The Royal Australian and New Zealand College of Obstetricians and Gynaecologists
Excellence in Women's Health

Categorisation of urgency for caesarean section

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: July 2002
Current: July 2019
Review due: July 2022

Objectives: To provide health professionals and health care facilities providing intrapartum maternity care with information and recommendations regarding the various categories for urgency of caesarean section.

Target audience: Health professionals and health care facilities providing maternity and perinatal care.

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 July 2002 and most recently reviewed in July 2019.

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

1. Summary of recommendations

Recommendation 1	Grade
Units are encouraged to adopt the classification of urgency of caesarean section, which uses four categories of urgency without specific time constraints. An individualised approach to assessment of urgency of delivery is required in all cases.	Consensus-based Recommendation
Recommendation 2	**Grade**
The categorisation of risk should be continually assessed by the clinical team and escalated if required.	Consensus-based Recommendation
Recommendation 3	**Grade**
Hospitals that offer maternity services should develop guidelines that result in the shortest achievable DDI based on their clinical capability framework and current infrastructure available.	Consensus-based Recommendation
Recommendation 4	**Grade**
All staff involved in maternity care should receive training in the management of obstetric emergencies, including the management and transfer of urgent caesarean section.	Consensus-based Recommendation
Recommendation 5	**Grade**
Clear channels of communication are vital in cases requiring emergency caesarean section. Units should define the roles of each member of the multidisciplinary team to facilitate communication and effective management.	Consensus-based Recommendation

2. Introduction

Judicial opinion in Australia and New Zealand supports a so-called "optimal" decision-to-delivery interval (DDI) of 30 minutes. This optimal DDI is based on custom and historic practice rather than on strong evidence in relation to condition of the newborn, however it provides a useful audit tool that allows testing of the efficiency of the whole delivery team. While acknowledging that legal opinion may guide professional practice, the Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG) considers that a more nuanced approach to determining urgency is required.

3. Discussion

3.1 Categories

RANZCOG therefore recommends and endorses usage of a four-grade classification system for emergency caesarean section. The four categories are:

RANZCOG Category 1	Urgent threat to the life or the health of a woman or fetus.
RANZCOG Category 2	Maternal or fetal compromise but not immediately life threatening.

RANZCOG Category 3	Needing earlier than planned delivery but without currently evident maternal or fetal compromise.
RANZCOG Category 4	At a time acceptable to both the woman and the caesarean section team, understanding that this can be affected by a number of factors.

RANZCOG recommends there be no specific time interval attached to the various categories of urgency of caesarean section. Once a decision to deliver has been made, delivery should be carried out with an urgency appropriate to the risk of the baby and the safety of the mother. Each case should be managed according to the clinical evidence of urgency, with every single case being considered on its merits. For example, a RANZCOG Category 2 caesarean section can become urgent if recurrent delays for other emergencies in a labour ward repeatedly postpone surgery.

Judgement on the appropriateness of DDIs should be made on the basis of information available to the clinician making the decision for caesarean section before delivery, and not on the condition of the baby at birth nor on the time required to access a functional and staffed operating theatre.

Where the likelihood of requiring an urgent caesarean section in labour is increased and circumstances are such that a timely caesarean section is unlikely to be achievable, early recourse to caesarean section should be considered.

The DDI for emergency caesarean sections should be subject to regular audit based on the clinician's assessment of RANZCOG category prior to birth.

Recommendation 1	Grade
Units are encouraged to adopt the classification of urgency of caesarean section, which uses four categories of urgency without specific time constraints. An individualised approach to assessment of urgency of delivery is required in all cases.	Consensus-based Recommendation
Recommendation 2	**Grade**
The categorisation of risk should be continually assessed by the clinical team and escalated if required.	Consensus-based Recommendation

3.2 Hospital Infrastructure

Hospitals that offer maternity services should develop guidelines that result in the shortest achievable DDI based on their clinical capability framework and current infrastructure available. A clinical capability framework outlines the 'level of complexity of care that can be planned for each level of maternity service based on the arrangement and mix of a suite of factors that enable the management of the level of acuity matched for that service'. [1] These factors include the available workforce, clinical policy, capability of the clinical support services available at the facility and the integration of the service within a wider health care network.

Hospitals providing intrapartum maternity care must be able to provide timely access of obstetric cases to an emergency theatre. In a large teaching hospital, this will necessitate at least one dedicated obstetric theatre ideally located adjacent to the labour ward which is quarantined from non-obstetric cases in all but the most dire of clinical circumstances. It is expected that instruments, sutures, and associated clinical requirements (such as additional uterotonic agents, and tamponade balloons) required for emergency obstetric procedures be stored in close proximity to the theatre designated for emergency cases.

For every unit that has 4000 deliveries annually or part thereof, RANZCOG recommends that a dedicated obstetric emergency theatre be available at all times and staffed to deal with obstetric emergencies, in line with international standards.[2] With larger birthing populations RANZCOG recommends an additional theatre and set-up as above for every 4000 deliveries (or part thereof). Staff allocated to obstetric theatres should receive obstetric-specific training and be able to effectively deal with situations that require urgent and timely attention. Ideally, theatre staff should be on site and co-ordinated by a supernumerary member of the caesarean section team, this team member is not required to scrub for cases. It is acknowledged that it is not possible in smaller hospitals to have a dedicated theatre and in hospital staff for 24 hours a day.

All maternity services conducting deliveries should be staffed and equipped to perform a caesarean section promptly within the above guidelines. Where, by virtue of remote location or resource limitations, such onsite services cannot be provided, patients should be informed of the limitations of services available and of the implications for intrapartum and postpartum care imposed by such limitations.

In these situations, antenatal transfer to a centre with more comprehensive services should be offered and an audit of the number of women transferring care because of these limitations be kept, so health services may make future recommendations regarding need for staffing and facilities.

Remote location units with limited facilities must have ready access to appropriate medical transport when intra or post-partum transfer to another hospital is required. Access is determined by retrievable service availability and weather conditions.

It is imperative that there is sufficient staffing and resourcing to meet the requirements of these recommendations. Any attempt to disguise or justify inadequate resourcing of, and access to, obstetric theatres is strongly condemned.

Recommendation 3	Grade
Hospitals that offer maternity services should develop guidelines that result in the shortest achievable DDI based on their clinical capability framework and current infrastructure available.	Consensus-based Recommendation
Recommendation 4	**Grade**
All staff involved in maternity care should receive training in the management of obstetric emergencies, including the management and transfer of urgent caesarean section.	Consensus-based Recommendation

3.3 Intra-uterine resuscitation

Intrauterine resuscitation should be initiated for the active management of serious fetal compromise using the pneumonic SPILT to improve fetal oxygenation before delivery.

CTG should be continued and maintained for as long as possible.

Syntocinon off

Position full left lateral; continue for transfer & on operating table (if FHR remains low try right lateral / knee elbow for possible cord compression)

Intravenous Fluid Hartmann's 1 litre rapid infusion (unless fluid intake restricted e.g. preeclampsia)

Low blood pressure – if unresponsive to IV fluids give IV vasopressor

Tocolysis - terbutaline 0.25 mg subcutaneous (0.5 ml from a 1ml ampoule). Alternatively, for immediate action GTN sublingual spray, 2 puffs initially, repeat after 1 minute until contractions stop, maximum 3 doses.

3.4 Communication

Good communication is central to timely delivery of the fetus, while avoiding unnecessary risk to the mother. The time taken for a patient to reach the operating theatre is a critical predictor of the DDI.

- Communication is frequently highlighted as an area for improvement in obstetric practice.
- All members of the multidisciplinary team must be informed of the need (or likely need) for caesarean delivery as early as possible, as well as specific instructions on the degree of urgency.
- Communication must ensure that all tasks and preparations for caesarean section that can be performed concurrently should be done so and that, where appropriate, roles are interchangeable.
- Communication could be more effective using a classification that confers a more precise and individual approach to degree of urgency.
- Categorisation of risk should be reviewed by the multidisciplinary team when the mother arrives in the operating theatre[2]

Recommendation 5	Grade
Clear channels of communication are vital in cases requiring emergency caesarean section. Units should define the roles of each member of the multidisciplinary team to facilitate communication and effective management.	Consensus-based Recommendation

4. References

1. Standing Council on Health and Community & Disability Services (2012). National Maternity Services Capability Framework. Available at: https://www.health.gov.au/internet/main/publishing.nsf/Content/FC3A10DCCCE8CC0BCA257D2A0016CD0E/$File/capab.pdf
2. Royal College of Obstetricians and Gynaecologists, Classification of urgency of caesarean section – a continuum of risk. Good Practice No.11 April 2010. Available at: https://www.rcog.org.uk/globalassets/documents/guidelines/goodpractice11classificationofurgency.pdf

5. Other suggested reading

Spencer MK, MacLennan AL. How long does it take to deliver a baby by emergency caesarean section? Aust J Obstet Gynaecol 2001; 41: 7-11.

Steer PJ. The 30 minute decision to delivery interval for caesarean section. Is there an evidence base? Healthcare risk resources INT 2001; 3: No. 3.

Chauhan SP, Roach H, Naef RW, Magann EF, Morrison JC, Martin JN. Caesarean section for fetal distress. Does the decision incision time make a difference? J Reprod Med 1997; 42: 347-352.

Dwyer JP. Decision to delivery time in emergency Caesarean sections. Proceedings of the Fourth International Scientific Meeting of the Royal College of Obstetricians and Gynaecologist 1999; 13 (Abstract 32).

Moore TR, Gilbert WM, Resnik R, Stevenson RC. A prospective study of the 30 minute rule in the timing of caesarean delivery for fetal distress. Am J Obstet Gynecol 1992; 166: 400 (SPO Abstract 455).

Quinn AJ, Kilpatrick A. Emergency caesarean section during labour: response times and type of anaesthesia. Eur J Obstet Gynecol Reprod Biol 1994; 54: 25-29.

Schauberger CW, Rooney BL, Beguin EA, Schaper AM, Spindler J. Evaluating the thirty minute interval in emergency cesarean sections. J Am Coll Surg 1994; 179: 151-155.

Phelan JP, Ahn MO, Jàuregui I, Phelan SL, Kim C. A timely cesarean decision-incision time does not prevent fetal brain injury. Am J Obstet Gynecol 1999; 180: S112 (SMFM Abstract 381).

Korhonen J, Kariniemi V. Emergency cesarean section: the effect of delay on umbilical arterial gas balance and Apgar scores. Acta Obstet Gynecol Scand 1994; 73: 782-6.

Lavery JP, Janssen J, Hutchinson L. Is the obstetric guideline of 30 minutes from decision to incision for Cesarean delivery clinically significant? J Healthc Risk Manag 1999; 19: 11-20.

Lucas DN, Yentis SM, Kinsella SM, Holdcroft A, May AE, Wee M et al. Urgency of caesarean section: a new classification. J Roy Soc Med 2000; 93: 346-50.

6. Links to other College statements

Consent and the Provision of Information to Patients in Australia regarding Proposed Treatment (C-Gen 02a) https://www.ranzcog.edu.au/RANZCOG_SITE/media/RANZCOG-MEDIA/Women%27s%20Health/Statement%20and%20guidelines/Clinical%20-%20General/Consent-and-provision-of-information-to-patients-in-Australia-(C-Gen-2a)-Review-July-2016.pdf?ext=.pdf

Consent and Provision of Information to Patients in New Zealand regarding Proposed Treatment (C-Gen 02b) https://www.ranzcog.edu.au/RANZCOG_SITE/media/RANZCOG-MEDIA/Women%27s%20Health/Statement%20and%20guidelines/Clinical%20-%20General/Consent-and-provision-of-information-NZ-(C-Gen-2b)-Review-March-2016_1.pdf?ext=.pdf

Evidence-based Medicine, Obstetrics and Gynaecology (C-Gen 15) https://www.ranzcog.edu.au/RANZCOG_SITE/media/RANZCOG-MEDIA/Women%27s%20Health/Statement%20and%20guidelines/Clinical%20-%20General/Evidence-based-medicine,-Obstetrics-and-Gynaecology-(C-Gen-15)-Review-March-2016.pdf?ext=.pdf

7. Patient information

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

https://www.ranzcog.edu.au/Womens-Health/Patient-Information-Guides/Patient-Information-Pamphlets

Appendices

Appendix A Women's Health Committee Membership

Name	Position on Committee
Professor Yee Leung	Chair and Board Member
Dr Gillian Gibson	Deputy Chair, Gynaecology
Dr Scott White	Deputy Chair, Obstetrics and Subspecialties Representative
Associate Professor Ian Pettigrew	Member and EAC Representative
Dr Kristy Milward	Member and Councillor
Dr Will Milford	Member and Councillor
Dr Frank O'Keeffe	Member and Councillor
Professor Sue Walker	Member
Dr Roy Watson	Member and Councillor
Dr Susan Fleming	Member and Councillor
Dr Sue Belgrave	Member and Councillor
Dr Marilyn Clarke	ATSI Representative
Associate Professor Kirsten Black	Member
Dr Thangeswaran Rudra	Member
Dr Nisha Khot	Member and SIMG Representative
Dr Judith Gardiner	Diplomate Representative
Dr Angela Brown	Midwifery Representative
Ms Ann Jorgensen	Community Representative
Dr Rebecca Mackenzie-Proctor	Trainee Representative
Prof Caroline De Costa	Co-opted member (ANZJOG member)

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 July 2019. 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 March 2019 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.