Standards for the Management of Category One Caesarean Section in South Australia 2011

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Government of South Australia
SA Health

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Note

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These standards do not address all the elements of clinical practice and assumes that the individual clinicians are responsible to:

> Discuss care with consumers in an environment that is culturally appropriate and which enables respectful confidential discussion. This includes the use of interpreter services where necessary.

> Advise consumers of their choice and ensure informed consent is obtained.

> Provide care within scope of practice, meet all legislative requirements and maintain standards of professional conduct.

> Document all care in accordance with mandatory and local requirements.

Acknowledgements

This document has been developed to assist health care staff employed in the South Australian public health service in their management of a Category one (1) Caesarean Section.

These standards have been developed in accordance with contemporary professional, quality and safety standards and establish the minimum standards for the provision of health services for management of a pregnancy requiring a Category 1 Caesarean Section in hospitals in South Australia. Recommendations made by the South Australian Maternal, Perinatal and Infant Mortality Committee have been considered in the development of these standards.

The development of this criterion based framework aligns with the SA Health's *Standards for Maternal & Neonatal Services in SA 2010* document.

In 2009, the SA Maternal & Neonatal Clinical Network established a work group to develop these standards in response to service demands within the perinatal health services in South Australia.

The members of the group that participated in the development of these standards were:

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Glossary of Terms

Apgar score

A criteria based physical assessment undertaken on a newborn at predetermined time intervals immediately following birth. It is designed to quickly evaluate the newborn's physical condition and to determine any immediate need for extra medical or emergency care.

Caesarean Section

Is a surgical incision in a woman's abdomen and uterus to deliver one or more babies. Caesarean sections have traditionally been divided into two groups either elective or emergency procedures. Elective caesarean sections are undertaken before labour commences as opposed to an emergency caesarean section which can be undertaken before or after labour has commenced.

Category 1 Caesarean Section

A caesarean section that is undertaken when it is deemed that there is an immediate threat to the life of a woman or fetus. Supersedes the historical term 'emergency caesarean section'.

Operating Rooms Information Management System (ORMIS)

A standardised electronic data system with functionality for all aspects of managing hospital operating rooms based on a predetermined set of rules established by the users.

Planned Homebirth

Is a birth that is intended to occur at home. Homebirth occurs when a woman makes an informed choice, in the antenatal period to give birth at home and secures the assistance of a registered practitioner experienced in homebirth.

Triage Process

A process in which a group of patients are sorted according to their need for care and in consideration of the severity of the problem, and the facilities available to manage the required care.

Team Time Out

A safety check procedure undertaken before any incision has been made in an operative procedure, whereby the operative team confirm verbally – out loud, the operation, the patient's name, the patient identification number and the site of the surgery ie correct operation, correct patient, correct site.

Introduction

These standards have been developed to assist public health care providers and health policy makers in the appropriate management of women requiring an urgent/emergency caesarean section (Category 1 Caesarean Section).

Although the document has primarily been produced for application within the public health sector, it is acknowledged that the standards of practice outlined in the document are also relevant to private health services and may subsequently be used as a reference for maternity services in this sector.

Responding to obstetric emergencies is uniquely challenging, and requires defined resources and skills that need to be sourced from several disciplines across a health service. Most maternity services have determined a systematic process whereby staff recognise the need for an urgent/emergency caesarean section and respond accordingly. Historically, within maternity services, the procedure of co-ordinating the required resources to undertake an urgent/emergency caesarean section have been called a variety of terms ie:

"Crash caesarean section"

"Code Green"

"Code Blue Obstetrics"

"Emergency caesarean section"

Many of these descriptors are now known to be inappropriate for use in planning for emergency care in health facilities. As per Australian Standards AS 4083-1997, '*Planning for emergencies – Health care facilities*', the colour green is identified as part of a national colour code system for describing emergencies and is discouraged from use for any other purpose. In consideration of these anomalies that currently exist within the maternity care services and the need to improve consistency and reliability of the processes associated with co-ordinating an urgent/emergency caesarean section, these standards have been developed using **Category 1 Caesarean Section** as the term of choice to instigate the deployment of resources to accommodate an urgent/emergency caesarean section. No other term should be used to describe this process. All maternity services should only use the term **Category 1 Caesarean Section** to describe an urgent/emergency caesarean section undertaken when it is deemed that there is an immediate threat to the life of a woman or fetus.

These standards have also adopted the term 'booking to birth' interval as opposed to the commonly used term; 'decision to delivery' interval. It is acknowledged that the 'decision to delivery' interval has been influenced by organisational factors such as the availability of staff and theatre. Using the term 'booking to birth' interval will also provide better opportunity to audit Category 1 Caesarean Sections.

The criterion-based framework from the *Standards for Maternal & Neonatal Services in SA 2010* document has been used to determine the minimum clinical standards that should be provided given the complexity of maternity service required by a woman requiring a Category 1 Caesarean Section. In consideration of the quality and safety of care, the framework used in the *Standards for Maternal & Neonatal Services in SA 2010* defines the relevant workforce, equipment, protocols and service arrangements that need to be formally in place to ensure an appropriate level of service is available. The standards outlined in this document provide direction for the clinical management of the woman requiring a Category 1 Caesarean Section and it is intended that hospitals utilise these in conjunction with the *Standards for Maternal & Neonatal Services in SA 2010* and the *South Australian Perinatal Practice Guidelines*.

The South Australian Perinatal Practice Guidelines are recommended for use in all public hospitals in South Australia as a minimum standard of practice. These include a general guideline on the management of a caesarean section.

Further to this, it is also strongly recommended that each hospital providing birthing services ie Level 3-6 in accordance with the *Standards for Maternal & Neonatal Services in SA 2010* has a comprehensive formal procedure/ protocol guiding staff in the safe and efficient management of women requiring a Category 1 Caesarean Section that has been developed relevant to the local workforce and support services.

Woman seeking maternity care within South Australian hospitals must be made aware that not all hospitals have the appropriate resources and staff available to manage a Category 1 Caesarean Section. Subsequently, it should be made known that in certain situations special arrangements, including transfer of the woman to an alternate hospital may need to occur to ensure the optimal health outcomes for the pregnant woman and her infant.

Definition

For the purposes of these standards, a Category 1 Caesarean Section refers to the measures, resources and range of health disciplines required to instigate the surgical procedure, caesarean section, when it is deemed that there is an immediate threat to the life of a woman or fetus.

These standards recognise a safe and effective Category 1 Caesarean Section requires a routine, well co-ordinated multidisciplinary team to achieve this end.

Background

Caesarean sections have traditionally been divided into two groups either elective or emergency procedures. Elective caesarean sections are undertaken before labour commences as opposed to an emergency caesarean section which is undertaken before or after labour has commenced. The emergency category is broad, as it may include procedures done within minutes to save the life of mother and baby as well as those in which mother and baby are well but where early birth is desirable. The classification does not convey the degree of urgency of the procedure. In some centres this has led to an ad hoc local adaptation with either reclassification of the least urgent cases to elective or the creation of a third semi elective category. A clear classification system facilitates communication between health professionals as to the degree of urgency of a caesarean section.

Birthing normally carries a low risk to the mother or her baby. However, there are occasions when the birth of the baby needs to be expedited with birth by caesarean section quickly to optimise the health outcomes for the mother and/or her baby. In this circumstance, maternity units must have a well drilled team, available 24 hours a day which can respond appropriately.

The 'decision to delivery' interval has been a matter of considerable controversy in recent years. A standard for Category 1 Caesarean Sections has emerged without a secure evidence base that supports better outcomes for the mother and fetus if the standard is adopted.

Within the context of a risk management framework, it is recognised that hospitals that provide obstetric services should establish their capability of responding in a timely and appropriately manner to emergencies such as Category 1 Caesarean Section.

The Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG) recommends that there be a four grade classification system for emergency caesarean section.[1]
These are:

Category 1 Immediate threat to the life of a woman or fetus.

Category 2 Maternal or fetal compromise but not immediately life threatening.

Category 3 Needing early birth but no maternal or fetal compromise.

Category 4 At a time to suit the woman and the caesarean section team.

Whilst RANZCOG recommends that there should be no specific time attached to the various types of caesarean section, each case should be managed according to the clinical evidence of urgency, with every single case being considered on its merits.

The professionally accepted categories for caesarean sections include:

Category	Clinical Conditions
1 Immediate threat to life of a woman or fetus	• cord prolapse
	• failed instrument birth with fetal compromise (bradycardia, high lactate or low pH ie < 7.2
	• maternal cardiac arrest
	• abnormal fetal scalp blood sample/pH (high lactate or pH<7.2)
	• confirmed fetal blood (Apt's test) indicating ruptured fetal blood vessel, including Vasa Praevia
	• sustained fetal bradycardia (<70/min for ≥ 3minutes)
	• Placental abruption
	• Placenta praevia with major haemorrhage
	• identified irreversible abnormality on the cardiotocographs that requires delivery within 30 minutes
2 Maternal or fetal compromise but not immediately life threatening	• identified, but irreversible abnormality on the cardiotocographs but safe to deliver within 60 minutes
	• malpresentation of the fetus
3 Needing early birth but no maternal or fetal compromise	• failure to progress
	• malpresentation in early labour
	• planned caesarean section presenting in labour
	• maternal condition requiring stabilisation, eg preeclampsia
4 At a time to suit the woman and the caesarean section team	

Source: *Standards for Maternal & Neonatal Services in SA 2010*

Intrapartum or peripartum death of a mature fetus is a rare event. In the annual reports from the South Australian Maternal, Perinatal and Infant Mortality Committee, hypoxic peripartum death rate is 0.1-0.5 per 1000 births.[2] Most of these are not associated with complications during labour.

Fetal distress is the most common reason recorded for justifying a Category 1 Caesarean Section. Fetal distress includes abnormalities of the fetal heart rate or detection of acidaemia in a sample of blood collected from the fetal scalp. Other terms used include non-reassuring fetal heart rate, however, the RANZCOG in the second edition of its guideline on intrapartum fetal surveillance recommends that it is better to describe simply the findings or patterns indicating birth. As identified by James, when recognised, clinicians aim for a swift birth because they lack a clear understanding of the severity of hypoxia that these findings might imply.[3] James stated that there is no evidence that the 30 minutes is a critical threshold in intrapartum hypoxia, however he concluded it was a useful audit standard.

In the non-metropolitan hospitals, theatre teams are usually on site in the hospital during normal working hours and on-call after hours. In accordance with the *Standards for Maternal & Neonatal Services in SA 2010*, the minimum team required for a caesarean section includes a medical officer or neonatal nurse practitioner privileged to perform a caesarean section, a general practitioner or specialist anaesthetist, a medical officer privileged to care for the newborn baby, a theatre 'scrub' nurse, a midwife and a theatre nurse to assist.

The Standards for Maternal & Neonatal Services in SA 2010 provides a framework to define the levels of complexity of care appropriate for maternity units in South Australia. Subsequent to this, the *Standard* further defines the 'booking to birth' time interval for each of these levels of service. It is acknowledged that Level 5 and 6 maternity units have the required staff onsite 24 hours per day, seven days per week, and are therefore able to mobilise an appropriate operating room team to achieve a Category 1 Caesarean Section within a 30 minute period (booking to birth). The relevant literature remains consistent with the recommendations made in the King Edward Memorial Hospital Inquiry.[4] The recommendations included a preference for general or spinal anaesthesia over epidural anaesthesia (R5.20 8). The 'booking to birth' interval is to be recorded for each non-elective caesarean section and should be less than 45 minutes in the (tertiary) hospital (R5.20 10).[5]

In accordance with the *Standards for Maternal & Neonatal Services in SA 2010*, those hospitals providing Level 3 and 4 maternity services are resourced to manage less complex patients when compared to Level 5 and 6 hospitals (ie tertiary sites) and have a requirement to mobilise an appropriate health care team to achieve a Category 1 Caesarean Section within an extended period of time ie Level 3 – 60 minutes and Level 4 – 45 minutes (booking to birth interval).

It has been suggested that the standard of 30 minutes is unachievable in many circumstances. In an audit conducted in South Australia and published in 2001, Spencer and MacLennan showed that the mean time from 'booking to birth' varied by type of hospital.[6] In Level 3 hospitals, the mean time was 42 minutes (17- 86 minutes), in Level 2 hospitals, 54 minutes (28-96 minutes) and in Level 1 hospitals, 69 minutes (37-114 minutes). The time for emergency intrapartum caesarean sections achieved in Oxford (a tertiary hospital) was remarkably similar (42.9 minutes).[7] In the 22 urgent/emergency caesarean sections, the mean 'booking to birth' interval was 27.4 minutes (standard deviation 13.4 minutes), median 24 minutes. These findings are similar to those reported earlier for the same unit.[8]

While it may be possible for a hospital to achieve birth within the 30 minute period, an auditable standard should be less than 45 minutes in keeping with the data from South Australia. A second auditable standard of 75 minutes is in keeping with the findings of the large United Kingdom (UK) audit of the neonatal outcomes of caesarean sections.

In another audit, where only 66.3% of women were delivered within 30 minutes, Tufnell and colleagues concluded that the current recommendations were not being achieved.[9] In the 721 caesarean sections, this did not increase neonatal morbidity. However, the UK national audit of caesarean sections divided the interval from 'booking to birth' into three categories. There was no difference between the outcome for babies delivered within 15 minutes or 16-75 minutes, but for those with intervals longer than 75 minutes a low Apgar score was more likely, as were poor maternal outcomes.[10]

In 2001, the UK national audit of caesarean sections noted that:

> "The generally accepted standard in cases of serious maternal or fetal compromise is that 'decision to birth' time by caesarean section should be within 30 minutes, although the literature suggests that there is minimal research evidence to show that this standard improves fetal outcomes.
>
> There may be conflicting priority of concerns about the mother and her baby. Rapid decision-making has the potential to cause adverse effects. Delays in birth possibly associated with poor outcomes have also been attributed to poor communication.
>
> Overall, in the audit, the median 'decision to birth' time for the cases included in the category 'immediate threat to the life of the mother or the fetus' and meeting clinical criteria of urgency was 27 minutes. Twenty-five percent of cases were delivered within 18 minutes; 75% by 40 minutes; 63% of units delivered at least 50% of cases within 30 minutes."

It is crucial that a triage process exists to allow women to be selected for birth in country hospitals providing maternity services according to the complexity of care they require. This should be undertaken in accordance with the *Standards for Maternity & Neonatal Services in SA 2010*. Triage, by definition, is a dynamic process, as the patient's status can change rapidly. Hospitals providing maternity services must have the capacity to escalate the management of pregnant women to include access to an immediate caesarean section.

The safety of small maternity hospitals has been examined and generally the outcomes from country hospitals are good.[11] The South Australian Perinatal Outcomes Unit examines the outcomes for each hospital, adjusting for abnormalities and birthweight. South Australian country hospitals are divided into two categories, two major hospitals (Mount Gambier and Whyalla) and other (mainly smaller) country hospitals. The standardised perinatal mortality ratios and measures of morbidity for these categories compare well with the larger metropolitan hospitals[2].

Women with identified risk factors are transferred to maternity hospitals equipped with facilities and appropriate personnel to manage these complexities. The larger public maternity hospitals usually receive these types of transfers. Transfer in labour at term occurs infrequently compared with transfer with preterm labour or when maternal or fetal complications are identified.[2]

Scotland has remote community maternity units. Approximately 10% of pregnant women received antenatal care by midwives in these units and of the 1442 (3% of all births) who gave birth in these units, less than 10% had identified risk factors. Some of the latter were in advanced labour precluding transfer and some were unwilling to transfer, preferring to birth at the community unit. Of the 1686 babies who where admitted to the community maternity units there were no stillbirths and three early neonatal deaths. Five percent of babies were admitted to a neonatal unit. The mean time from decision to transfer until the woman or her baby was medically assessed was 2.6 hours. In the 60 transfers in the second stage of labour the mean time from decision to medical assessment was 1.6 hours. These outcomes indicate that the repeated or continuous methods for assessment of risk throughout pregnancy and labour are associated with good outcomes despite potentially long times between decision and assessment in a consultant led unit.[12]

In 2008, the Deputy State Coroner reporting of a death in South Australia, where there was a long time interval between decision and birth, made the following recommendations:[13]

"The Minister of Health cause a review to be undertaken in respect of hospitals that provide obstetric services with a view to establishing their capability of responding appropriately and timeously to emergencies that involve carrying out of caesarean section procedures with particular regard to the following:

a) existence of emergency protocols relating to birth by emergency caesarean section;

b) availability of operating staff at night

c) availability of suitably qualified and experienced clinicians capable of performing and permitted to perform various types of anaesthesia including general anaesthesia.

In the light of that review implement or cause to be implemented measures designed to facilitate efficient and expeditious carrying out of emergency procedures."

The recently published cluster randomised clinical trial of training teams for obstetric procedures showed that the time for 'booking to birth' was significantly shorter in hospitals which had received training[14]. Training for acute obstetric emergencies in South Australian maternity hospitals is encouraged and many health professionals have attended Advanced Life Support Training in Obstetrics courses and a few have attended the Managing Obstetric Emergencies and Trauma course in the United Kingdom. Several hospitals in South Australia also have regular mock drills related to acute obstetric emergencies.

Quality, Safety and Risk Management

It is envisaged that these standards will be used by health care providers and service planners with the aim of providing an objective, standardised system for safely managing a Category 1 Caesarean Section; describing the minimum requirement for the resources, staffing and equipment provided by a particular hospital.

The early identification of a clinically compromised pregnant woman and/or her baby along with timely referral, assessment and provision of appropriate care and services, will promote optimal health outcomes for them both.

Some maternity models of care such as planned homebirth will not, due to the location of the birth in reference to operating rooms facilities, usually allow a woman easy access to a Category 1 Caesarean Section. Although a planned homebirth is sought by a small minority of women, women should be carefully selected for this type of care and restricted to those deemed to be low risk.[2] The recent policy on homebirths in South Australia indicates that it may not be possible to achieve birth within the time scale required by fetal or maternal condition.[15]

All hospitals offering a birthing service as part of their maternity services should have the appropriate staff and resources to perform a safe and prompt Category 1 Caesarean Section.

In accordance with the Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG), the specific 'booking to birth interval', should be determined in relation to the objective information regarding the condition of the mother and/or fetus, ie;[1]

Category 1	Immediate threat to life of a woman or fetus
Category 2	Maternal or fetal compromise but not immediately life threatening
Category 3	Needing early birth but no maternal or fetal compromise
Category 4	At a time to suit the woman and the caesarean section team

Hospitals with maternity services must have a multidisciplinary protocol, guiding staff in the management of a Category 1 Caesarean Section, which ensures the efficient mobilisation of identified health team members required for this procedure. This protocol must be applicable over the 24 hour period and must determine the resources and processes required. It should include:

- a list of staff required:
  - Medical officer performing the caesarean section
  - Switchboard operator(s)
  - Hospital senior nurse manager
  - Labour ward midwife
  - Operating room staff taking the booking
  - Theatre orderly(s)
  - Operating room nurse/midwife
  - Scrub nurse
  - Anaesthetic assistant
  - Anaesthetist
  - Surgeon assistant
  - Neonatologist/ Paediatrician/Neonatal Nurse practitioner
  - Neonatal nurse/midwife.

and must provide a clear, concise role and function for the each of these staff, including;

- an alert system for all relevant staff involved in the caesarean section – ie telephone/pager/overhead intercom using a generic alert 'Category 1 Caesarean Section.'
- specifics of the operating room booking system:
  - booking process system (level 5 and 6 hospitals via IT/software – SA Health – Operating Rooms Information Management System (ORMIS), other hospitals will utilise designated local documentation system),
  - incorporates the ability of the midwife to 'book' the Category 1 Caesarean Section under instruction from a medical practitioner,
  - provides a priority system of allocating an operating room and the reallocation of theatre cases which are pre-booked to the allocated operating room,
  - provides local system to inform and mobilise the operating room staff.

- a detailed list of pre-operative tasks that must occur prior to the commencement of surgery:
  - performance of a SA Health Surgical Team Safety Checklist,
  - insertion of an intravenous cannula,
  - removal of the fetal scalp electrode (if in situ), and
  - anaesthetic check.

Whilst it is recognised that the majority of Category 1 Caesarean Sections are conducted in the operating room, it is acknowledged that in some Category 1 cases, such as a peri-mortem caesarean section, demand that the procedure may be undertaken in an area outside of the operating room.

The location of the Category 1 Caesarean Section does not preclude instigation of the – Generic Alert 'Category 1 Caesarean Section' which will ensure the efficient mobilisation of identified health team members required for this procedure.

While short 'booking to birth' intervals are advocated when this is indicated by the maternal or fetal clinical presentation, this must be balanced with the ability to provide a safe service in a particular setting. In settings where less complex care is provided and longer 'booking to birth' intervals are likely, this information should be included in antenatal information provided to pregnant women. Women receiving perinatal care in a Level 3 or 4 hospitals should be provided with the patient information brochure 'Standards for the Management of Category 1 Caesarean Section in SA'.

It is strongly recommended that those maternity services in remote locations with limited resources and/or facilities preventing them from offering birth by caesarean section, or the full range of categories 1 to 4 caesarean section births involved should:

- inform the patients of the limitations of services available, and
- have ready access to appropriate intra or post partum medical transport to another health unit able to as required.

Monitoring the 'booking to birth' interval is important in evaluating quality of maternity care and a time reference is needed to achieve this.

Information Management System

Hospitals with birthing services must have a formal information management system designed to audit the 'booking to birth' interval. Level 5 and 6 hospitals will have a designated electronic system – SA Health advocated IT software – Operating Rooms Information Management System (ORMIS).[16] Level 3 and 4 hospitals will have a designated local documentation procedure which may be electronic or paper based.

Table: Outlining Booking to Birth Interval for Category 1 Caesarean Section and the relationship with Operating Rooms Information Management System.

Category Caesarean Section	Booking to birth interval	Level 6	Level 5	Level 4	Level 3	Level 1 & 2
		ORMIS code used	ORMIS code used	Local data system	Local data system	Not applicable
Category 1	Within 30 minutes	0.5	0.5	NA	NA	No birth facilities to undertake caesarean section
	Within 45 minutes	N/A	NA	Within 45 minutes	NA	
	Within 60 minutes	N/A	NA	NA	Within 60 minutes	
Category 2	Within 1 hour	001	001	Within 60 minutes	Within 60 minutes	
Category 3	Within 4 hours	004	004	Within 4 hours	Within 4 hours	
Category 4	Within 24 hours	024	024	Within 24 hours	Within 24 hours	

Please note: The process of booking an elective caesarean section is not included in this document and remains outside the scope of these standards.

All birthing services must have an operating room information management system that has the capability of reporting the:

- total number of Category 1 Caesarean Sections as a percentage of the total number of (emergency) caesarean sections;
- number of Category 1 Caesarean Sections where the booking to birth time is less than 30 minutes (Level 5 and 6 hospitals), less than 45 minutes (Level 4 hospitals), less than 60 minutes (Level 3 hospitals);
- number of Category 1 Caesarean Sections where the booking to birth time is between 46 and 60 minutes;
- number of Category 1 Caesarean Sections where the booking to birth time is >60 minutes;
- clinical condition associated with the Category 1 Caesarean Sections;
- percentage of Category 1 Caesarean Sections that comply with the clinical criteria associated with a Category 1 Caesarean Section; and
- percentage of Category 1 Caesarean Sections that are performed with a general anaesthesia.

Data collected from the operating room information management system will be required for reporting to SA Health Insurance Services on an annual basis.

Anaesthetic Management

The safe anaesthetic management of the woman requiring a Category 1 Caesarean Section is integral to the health outcomes for both the woman and her baby. The role of the Anaesthetist in a Category 1 Caesarean Section includes the management of maternal resuscitation, including the post operative period and active participation in the in-utero resuscitation of the fetus.

Only those Anaesthetists privileged for this procedure can undertake this role and will ensure their clinical practices are performed in accordance with the professional standards of the Australian and New Zealand College of Anaesthetists.

Good communication is central to timely delivery of the baby while avoiding unnecessary risk to the mother or baby. A multidisciplinary communication strategy including all relevant health professionals is required to ensure the efficient mobilisation of the required health team to undertake a Category 1 Caesarean Section.

Use of the standards

These standards are confined to determining the minimal requirements for the safe management of Category 1 Caesarean Sections taking account current research and professional standards of clinical practice.

These standards recognise the need for a hospital providing maternity services to:

- Identify the appropriately qualified and experienced clinicians required to safely manage the comprehensive care of the women and her baby in the event the a Category 1 Caesarean Section.
- Define the role responsibilities of all relevant perinatal health professionals in the clinical management a Category 1 Caesarean Section.
- Establish the necessary professional and technical infrastructure within their hospitals in addition to those defined in the *Standards for Maternal & Neonatal Services in SA* to appropriately support the woman requiring a Category 1 Caesarean Section.
- Determine the minimum data set required for collection, enabling a suitable audit of the clinical standards associated with Category 1 Caesarean Section.

It is envisaged that these standards will be used by health care providers with the aim of providing an objective, standardised system for describing the scope of maternity services that can be provided to women requiring a Category 1 Caesarean Section. It is recognised that the facilities made available to the woman requiring a Category 1 Caesarean Section should meet the needs of the woman and her baby.

Health managers have the opportunity and obligation to determine their hospital's maternity services role in managing a Category 1 Caesarean Section within this service delineation framework.

Principles of the standards

General

The levels of maternity care described in these standards are differentiated by the complexity of clinical activity that is required by a hospital providing maternity services to meet the needs of the woman requiring a Category 1 Caesarean Section. This is determined by the workforce, facilities, equipment, support services, education and organisational quality and risk management systems available at each hospital. *The Standards for Maternal & Neonatal Services in SA 2010* should be referred to for additional detail.

Whilst it is recognised that variations in the services provided may be warranted as unique patients, resources and limitations to services arise, it is a requirement that these variations are documented and substantiated with an appropriate risk management policy and strategy.

Facilities

The scope of these standards does not include the standard operating procedures relevant to the mobilising staff and equipment enabling a safe Category 1 Caesarean Section.

Hospitals providing maternity services must have the capacity to record the processes of the 'booking to birth' for Category 1 Caesarean Section. (SA Health advocated IT software – ORMIS). Level 3 and 4 hospitals will have a designated local documentation procedure which may be electronic or paper based.

Each hospital should have detailed standard operating procedures for alerting and mobilising appropriate staff, as well as checklists and flow charts outlining staff specific roles and responsibilities. The detailed standard operating procedures must cover the 24 hour period and include procedures for 'out of hours', and staff 'call in'.

The detailed standard operating procedures should ensure all relevant staff have a delegation of responsibility in the event of a Category 1 Caesarean Section.

Hospital managers and general practitioners have a responsibility to inform the community of the limitations regarding the management of a Category 1 Caesarean Section within the maternity services provided at the hospital. The patient information brochure *Standards for the Management of Category 1 Caesarean Section in SA* could be used in this situation.

Workforce implications

It is essential that birthing unit staff, facilities and equipment at each level of service are appropriate to optimise the health outcomes for woman and her baby in the event of a Category 1 Caesarean Section. It is recognised that the management of a Category 1 Caesarean Section will demand additional resources than those required for a normal birth.

Determinants of the suitability of the maternity services workforce available at each level of service to manage a Category 1 Caesarean Section are determined in the *Standards for Maternal & Neonatal Services in SA 2010*. Credentialing, admitting rights and clinical privileges for these staff remain the responsibility of the employing hospital.

To ensure optimal health outcomes, it should be recognised that a woman requiring more complex care should have access to a range of allied health staff to help reduce potential risks and adverse outcomes associated with a Category 1 Caesarean Section.

Hospitals providing less complex care must have the capacity to refer a woman requiring more complex care to more qualified perinatal staff for advice and, when required the facility to provide more advanced care whilst providing the clinical capabilities to support the obstetric woman.

Workforce education

The level of service described in these standards determines the complexity of clinical activity that a hospital can provide a woman requiring a Category 1 Caesarean Section. The presence of suitable health professionals who hold specialist care qualifications compatible with the defined level of care is necessary.

Hospitals providing perinatal services require appropriate education and training is provided to staff to ensure they are aware of the limitations and scope of the perinatal services provided by their hospital and have appropriate competencies in the management of the woman requiring a Category 1 Caesarean Section.

All hospital staff involved in a Category 1 Caesarean Section must have access to specific competency based education and training that addresses the emergency management of a woman requiring a Category 1 Caesarean Section. Hospital protocols should be tested in these education sessions.

Description of perinatal service delineation for a Category 1 Caesarean Section

Level 1 or Level 2: Complexity of perinatal clinical care for managing a Category 1 Caesarean Section

Level 1 and Level 2 hospitals and their available workforce have been determined as hospitals which cannot provide a safe perinatal service and have no capacity to manage a woman requiring a Category 1 Caesarean Section.

As per Standards for Maternal & Neonatal Services in SA 2010

Level 3: Complexity of perinatal clinical care for managing a Category 1 Caesarean Section

Hospitals providing Level 3 perinatal services have an appropriate workforce and facilities enabling the provision of comprehensive care for an uncomplicated pregnancy deemed to be 'low risk' in accordance with per the *South Australian Perinatal Practice Guidelines.*

Perinatal service providers working in a Level 3 hospital are restricted to managing the perinatal period, including birth, for a woman with no complications.

Hospitals deemed to provide Level 3 perinatal services should have appropriate formal policy/protocols which guide staff, ensuring that the woman requiring a Category 1 Caesarean Section has access to operating room facilities adequate to accommodate a Category 1 Caesarean Section and achieve birth within 60 minutes of the booking.

Hospitals deemed to provide Level 3 perinatal services must have an operating room information management system with the capacity to record the processes of the 'booking to birth'.

As per Standards for Maternal & Neonatal Services in SA 2010

Level 4: Complexity of perinatal clinical care for managing a Category 1 Caesarean Section

Hospitals providing Level 4 perinatal services have an appropriate workforce with facilities enabling the provision of comprehensive care for a woman deemed to be 'low risk' in accordance with the *South Australian Perinatal Practice Guidelines* and are able to extend this care for some pregnancy related illnesses that remain stable.

Hospitals deemed to provide Level 4 perinatal services should have appropriate formal policy/protocols which guide staff, ensuring that the woman requiring a Category 1 Caesarean Section has access to operating room facilities adequate to accommodate a Category 1 Caesarean Section and achieve birth within 45 minutes of the booking.

Hospitals deemed to provide Level 4 perinatal services must have an operating room information management system with the capacity to record the processes of the 'booking to birth'.

As per Standards for Maternal & Neonatal Services in SA 2010

Level 5 or 6: Complexity of perinatal clinical care for managing a Category 1 Caesarean Section

Hospitals providing Level 5 or Level 6 perinatal services have an appropriate workforce and facilities enabling the provision of comprehensive care of a pregnancy deemed 'low-high' risk, in accordance with the *South Australian Perinatal Practice Guidelines* and are able to extend this care for all pregnancy related illnesses.

Hospitals deemed to provide Level 5 or 6 perinatal services should have appropriate formal policy/protocols which guide staff, ensuring that the woman requiring a Category 1 Caesarean Section has access to operating room facilities adequate to accommodate a Category 1 Caesarean Section and achieve birth within 30 minutes of the booking.

Health units deemed to provide Level 5 or 6 perinatal services must have an operating room information management system with the capacity to record the processes of the 'booking to birth'.

As per Standards for Maternal & Neonatal Services in SA 2010

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For more information

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If you do not speak English, request an interpreter from SA Health and the Department will make every effort to provide you with an interpreter in your language.

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