# **Queensland Clinical Guidelines**

Translating evidence into best clinical practice

# Maternity and Neonatal Clinical Guideline

Guideline Supplement: Preterm labour and birth



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## 1 Introduction

This document is a supplement to the Queensland Clinical Guideline (QCG) *Preterm labour and birth*. 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. No conflict of interest was identified.

## 1.3 Review process

- A review of the guideline scope, clinical questions and current literature was undertaken October–November 2019.
- The clinical lead was consulted and reviewed the previous version of the guideline.
- A peer review panel was formed with clinical experts to review the updated literature and guideline.
- The QCG steering committee and SMNCN re-endorsed the guideline and supplement.

# 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   | Identifier      | Summary of major change   |  |
|--|-----------------|---|--|
| October 2009   | MN0909.6-V1-R11 | First publication   |  |
| December 2009  | MN0909.6-V2-R11 | Correction to acknowledgements  |  |
| August 2011  | MN09.6-V3-R11   | Minor format and name change updates  |  |
| September 2011   | MN09.6-V4-R14   | Review date extended until 2014   |  |
| December 2014  | MN14.6-V5-R19   | First full review   |  |
|  |                 | Updated title to Preterm labour and birth   |  |
|  |                 | Added risk reduction measures   |  |
|  |                 | Added consumer advice after threatened preterm labour   |  |
|  |                 | Guideline supplement created  |  |
| October 2015 MN14.6-V6-R19 Ame   |                 | Amendment to Section 3.2 Cervical cerclage.   |  |
|  |                 | <ul> <li>Clarified recommendation that multiple dilation and evacuations, cervical surgery or other abnormalities are not<br/>themselves indications for cerclage.</li> </ul> |  |
|  |                 | Amendment to Section 4 Clinical assessment of PTL   |  |
|  |                 | Clarified purpose of sterile speculum examination to visualise cervix and membranes   |  |
| June 2016  | MN14.6-V7-R19   | Amendment to Section 5.5 Antibiotics and Flowchart  |  |
| <ul> <li>Ampicillin dose if signs of chorioamnionitis changed from 1 g every 4 hours to 1 g every 6 hours</li> <li>Regimen if chorioamnionitis and penicillin allergy clarified to include clindamycin or lincomycin 600m and Gentamicin 5 mg IV daily and Metronidazole 500 mg IV every 12 hours</li> </ul> |                 | Regimen if chorioamnionitis and penicillin allergy clarified to include clindamycin or lincomycin 600mg IV every 8 hours  |  |
| November 2016  |                 |   |  |
|  |                 | • Antibiotic regimen for PPROM deleted and replaced with reference to regimen to prolong latency in Queensland Clinical Guideline: Early onset Group B Streptococcal Disease. |  |
| June 2020 MN20.6-V9-R25 Peer review  |                 | Peer review   |  |
|  |                 | Formatting updated  |  |
|  |                 | References updated to align with current evidence   |  |
|  |                 | Flowchart updated to reflect changes  |  |

| Publication date | Identifier | Summary of major change   |
|------------------|------------|---|
|                  |            | Definition of terms   |
|                  |            | Amendment and update to 'Health care providers'   |
|                  |            | Addition of cervical incompetence   |
|                  |            | Removal of:   |
|                  |            | <ul> <li>Informed choice, informed consent, definition of obstetrician, woman centred care (refer to the Queensland Clinical<br/>Guideline: Standard Care guideline)</li> </ul>                               |
|                  |            | Addition of Section 1.1 Background  |
|                  |            | Gestational age from definition of terms to background  |
|                  |            | <ul> <li>Moderately preterm (32+0 to 33+6 weeks)</li> </ul>   |
|                  |            | o Very preterm (28+0 to 31+6 weeks)   |
|                  |            | o Extremely preterm (less than 27+6 weeks)  |
|                  |            | Section 1.2 Perinatal mental health (table 1)   |
|                  |            | <ul> <li>Minimal content change: information from previous guideline consolidated into table formatting and areas that can be<br/>referenced to the standard care guideline removed and referenced</li> </ul> |
|                  |            | Addition of information on perinatal mental health  |
|                  |            | Section 3.2 Cervical cerclage (table 6)   |
|                  |            | <ul> <li>Addition of indications of cervical cerclage to include a history of cervical trauma and PPROM in a previous pregnancy</li> </ul>  |
|                  |            | Emergency cerclage indication added   |
|                  |            | Section 4 Clinical assessment of labour (table 7)   |
|                  |            | Added importance of treatment based on appropriate clinical diagnosis   |
|                  |            | Section 4 Clinical assessment of labour (table 7)   |
|                  |            | Emphasis on fFN and TVCL measurement in conjunction to assist with diagnosis of PTL added   |
|                  |            | Section 4.2 Fetal fibronectin testing (table 10)  |
|                  |            | <ul> <li>Added testing women for fFN if asymptomatic but have a history of cervical surgery</li> </ul>  |
|                  |            | Addition of fFN tests greater than 200 ng/mL and less than 10 ng/mL   |
|                  |            | Section 5 Management of PTL   |
|                  |            | Added information about upcoming technologies to assist clinicians in diagnosing PTL  |
|                  |            | Section 5.2 in-utero transfer   |
|                  |            | Removal of gestational ages for transfer  |
|                  |            | Recommendations to align with QCG guideline: Perinatal care at the threshold of viability   |
|                  |            | Section 5.6 MgSO <sub>4</sub> for neuroprotection (table 19)  |
|                  |            | Added consider MgSO <sub>4</sub> for gestations up to 34+0 weeks gestation  |
|                  |            | Appendix B: Consumer advice after threatened PTL  |
|                  |            | Removed and consolidated into consumer information handout  |
|                  |            | Consumer information updated  |

| Publication date | Identifier     | Summary of major change   |
|------------------|----------------|---|
| December 2022    | MN20.6-V10-R25 | Flowchart   |
|                  |                | MgSO4 loading dose amended to align with text   |
|                  |                | o FROM over 15 minutes  |
|                  |                | o TO over 20 minutes  |
|                  |                | Table 2. Risk factors associated with preterm birth   |
|                  |                | Addition of risk of PTB based on ethnicity  |
|                  |                | Table 3 Risk reduction measures   |
|                  |                | Addition: Recommendation for universal routine cervical length measurement during mid-trimester ultrasound                      |
|                  |                | Section 3.1 Progesterone therapy  |
|                  |                | Amendment: Recommendation strengthened FROM Consider prophylactic progesterone TO Recommend vaginal                             |
|                  |                | progesterone from 16-36 weeks if incidentally diagnosed shortened cervix or prior spontaneous preterm birth between 20–34 weeks |
|                  |                | Section 3.2 Cervical cerclage   |
|                  |                | Addition: Consider cervical cerclage for women with cervical length less than 10 mm   |
|                  |                | Section 5.4 Antenatal corticosteroids   |
|                  |                | Recommendations aligned to QCG guideline: Antenatal corticosteroids   |

# 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   | Pregnant women less than 37+0 weeks gestation at risk of spontaneous preterm labour and birth.   |  |  |  |
| Purpose  | Identify relevant evidence related to:     Diagnosis, assessment and management of condition (including any updated/upcoming technologies in the field of management of preterm labour)  |  |  |  |
| Outcome  | <ul> <li>Early identification of pregnant women at risk of spontaneous preterm labour and birth</li> <li>Accurate assessment and correct diagnosis of condition</li> <li>Best practice management during pregnancy, labour and postpartum</li> </ul> |  |  |  |
| <ul> <li>Best practice management during pregnancy, labour and postpartum</li> <li>Management of pregnancies at the threshold of perinatal viability—refer Queensland Clinical Guideline Perinatal care at the threshold of viability guideline</li> <li>Management of prolonged premature rupture of membranes (including the assessment, decisions regarding timing of birth)—refer to Queensland Clinical Guideline Preterm prelabour rupture of membranes short guide</li> <li>Induction of labour methods at preterm gestational age</li> <li>Indications (maternal or fetal) for planned preterm birth</li> <li>Detailed information about cervical cerclage (including methods and removal)</li> <li>Intrapartum and postnatal care (routine)</li> <li>Care of the preterm newborn</li> </ul> |  |  |  |  |

## 2.3 Clinical questions

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

- What information should be provided to a woman and her partner when she is at risk of preterm labour and birth?
- What assessments are recommended for women in threatened or established preterm labour?
- What management is indicated for women in threatened or established preterm labour?

## 2.4 Search strategy

A search of the literature was conducted during August to October 2019. 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   |
|--|--|---|
| Review clinical guidelines developed by other reputable groups relevant to the clinical speciality |  | <ul> <li>This may include national and/or international guideline writers, professional organisations, government organisations, state based groups.</li> <li>This assists the guideline writer to identify:         <ul> <li>The scope and breadth of what others have found useful for clinicians and informs the scope and clinical question development</li> <li>Identify resources commonly found in guidelines such as flowcharts, audit criteria and levels of evidence</li> <li>Identify common search and key terms</li> <li>Identify common and key references</li> </ul> </li> </ul> |
| 2.   | Undertake a foundation search using key search terms | <ul> <li>Construct a search using common search and key terms identified during Step 1 above</li> <li>Search the following databases         <ul> <li>PubMed</li> <li>CINAHL</li> <li>Medline</li> <li>Cochrane Central Register of Controlled Trials</li> <li>EBSCO</li> <li>Embase</li> </ul> </li> <li>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</li> <li>Save and document the search</li> <li>Add other databases as relevant to the clinical area</li> </ul>       |
| 3.   | Develop search word list for each clinical question. | <ul> <li>This may require the development of clinical sub-questions beyond those identified in the initial scope.</li> <li>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</li> <li>Save and document the search strategy undertaken for each clinical question</li> </ul>   |
| 4.   | Other search strategies                              | <ul> <li>Search the reference lists of reports and articles for additional studies</li> <li>Access other sources for relevant literature         <ul> <li>Known resource sites</li> <li>Internet search engines</li> <li>Relevant text books</li> </ul> </li> </ul>   |

#### 2.4.1 Keywords

The following keywords were used in the basic search strategy: fetal fibronectin (fFN), preterm, preterm labour, preterm birth, tocolysis, transfer, bacterial vaginosis, risk reduction, progesterone, magnesium sulphate, neuroprotection, fetal surveillance, antibiotics, premature rupture of membranes.

Other keywords may have been used for specific aspects of the guideline.

#### 2.5 Consultation

A peer review of the clinical guideline occurred between November 2019 and January 2020.

Major consultative and development processes occurred between August 2014 and November 2014. These are outlined in Table 4. The clinical lead reviewed the guideline in November 2019 and did not recommend any major changes to the guideline.

Table 4. Peer review panel development processes

| Process                | Activity  |  |  |
|------------------------|---|--|--|
| Clinical lead          | <ul> <li>The nominated Clinical Lead/s was approved by the QCG steering<br/>committee</li> </ul>  |  |  |
| Consumer participation | <ul> <li>The QCG steering committee (SC) consumer/s was invited to be involved<br/>in the peer review process</li> </ul>  |  |  |
| Peer review panel      | <ul> <li>Members from the QCG SC who had clinical expertise, knowledge and/or interest in the clinical guideline topic participated in the peer review panel</li> <li>Relevant stakeholders and/or experts in the field were identified and included in the peer review panel</li> <li>Consultation by the peer review panel occurred between November 2019 January 2020</li> </ul> |  |  |
| Review                 | A literature review and consultation with the clinical lead was undertaken in October–November 2019   |  |  |

## 2.6 Endorsement

The guideline was re-endorsed by the:

- Queensland Clinical Guidelines Steering Committee in May 2020
- Statewide Maternity and Neonatal Clinical Network [Queensland] in June 2020

#### 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: <a href="https://www.health.qld.gov.au/qcg">www.health.qld.gov.au/qcg</a>.

#### **EXAMPLE:**

Queensland Clinical Guidelines. Normal birth. Guideline No. MN17.25-V3-R22. Queensland Health 2017. Available from: <a href="www.health.qld.gov.au/qcg">www.health.qld.gov.au/qcg</a>.

## 3 Levels of evidence

The levels of evidence identified in the National Health and Medical Research Council (NHMRC)<sup>1</sup>, Levels of evidence and grades for recommendations for developers of guidelines (2009) were used to inform the summary recommendations. Levels of evidence are outlined in Table 5. Levels of evidence (NHMRC).

Note that the 'consensus' definition\* in Table 5. Levels of evidence (NHMRC) is different from that proposed by the NHMRC. Instead, it relates to forms of evidence that are not identified by the NHMRC and/or that arise from the clinical experience of the guideline's clinical lead and working party.

Summary recommendations are outlined in Table 6. Summary recommendations

Table 5. Levels of evidence (NHMRC)

| Grade of recommendation | Description  |  |
|-------------------------|--|--|
| Α                       | Body of evidence can be trusted to guide practice  |  |
| В                       | Body of evidence can be trusted to guide practice in most situations   |  |
| С                       | Body of evidence provides some support for recommendation(s) but care should be taken in its application                                 |  |
| D                       | Body of evidence is weak, and recommendation must be applied with caution  |  |
| Consensus*              | Opinions based on respected authorities, descriptive studies or reports of expert committees or clinical experience of the working party |  |

# 3.1 Summary recommendations

Summary recommendations and levels of evidence are outlined in Table 5.

Table 6. Summary recommendations

| Reco | mmendation  | Grading of evidence |
|------|---|---------------------|
| 1.   | Perform a comprehensive review of all previous pregnancies because the most important historical factor for preterm birth is prior spontaneous preterm birth  | Consensus           |
| 2.   | Routine screening and treatment for asymptomatic bacterial vaginosis is not recommended but may be of benefit in women with previous preterm birth (PTB)  | A                   |
| 3.   | Routine screening for and treatment of bacteriuria is recommended for all women   | В                   |
| 4.   | Consider progesterone therapy from 16–24 weeks gestation for women with a singleton gestation and a prior spontaneous PTB   | Α                   |
| 5.   | Consider progesterone therapy for asymptomatic women with an incidentally diagnosed short cervix (less than 25 mm) on transvaginal cervical length (TVCL) assessment in the second trimester  | A                   |
| 6.   | Consider cervical cerclage for women with:         Prior PTB and/or         Second-trimester losses related to painless/painful cervical dilation and in the absence of labour or abruptio placentae or         Prior cerclage due to painless cervical dilation in the second trimester or         Cervical incompetence | В                   |
| 7.   | Consider cervical cerclage for women with a history of one or more spontaneous mid-trimester losses or PTB who are undergoing TVCL surveillance, if the cervix is 25 mm or less and before 24 weeks of gestation  | Α                   |
| 8.   | Consider therapeutic interventions when the TVCL is measured at less than 25 mm   | Consensus           |
| 9.   | Recommend corticosteroids to women with a viable fetus who are at increased risk of PTB before or at 35+0 weeks gestational age   | Α                   |
| 10.  | Consider tocolysis when a 48 hour delay in birth will benefit the newborn (e.g. for administration of medications or in-utero transfer)   | Α                   |
| 11.  | If preterm labour commences (or there is imminent risk of PTB), give intrapartum antibiotic prophylaxis for prevention of Early Onset Group B Streptococcus irrespective of GBS status  | А                   |
| 12.  | Recommend MgSO <sub>4</sub> to women before 30+0 weeks gestation where birth is imminent or planned within 24 hours   | Α                   |
| 13.  | Recommend vaginal birth for the singleton vertex fetus unless there are specific contraindications to vaginal birth or there are maternal conditions necessitating caesarean section (CS)   | 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: Assessment and management of preterm labour (< 37 weeks)
- Education resource: Preterm labour and birth
- Knowledge assessment: Preterm labour and birth
- Videoconference recording: Preterm labour and birth
- Parent information: Preterm labour and birth
- Parent information: Transferring a sick or unwell baby

## 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:

- Guideline on corticosteroid administration
- Culturally specific parent information (e.g. for Aboriginal and Torres Strait Islander people)

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

#### 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

#### 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 <a href="https://www.health.gld.gov.au/qcg">www.health.gld.gov.au/qcg</a>

## 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<sup>2</sup> [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                    | Provide clinicians with ready access to best-practice guidelines, integrated care pathways, clinical pathways and decision support tools relevant to their clinical practice     |  |  |
| Evidence based care                    | 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 with a singleton pregnancy, prior spontaneous PTB at less than 34 weeks gestation, and short cervical length (less than 25 mm) before 24 weeks of gestation, who are counselled about cerclage | Section 3         |
| 2. | Proportion of women with a singleton pregnancy and prior spontaneous preterm birth who are counselled about progesterone therapy   | Section 3         |
| 3. | Proportion of asymptomatic women with an incidentally diagnosed short cervix on TVCL who are counselled about progesterone therapy   | Section 3.1       |
| 4. | Proportion of women presenting with threatened PTL who have fetal fibronectin (fFN) (or equivalent) testing  | Section 4         |
| 5. | Proportion of women presenting with suspected PTL who have:  Low and high vaginal swabs for microscopy culture and sensitivity (MC&S)  Genital swab for GBS  | Section 4         |
|    | Midstream specimen of urine for bacteriology   |                   |
| 6. | Proportion of babies less than 26 weeks gestational age who are born outside a Level 6 facility with comprehensive neonatal support(according to the Clinical Services Capability Framework)                       | Section 5.2       |
| 7. | Proportion of women with PTL at less than 35+0 weeks gestation who receive corticosteroid therapy  | Section 5.3       |
| 8. | Proportion of women birthing before 30+0 weeks gestational age who receive magnesium sulfate   | Section 5.6       |
| 9. | Proportion of women with threatened PTL who at the time of discharge, receive information about signs and symptoms of preterm labour and when to seek clinical advice  | Section 6         |

#### 4.5 Areas for future research

During development the following area was identified as potentially having clinical impact on decision making. Further research in these areas may be useful.

• Utilising the QUIPP (Quantitative Innovation in Predicting Preterm birth) app for clinician use in determining risk of preterm labour and birth

# 4.6 Safety and quality

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

Table 9. NSQHS

| 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   | <ul> <li>✓ Assessment and care appropriate to the cohort of patients is identified in the guideline</li> <li>✓ High risk groups are identified in the guideline</li> <li>✓ The guideline is based on the best available evidence</li> </ul>   |  |  |
| Clinical performance and effectiveness The workforce has the right qualifications, skills and supervision to  | 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 | <ul> <li>☑ Queensland Clinical Guidelines is funded by Queensland Health to develop clinical guidelines relevant to the service line to guide safe patient care across Queensland</li> <li>☑ The guideline provides evidence-based and best practice recommendations for care</li> <li>☑ The guideline is endorsed for use in Queensland Health facilities.</li> <li>☑ A desktop icon is available on every Queensland Health computer desktop to provide quick and easy access to the guideline</li> </ul> |  |  |
| provide safe, high-quality health care to patients.   | 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 <a href="http://www.health.qld.gov.au/qcg">http://www.health.qld.gov.au/qcg</a>   |  |  |

| NSQHS Criteria  | Actions required   | ☑ Evidence of compliance  |
|---|--|---|
| NSQHS Standard 1: Clinical governan   | ce   |   |
| 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   | <ul> <li>☑ QCG has established processes to review and maintain all guidelines and associated resources</li> <li>☑ Change requests are managed to ensure currency of published guidelines</li> <li>☑ Implementation tools and checklist are provided to assist with adherence to guidelines</li> <li>☑ Suggested audit criteria are provided in guideline supplement</li> <li>☑ The guidelines comply with legislation, regulation and jurisdictional requirements</li> </ul> |
| NSQHS Standard 2: Partnering with Co  |  |   |
| 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 | <ul> <li>✓ Consumer consultation was sought and obtained during the development of the guideline. Refer to the acknowledgement section of the guideline for details</li> <li>✓ Consumer information is developed to align with the guideline and included consumer involvement during development and review</li> <li>✓ The consumer information was developed using plain English and with attention to literacy and ease of reading needs of the consumer</li> </ul>        |
| 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  | <ul> <li>☑ Consumers are members of guideline working parties</li> <li>☑ The guideline is based on the best available evidence</li> <li>☑ The guidelines and consumer information are endorsed by the QCG and Queensland Statewide Maternity and Neonatal Clinical Network Steering Committees which includes consumer membership</li> </ul>  |

| NSQHS Criteria   | Actions required   | ☑ Evidence of compliance  |
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| NSQHS Standard 2: Partnering with Co   | onsumers   |   |
| Partnering with consumers in their own care Patients are partners in their own care to the extent that they choose   | Healthcare rights and informed consent 2.4 The health service organisation ensures that its informed consent processes comply with legislation and best practice 2.5 The health service organisation has processes to identify: a. The capacity of a patient to make decisions about their own care b. A substitute decision-maker if a patient does not have the capacity to make decisions for themselves                      | <ul> <li>☑ This guideline and consumer information provides information for consumers to make informed decisions</li> <li>☑ This guideline promotes informed consent</li> </ul>   |
|  | Shared decisions and planning care 2.6 The health service organisation has processes for clinicians to partner with patients and/or their substitute decision-maker to plan, communicate, set goals, and make decisions about their current and future care 2.7 The health service organisation supports the workforce to form partnerships with patients and carers so that patients can be actively involved in their own care | <ul> <li>☑ Consumer information is available for this guideline</li> <li>☑ Consumers are members of guideline working parties</li> </ul>  |
| NSQHS Standard 3:Infection prevention  | on and control systems   |   |
| Clinical governance and quality improvement to prevent and control healthcare-associated infections, and support antimicrobial stewardship  Systems are in place to support and promote prevention and control of healthcare-associated infections, and improve antimicrobial stewardship. | Integrating clinical governance 3.1The workforce uses the safety and quality systems from the Clinical Governance Standard when: a. Implementing policies and procedures for healthcare-associated infections and antimicrobial stewardship b. Managing risks associated with healthcare-associated infections and antimicrobial stewardship   | <ul> <li>☑ The guideline provides evidence-based and best practice recommendations for care</li> <li>☑ Recommendations for use of antimicrobials are evidence based</li> </ul>  |
| Infection prevention and control systems Patients presenting with, or with risk factors for, infection or colonisation with an organism of local, national or global significance are identified promptly, and receive the necessary management and treatment.                             | Standard and transmission-based precautions 3.6 Clinicians assess infection risks and use transmission-based precautions based on the risk of transmission of infectious agents, and consider: a. Patients' risks, which are evaluated at referral, on admission or on presentation for care, and re-evaluated when clinically required during care  | <ul> <li>☑ The guideline provides evidence-based and best practice recommendations for care</li> <li>☑ Assessment and care appropriate to the cohort of patients is identified in the guideline</li> <li>☑ High risk groups are identified in the guideline if applicable</li> </ul>                    |
| Antimicrobial stewardship Systems are implemented for safe and appropriate prescribing and use of antimicrobials as part of an antimicrobial stewardship program   | Antimicrobial stewardship 3.15 The health service organisation has an antimicrobial stewardship program that: a. Includes an antimicrobial stewardship policy b. Provides access to, and promotes the use of, current evidence-based Australian therapeutic guidelines and resources on antimicrobial prescribing  | <ul> <li>☑ The guideline provides evidence-based and best practice recommendations for care</li> <li>☑ Recommendations for use of antimicrobials are evidence based</li> <li>☑ If applicable, Australian therapeutic guidelines and resources were used to develop guideline recommendations</li> </ul> |

| NSQHS Criteria  | Actions required   | ☑ Evidence of compliance   |  |
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| NSQHS Standard 4: Medication safety   | 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 ca  | are  |  |  |
| 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 | <ul> <li>☑ 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 <a href="http://www.health.qld.gov.au/qcg">http://www.health.qld.gov.au/qcg</a></li> <li>☑ The guideline provides evidence-based and best practice recommendations for care</li> <li>☑ Consumer information is developed for the guideline</li> </ul> |  |

| NSQHS Criteria   | Actions required   | ☑ Evidence of compliance   |
|--|--|--|
| NSQHS Standard 6: Communicating fo   | pr 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 | <ul> <li>☑ Requirements for effective clinical communication by clinicians are identified</li> <li>☑ The guideline provides evidence-based and best practice recommendations for communication between clinicians</li> <li>☑ The guideline provides evidence-based and best practice recommendations for communication with patients, carers and families</li> <li>☑ The guideline provides evidence-based and best practice recommendations for discharge planning and follow –up care</li> </ul> |
| 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   | <ul> <li>☑ Requirements for effective clinical communication of critical information are identified</li> <li>☑ Requirements for escalation of care are identified</li> </ul>   |

| NSQHS Criteria   | Actions required   | ☑ Evidence of compliance   |
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| NSQHS Standard 6: Communicating for  | or safety (continued)  |  |
| 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  |
| 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 Criteria  | Actions required   | ☑ Evidence of compliance   |
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| NSQHS Standard 7: Blood management  | nt   |  |
| 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 | <ul> <li>☑ The guideline provides evidence-based and best practice recommendations for use of blood products</li> <li>☑ The guideline is consistent with recommendations of national guidelines</li> </ul> |

| NSQHS Criteria   | Actions required   | ☑ Evidence of compliance  |  |  |
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| NSQHS Standard 8: Recognising and  | 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 | <ul> <li>☑ The guideline is consistent with National Consensus statements recommendations</li> <li>☑ The guideline recommends use of tools consistent with the principles of recognising and responding to clinical deterioration</li> <li>☑ Consumer information is developed for the guideline</li> </ul> |  |  |

## References

- 1. National Health and Medical Research Council (NHMRC), Department of Health and Ageing, Australian Government. NHMRC additional levels of evidence and grades for recommendations for developers of guidelines. 2009 [cited 2020 January 28]. Available from: www.nhmrc.gov.au.
- 2. Australian Commission on Safety and Quality in Health Care. National Safety and Quality Health Service Standards. [Internet]. 2017 [cited 2019 September 19]. Available from: <a href="https://www.safetyandquality.gov.au">www.safetyandquality.gov.au</a>.
- 3. Queensland Clinical Guidelines. Standard care. Guideline No. MN22.50-V2-R27. [Internet]. Queensland Health. 2018. [cited 2022 November 29]. Available from: <a href="https://www.health.qld.gov.au/qcg">https://www.health.qld.gov.au/qcg</a>