Queensland Clinical Guidelines

Translating evidence into best clinical practice

Maternity and Neonatal **Clinical Guideline**

Guideline supplement: Postpartum haemorrhage

Queensland Government

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1 Introduction

This document is a supplement to the Queensland Clinical Guideline (QCG) *Postpartum haemorrhage.* It provides supplementary information regarding guideline development, makes summary recommendations, suggests measures to assist implementation and quality activities and summarises changes (if any) to the guideline since original publication. Refer to the guideline for abbreviations, acronyms, flow charts and acknowledgements.

1.1 Funding

The development of this guideline was funded by Healthcare Improvement Unit, Queensland Health. Consumer representatives were paid a standard fee. Other working party members participated on a voluntary basis.

1.2 Conflict of interest

Declarations of conflict of interest were sought from working party members as per the Queensland Clinical Guidelines Conflict of Interest statement. Declared conflicts of interest were recorded and noted in the COI register.

1.3 Development process

This version of the guideline followed the QCG Full review process.

1.4 Summary of changes

Queensland clinical guidelines are reviewed every 5 years or earlier if significant new evidence emerges. Table 1 provides a summary of changes made to the guidelines since original publication.

Table 1. Summary of change

Publication date *Endorsed by:*	**Identifier**	**Summary of major change**
02/07/2009	MN0907.1-V1-R11	First publication
22/08/2011	MN09.1-V2-R11	New website: updated name and format changes
07/12/2012	MN12.1-V3-R17	First full review original guideline • Supplement and flow charts added/amended
14/10/2013	MN12.1-V4-R17	• Flow chart: Emergency donor panel activation: Target results: '*Base excess < minus 6'*, amended to '*Base excess > minus 6'* • Section 3.2 Monitoring in the fourth stage of labour; Table 5 Recommended observations post birth: o Removed *Normal birth* column o Added oxygen saturation and level of consciousness to observations (as per National consensus statement: essential elements for recognising and responding to clinical deterioration[1]) • Section 4.1 Tone: Carboprost information moved to Section 4.1.2 • Section 4.1.2 Uterine atonia and second line drugs: New section, Dinoprost added as carboprost not readily obtainable within Australia • Minor formatting and branding updates
15/03/2017	MN12.1-V5-R17	• Section 4.1.2 and Flowchart–initial response: Clarified administration instructions for carboprost • Oxytocin infusion regimen updated from 40 IU in 1 L IV solution to 30 IU in 500 mL IV solution to align with *Induction of labour* clinical guideline • Minor formatting/branding updates
March 2018 *QCG Steering Committee* *Statewide Maternity and Neonatal Clinical Network*	MN18.1-V6-R23	Second full review • Removed: o Emergency donor panel o Blood transfusion administration o PPH proforma • Added: o Point of care blood clot analyser use o Fibrinogen concentrate o Tranexamic acid administration o Prophylactic misoprostol o Requirements and actions for low resource settings

Publication date *Endorsed by:*	**Identifier**	**Summary of major change**
March 2018	MN18.1-V7-R23	Amendment to flowchart Initial response to PPH Added: Dose of carboprost if administered intramyometrial (500 micrograms)
April 2019 *Statewide Maternity and Neonatal Clinical Network*	MN18.1-V8-R23	Initiated following evidence updates to carbetocin use for PPH • 2.3 Intrapartum risk management o Emergency caesarean section: Use of carbetocin added o Elective caesarean section: Evidence for carbetocin use deleted (use of carbetocin retained) • 2.3.1 Third stage management o Added new evidence for oxytocin IV versus IM • 2.3.2 Syntometrine o Moved from third stage management o Added carbetocin preferred to syntometrine • 2.3.3 Carbetocin o Added. New content • 2.3.4 Secondary prevention with misoprostol o Moved from postnatal risk management (no change to content) • Minor formatting updates
September 2020	MN18.1-V9-R23	Amended following request arising from RCA and other change requests. • 2.1 Risk factors o Added: Precipitate labour • 3.4.2 Second line pharmacological therapy for uterine atonia o Reworded: Prescribing considerations–observations required for carboprost administration • 3.6 Tissue o Added: Unexpected placenta accrete • 3.4.3 Intractable bleeding o Added new content: Medical procedures–care after intrauterine balloon tamponade insertion o Separated medical and surgical treatment of intractable bleeding into separate tables • Appendix A: Updated to align with Section 3.4 changes • Minor formatting updates
July 2021	MN18.1-V10-R23	Amended following notification of error: Flowchart Massive haemorrhage protocol (MHP) • The acronym *CBP* (critical bleeding protocol) replaced with *MHP* (massive haemorrhage protocol) • Minor formatting updates

2 Methodology

Queensland Clinical Guidelines (QCG) follows a rigorous process of guideline development. This process was endorsed by the Queensland Health Patient Safety and Quality Executive Committee in December 2009. The guidelines are best described as 'evidence informed consensus guidelines' and draw from the evidence base of existing national and international guidelines and the expert opinion of the working party.

2.1 Topic identification

The topic was identified as a priority by the Statewide Maternity and Neonatal Clinical Network at a forum in 2009.

2.2 Scope

The scope of the guideline was determined using the following framework.

Table 2. Scope framework

Scope framework	
Population	*Which group of people will the guideline be applicable to?* Pregnant women Postnatal women within 24 hours of birth
Purpose	*How will the guideline support evidence-based decision-making on the topic?* Identify relevant evidence related to : • Prophylaxis, diagnosis, assessment and management of PPH
Outcome	*What will be achieved if the guideline is followed?* *(This is not a statement about measurable changes / not SMART goals)* Support: • Early identification of pregnant women at risk of PPH • Risk management/mitigation strategies • Accurate assessment and correct diagnosis of PPH • Best practice management of PPH
Exclusions	*What is not included/addressed within the guideline* • Management of anaesthesia • Routine antenatal, intrapartum and postpartum care • Work instructions for surgical techniques to treat PPH • Definition, diagnosis and treatment of secondary PPH

2.3 Clinical questions

The following clinical questions were generated to inform the guideline scope and purpose:

- What risk reduction measures prevent or reduce the severity of PPH?
- How should a woman experiencing a PPH be assessed, and managed?
- How should a woman be cared for after PPH?

2.4 Search strategy

A search of the literature was conducted during may to July 2017. A further search was conducted in August 2020. The QCG search strategy is an iterative process that is repeated and amended as guideline development occurs (e.g. if additional areas of interest emerge, areas of contention requiring more extensive review are identified or new evidence is identified). All guidelines are developed using a basic search strategy. This involves both a formal and informal approach.

Table 3. Basic search strategy

Step		Consideration
1.	Review clinical guidelines developed by other reputable groups relevant to the clinical speciality	• This may include national and/or international guideline writers, professional organisations, government organisations, state based groups. • This assists the guideline writer to identify: o The scope and breadth of what others have found useful for clinicians and informs the scope and clinical question development o Identify resources commonly found in guidelines such as flowcharts, audit criteria and levels of evidence o Identify common search and key terms o Identify common and key references
2.	Undertake a foundation search using key search terms	• Construct a search using common search and key terms identified during Step 1 above • Search the following databases o PubMed o CINAHL o Medline o Cochrane Central Register of Controlled Trials o EBSCO o Embase • Studies published in English less than or equal to 5 years previous are reviewed in the first instance. Other years may be searched as are relevant to the topic • Save and document the search • Add other databases as relevant to the clinical area
3.	Develop search word list for each clinical question.	• This may require the development of clinical sub-questions beyond those identified in the initial scope. • Using the foundation search performed at Step 2 as the baseline search framework, refine the search using the specific terms developed for the clinical question • Save and document the search strategy undertaken for each clinical question
4.	Other search strategies	• Search the reference lists of reports and articles for additional studies • Access other sources for relevant literature o Known resource sites o Internet search engines o Relevant text books

2.4.1 Keywords

The following keywords were used in the basic search strategy: ‘postpartum haemorrhage’, PPH, obstetric haemorrhage, uterine atonia, oxytocics, uterotonics, tranexamic acid, B-lynch suture, ‘uterine artery embolism, bilateral ligation.
Other keywords may have been used for specific aspects of the guideline.

2.5 Consultation

Major consultative and development processes occurred between July and August 2017.

Table 4. Major guideline development processes

Process	Activity
Clinical lead	• The nominated Clinical Lead was approved by QCG Steering Committee
Consumer participation	• Consumer participation was invited from a range of consumer focused organisations who had previously accepted an invitation for on-going involvement with QCG
Working party	• An EOI for working party membership was distributed via email to Queensland clinicians and stakeholders in July 2017 • The working party was recruited from responses received • Working party members who participated in the working party consultation processes are acknowledged in the guideline • Working party consultation occurred in a virtual group via email
Statewide consultation	• Consultation was invited from Queensland clinicians and stakeholders during July and August 2017 • Feedback was received primarily via email • All feedback was compiled and provided to the clinical lead and working party members for review and comment

2.6 Endorsement

The guideline was endorsed by the:

- Queensland Clinical Guidelines Steering Committee in February 2018
- Statewide Maternity and Neonatal Clinical Network [Queensland] in February 2018

2.7 Citation

The recommended citation of Queensland Clinical Guidelines is in the following format:

> Queensland Clinical Guidelines. [**Insert Guideline Title**]. Guideline No. [**Insert Guideline Number**]. Queensland Health. [**Insert Year of Publication**]. Available from: www.health.qld.gov.au/qcg.
>
> **EXAMPLE:**
> Queensland Clinical Guidelines. Normal birth. Guideline No. MN17.25-V3-R22. Queensland Health 2017. Available from: www.health.qld.gov.au/qcg.

3 Levels of evidence

The levels of evidence identified in the Royal College of Obstetricians and Gynaecologists (RCOG) Green-top Guideline No. 52 (2016)[2] were used to inform summary recommendations.

Note that the 'consensus' definition* in Table 5. Levels of evidence and grades of recommendation is different from that proposed by RCOG. It relates to forms of evidence that arise from the clinical experience of the guideline's clinical lead and working party

Summary recommendations are outlined in 3.1Summary recommendations**.**

Table 5. Levels of evidence (GRADE)

GRADE Levels of evidence	
1++	Evidence obtained from high quality meta-analyses, systematic reviews of RCTs, or RCTs with a very low risk of bias.
1+	Evidence obtained from well conducted meta-analyses, systematic reviews of RCTs, or RCTs with a low risk of bias.
1	Evidence obtained from meta-analyses, systematic reviews or RCTs, or RCTs with a high risk of bias.
2++	Evidence obtained from high quality systematic reviews of case-control or cohort studies *or* high quality case-control or cohort studies with a very low risk of confounding, bias, or chance and a high probability that the relationship is causal.
2+	Evidence obtained from well conducted case-control or cohort studies with a low risk of confounding, bias, or chance and a moderate probability that the relationship is causal.
2-	Evidence obtained from case-control or cohort studies with a high risk of confounding, bias, or chance and a significant risk that the relationship is not causal.
3	Evidence obtained from non-analytic studies, e.g. case reports, case series.
4	Expert opinion.
Consensus	Agreement between clinical lead, working party and other clinical experts.
Grade of recommendation	
A	At least one meta-analysis, systematic reviews or RCT rated as 1++, and directly applicable to the target population; or A systematic review of RCTs or a body of evidence consisting principally of studies rated as 1+, directly applicable to the target population and demonstrating overall consistency of results
B	A body of evidence including studies rated as 2++ directly applicable to the target population, and demonstrating overall consistency of results; or Extrapolated evidence from studies rated as 1++ or 1+
C	A body of evidence including studies rated as 2+ directly applicable to the target population, and demonstrating overall consistency of results; or Extrapolated evidence from studies rated as 2++
D	Evidence level 3 or 4; or Extrapolated evidence from studies rated as 2+

3.1 Summary recommendations

Summary recommendations and levels of evidence are outlined in The levels of evidence identified by the GRADE system were used to inform the summary recommendations. Levels of evidence are outlined in Table 5. Levels of evidence (GRADE)and Summary recommendations are outlined in Table 6. Summary recommendations.

Note that the 'consensus' definition in Table 5. Levels of evidence (GRADE) relates to forms of evidence that are not identified by the GRADE system and/or that arise from the clinical experience of the guideline's clinical lead(s) and working party.

Table 6. Summary recommendations

Recommendation		Grading of evidence
1.	Assess risks for PPH in the antenatal period and plan risk mitigation strategies with the woman. For example: • Screen for and correct anaemia • Identify placental location • If risk factors, plan the safest place of birth • Consult and refer as required • Discuss the risks and benefits of management options for PPH with pregnant women	**Consensus**
2.	Review both antenatal and intrapartum risk factors at the onset of labour • Regularly review the progress of labour and remain vigilant for risk factors predisposing to uterine atony as this is the most common cause of PPH	**Consensus**
3.	Routinely recommend prophylactic uterotonics for the management of third stage as they reduce the risk of PPH (oxytocin is the uterotonic of choice)	**A**
4.	Immediately PPH is identified: • Call for appropriate help • Initiate standard emergency procedures • Establish IV access and commence intravenous fluids • Collect urgent blood tests but do not wait unnecessarily for results before initiating treatments • Assess the cause of bleeding (4T assessment) and direct management toward the causative factor • Monitor temperature every 15 minutes • Monitor vital signs continuously	**D**
5.	If a point of care blood clotting analyser is available (ROTEM®/TEG®), initiate use as early as possible	**Consensus**
6.	Consider the use of intravenous tranexamic acid in the management of PPH. • Maximum benefit reported if administered within three hours of PPH	**B**
7.	If the Hb is less than 7-8 g/dL in the postnatal period and where there is no continuing or threat of bleeding, make the decision to transfuse on an informed individual basis.	**Consensus**

4 Implementation

This guideline is applicable to all Queensland public and private maternity facilities. It can be downloaded in Portable Document Format (PDF) from www.health.qld.gov.au/qcg

4.1 Guideline resources

The following guideline components are provided on the website as separate resources:

- Flowchart: Initial response to postpartum haemorrhage
- Flowchart: Massive haemorrhage protocol
- Education resource: Postpartum haemorrhage
- Knowledge assessment: Postpartum haemorrhage
- Auditing resources: Postpartum haemorrhage
- Parent information: Severe bleeding after birth

4.2 Suggested resources

During the development process stakeholders identified additional resources with potential to complement and enhance guideline implementation and application. The following resources have not been sourced or developed by QCG but are suggested as complimentary to the guideline:

- Standard obstetric haemorrhage form to provide comprehensive documentation during PPH
- Local procedure/work instructions for PPH management techniques identified in the guideline (e.g. reduction of inverted uterine, manual removal of placenta)

4.3 Implementation measures

Suggested activities to assist implementation of the guideline are outlined below.

4.3.1 Implications for implementation

The following areas may have implications for local implementation of the guideline recommendations. It is suggested they be considered for successful guideline implementation.

- Economic considerations including opportunity costs
- Human resource requirements including clinician skill mix and scope of practice
- Clinician education and training
- Equipment and consumables purchase and maintenance
- Consumer acceptance
- Model of care and service delivery

4.3.2 QCG measures

- Notify Chief Executive Officer and relevant stakeholders
- Monitor emerging new evidence to ensure guideline reflects contemporaneous practice
- Capture user feedback
- Record and manage change requests
- Review guideline in 2023

4.3.3 Hospital and Health Service measures

Initiate, promote and support local systems and processes to integrate the guideline into clinical practice, including:

- Hospital and Health Service (HHS) Executive endorse the guidelines and their use in the HHS and communicate this to staff
- Promote the introduction of the guideline to relevant health care professionals
- Support education and training opportunities relevant to the guideline and service capabilities
- Align clinical care with guideline recommendations
- Undertake relevant implementation activities as outlined in the *Guideline implementation checklist* available at www.health.qld.gov.au/qcg

4.4 Quality measures

Auditing of guideline recommendations and content assists with identifying quality of care issues and provides evidence of compliance with the National Safety and Quality Health Service (NSQHS) Standards[3] [Refer to Table 7. NSQHS Standard 1]. Suggested audit and quality measures are identified in Table 8. Clinical quality measures.

Table 7. NSQHS Standard 1

NSQHS Standard 1: Clinical governance	
Clinical performance and effectiveness	
Criterion 1.27:	**Actions required:**
Evidence based care	a. Provide clinicians with ready access to best-practice guidelines, integrated care pathways, clinical pathways and decision support tools relevant to their clinical practice
	b. Support clinicians to use the best available evidence, including relevant clinical care standards developed by the Australian Commission on Safety and Quality in Health Care

The following clinical quality measures are suggested:

Table 8. Clinical quality measures

No	Audit criteria	Guideline Section
1.	Proportion of women experiencing PPH greater than: • 500 mL after vaginal birth 1000 mL after caesarean section	Section 1.1
2.	Proportion of women experiencing severe or very severe PPH (greater than 1000 mL or greater than 2500 mL)	Section 1.1
3.	Proportion of women with PPH who required a hysterectomy	Section 3.4.3
4.	Proportion of women with PPH who required a blood transfusion	Section 2 Section 3
5.	Proportion of women with known abnormalities of placentation who received all elements of the preventative care bundle specified in the guideline	Section 2.2
6.	Perform a case review/audit of each case of PPH greater than 1000 mL with a view to reviewing compliance with guideline recommendations for • Risk identification and mitigation • Intrapartum care management Management of PPH including communication and escalation of care	Sections 1–5

4.5 Areas for future research

During development the following areas where identified as having limited or poor quality evidence to inform clinical decision making. Further research in these areas may be useful.

- Economic analysis of the use of point of care blood clotting analysers
- Optimal ratio of packed red cells to FFP in the management of obstetric haemorrhage.

4.6 Safety and quality

In conjunction with the Queensland Clinical Guideline *Standard care*[4], implementation of this guideline provides evidence of compliance with the National Safety and Quality Health Service Standards.[3]

Table 9. NSQHS National Criteria

NSQHS Criteria	Actions required	☑ Evidence of compliance
NSQHS Standard 1: Clinical governance		
Patient safety and quality systems Safety and quality systems are integrated with governance processes to enable organisations to actively manage and improve the safety and quality of health care for patients.	**Diversity and high risk groups** 1.15 The health service organisation: a. Identifies the diversity of the consumers using its services b. Identifies groups of patients using its services who are at higher risk of harm c. Incorporates information on the diversity of its consumers and higher-risk groups into the planning and delivery of care	☑ Assessment and care appropriate to the cohort of patients is identified in the guideline ☑ High risk groups are identified in the guideline ☑ The guideline is based on the best available evidence
Clinical performance and effectiveness The workforce has the right qualifications, skills and supervision to provide safe, high-quality health care to patients.	**Evidence based care** 1.27 The health service organisation has processes that: a. Provide clinicians with ready access to best-practice guidelines, integrated care pathways, clinical pathways and decision support tools relevant to their clinical practice b. Support clinicians to use the best available evidence, including relevant clinical care standards developed by the Australian Commission on Safety and Quality in Health Care	☑ Queensland Clinical Guidelines is funded by Queensland Health to develop clinical guidelines relevant to the service line to guide safe patient care across Queensland ☑ The guideline provides evidence-based and best practice recommendations for care ☑ The guideline is endorsed for use in Queensland Health facilities. ☑ A desktop icon is available on every Queensland Health computer desktop to provide quick and easy access to the guideline
	Performance management 1.22 The health service organisation has valid and reliable performance review processes that: a. Require members of the workforce to regularly take part in a review of their performance b. Identify needs for training and development in safety and quality c. Incorporate information on training requirements into the organisation's training system	☑ The guideline has accompanying educational resources to support ongoing safety and quality education for identified professional and personal development. The resources are freely available on the internet http://www.health.qld.gov.au/qcg

NSQHS Criteria	Actions required	☑ Evidence of compliance
NSQHS Standard 1: Clinical governance		
Patient safety and quality systems Safety and quality systems are integrated with governance processes to enable organisations to actively manage and improve the safety and quality of health care for patients.	**Policies and procedures** 1.7 The health service organisation uses a risk management approach to: a. Set out, review, and maintain the currency and effectiveness of, policies, procedures and protocols b. Monitor and take action to improve adherence to policies, procedures and protocols c. Review compliance with legislation, regulation and jurisdictional requirements	☑ QCG has established processes to review and maintain all guidelines and associated resources ☑ Change requests are managed to ensure currency of published guidelines ☑ Implementation tools and checklist are provided to assist with adherence to guidelines ☑ Suggested audit criteria are provided in guideline supplement ☑ The guidelines comply with legislation, regulation and jurisdictional requirements
NSQHS Standard 2: Partnering with Consumers		
Health literacy Health service organisations communicate with consumers in a way that supports effective partnerships.	**Communication that supports effective partnerships** 2.8 The health service organisation uses communication mechanisms that are tailored to the diversity of the consumers who use its services and, where relevant, the diversity of the local community 2.9 Where information for patients, carers, families and consumers about health and health services is developed internally, the organisation involves consumers in its development and review 2.10 The health service organisation supports clinicians to communicate with patients, carers, families and consumers about health and health care so that: a. Information is provided in a way that meets the needs of patients, carers, families and consumers b. Information provided is easy to understand and use c. The clinical needs of patients are addressed while they are in the health service organisation d. Information needs for ongoing care are provided on discharge	☑ Consumer consultation was sought and obtained during the development of the guideline. Refer to the acknowledgement section of the guideline for details ☑ Consumer information is developed to align with the guideline and included consumer involvement during development and review ☑ The consumer information was developed using plain English and with attention to literacy and ease of reading needs of the consumer
Partnering with consumers in organisational design and governance Consumers are partners in the design and governance of the organisation.	**Partnerships in healthcare governance planning, design, measurement and evaluation** 2.11 The health service organisation: a. Involves consumers in partnerships in the governance of, and to design, measure and evaluate, health care b. Has processes so that the consumers involved in these partnerships reflect the diversity of consumers who use the service or, where relevant, the diversity of the local community 2.14 The health service organisation works in partnership with consumers to incorporate their views and experiences into training and education for the workforce	☑ Consumers are members of guideline working parties ☑ The guideline is based on the best available evidence ☑ The guidelines and consumer information are endorsed by the QCG and Queensland Statewide Maternity and Neonatal Clinical Network Steering Committees which includes consumer membership

NSQHS National Criteria	Actions required	☑ Evidence of compliance
NSQHS Standard 4: Medication safety		
Clinical governance and quality improvement to support medication management Organisation-wide systems are used to support and promote safety for procuring, supplying, storing, compounding, manufacturing, prescribing, dispensing, administering and monitoring the effects of medicines	**Integrating clinical governance** 4.1 Clinicians use the safety and quality systems from the Clinical Governance Standard when: a. Implementing policies and procedures for medication management b. Managing risks associated with medication management c. Identifying training requirements for medication management	☑ The guideline provides current evidence based recommendations about medication
NSQHS Standard 5: Comprehensive care		
Clinical governance and quality improvement to support comprehensive care Systems are in place to support clinicians to deliver comprehensive care	**Integrating clinical governance** 5.1 Clinicians use the safety and quality systems from the Clinical Governance Standard when: a. Implementing policies and procedures for comprehensive care b. Managing risks associated with comprehensive care c. Identifying training requirements to deliver comprehensive care **Partnering with consumers** 5.3 Clinicians use organisational processes from the Partnering with Consumers Standard when providing comprehensive care to: a. Actively involve patients in their own care b. Meet the patient's information needs c. Share decision-making	☑ The guideline has accompanying educational resources to support ongoing safety and quality education for identified professional and personal development. The resources are freely available on the internet http://www.health.qld.gov.au/qcg ☑ The guideline provides evidence-based and best practice recommendations for care ☑ Consumer information is developed for the guideline

NSQHS National Criteria	Actions required	☑ Evidence of compliance
NSQHS Standard 6: Communicating for safety		
Clinical governance and quality improvement to support effective communication Systems are in place for effective and coordinated communication that supports the delivery of continuous and safe care for patients.	**Integrating clinical governance** 6.1 Clinicians use the safety and quality systems from the Clinical Governance Standard when: a. Implementing policies and procedures to support effective clinical communication b. Managing risks associated with clinical communication c. Identifying training requirements for effective and coordinated clinical communication **Partnering with consumers** 6.3 Clinicians use organisational processes from the Partnering with Consumers Standard to effectively communicate with patients, carers and families during high-risk situations to: a. Actively involve patients in their own care b. Meet the patient's information needs c. Share decision-making **Organisational processes to support effective communication** 6.4 The health service organisation has clinical communications processes to support effective communication when: a. Identification and procedure matching should occur b. All or part of a patient's care is transferred within the organisation, between multidisciplinary teams, between clinicians or between organisations; and on discharge c. Critical information about a patient's care, including information on risks, emerges or changes	☑ Requirements for effective clinical communication by clinicians are identified ☑ The guideline provides evidence-based and best practice recommendations for communication between clinicians ☑ The guideline provides evidence-based and best practice recommendations for communication with patients, carers and families ☑ The guideline provides evidence-based and best practice recommendations for discharge planning and follow –up care
Communication of critical information Systems to effectively communicate critical information and risks when they emerge or change are used to ensure safe patient care.	**Communicating critical information** 6.9 Clinicians and multidisciplinary teams use clinical communication processes to effectively communicate critical information, alerts and risks, in a timely way, when they emerge or change to: a. Clinicians who can make decisions about care b. Patients, carers and families, in accordance with the wishes of the patient 6.10 The health service organisation ensures that there are communication processes for patients, carers and families to directly communicate critical information and risks about care to clinicians	☑ Requirements for effective clinical communication of critical information are identified ☑ Requirements for escalation of care are identified
Correct identification and procedure matching Systems to maintain the identity of the patient are used to ensure that the patient receives the care intended for them.	**Correct identification and procedure matching** 6.5 The health service organisation: a. Defines approved identifiers for patients according to best-practice guidelines b. Requires at least three approved identifiers on registration and admission; when care, medication, therapy and other services are provided; and when clinical handover, transfer or discharge documentation is generated	☑ Requirements for safe and for correct patient identification are identified

NSQHS National Criteria	Actions required	☑ Evidence of compliance
NSQHS Standard 6: Communicating for safety		
Communicating at clinical handover Processes for structured clinical handover are used to effectively communicate about the health care of patients.	**Clinical handover** 6.7 The health service organisation, in collaboration with clinicians, defines the: a. Minimum information content to be communicated at clinical handover, based on best-practice guidelines b. Risks relevant to the service context and the particular needs of patients, carers and families c. Clinicians who are involved in the clinical handover 6.8 Clinicians use structured clinical handover processes that include: a. Preparing and scheduling clinical handover b. Having the relevant information at clinical handover c. Organising relevant clinicians and others to participate in clinical handover d. Being aware of the patient's goals and preferences e. Supporting patients, carers and families to be involved in clinical handover, in accordance with the wishes of the patient f. Ensuring that clinical handover results in the transfer of responsibility and accountability for care	☑ The guideline acknowledges the need for local protocols to support transfer of information, professional responsibility and accountability for some or all aspects of care
NSQHS Standard 7: Blood management		
Clinical governance and quality improvement to support blood management Organisation-wide governance and quality improvement systems are used to ensure safe and high-quality care of patients' own blood, and to ensure that blood product requirements are met.	**Integrating clinical governance** 7.1 Clinicians use the safety and quality systems from the Clinical Governance Standard when: a. Implementing policies and procedures for blood management b. Managing risks associated with blood management c. Identifying training requirements for blood management	☑ The guideline provides evidence-based and best practice recommendations for use of blood products
Prescribing and clinical use of blood and blood products The clinical use of blood and blood products is appropriate, and strategies are used to reduce the risks associated with transfusion.	**Optimising and conserving patients' own blood** 7.4 Clinicians use the blood and blood products processes to manage the need for, and minimise the inappropriate use of, blood and blood products by: a. Optimising patients' own red cell mass, haemoglobin and iron stores b. Identifying and managing patients with, or at risk of, bleeding c. Determining the clinical need for blood and blood products, and related risks **Prescribing and administering blood and blood products** 7.6 The health service organisation supports clinicians to prescribe and administer blood and blood products appropriately, in accordance with national guidelines and national criteria	☑ The guideline provides evidence-based and best practice recommendations for use of blood products ☑ The guideline is consistent with recommendations of national guidelines

NSQHS National Criteria	Actions required	☑ Evidence of compliance
NSQHS Standard 8: Recognising and responding to acute deterioration		
Clinical governance and quality improvement to support recognition and response systems Organisation-wide systems are used to support and promote detection and recognition of acute deterioration, and the response to patients whose condition acutely deteriorates.	**Integrating clinical governance** 8.1 Clinicians use the safety and quality systems from the Clinical Governance Standard when: a. Implementing policies and procedures for recognising and responding to acute deterioration b. Managing risks associated with recognising and responding to acute deterioration c. Identifying training requirements for recognising and responding to acute deterioration **Partnering with consumers** 8.3 Clinicians use organisational processes from the Partnering with Consumers Standard when recognising and responding to acute deterioration to: a. Actively involve patients in their own care b. Meet the patient's information needs c. Share decision-making **Recognising acute deterioration** 8.4 The health service organisation has processes for clinicians to detect acute physiological deterioration that require clinicians to: a. Document individualised vital sign monitoring plans b. Monitor patients as required by their individualised monitoring plan c. Graphically document and track changes in agreed observations to detect acute deterioration over time, as appropriate for the patient	☑ The guideline is consistent with National Consensus statements recommendations ☑ The guideline recommends use of tools consistent with the principles of recognising and responding to clinical deterioration ☑ Consumer information is developed for the guideline

References

1. Belfort MA, GA DI. Postpartum hemorrhage and other problems of third stage. In: High risk pregnancy: management options. 4th ed. St Louis: Elsevier Saunders; 2011.
2. Mavrides E, Allard S, Chandraharan E, Collins P, et al, on behalf of the Royal College of Obstetricians and Gynaecologists. Prevention and management of postpartum haemorrhage. BJOG 2016;124:e106-2149.
3. Australian Commission on Safety and Quality in Health Care. National Safety and Quality Health Service Standards. [Internet]. 2017 [cited 2017 December 24]. Available from: http://www.safetyandquality.gov.au.
4. Ertem IO, Krishnamurthy V, Mulaudzi MC, Sguassero Y, Balta H, Gulumser O, et al. Similarities and differences in child development from birth to age 3 years by sex and across four countries: a cross-sectional, observational study. Lancet Global Health 2018;9:e279-91.