Queensland Clinical Guidelines

Translating evidence into best clinical practice

Maternity and Neonatal **Clinical Guideline**

Guideline Supplement: Term small for gestational age (SGA) baby

Queensland Government

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1 Introduction

This document is a supplement to the Queensland Clinical Guideline *Term Small for gestational age baby.* 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, flowcharts 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 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 *Endorsed by:*	**Identifier**	**Summary of major change**
December 2010	MN1012.16-V1-R13	First publication
August 2011 *QCG Steering Committee*	MN10.16-V2-R15	Review date extended. Identifier updated. Program name updated
July 2016 *QCG Steering Committee* *Statewide Maternity and Neonatal Clinical Network (QLD)*	MN16.16-V3-R21	Full review Removed content covered in subsequently published Queensland Clinical Guidelines and referenced these guidelines Removed antenatal specific care Amended small for gestational age (SGA) risk factors to risk factors specific for the term SGA baby Expanded parental considerations Removed content on routine care for all babies Replaced Beeby growth charts with Fenton preterm growth charts which merge with the WHO growth charts
November 2016 *Clinical lead*	MN16.16-V4-R21	Section 3.3 Investigations: Table 7 **Changed from**: 'Chormosomes BoBs and SNP array in all cases' **to** 'SNP array (single nucleotide polymorphism) plus consider FISH (fluorescence in situ hybridization) if clinical suspicion of specific conditions (e.g. trisomy 21,13 or 18)'

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 PICO Framework (Population, Intervention, Comparison, and Outcome) as outlined in Table 2.

Table 2. PICO Framework

PICO	
Population	Term small for gestational age (SGA) baby (less than the 10th percentile) to 28 days
Intervention	Assessment, investigation and management of condition
Comparison	n/a
Outcome	• Growth • Morbidity and mortality

2.3 Clinical questions

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

- What is the definition of SGA in babies?
- How is SGA diagnosed?
- What is the best practice management for SGA babies?
- What are the longer term consequences for babies born with SGA?
- What are discharge considerations for a baby born with SGA?

2.4 Exclusions

The following exclusions were identified in the guideline scope:

- Extremely low birth weight (less than 1000 grams) and very low birth weight (less than 1500 grams)
- Antenatal, intrapartum and postpartum care of women with suspected SGA pregnancies
- Care of other conditions associated with term SGA babies

2.5 Search strategy

A search of the literature was conducted during November 2015–February 2016. The QCG search strategy is an iterative process that is repeated and amended as guideline development evolves and the draft guideline is refined, 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

2.5.1 Keywords

The following keywords were used in the basic search strategy. Other keywords may have been used for specific aspects of the guideline:

- Small, gestation, gestational, age, SGA, intrauterine growth retardation, IUGR, fetal growth restriction, FGR, term, low birth weight, LBW, management, temperature, infection, risk factor, risk factors, reverse, absent, end diastolic flow, umbilical artery, prognosis, sequelae, feeding, postnatal care, parent/consumer information, guidelines, morbidity, morbidities, symmetrical, asymmetrical

2.6 Consultation

Major consultative and development processes occurred between February and April 2016. These are outlined in Table 4.

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 (~1000) in February 2016 • 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 March 2016 • 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 May 2016
- Statewide Maternity and Neonatal Clinical Network [Queensland] in June 2016

2.8 Publication

The guideline and guideline supplement were published on the QCG website in July 2016.
The guideline can be cited as:

> Queensland Clinical Guidelines. Term small for gestational age baby. Guideline No. MN16.16-V4-R21. Queensland Health. 2016. Available from: http://www.health.qld.gov.au/qcg/.

The guideline supplement can be cited as:

> Queensland Clinical Guidelines. Supplement: Term small for gestational age baby. Guideline No.MN16.16-V4-R21. Queensland Health. 2016. 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 5. Summary recommendations are outlined in Table 6.

Note that the 'consensus' definition* in Table 5 is different from that proposed by the NHMRC and instead relates to forms of evidence such as the clinical experience of the guideline's clinical lead and working party (and may be in accordance with published consensus statements). It is evidence that is not identified in the NHMRC's level of evidence.

Table 5. 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

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

Table 6. Summary recommendations for the term SGA baby

Recommendation: Term SGA baby		Grading of evidence
1	Measure temperature within one hour of birth.	**Consensus**
2	Measure temperature 3-4 hourly in babies whose temperature is stable, for the first 24 hours post birth.	**Consensus**
3	Measure and plot birth weight, head circumference and length relative to gestational age on growth chart (e.g. Fenton growth chart for preterm infants, World Health Organization growth standards[1]).	**Consensus**
4	For babies in the special care nursery or under postnatal care: • Document discussions with the parents about the baby's care including: o Temperature maintenance o Feeding baby regularly and effectively to avoid hypoglycaemia.	**Consensus**
5	If baby is demand feeding, feed at least 3 hourly.	**Consensus**
6	Where the demand feeding baby has not fed for 4 hours, the baby is reassessed and/or referred to the paediatric team.	**Consensus**
7	Babies who are less than 2000 grams birth weight require specialised multidisciplinary follow-up.	**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: Term small for gestational age baby
- Education resource: Term small for gestational age baby
- Knowledge assessment: Term small for gestational age baby
- Parent information: Small for gestational age baby

4.2 Implementation measures

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

4.2.1 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
- Review guideline in 2020

4.2.2 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

4.3 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[2] [refer to Table 7]. Suggested audit and quality measures are identified in Table 8. Clinical quality measures: Term SGA babies.

Table 7. NSQHS Standard 1

NSQHS Standard 1: Governance for Safety and Quality in Health Service Organisations	
Clinical Practice: Care provided by the clinical workforce is guided by current best practice	
Criterion 1.7:	**Actions required:**
Developing and/or applying clinical guidelines or pathways that are supported by the best available evidence	1.7.1 Agreed and documented clinical guidelines and/or pathways are available to the clinical workforce
	1.7.2 The use of agreed clinical guidelines by the clinical workforce is monitored

The following clinical quality measures are suggested:

Table 8. Clinical quality measures: Term SGA babies

No	Audit criteria: Term SGA babies	Guideline Section
1.	The baby's temperature was measured within one hour of birth.	3.4 Thermoregulation
2.	The baby's temperature was measured 3-4 hourly, or more frequently, for the first 24 hours post birth.	3.4 Thermoregulation
3.	The baby's weight, length and head circumference relative to gestational age are plotted on a recognised growth standard (e.g. Fenton growth chart for preterm infants, World Health Organization growth standards[1]).	3.2 Growth standards
4.	There is documented discussion with the parents and about their baby's care.	1.3 Parental considerations
5.	There is documented discussion with the parents on maintaining baby's temperature.	1.3 Parental considerations
6.	There is documented discussion with the parents on the care related to their baby feeding effectively and regularly to avoid hypoglycaemia.	1.3 Parental considerations
7.	The demand fed baby was fed at least 3 hourly.	3.5 Hypoglycaemia, feeding and polycythaemia
8.	If the baby was demand feeding and has not fed for 4 hours: the baby was reassessed and/or referred to the paediatric team.	3.5 Hypoglycaemia, feeding and polycythaemia
9.	Babies who were less than 2000 grams birth weight were referred for specialised follow-up after discharge from hospital.	5 Discharge planning

4.4 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.

- Risk factors for term SGA babies
- Prognosis for term SGA babies with/without fetal growth restriction

4.5 Safety and quality

Implementation of this guideline provides evidence of compliance with the NSQHS and Australian Council on Healthcare Standards (ACHS) EQuIPNational accreditation programs[2,3]

Table 9. NSQHS/EQuIPNational Criteria

NSQHS/EQuIPNational Criteria	Actions required	☑ Evidence of compliance
Standard 1: Governance for Safety and Quality in Health Service Organisations		
Clinical practice 1.7 Developing and/or applying clinical guidelines or pathways that are supported by the best available evidence	1.7.1 Agreed and documented clinical guidelines and/or pathways are available to the clinical workforce	☑ 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 Queensland Health computer desktop to provide quick and easy access to the guideline
Performance and skills management 1.12 Ensuring that systems are in place for ongoing safety and quality education and training	1.12.1 The clinical and relevant non-clinical workforce have access to ongoing safety and quality education and training for identified professional and personal development	☑ 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
Standard 2: Partnering with Consumers		
Consumer partnership in designing care 2.5 Partnering with consumers and/or carers to design the way care is delivered to better meet patient needs and preferences	2.5.1 Consumers and/or carers participate in the design and redesign of health services	☑ Consumer consultation was sought and obtained during the development of the guideline. Refer to the acknowledgement section of the guideline for details
Standard 9: Recognising clinical deterioration and escalating care		
Establishing recognition and response systems 9.1 Developing, implementing and regularly reviewing the effectiveness of governance arrangements and the policies, procedures and/or protocols that are consistent with the requirements of the National Consensus Statement.	9.1.2 Policies, procedures and/or protocols for the organisation are implemented in areas such as: • Measurement and documentation of observations • Escalation of care • Establishment of a rapid response system • Communication about clinical deterioration	☑ The guideline is consistent with National Consensus statement recommendations
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

5 References

1. Fenton TR, Kim JH. A systematic review and meta-analysis to revise the Fenton growth chart for preterm infants. BMC Pediatrics. 2013; 13:1-13.

2. Australian Commission on Safety and Quality in Healthcare. National Safety and Quality Health Service Standards. 2012 [cited 2014, October 14]. Available from: http://www.safetyandquality.gov.au/.

3. The Australian Council on Healthcare Standards. EQuIPNational Guidelines. 2012 [cited 2014 October 20]. Available from: http://www.achs.org.au/programs-services/.