Supplement: Induction of labour
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1 Introduction
This document is a supplement to the Queensland Clinical Guideline *Induction of labour* (IOL). 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 supported by funding from Centre for health Care Improvement, Queensland Health. Working party members participated on a voluntary basis.

1.2 Conflict of interest
No conflict of interest was identified

1.3 Guideline review
The 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

<table>
<thead>
<tr>
<th>Publication date</th>
<th>Identifier</th>
<th>Summary of major change</th>
</tr>
</thead>
<tbody>
<tr>
<td>August 2011</td>
<td>MN11.22-V1-R16</td>
<td>First publication</td>
</tr>
</tbody>
</table>
| October 2011     | MN11.22-V2-R16  | Minor formatting corrections  
Table 18: Oxytocin considerations – Frequency of Temperature monitoring amended from 4 hourly to 2 hourly |
| January 2014     | MN11.22-V3-R16  | Added: Section 1.5 Care if induction postponed  
Added to Table 17 Indications for removal: re use of Dinoprostone gel following insufficient cervical ripening  
Added to Table 19 Administration: re use of secondary IV access  
Added to Table 21. Monitoring: Additional assessments before ARM  
Added to Table 23 Uterine hypercontractility: Use of off-licence sublingual GTN |
| April 2015       | MN11.22-V4-R16  | Flowchart: Oxytocin row: shaded blue; frequency of observations amended  
Table 4 Term prelabour rupture of membranes, Recommendations row: Deleted Recommend expedited IOL as contradicts Early onset Group B streptococcal disease guideline  
Table 5 Previous caesarean section, Risk/Benefit row: deleted content and added ‘Refer to guideline: Vaginal birth after caesarean section (VBAC)’  
Table 17: Maximum dose and Indications for removal rows: the timing for Dinoprostogute gel administration amended to be based on the woman’s individual circumstances and the obstetrician’s discretion  
Table 18: Cautions row: Amended wording from ‘Oxytocin should be used with caution..’ to ‘Oxytocin is contraindicated in women with a previous uterine scar or high parity ..’ |
2 Methodology
The Queensland Clinical Guideline 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, Outcome) as outlined in Table 2.

Table 2. PICO Framework

<table>
<thead>
<tr>
<th>PICO</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>Pregnant women</td>
</tr>
<tr>
<td>Intervention</td>
<td>Assessment for and management of induction of labour</td>
</tr>
<tr>
<td>Comparison</td>
<td>N/A</td>
</tr>
<tr>
<td>Outcome</td>
<td>Accurate assessment of suitability for induction of labour</td>
</tr>
<tr>
<td></td>
<td>Best practice management during induction of labour</td>
</tr>
</tbody>
</table>

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

- What are the clinical indications for IOL?
- What clinical care should be provided to pregnant women where IOL has been agreed?
- What methods of IOL are recommended?
- What are the complications of induction of labour and how should they be managed?

2.4 Exclusions
- Augmentation of labour
- Induction for termination of pregnancy
- Other methods of IOL - castor oil, enema, sexual intercourse, breast stimulation, nitrates, acupuncture, homeopathy

2.5 Search strategy
A search of the literature was conducted during June 2010 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 February 2011 and May 2011. These are outlined in Table 3.

Table 3. Major guideline development processes

<table>
<thead>
<tr>
<th>Process</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical lead</td>
<td>• The nominated Clinical Lead was approved by the QCG Steering Committee</td>
</tr>
<tr>
<td>Consumer participation</td>
<td>• Consumer participation was invited from a range of consumer focused organisations who had previously accepted an invitation for on-going involvement with QCG</td>
</tr>
</tbody>
</table>
| Working party          | • An EOI for working party membership was distributed via email to Queensland clinicians and stakeholders (~1000) in November 2010  
                         • 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 2011 – April 2011. 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:
- Queensland Clinical Guidelines (QCG) Steering Committee in June 2011
- Statewide Maternity and Neonatal Clinical Network in July 2011
- Queensland Health Patient Safety and Quality Executive Committee in August 2011

2.8 Publication

The guideline and guideline supplement were published on the QCG website in August 2011

The guideline can be cited as:


The guideline supplement can be cited as:

3 Levels of evidence

The Scottish Intercollegiate Guidelines Network, SIGN50: A guidelines developer’s handbook levels of evidence were identified in the National Collaborating Centre for Women’s and Children’s Health clinical guideline Induction of labour and were used to inform the summary recommendations. Additionally recommendations made by the Queensland Clinical Guideline Working Party are classified as Good Practice Points. Levels of evidence are outlined in Table 4. Summary recommendations are outlined in Table 5.

Table 4. Levels of evidence

<table>
<thead>
<tr>
<th>Levels of Evidence</th>
<th>Scottish Intercollegiate Guidelines Network</th>
</tr>
</thead>
<tbody>
<tr>
<td>1++</td>
<td>High quality meta-analyses, systematic reviews of RCTs, or RCTs with a very low risk of bias</td>
</tr>
<tr>
<td>1+</td>
<td>Well-conducted meta-analyses, systematic reviews, or RCTs with a low risk of bias</td>
</tr>
<tr>
<td>1-</td>
<td>Meta-analyses, systematic reviews, or RCTs with a high risk of bias</td>
</tr>
<tr>
<td>2++</td>
<td>High quality systematic reviews of case control or cohort or studies</td>
</tr>
<tr>
<td></td>
<td>High quality case control or cohort studies with a very low risk of confounding or bias and a high probability that the relationship is causal</td>
</tr>
<tr>
<td>2+</td>
<td>Well-conducted case control or cohort studies with a low risk of confounding or bias and a moderate probability that the relationship is causal</td>
</tr>
<tr>
<td>2-</td>
<td>Case control or cohort studies with a high risk of confounding or bias and a significant risk that the relationship is not causal</td>
</tr>
<tr>
<td>3</td>
<td>Non-analytic studies, e.g. case reports, case series</td>
</tr>
<tr>
<td>4</td>
<td>Expert opinion</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Queensland Clinical Guideline Working Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPP</td>
</tr>
</tbody>
</table>


3.1 Summary recommendations

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

Table 5. Summary recommendations

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Grading of evidence</th>
</tr>
</thead>
</table>
| **1** Care if IOL declined in postterm pregnancy -  
  Offer increased antenatal monitoring consisting of twice weekly:  
  • Cardiotocography  
  • Ultrasound assessment of amniotic fluid volume using:  
    o Estimation of maximum amniotic pool depth, or  
    o Amniotic fluid index  
  • Umbilical arterial Doppler ultrasound | 2- |
| **2** Care if IOL declined  
  • Perform an assessment of maternal and fetal wellbeing  
  • Involving the woman, develop a plan for continued care including, arrangements for ongoing monitoring (if required) and return for IOL  
  • Document the assessment and plan in the health record  
  • Advise the woman to contact the facility if she has concerns about her wellbeing or that of her baby | GPP |
| **3** Prolonged pregnancy - For women with uncomplicated pregnancies, recommend IOL between 41 and 42 weeks | 2+ |
| **4** Prolonged pregnancy - Waiting after 42 weeks is not recommended | 2- |
| **5** Preterm prelabour rupture of membranes – Gestation less than 34 weeks - IOL is not recommended unless there are additional obstetric or fetal indications | 3 |
| **6** Term prelabour rupture of membranes – Recommend women to have expedited IOL | 1++ |
| **7** Term prelabour rupture of membranes - If the woman wishes to await spontaneous labour: If a digital VE has been performed, the use of prophylactic antibiotics while awaiting the onset of spontaneous labour is recommended | GPP |
| **8** Obstetric cholestasis – Based on weak evidence, IOL may be recommended at 37 weeks | 2- |
| **9** Suspected fetal macrosomia (>4000grams) – In the absence of other indications, IOL should not be recommended simply on suspicion that a baby is macrosomic | 1++ |
| **10** Fetal growth restriction – Plan birth for a woman with fetal growth restriction diagnosed at term | 2++ |
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:
- Flow chart: Summary of recommendations: Induction of labour

4.2 Suggested resources
During the development process stakeholders identified additional resources with potential to compliment 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:
- Patient information on induction of labour
- Informed consent form containing information on induction of labour

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
- Review guideline in 2016

4.3.2 District Health Service measures
- Table the guideline at the local Patient Safety and Quality Committee meeting
- Replace all other guidelines on this topic with the current version of this guideline
- Promote the introduction of the guideline to relevant health care professionals (e.g. at staff forums, clinical handovers, incorporate into orientation packages)
- Provide education and training relevant to the guideline
- Develop or access suggested resources as identified in section 4.2 of this guideline

4.4 Clinical quality measures
The following clinical quality measures are suggested:
- Audit rates of IOL for women induced before 41 weeks, excluding IOL in the situation of a complication or clinical reason
- Rates of IOL for prolonged pregnancy
- Rates of failed IOL for prolonged pregnancy and factors associated with failure
- Audit neonatal outcomes of pregnancies that go beyond 42 weeks
- Audit rates of IOL for suspected macrosomia without GDM
- Audit rates of IOL for maternal request
- Initiate or promote regular multidisciplinary meetings to review obstetric cases and births