Quality-Based Procedure

Low Risk Birth

Toolkit

Provincial Council *for* Maternal *and* Child Health

building a brighter future

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The full version of the QBP for Low Risk Birth Clinical Handbook and other implementation support tools can be downloaded from www.pcmch.on.ca

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Contents

Introduction

What is a Quality-Based Procedure?

Quality-Based Procedures (QBP) are an integral part of Ontario's Health System Funding Reform (HSFR) and a key component of the Patient-Based Funding. This reform plays a key role in advancing the government's quality agenda and it's *Action Plan for Health Care*. HSFR allocates funds based on a price, volume and quality approach, premised on evidence-based practices and available data. HSFR has been identified as an important mechanism to strengthen the link between the delivery of high quality care and fiscal sustainability.

For more information about QBPs please visit the Ministry of Health and Long-Term Care website: http://www.health.gov.on.ca/en/pro/programs/ecfa/funding/hs_funding_qbp.aspx

Objectives of the QBP for Low Risk Birth

Caesarean section rates have increased in Canada and globally during the past two decades. The Caesarean section rate in Canada increased from 17.6% in 1995 to 26.9% in 2010 [1], and has since remained relatively stable. In addition to this increase in rate, there is also a large variation of rates across the province, from 5% to 38% [2]. The application of evidence-based practice recommendations for low risk birth has the ability to address this variation in rate the low risk patient.

The objective of this QBP is to reduce the variation in Caesarean section rates across the province via the adoption of evidence-based guidelines that *promote vaginal birth.*

Target Population

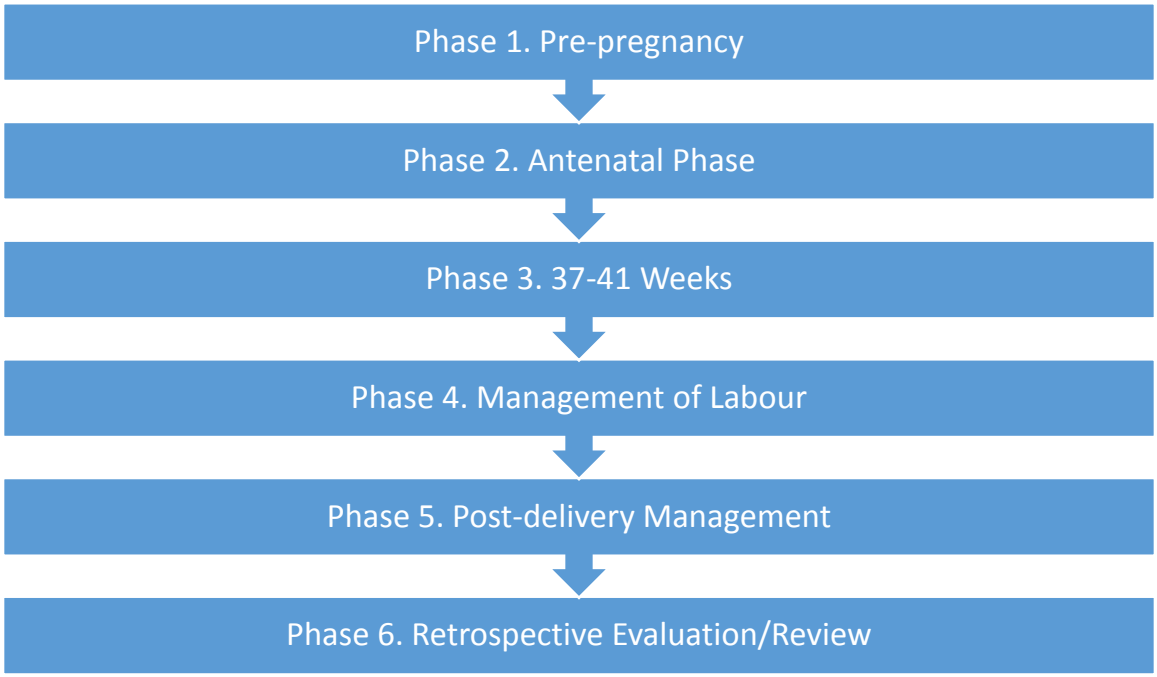
These recommendations were developed to target the low-risk, first-time mother in spontaneous labour (Robson Group 1)[1] – a homogeneous group that is applicable to all levels of maternity care and for which there are evidence-based standards of care that promote vaginal birth.

It is recognized, however, that although this QBP has been developed for the above mentioned target population, it can also be used to promote vaginal birth in women outside of this group. Any reduction in primary Caesarean section will positively impact the rate of repeat Caesarean section.

[1] <36 years of age at the time of delivery, Pre-pregnancy BMI <40.0 kg/m^2, Nulliparous, Singleton gestation with cephalic presentation, Delivery ≥ 37 weeks of gestation, Spontaneous labour. Exclusion criteria can be found in the QBP for Low Risk Birth Clinical Handbook at: www.pcmch.on.ca

Clinical Recommendations for Low Risk Birth

The clinical recommendations for low risk birth have been developed to address the following phases of care:



The recommendations are based on existing Clinical Practice Guidelines and are accompanied by an Evidence Grade, based on the rankings of the Canadian Task Force on Preventive Health Care. See Appendix A for more information about the grade rankings.

PHASE I – Pre-Pregnancy Phase Recommendations

#	Recommendation	Evidence Grade
1.0	**Increase knowledge and awareness about healthy pregnancy through healthcare provider –patient conversation and engagement with other agencies (such as public health agencies)**	
1.1	Strategies to increase public awareness [3]: ***Inform and Educate:*** DISTRIBUTE information and resources developed by existing programs. Relevant information and resources include: • **The MotHERS Program** – This Ontario-based website provides information to women contemplating pregnancy, are pregnant or are now new mothers to keep up-to-date on the latest medical information. Includes links to other resources and mobile apps to track baby's fetal movements and mother's health. *Website link:* http://themothersprogram.ca/before-pregnancy/priming-for-pregnancy • **OMama**– OMama is an innovative tool to support and inform effective care, developed and owned by the Better Outcomes Registry & Network (BORN) Ontario. OMama contains information on over 100 topics, curated by Ontario experts from across a range of disciplines. The website and mobile app enable access to information on pregnancy, birth, postpartum, and early parenting. Website link: *http://www.omama.com/en/index.asp* • **The Society of Obstetricians and Gynaecologists of Canada (SOGC) website** – This website provides evidence based information about pregnancy and childbirth to the Canadian public and healthcare professionals. All materials on this website are developed by doctors, nurses, and midwives and is based on guidelines from the SOGC. *Website link:* https://www.pregnancyinfo.ca/ • **Association of Ontario Midwives (AOM) website** – This website includes information to the public about midwifery care and helpful resources and information on pregnancy. *Website link:* https://www.ontariomidwives.ca/client-handouts • **Healthy Beginnings** – This book was developed by the SOGC, Best Start Resource Centre and the Canadian Paediatric Society. This comprehensive prenatal resource is designed to meet the information needs of couples planning a pregnancy, pregnant women and new parents. *Website link:* http://www.beststart.org/cgi-bin/commerce.cgi?preadd=action&key=E12-E • **The Healthy Pregnancy Guide** – This guide was developed by the Public Health Agency of Canada (PHAC) and will provide women with accurate information to help them make good decisions about how to take care of themselves before, during and after their pregnancy. *Website link:* http://www.phac-aspc.gc.ca/hp-gs/guide/index-eng.php	III

PHASE 2 – Antenatal Phase Recommendations

#	Recommendation	Evidence Grade
2.0	**Inform women that appropriate weight gain and regular exercise appear to decrease the risk of Caesarean section**	
2.1	Women should be advised to gain the recommended amount of weight during pregnancy based on their pre-pregnancy body mass index, and counselled on how to stay within the recommended range [4] [5] [6]: • Normal weight – 11.5 - 16.0 kg (25 - 35 lbs) is recommended • Overweight – 7.0 - 11.5 kg (15 - 25 lbs) is recommended • Class I/II Obese – 7.0 kg (15 lbs) is recommended	N/A
2.2	All women without contraindications should be encouraged to participate in aerobic and strength-conditioning exercises as part of a healthy lifestyle during their pregnancy. [7]	II-1,2B
2.3	Women should be advised that adverse pregnancy or neonatal outcomes are not increased for exercising women. [7]	II-1,2B
3.0	**Recommend routine dating ultrasound to attain the best estimate of the expected date of delivery**	
3.1	When performed with quality and precision, ultrasound alone is more accurate than a "certain" menstrual date for determining gestational age in the first and second trimesters (≤23 weeks) in spontaneous conceptions, and it is the best method for estimating the delivery date. [8]	II
3.2	In the absence of better assessment of gestational age, routine ultrasound in the first or second trimester reduces inductions for post-term pregnancies. [8]	I
3.3	Ideally, every pregnant woman should be offered a first trimester dating ultrasound; however, if the availability of obstetrical ultrasound is limited, it is reasonable to use a second trimester scan to assess gestational age. [8]	I
4.0	**Counsel women about practices that support vaginal birth**	
4.1	Women should be informed about what it means to be at term and post-term (due date vs. latest date of delivery), and the patient and provider practices during this period that support vaginal birth. [9] [10]	III
4.2	Women should be offered information on the benefits, limitations, indications, and risks of intermittent auscultation and electronic fetal monitoring during labour. [3]	III

PHASE 3 – 37 to 41 Weeks Recommendations

#	Recommendation	Evidence Grade
5.0	**Perform induction of labour for postdates only after 41 weeks, unless medically indicated**	
5.1	Institutions should have quality assurance programs and induction policies, including safety tools such as checklists, to ensure that inductions are performed only for acceptable indications. [11]	II-2B
5.2	Before 41 0/7 weeks of gestation, induction of labour should be performed based on maternal and fetal medical indications. [12]	I-A
5.3	Women should be offered induction of labour between 41+0 and 42+0 weeks as this intervention may reduce perinatal mortality and meconium aspiration syndrome without increasing the Caesarean section rate. [11]	I-A
5.4	For pregnancies continuing beyond 41 weeks, twice-weekly assessment for fetal well-being is recommended. [11]	I-A
6.0	**Perform membrane sweeping/cervical massage to promote onset of labour and avoid likelihood of induction**	
6.1	Women should be offered the option of membrane sweeping commencing at 38 to 41 weeks, following a discussion of risks and benefits. [13]	I-A
7.0	**Offer external cephalic version in cases of breech presentation before term when appropriate**	
7.1	Fetal presentation should be assessed and documented beginning at 36 0/7 weeks of gestation to allow for external cephalic version to be offered if necessary. [12]	I-C
7.2	External cephalic version should be offered at 37 weeks to women with a breech presentation. [3] [14]	III
7.3	When an external cephalic version is planned, there is evidence that success may be enhanced by regional analgesia. [3] [12]	III
7.4	Provide mentorship and training to obstetrical providers so that they can become more skilled in external cephalic version. Many midwives are trained to perform external cephalic version and can provide interdisciplinary support where needed. [3]	III
7.5	LHIN-level/Regional-level initiatives [3]: • Identify centers/hospitals at the LHIN or regional level that perform external cephalic version or offer an external cephalic version clinic • Aim to have at least one care provider at each center/hospital who can perform external cephalic versions, otherwise ensure that protocols are in place for referral • Collect data at the LHIN level on the number and outcome of external cephalic versions conducted by each hospital.	III
8.0	**Establish standard protocols for induction of labour**	
8.1	Create an algorithm for the booking of inductions so that no inductions can be booked before 41 weeks of gestation, unless medically indicated. [3]	III

PHASE 4 – Management of Labour Recommendations

#	Recommendation	Evidence Grade
9.0	**Support management of latent phase (prior to established active labour) and delay hospital admission until labour is established**	
9.1	Delay admitting women to the labour and delivery unit who do not have any indications/risk factors until they are in active labour, and inform women of risks of admission prior to active labour. [3] [15]	III
9.2	Electronic fetal monitoring assessment should be avoided unless risk factors have been identified, and instead fetal status should be assessed by intermittent auscultation. [3] [16]	III
9.3	Routinely offer support and information, and additionally for those women who require pain relief, offer analgesic or other pain relief as an outpatient service or in an early-labour lounge. Provide women with information on alternative methods of pain management. [3]	III
9.4	Women should be informed ahead of time that admission to the labour and delivery unit will be delayed until they are in active labour. [3]	III
10.0	**Provide one-to-one support during active labour**	
10.1	Women in active labour should receive continuous close support from an appropriately trained person. [16]	I-A
11.0	**Perform assessment of fetal wellbeing using evidenced based methods**	
11.1	Intermittent auscultation following an established protocol of surveillance and response is the recommended method of fetal surveillance in low risk women; compared with continuous electronic fetal monitoring, it has lower intervention rates without evidence of compromising neonatal outcomes. [16]	I-B
11.2	Intermittent auscultation may be used to monitor the fetus prior to and following epidural analgesia, provided that a protocol is in place for frequent intermittent auscultation assessment (e.g., every 5 minutes for 30 minutes after epidural initiation and after bolus top-ups as long as maternal and fetal vital signs are normal). [16]	III-B
12.0	**Perform assessment for fetal well-being when abnormal or atypical fetal heart rate tracing**	
12.1	Scalp stimulation should be used as an indirect assessment of acid-base status when abnormal or atypical fetal heart patterns are present. [12] [16]	I-C
12.2	Fetal scalp blood sampling (where available) should be performed to assess fetal acid–base status when abnormal or atypical fetal heart patterns are present at gestations >34 weeks and delivery is not imminent, or if digital fetal scalp stimulation does not result in an acceleratory fetal heart rate response. [3] [12] [16]	III-C
12.3	Amnioinfusion for repetitive variable fetal heart rate decelerations may safely reduce the rate of Caesarean section. [12]	I-A
13.0	**Management of abnormal first stage and second stage of labour**	
13.1	A prolonged latent phase (e.g. greater than 20 hours) in the first stage of labour should not be an indication for Caesarean delivery, since most women with a prolonged latent phase ultimately will enter the active phase with expectant	I-B

	management (the remainder either will cease contracting or will achieve active phase with amniotomy or oxytocin, or both). [12]	
13.2	Slow but progressive labour in the first stage of labour should not be an indication for Caesarean section. [12]	I-B
13.3	Cervical dilatation of 4 cm should be considered the threshold for the active phase of most women, as long as fetal and maternal status are reassuring; before 4cm of dilatation is achieved, standards of active phase progress should not be applied. [17]	I-B
13.4	Women should be informed of the benefits of upright positioning in labour and encouraged and assisted to assume whatever positions they find most comfortable. [17]	I-B
13.5	Oxytocin should be administered for augmentation of labour when necessary in the first stage of labour for up to 8 hours. In women with unsatisfactory progress (i.e., protraction or arrest), after 4 hours of oxytocin augmentation, augmentation for an additional 4 hours (total 8 hours) may safely reduce the rate of Caesarean section. [3] [17] [18]	III
13.6	Pushing may commence when the cervix is fully dilated, the presenting part is confirmed to be engaged, and the woman feels the urge to push. [17]	III-A
13.7	Delayed pushing, to allow passive descent, is preferred when the woman has no urge to push, particularly if the presenting part is above station +2 and/or in a non-occiput anterior position, assuming reassuring fetal and satisfactory maternal status. [17]	I-A
13.8	In women with or without epidural anaesthesia, waiting for up to 2 hours prior to the onset of pushing is appropriate if there is continued descent of the head and reassuring fetal and maternal status. [17]	I-A
13.9	Pushing should commence in all women whenever the guideline waiting time is exceeded. [19]	III
13.10	Before diagnosing arrest of labour in the second stage, if the maternal and fetal conditions permit, allow for at least 3 hours of pushing with an epidural and 2 hours of pushing without an epidural. Longer durations may be appropriate on an individualized basis (e.g., with fetal malposition) as long as progress is being documented. [12] [17]	I-B
13.11	A specific absolute maximum length of time spent in the second stage of labour beyond which all women should undergo operative delivery has not been identified. [12] [17]	I-C
13.12	Operative vaginal delivery in the second stage of labour should be considered in the clinical management as a safe and acceptable alternative to Caesarean section. [12]	I-B
13.13	Operative delivery less than 2 hours after commencing pushing is not recommended provided maternal status and fetal surveillance are normal. [17]	III-D
13.14	Training and ongoing maintenance of practical skills related to operative vaginal delivery should be encouraged. [12]	I-B
13.15	Fetal position should be assessed in the second stage of labour, particularly in the setting of abnormal fetal descent, and manual rotation of the fetal occiput should be considered in the setting of fetal malposition, before moving to operative vaginal delivery or Caesarean section. [12]	I-B

PHASE 5 – Post-Delivery Management Recommendations

#	Recommendation	Evidence Grade
14.0	**Use evidence based approaches for post-delivery management to promote optimal outcomes and reduced length of hospital stay**	
14.1	Regardless of the mode of delivery, newborns should be placed in uninterrupted skin-to-skin contact with their mothers immediately following birth for at least an hour or until completion of the first feeding or as long as the mother wishes. [3] [20] [21]	III
14.2	If skin-to-skin contact between the newborn and the mother is not possible, a partner or other support person can provide this. [3]	III
14.3	Hospitals should adopt and implement evidenced based guidelines (e.g., SOGC) for discharge after vaginal birth and after Caesarean section. This is intended to promote optimal length of stay and early discharge when appropriate, as well as better outcomes for mother and newborn. [3] [22]	III
14.4	Intraoperative epidural/ intrathecal morphine and post-operative multimodal co-analgesics should be used to improve post-operative pain management and encourage early ambulation. [3] [23]	III
14.5	Evidence-based practices should be followed with respect to surgical site infection prevention. [3]	III
14.6	Clinical practice guidelines should be followed for venous thromboembolism prophylaxis. [3] [24]	III
15.0	**Discuss the option of vaginal birth in the subsequent pregnancy with women who had a Caesarean section**	
15.1	Women who have had a Caesarean section should be offered an opportunity for discussion about why they had a Caesarean delivery and counselled about the possibility of having a vaginal birth in their subsequent pregnancy. [3] [25]	III

PHASE 6 – Retrospective Evaluation/Review Recommendations

#	Recommendation	Evidence Grade
16.0	**Each hospital to establish an interdisciplinary committee to monitor and review performance metrics**	
16.1	Establish hospital processes to review the number of postdates inductions taking place before 41 weeks of gestation to determine whether or not the induction was medically indicated/warranted. [3]	III
16.2	Hospitals should review the Caesarean section rate and rate variation by provider to identify opportunities for improvement. [3] [26] [27] [28]	III
16.3	Caesarean section and all other QBP metrics will be shared publically in an open and transparent manner to promote quality improvement. [3]	III
16.4	LHINs should monitor hospital performance based on the established indicators. Where hospitals are consistently unable to meet established performance metrics, LHINs should consider progressive performance improvement steps, such as coaching or mentoring by peer hospital organizations. PCMCH or the Regional Maternal-Child Networks may act as support to LHINs and hospitals in enlisting mentorship support. [3]	III

Implementation of Best Practices

Tailoring the recommended clinical pathway at the local level is critical for successful implementation, adoption and sustained use. Recommended best practices for tailored implementation include the following:

- Ensuring commitment from hospital administration/executive sponsor.

- Identification of a site lead/champion who will be responsible for:
    - Adapting the documents to meet hospital formatting requirements;
    - Leading the pathway and recommendations through the necessary hospital approval committees;
    - Discussing the recommendations and implications with obstetric team members (nurses, obstetricians, midwives, family physicians, anesthesiology);
    - Organizing education/training sessions and identifying other resources to support uptake of the recommendations;
    - Monitoring metrics associated with QBP to track progress and identify gaps.

- Convening a small implementation team, including the above-mentioned site lead/champion, and where appropriate: administrative leads, physicians, midwives, clinical practice leads, nursing, decision support, executive sponsor, communications strategist and patient representative. This implementation team should provide oversight to the implementation process, including:
    - Detailed review of the Low Risk Birth Pathway recommendations, including the quality indicators, and the funding and volume impact;
    - Current state assessment and pathway gap analysis on comparison with current institutional and individual practices;
    - Development of an organizational vision, including the identification of opportunities for improvement;
    - Development of an operational strategy to ensure optimal environment for care based on the institution's local circumstances, unique clinical team compositions and available staffing capacities and resources;
    - Discussion of feasible changes for that institution, including outcome measures and targets, and timelines for completion;
    - Progress reports to ensure accountability to hospital administration;
    - Audit and feedback of pathway use;
    - Engagement with peers to promote sharing of implementation experiences and insights.

Further implementation support can be found in the Ontario Hospital Association's *Toolkit to Support the Implementation of Quality-Based Procedures*:
https://www.oha.com/KnowledgeCentre/Library/Toolkits/Documents/OHA_QBProcedures_toolkit_FNL.pdf.

Low Risk Birth Quality Indicators

Better Outcomes Registry & Network (BORN) Ontario is developing a data report to support the implementation of clinical best practices with respect to low risk birth. This report will be an important resource to monitor implementation and progress across the province. Report development has been initiated and work will be ongoing in FY2018-19.

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Appendix A – Canadian Task Force on Preventative Health Care Evidence Ranking

Key to evidence statements and grading of recommendations, using the ranking of the Canadian Task Force on Preventive Health Care	
Quality of Evidence Assessment*	**Classification of Recommendations†**
I. Evidence obtained from at least one properly randomized controlled trial II-1. Evidence from well-designed controlled trials without randomization II-2. Evidence from well-designed cohort (prospective or retrospective) or case-control studies, preferably from more than one centre or research group II-3. Evidence obtained from comparisons between times or places with or without the intervention. Dramatic results in uncontrolled experiments (such as the results of treatment with penicillin in the 1940s) could also be included in this category III. Opinions of respected authorities, based on clinical experience, descriptive studies, or reports of expert committees	A. There is good evidence to recommend the clinical preventive action B. There is fair evidence to recommend the clinical preventive action C. The existing evidence is conflicting and does not allow to make a recommendation for or against use of the clinical preventive action; however, other factors may influence decision-making D. There is fair evidence to recommend against the clinical preventive action E. There is good evidence to recommend against the clinical preventive action F. There is insufficient evidence (in quantity or quality) to make a recommendation; however, other factors may influence decision-making

* The quality of evidence reported in these guidelines has been adapted from the Evaluation of Evidence criteria described in the Canadian Task Force on Preventive Health Care.

† Recommendations included in these guidelines have been adapted from the Classification of Recommendations criteria described in the Canadian Task Force on Preventive Health Care.

Source: Woolf SH, Battista RN, Angerson GM, Logan AG, Eel W. Canadian Task Force on Preventive Health Care. New grades for recommendations from the Canadian Task Force on Preventive Health Care. Can Med Assoc J 2003;169(3):207-8.