Queensland Clinical Guidelines

Translating evidence into best clinical practice

Maternity and Neonatal **Clinical Guideline**

Supplement: Routine newborn assessment

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1 Introduction

This document is a supplement to the Queensland Clinical Guideline *Routine newborn assessment*. 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 the Health Systems Innovation Branch, Queensland Health. 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 Guideline review

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
02/07/2009	NN0907.4-V1-R11	First publication
22/08/2011	MN09.4-V2-R11	Name and format updates
25/10/2011	MN09.4-V3-R14	Review date extended until 2014
20/10/2014	MN14.4-V4-R19	• First full review o Updated title to Routine newborn assessment o Inclusion of: *Indications for further review* o Additional information related to: discharge planning, consultation and review o Guideline supplement developed
17/06/2019	MN19.4-V5-R21	• Re-endorsed as current. Review date extended 2021 • Minor amendments to Table 4 o Moved: *bilious vomiting* from growth and feeding to abdomen o Added to: skin–petechiae *newly appearing or associated with purpura* o Added to: eyes–*yellow sclera* o Amended: nose–from *non-patent nares* to *nasal obstruction* o Added to neurological–absent/*exaggerated* reflexes • Supplement: National Safety and Quality Health Service Standards updated • Minor formatting updates

2 Methodology

Queensland Clinical Guidelines (QCG) follow 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 as follows: using the PICO Framework (Population, Intervention, Comparison, Outcome) as outlined in Table 2.

Table 2. PICO Framework

PICO	
Population	Normal term newborn
Intervention	Conduct of the routine newborn assessment
Comparison	N/A
Outcome	Key concepts of the routine newborn assessment are outlined

2.3 Clinical questions

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

- What measures promote positive parental engagement during the routine assessment of the newborn?
- How and when should routine assessment of the normal newborn be conducted?

2.4 Exclusions

The following exclusions were identified in the guideline scope:

- Detailed educational information about normal and/or abnormal findings related to the routine newborn assessment
- Additional or specialist examinations or assessments required for newborns with known or suspected conditions (e.g. prematurity, cardiac disease)

2.5 Search strategy

A search of the literature was conducted during March 2014 using multiple techniques including search and review of:

- Known guideline sites (e.g. Royal Australian and New Zealand College of Obstetricians and Gynaecologists, National Guideline Clearing House, Royal College of Obstetrician and Gynaecologists, Society of Obstetricians and Gynaecologists of Canada, American Academy of Pediatrics)
- Synthesised evidence (e.g. UpToDate, Cochrane reviews)
- Summaries of relevant literature (e.g. identified using Cinahl, PubMed)
- Individual case reports, studies and trials identified in the literature
- Relevant reference lists

2.6 Consultation

Major consultative and development processes occurred between June 2014 and August 2014. These are outlined in Table 3.

Table 3. 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 (~1000) in May 2014 • 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 (~1000) during June 2014 • Feedback was received primarily via email • All feedback was compiled and provided to the clinical lead and working party members for review and comment

2.7 Endorsement

The guideline was endorsed by the:

- Queensland Clinical Guidelines Steering Committee in October 2014. In June 2019 re-endorsed as current and review date extended until 2021
- Statewide Maternity and Neonatal Clinical Network [Queensland] in October 2014

2.8 Publication

The guideline and guideline supplement were published on the QCG website in October 2014
The guideline can be cited as:

Queensland Clinical Guidelines. Routine newborn assessment. Guideline No. MN14.4-V5-R21. Queensland Health. 2014. Available from: http://www.health.qld.gov.au/qcg

The guideline supplement can be cited as:

Queensland Clinical Guidelines Supplement. Routine newborn assessment. Guideline No. MN14.4-V5-R21. Queensland Health. 2014. Available from: http://www.health.qld.gov.au/qcg

3 Levels of evidence

The levels of evidence identified [in the National Health and Medical Research Council (NHMRC), 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 4. Summary recommendations are outlined in Table 5.

Note that the 'consensus' definition* in Table 4 is different from that proposed by the NHMRC and instead relates to forms of evidence not identified in the NHMRC's level of evidence and/or the clinical experience of the guideline's clinical lead and working party.

Table 4. Levels of evidence

Levels of evidence	
I	Evidence obtained from a systematic review of all relevant randomised controlled trials.
II	Evidence obtained from at least one properly designed randomised controlled trial**.**
III-1	Evidence obtained from well-designed pseudo randomised controlled trials (alternate allocation or some other method).
III-2	Evidence obtained from comparative studies including systematic review of such studies with concurrent controls and allocation not randomised (cohort studies), case control studies or interrupted time series with a control group**.**
III-3	Evidence obtained from comparative studies with historical control, two or more single arm studies, or interrupted time series without parallel control group.
IV	Evidence obtained from case series, either post-test or pre-test and post-test.
Consensus*	Opinions based on respected authorities, descriptive studies or reports of expert committees or clinical experience of the working party.

3.1 Summary recommendations

There is limited high level evidence related to the performance of the routine newborn assessment. The experience and expertise of the clinical lead and working party has been relied upon in forming these summary recommendations. Summary recommendations and levels of evidence are outlined in Table 5.

Table 5. Summary recommendations

Recommendation		Grading of evidence
1	Perform a full and detailed newborn assessment within 48 hours of birth.	**Consensus**
2	Involve parent(s) in the full and detailed newborn assessment and discuss the purpose, process, timing and results of the examination with them.	**Consensus**
3	Use a systematic approach to examine the newborn. A recommended systematic approach is 'head to toe' and 'front to back.	**Consensus**
4	Document the brief initial and the full and detailed newborn assessments and findings in the health record(s).	**Consensus**
5	Communicate relevant findings of the all newborn assessments to health care professionals involved in the future care of the newborn.	**Consensus**
6	Discuss relevant parenting and health education issues with parent(s) prior to discharge.	**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: Routine newborn assessment
- Education PowerPoint resource: Routine newborn assessment
- Knowledge assessment: Routine newborn assessment
- Auditing resources: Routine newborn assessment

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:

- Parent information about the routine newborn assessment
- Parent information about when to seek urgent medical assistance - especially if discharged prior to 24 hours of age
- Local policy about whether pulse oximetry screening is to be performed
- Access to online resources that support auditory learning of heart sounds

4.3 Implementation measures

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

4.3.1 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

4.3.2 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 Standards (NSQHS)[1]. Suggested audit and quality measures are identified in Table 7. Clinical quality measures.

Table 6. 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

4.5 Clinical quality measures

Table 7. Clinical quality measures

No	Suggested audit/quality questions	Guideline Section
1.	Did an appropriately trained maternity care professional carry out the full and detailed newborn assessment? *Consider currency/completion of education or training programs*	Section 1.2 Clinical standards
2.	Is there documentation of the performance of the full and detailed newborn assessment in the newborn's health record? *Consider the local documentation requirements and use (electronic medical record, infant health record, clinical pathways)*	Section 1.2 Clinical standards
3.	Was the full and detailed newborn assessment performed within 48 hours after birth? *Consider timing of the initial brief examination immediately after birth and the full and detailed routine newborn assessment*	Section 1.4.2 Preparation
4.	Is there evidence that the parents were involved in the full and detailed newborn assessment? *Consider: Is there documentation that the purpose, process, timing and limitations of the newborn exam were communicated to the parents.* *Were the parents present during the routine newborn assessment?* *Was parental consent obtained prior to the routine newborn assessment?* *Were the findings discussed with the parents?*	Section 1.2 Communication
5.	Are the findings of the full and detailed newborn assessment recorded in the newborn's health record? *Consider: Findings are systematically recorded in detail*	Section 1.2 Clinical standards Section 4 Discharge planning
6.	If urgent follow-up was indicated for a newborn condition(s) was referral/follow-up initiated within 24 hours? *Consider reasons why urgent referral did not occur*	Section 3.2 Consultation and follow-up
7.	Was relevant information relating the newborn provided to those involved in the future health care of the baby? *Consider where relevant, if referrals were made in a timely manner and communicated to the parents and other health professionals?*	Section 4 Discharge planning Section 4.1 Health promotion
8.	Did the parents find the full and detailed newborn assessment informative and educational? *Consider: Parental/Maternal experience survey*	Section 1.1 Family centred care
9.	Was the Queensland Clinical Guideline *Routine newborn assessment* useful for clinicians in guiding clinical practice related to newborn assessment? *Consider: Comprehensiveness of information, missing information, feasibility of guidance, practical application, usefulness as a teaching or education tool*	All sections

4.6 Safety and quality

Implementation of this guideline provides evidence of compliance with the National Safety and Quality Health Service Standards and Australian Council on Healthcare Standards (ACHS) Evaluation and Quality Improvement Program (EQuIP) National accreditation programs.[1,2]

Table 8. NSQHS/EQuIP criteria

NSQHS/EQuIPNational 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
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/EQuIPNational Criteria	Actions required	☑ Evidence of compliance
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/EQuIPNational Criteria	Actions required	☑ Evidence of compliance
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 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

NSQHS/EQuIPNational Criteria	Actions required	☑ Evidence of compliance
NSQHS Standard 6: Communicating for safety (continued)		
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
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/EQuIPNational 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
EQuIP Standard 12 Provision of care		
Criterion 1: Assessment and care planning 12.1 Ensuring assessment is comprehensive and based upon current professional standards and evidence based practice	12.1.1 Guidelines are available and accessible by staff to assess physical, spiritual, cultural, physiological and social health promotion needs	☑ Assessment and care appropriate to the cohort of patients is identified in the guideline ☑ The guideline is based on the best available evidence

References

1. Australian Commission on Safety and Quality in Healthcare. National Safety and Quality Health Service Standards. 2012 [cited 2014 July 09]. Available from: http://www.safetyandquality.gov.au/publications/national-safety-and-quality-health-service-standards/
2. The Australian Council on Healthcare Standards. EQuIPNational Guidelines. 2012 [cited 2014 July 09]. Available from: http://www.achs.org.au/programs-services/