antenatal care planning needs to be determined locally, with consideration being given to the woman’s individual needs.

• Prior to leaving, ensure the woman has received post ECV information that includes discussion around expectations for normal fetal movement, maternal pain, vaginal bleeding or fluid loss and contact details should she have any concerns.

• Discuss options for women whose baby remains in the breech position - see NSW Health Guideline-Maternity-Supporting women planning a vaginal breech birth. Document the woman’s wishes for further care and preferred birth plan. Consider
each woman’s individualised needs and preferences, also consideration of planning a repeat ECV

• Repeat ECV can be offered on an individualised basis taking into account the woman’s gestation, parity and willingness to have the procedure repeated.

6 REVIEW AND AUDIT

There are a number of relevant data items that are worthy of collection on an ongoing basis as part of service audit and review:

ECV attended:
  o Not done
  o Successful
  o Unsuccessful

• ECV available:
  o Declined
  o Not offered

• ECV contraindicated

• ECV not available
7 REFERENCES


4. RANZCOG. Management of Term Breech Presentation (C-obs 11). Melbourne RANZCOG; 2009.


8 APPENDICES

8.1 Appendix 1: Scoring System to predict success when attempting ECV procedure

Table 1 Predictive index for the outcome of external cephalic version at term

<table>
<thead>
<tr>
<th>Element</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
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<tbody>
<tr>
<td>Parity</td>
<td>Primiparous</td>
<td>Biparous</td>
<td>Triparous or more</td>
<td></td>
</tr>
<tr>
<td>Placental location</td>
<td>Anterior</td>
<td>Fundal lateral</td>
<td>Posterior</td>
<td></td>
</tr>
<tr>
<td>Type of breech</td>
<td>Frank</td>
<td>Complete</td>
<td>Double footling</td>
<td></td>
</tr>
<tr>
<td>Amount of amniotic fluid</td>
<td>Low</td>
<td>Normal</td>
<td>Abundant</td>
<td></td>
</tr>
<tr>
<td>TOTAL Score</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1 needs to be completed before attempting to predict success as outlined in Table 2.

Table 2 Prediction of success based on score of external cephalic version (ECV) index

<table>
<thead>
<tr>
<th>Score of ECV Index</th>
<th>n = 1000 (%)</th>
<th>Success rate (%)</th>
<th>Fisher’s 95% CI</th>
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<tbody>
<tr>
<td>4–6</td>
<td>346 (34.6)</td>
<td>30.9</td>
<td>26.1–36.1</td>
</tr>
<tr>
<td>7–8</td>
<td>451 (45.1)</td>
<td>56.5</td>
<td>51.8–61.2</td>
</tr>
<tr>
<td>9–14</td>
<td>203 (20.3)</td>
<td>76.8</td>
<td>70.4–82.5</td>
</tr>
</tbody>
</table>

8.2 Appendix 2: Consumer Brochure: External Cephalic Version for Breech Presentation

Available on the next two pages is a printable version of the Consumer Brochure.
Preparing for an ECV (cont)

While the ECV procedure itself only takes a few minutes, monitoring you and your baby before and after can take up to two hours. You will be asked to sign a consent form before the procedure begins.

Before the ECV, an ultrasound will confirm that your baby is still breech and to check the baby’s size and the amount of amniotic fluid. Your baby’s heart rate will also be checked for about 20 to 30 minutes using a fetal heart monitor (called a CTG).

Depending on the facility’s practices, you may be offered medication to help relax the muscles of the uterus. This medication can improve the chances of your baby turning. This medication is safe for both you and your baby and the effects last only for a short time after the ECV. You can refuse to have this medication if you do not wish to have it.

What happens during an ECV?

During the ECV, your baby’s heart will be checked and you will be asked how you are coping with the ECV. It is normal to experience some pain or discomfort during the procedure. You can ask that the ECV be stopped at any time.

After the ECV

Your baby’s heart rate will be monitored for at least 30 minutes after the ECV regardless of whether or not your baby has turned. After you go home, it is important that you contact your midwife, doctor or maternity service if you are worried or have any concerns or if you notice any of the following changes:

- Vaginal bleeding
- Vaginal fluid loss
- Your baby is less active than usual
- Abdominal (stomach) pain
- Contractions

If your baby turned to a head down position during the ECV, there is still a small chance that it will turn back to a breech position. The clinician may discuss with you the possibility of repeating the ECV.

Are there things I can do myself to turn my baby to a head first position?

It has been reported acupuncture and various exercises and positions are helpful in changing the presentation of your baby. Although their success has not been proven these practices do not do any harm. Moxibustion, a type of herb available from Chinese medicine practitioners, has also been suggested as being helpful in correcting a breech position but current evidence shows it is not effective.

Other options for birth

If your baby remains breech, you will need to consider a vaginal breech birth or a caesarean section. Some hospitals offer vaginal breech birth and it may be an option to have your baby at one of these hospitals. An experienced clinician can assess your suitability for your preferred birth option.

Further information about these options is available in the brochure "Breech Baby at Term: Information about Your Care Options."

Please call the number below if you have any further questions or concerns either before or after the ECV.

Number:

If you have any questions or suggestions regarding this brochure, please provide this feedback to your healthcare provider.

External Cephalic Version for Breech Presentation

73 Miller Street, North Sydney, NSW 2060
Locked Mail Bag 961, North Sydney 2059
Tel: 611-2-9391 9000
This information brochure provides information about an External Cephalic Version for breech presentation. It can be used in discussions you will have with your midwife and/or doctor and help you in your decision making.

What is breech presentation?
A breech presentation is when a baby is lying either bottom or feet first. Breech presentation can be common in early pregnancy. Most babies will turn by themselves into a head down position by about 37 weeks of pregnancy.

A small number of babies, about three to four per cent, will still be breech at 37 weeks. This will make a difference to your birth choices.

There are three common variations of breech presentation:

- **Extended or frank breech.** Where the bottom is coming first and the legs are straight up, thighs against the body, feet near the ears.

- **Complete or flexed breech.** Where the bottom and feet are coming first and the knees are bent.

- **Footling breech.** Where a foot or both feet are coming first.

What is external cephalic version?
Women with a breech presentation towards the end of their pregnancy may have the option of External Cephalic Version (ECV). ECV is a procedure where experienced doctors attempt to turn your baby from the breech presentation to head-first by placing gentle pressure on your abdomen with their hands (see below).

The turning itself can be uncomfortable but usually only takes a few minutes. You will be asked to lie flat, slightly rolled onto your left side. To start the ECV, the clinician lifts the baby’s bottom out of your pelvic area and then applies gentle pressure behind your baby’s head to encourage him or her to roll and be head down. The level of pain varies between women. If you are uncomfortable at any time you can take a break or ask to stop the procedure. We do not recommend taking strong pain relief, as the clinician needs you to say how uncomfortable you are feeling.

The best time to perform an ECV is after 36 weeks of pregnancy, as your baby is more likely to turn on its own before this time.

Is ECV safe?
ECV is a safe procedure and complications are rare. The possible complications include bleeding from the placenta or changes to your baby’s heart rate patterns (the risk is less than one per cent).

If you decide to try an ECV you and your baby will be observed closely throughout the procedure. If any problems arise, the ECV will be stopped. If there are ongoing concerns about you or your baby a caesarean section may be recommended, although this is a rare event.

Am I suitable to have an ECV and how likely is it to work for me?
An ECV would not be performed if your baby is not growing well, your placenta is low-lying or you have issues with your own health. Your doctor or midwife will discuss these issues with you and give you advice.

The chances of your baby turning to a head first position as a result of the ECV varies. The position of your baby and the skill of the clinician performing the procedure can affect the chance of turning. Recent figures suggest 40 to 50 per cent of ECV procedures turn the baby. There may be more of a chance that your baby will turn if you have previously had a baby.

If you wish to have an ECV but it is not an option at your facility, your clinician should refer you to a facility that does offer this procedure.

Preparing for an ECV
You should bring someone who can support you for the ECV and can take you home afterwards. If you are hearing impaired or require an interpreter, one can be organised for the time of your appointments or procedure. Please check with your midwife or doctor that this has been arranged for you.