Caesarean Delivery on Maternal Request (CDMR)

Objectives: To provide advice on management where a woman requests elective delivery by caesarean section where there are no identifiable medical or obstetric contraindications to an attempt at vaginal delivery.

Definition: Caesarean delivery on maternal request (CDMR) is defined as elective caesarean delivery for singleton pregnancy on maternal request at term in the absence of any medical or obstetric indications.1

Options: Planned caesarean section versus an attempt at vaginal delivery.

Outcomes: Perinatal mortality, short-term neonatal morbidity, long-term infant morbidity, and short- and long-term maternal morbidity and mortality.

Target audience: All health practitioners providing maternity care, and patients.

Evidence: MEDLINE and CINAHL and the Cochrane Library were searched for randomised trials and cohort studies comparing caesarean section on maternal request versus an attempt at vaginal delivery (from July 2010 to 20 June 2013).

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

Validation: This statement was compared with other advice on CDMR by AHRQ2 NIH1, 3 ACOG4 and NICE5.

Background: This statement was first developed by Women’s Health Committee in July 2010 to provide advice on management of maternal requests for caesarean delivery.

Funding: The development and review of this statement was funded by RANZCOG.
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1. **Patient summary**
A number of pregnant women may prefer caesarean to vaginal delivery for various non-medical reasons. There are some risks and benefits to this decision for both mother and baby. It is important to know that the risks may not be apparent until subsequent pregnancies. Women considering elective caesarean delivery where there is no medical reason should discuss this decision with their obstetrician.

2. **Summary of recommendations**

<table>
<thead>
<tr>
<th>Recommendations</th>
<th>Grade and reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>If after full discussion the patient maintains a request for delivery by caesarean section, the obstetrician may:</td>
<td>Consensus-based recommendation</td>
</tr>
<tr>
<td>1. Agree to perform the caesarean section, providing the patient is able to demonstrate an understanding the risks and benefits of the course of action she has chosen;</td>
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<td>OR</td>
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<tr>
<td>2. Decline to perform the caesarean section in circumstances where:</td>
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<tr>
<td>• the obstetrician believes there are significant health concerns for mother or baby if this course of action is pursued; or</td>
<td></td>
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<tr>
<td>• the patient appears to not have an understanding sufficient to enable informed consent to the procedure;</td>
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<tr>
<td>OR</td>
<td></td>
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<tr>
<td>3. Advise the patient to seek the advice of another obstetrician for a second opinion.</td>
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</table>
3. **Introduction**

The term Caesarean Delivery on Maternal Request (CDMR) refers to elective delivery by caesarean section at the request of a woman with no identifiable medical or obstetric indications to an attempt at vaginal delivery.\(^1\)

The preference for CDMR varies widely and with many factors including geography, parity, previous birth experience and stage of reproductive life. Estimates of caesarean delivery on maternal request range from 4-18 percent but there is little confidence in the validity of these estimates as CDMR is not a well recognised clinical entity and there are currently no accurate means of reporting it.\(^1,2,6\)

4. **Evidence summary and basis for recommendations**

No randomised trials on caesarean delivery for non-medical reasons have been performed.\(^7\) Overall, there is a paucity of good quality evidence to differentiate the risks of elective CS compared to planned vaginal delivery as most studies of caesarean delivery include statistics from both emergency and elective caesarean sections.\(^1,7\)

Most of the current available evidence is based on indirect analyses that compare elective cesarean deliveries without labour with a combination of vaginal deliveries and unplanned and emergency caesarean deliveries.\(^4,8\)

4.1 **What effect does CDMR have on the incidence of short and long term maternal outcomes?**

4.1.1 **Does CDMR protect against pelvic floor damage?**

Urinary incontinence is reduced if elective CS is performed before the onset of labour but this protective benefit is reduced with age and subsequent pregnancies regardless of mode of delivery.\(^9\) Postpartum urinary incontinence may have a multifactorial origin.\(^10\) Anal incontinence and sphincter defects are not noted after elective CS.\(^11,12\) CS may decrease the risk of pelvic organ prolapse but cannot be routinely advocated for the prevention of prolapse.\(^13\)

4.1.2 **Does CDMR reduce recovery time?**

For most women the recovery after vaginal birth will be quicker than caesarean delivery, particularly with second and subsequent vaginal deliveries.

4.1.3 **What effect does CDMR have on the Index Pregnancy?**

CDMR removes the small potential or intrinsic risks associated with a vaginal delivery. However, these risks are then replaced with those imparted by a surgical delivery.

The maternal risks of the index pregnancy are related to the likelihood of successful vaginal birth. Epidemiological data is unable to distinguish a difference in maternal mortality.\(^1\)

Emergency caesarean section can be more hazardous than the elective procedure and it may be safer for the mother in the index pregnancy to perform an elective procedure than to attempt vaginal birth where the likelihood of achieving vaginal birth is not high.\(^14\)

It is impossible to predict which women will have a successful vaginal birth.

The risks of complication from elective CS (7%) is approximately half that of emergency CS in labour (16.3%) and instrumental vaginal deliveries (12.9%).\(^15\)
There is a negative association between prelabor caesarean delivery and early breastfeeding. However, if breastfeeding is initiated, mode of delivery has no effect on the number of mothers still breastfeeding at 6 months.\textsuperscript{16}

4.1.4 What effect does CDMR have in subsequent pregnancies?

Pivotal in the decision-analysis for many women should be the intended future family size. With rising caesarean section rates, placenta accreta becomes increasingly common. Silver \textit{et al}. (2006)\textsuperscript{17} found that placenta accreta was present in 0.24%, 0.31%, 0.57%, 2.1%, 2.3% and 6.7% of women undergoing their first, second, third, fourth, fifth, and sixth or more caesarean deliveries, respectively. This was a consequence of both an increasing incidence of placenta praevia with repeated caesarean sections and an increased likelihood of placenta accreta where the placenta was located over the uterine scar. Placenta accreta and percreta may be associated with significant maternal mortality and morbidity including massive haemorrhage requiring emergency hysterectomy.

Caesarean delivery may be associated in subsequent pregnancies with delayed conception, increased risk of ectopic pregnancy, possibly intrauterine growth restriction (IUGR), preterm birth, unexplained stillbirth after 34 weeks and uterine scar dehiscence or rupture.\textsuperscript{8}

4.2 What effect does CDMR have on the incidence of short and long term neonatal outcomes?

4.2.1 Does CDMR reduce perinatal mortality?

Approximately 1.4 in 1000 can be expected to have an antenatal, intrapartum or neonatal death after 39 weeks gestation\textsuperscript{18}, increasing to 4.6/1000 at 41 weeks gestation.\textsuperscript{19} This is an unacceptable risk for many women and health professionals.\textsuperscript{20}

Perinatal mortality from elective CS has been quoted at 10 times lower than that from vaginal birth.\textsuperscript{21}

4.2.2 Does CDMR reduce long-term neonatal morbidity?

Cerebral palsy can be expected to affect approximately 1 in 1000 term births. Of these, only 10% are felt to have an intrapartum origin\textsuperscript{22} but a further unknown percentage are the consequence of ‘late antenatal’ events that might be prevented by elective caesarean section. However, the number of CDMR needed to prevent one case of cerebral palsy has been estimated at 5000.\textsuperscript{23}

Erb’s palsy and other birth injuries may occur after caesarean section but are unequivocally greater after vaginal birth. The rate of Erb’s palsy is reported variously between 0.45 and 3 per thousand births. This is in the range that most women would seem to regard as important in deciding between caesarean section and vaginal birth.\textsuperscript{20}

4.2.3 What effect does CDMR have on other neonatal outcomes?

There are no studies on caesarean delivery on maternal request of sufficient quality therefore studies on caesarean delivery without labour are often referred to for when predicting the effect of CDMR on neonatal outcomes.\textsuperscript{4} Caesarean delivery without labor is associated with an increased risk of neonatal respiratory complications including transient tachypnea of the newborn.\textsuperscript{24, 25}
5. Conclusions and Recommendations

When a woman requests elective delivery by caesarean section in the absence of medical indication, the obstetrician should acknowledge the legitimacy of the request and explore the reasons underlying it. Accurate information may be sufficient to alleviate concerns and some issues, such as fear of pain and labour (tocophobia), may be satisfactorily addressed in other ways. The expected family size needs to be taken into account. Any decision making needs to take into account local jurisdictional factors.

Recommendation 1

If after full discussion the patient maintains a request for delivery by caesarean section, the obstetrician may:

1. Agree to perform the caesarean section, providing the patient is able to demonstrate an understanding the risks and benefits of the course of action she has chosen;

   OR

2. Decline to perform the caesarean section in circumstances where:
   - the obstetrician believes there are significant health concerns for mother or baby if this course of action is pursued; or
   - the patient appears to not have an understanding sufficient to enable informed consent to the procedure;

   OR

3. Advise the patient to seek the advice of another obstetrician for a second opinion.

Grade and reference

Consensus-based recommendation
References


7. Links to other College statements

(C-Obs 20) Placenta Accreta

(C-Obs 31) Routine Intrapartum Care in the absence of pregnancy complications

(C-Obs 38) Planned Vaginal Birth after Caesarean Section (Trial of Labour)

(C-Gen 02) Guidelines for consent and the provision of information regarding proposed treatment

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

Timing of Elective Caesarean Section (C-Obs 23)

Timing of Elective Caesarean Section at Term (C-Obs 23)

8. Patient information
A range of RANZCOG Patient Information Pamphlets can be ordered via:

Appendices

Appendix A Women’s Health Committee Membership

<table>
<thead>
<tr>
<th>Name</th>
<th>Position on Committee</th>
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<tbody>
<tr>
<td>Associate Professor Stephen Robson</td>
<td>Chair</td>
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<tr>
<td>Professor Susan Walker</td>
<td>Deputy Chair - Obstetrics</td>
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<tr>
<td>Dr Gino Pecoraro</td>
<td>Deputy Chair - Gynaecology</td>
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<tr>
<td>Professor Yee Leung</td>
<td>Member</td>
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<tr>
<td>Associate Professor Anuschirawan Yazdani</td>
<td>Member</td>
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<tr>
<td>Dr Simon Craig</td>
<td>Member</td>
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<tr>
<td>Associate Professor Paul Duggan</td>
<td>Member</td>
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<tr>
<td>Dr Vijay Roach</td>
<td>Member</td>
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<tr>
<td>Dr Stephen Lyons</td>
<td>Member</td>
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<tr>
<td>Dr Ian Page</td>
<td>Member</td>
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<tr>
<td>Dr Donald Clark</td>
<td>Member</td>
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<td>Dr Amber Moore</td>
<td>Member</td>
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<td>Dr Martin Ritossa</td>
<td>Member</td>
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<td>Dr Benjamin Bopp</td>
<td>Member</td>
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<td>Dr James Harvey</td>
<td>Member</td>
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<td>Dr John Tait</td>
<td>Member</td>
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<td>Dr Anthony Frumar</td>
<td>Member</td>
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<tr>
<td>Dr Kirsten Black</td>
<td>Member</td>
</tr>
<tr>
<td>Dr Jacqueline Boyle</td>
<td>Chair of IWHC</td>
</tr>
<tr>
<td>Dr Louise Sterling</td>
<td>GPOAC representative</td>
</tr>
<tr>
<td>Ms Catherine Whitby</td>
<td>Council Consumer representative</td>
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<tr>
<td>Ms Susan Hughes</td>
<td>Consumer representative</td>
</tr>
<tr>
<td>Ms Shemyn Elworthy</td>
<td>Midwifery representative</td>
</tr>
<tr>
<td>Dr Kathryn van Harselaar</td>
<td>Trainee representative</td>
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<tr>
<td>Dr Agnes Wilson</td>
<td>RANZCOG guideline developer</td>
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Appendix B Overview of the development and review process for this statement

i. Steps in developing and updating this statement

This statement was originally developed in July 2002 and was most recently reviewed in November 2013. 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 of MEDLINE and CINAHL and the Cochrane Library was carried out for randomised trials and cohort studies comparing caesarean section on maternal request versus an attempt at vaginal delivery (from July 2010 to 20 June 2013).
- At the July 2013 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 A part ii). An updated literature search to answer the clinical questions was undertaken where required.
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.

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