

A photograph of two women in an office environment. The woman on the left has blonde hair in a ponytail and is wearing a striped shirt. The woman on the right has curly hair and is wearing a colorful floral top and a blue lanyard. They are both smiling and looking at each other. The woman on the right is holding a tablet. In the background, there are office desks, a keyboard, a mouse, and a water bottle. A large, semi-transparent grey shape is overlaid on the bottom left of the image, containing the title and other text.

Informed Decision-Making for Labour & Birth

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Reproductive Health Workgroup

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Throughout this paper, gender-specific language such as “woman”, “women” and “mother” is used in order to accurately cite the research referred to. We intend these terms to refer to all childbearing individuals, regardless of their gender identity or sexual orientation.

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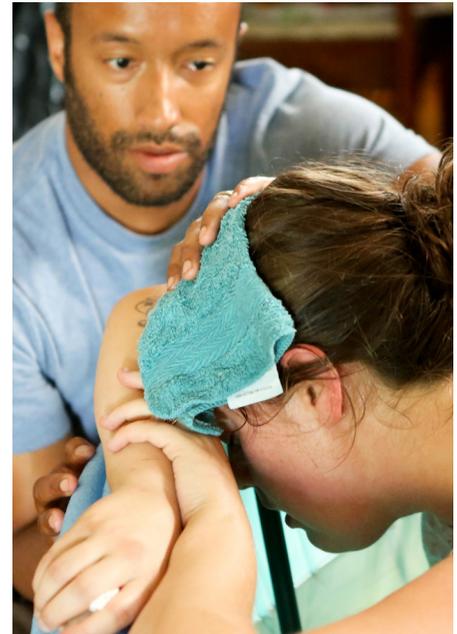
Executive Summary

To set the context for public health's role in the discussion about informed decision-making for labour and birth, the importance of physiological labour and birth to lifelong health and wellness must be addressed. From a public health perspective, this is a key upstream health promotion strategy for the prevention of poor health outcomes for mothers and babies.

Physiological labour and birth is a biological process that relies on the innate capacity of both mother and baby (1). A physiological labour and birth is more likely to be safe and provide healthy outcomes, in both the short and long term, because health-promoting-biological processes are not disrupted (1) (2). Medical interventions were developed to protect maternal and fetal well-being when complications arise. However, high rates of common maternity care practices and interventions are occurring in the absence of complications and/or without support from high-quality evidence (3). Not only do these maternity care practices and interventions disrupt the hormonal physiology of the mother and baby (3), thereby increasing the risk for maternal and fetal complications (2), they also “undermine the woman’s own capability to give birth and negatively impacts her childbirth experience” (4 p. 1). The resulting consequences of medical intervention may last through the perinatal period and beyond (3).

Health care situations may present with more than one care option, with each option having benefits and risks (5). The process of informed decision-making supports individuals to make knowledgeable choices in the context of their own values and preferences (5). Deciding on a care path becomes an easier decision for both health care providers (HCP) and patient when the patient’s values are understood (6). In the scope of labour and birth, it is necessary to explore an individual’s values and beliefs during pregnancy to help facilitate informed decision-making during labour if the need arises (6). As part of the process of informed decision-making, informed consent is the act of consenting or refusing a care path. If a patient does not have the right to refuse a care path, then the act of giving consent has no meaning (7). Informed consent and refusal is a fundamental human right (7) (8) (9) (10) (11).

There is a societal misconception that HCPs are responsible for deciding whether or not a medical intervention is used during labour and birth. In order to make an informed decision, individuals must receive the best scientific evidence of the benefits, risks and alternatives of an intervention from their HCP (12) (13). It is then the responsibility of the patient, through discussion with their HCP, to make the decision that is right for them (13). The role of the HCP should also



include informing women about how to achieve best outcomes by preserving the normal physiological processes of labour and birth as much as possible (1) (3) (13) even in the presence of interventions (1) (3). This helps to achieve a patient-centred care approach in which a woman makes informed decisions in the context of her own values and life circumstances (12). Patient-centred care is crucial; leading to a higher level of patient engagement and better self-perceived patient outcomes (14) (15).

Decision aids are tools to help individuals participate in their own informed health care decisions (5) (16). They identify the risks and benefits of all care options that individuals may value differently (5). An individual considers the evidence presented in the decision aid and chooses the care option that aligns with their own values and preferences (5) (16). Use of decision aids for making informed decisions will ultimately ensure that interventions used during labour and birth are congruent with evidence-based practice and patients' values.

International, national, and provincial efforts are being made to improve practice relating to evidence-based maternity care built on informed decision-making and physiological labour and birth principles. A summary of the following promising strategies and resources, that support best practice, is outlined within the paper.

INTERNATIONAL

- International MotherBaby Childbirth Initiative (IMBCI) (19)
- Childbirth Connection (21)
- California Maternal Quality Care Collaborative (CMQCC) – Toolkit to Support Vaginal Birth and Reduce Primary Caesareans (22)
- World Health Organization (WHO) – WHO recommendations: intrapartum care for a positive childbirth experience (4)

NATIONAL

- The Society of Obstetricians and Gynaecologists of Canada (SOGC) – Physiologic Basis of Pain in Labour and Delivery: An Evidence-Based Approach to its Management (13)
- Choosing Wisely Canada (23)
- Family-Centred Maternity and Newborn Care: National Guidelines (24)

PROVINCIAL

- Provincial Council for Maternal and Child Health (PCMCH) – Quality-Based Procedure for Low Risk Birth (25)

Although there are a number of positive efforts underway, various barriers have been identified that can impede the implementation of informed decision-making for labour and birth. These barriers can include:

1. Incomplete, inaccurate, biased, or unavailable patient education resources (22) (26) (27) (28) (29) (30).

2. Societal acceptance of labour and birth as an inherently dangerous event requiring medical interventions (22) (26) (28) (31) (32).
3. Erosion of women’s legal and ethical rights to informed consent (7) (16) (22) (26).
4. Obstacles to meaningful conversations between HCPs and pregnant individuals about their specific needs and preferences (22) (26) (29) (30).
5. Continued use of non-evidence-based practices in maternity care settings (22) (24) (32) (33).
6. Policies and practices that lead to non-adherence to individuals’ informed decisions (28) (34).
7. Challenges relating to implementing decision aids into practice (35).

Such barriers create an even greater health equity gap for those often marginalized. All individuals have the right to make well informed health decisions and be supported in the decisions they make (13). Implementing the education, policy, practice, and research recommendations outlined in [Hormonal Physiology of Childbearing](#) can help reduce these barriers and support systemic change (3).

Public health is well positioned to contribute to this systemic change. The 2018 Ontario Public Health Standards (OPHS) directs public health to reduce the burden of chronic diseases, improve well-being, and support healthy growth and development (36). In 2015, PCMCH identified maternal and newborn care as “the foundation of a healthy beginning for mothers, newborns and their families” (37 p. 3) and having “a lifelong impact on Ontarians and their communities” (37 p. 3). The growing body of evidence about better birth outcomes and lifelong wellness associated with physiological labour and birth (1) (3), as well as the importance of skills-based childbirth education (13) (22) (38) (39) and informed decision-making (4) (8) (9) (22) (28) (35), supports the importance of this work. Levett demonstrated that prenatal education decreased the incidence of medical interventions (39), resulting in a projected significant cost savings to the health care system (40). Public health currently provides prenatal education, skill-building, and health promotion for expectant individuals and families across Ontario. As a result, public health should continue providing prenatal education as a universal strategy to promote lifelong health and well-being, incorporating information and skill building related to informed decision-making and supporting physiological labour and birth.

Through advocating for access to consistent, evidence-based information necessary for informed decisions about labour and birth, public health has been helping to shift the dialogue from an illness model to one that supports wellness. This aligns with the Ontario Public Health Association (OPHA) Reproductive Health Work Group’s (RHWG) focus on promotion of wellness. Furthermore, investing in informed decision-making and skill-building for working with the pain of labour and birth can contribute to the sustainability of the health care system by reducing costs of maternity care and by improving long-term health outcomes.

Rationale for the Position Statement

Labour and birth is a physiological process that does not inherently require intervention (4) (22) (41). It begins and progresses via natural biological processes, “promoting fetal readiness for birth and safety during labour, enhancing labour effectiveness, providing physiologic help with labour stress and pain, promoting maternal and newborn transitions and maternal adaptations, and optimizing breastfeeding and maternal-infant attachment” (3 p. x). Despite this, rates of medical intervention used for labour and birth, for healthy women with low-risk pregnancies giving birth in similar settings, varies significantly between hospitals (42). This variation suggests that pregnant individuals and babies are being subjected to risks associated with unnecessary interventions. These unnecessary interventions may negatively impact downstream health outcomes for mothers and babies (3).

The Institute of Medicine highlighted evidence-based services and patient-centred care as key components for improving health care quality (43), with informed decision-making being an essential strategy for achieving patient-centred care (14) (43). In the context of labour and birth, informed decision-making can improve patient satisfaction (14) (15) (44), support physiological birth (26), and reduce unnecessary interventions (26) (28). However, information regarding the health promoting benefits of physiological labour and birth, as explained in the report [Hormonal Physiology of Childbearing](#), is often lacking in the information provided by HCPs. Consequently, the benefits of physiological labour and birth should be included in all comprehensive informed decision-making discussions.



Relevance to Public Health

The OPHA is a member-based, not-for-profit association that provides leadership on issues affecting the public's health and strengthens the impact of those who are active in public and community health throughout Ontario. OPHA has multiple active work groups and task forces that focus on particular public health issues. The OPHA RHWG, comprised of over 40 members representing both public and community health organizations from across the province, has advocated to support, promote, and protect physiological labour and birth since its inception in 2010. In 2014, it was recognized that informed decision-making plays an important role in health outcomes for individuals preparing for labour and birth. It became apparent that a synthesis of the evidence, including strategies for best practice, was needed to continue advancing this work.

The 2018 OPHS directs public health to reduce the burden of chronic diseases, improve well-being, and support healthy growth and development (36). In 2015, PCMCH identified maternal and newborn care as “the foundation of a healthy beginning for mothers, newborns and their families” (37 p. 3) and having “a lifelong impact on Ontarians and their communities” (37 p. 3). The growing body of evidence about better birth outcomes and lifelong wellness associated with physiological labour and birth (1) (3), as well as the importance of skills-based childbirth education (13) (22) (38) (39) and informed decision-making (4) (8) (9) (22) (28) (35), supports the importance of this work. Levett demonstrated that prenatal education decreased the incidence of medical interventions (39), resulting in a projected significant cost savings to the health care system (40). Public health currently provides prenatal education, skill-building, and health promotion for expectant individuals and families across Ontario. As a result, public health should continue providing prenatal education as a universal strategy to promote lifelong health and well-being, incorporating information and skill building related to informed decision-making and supporting physiological labour and birth.

Public health is also in the unique position of having invested in the Baby Friendly Initiative (BFI); for which informed decision-making is a foundational principle. Supporting, promoting, and protecting physiological labour and birth and informed decision-making for labour and birth is the logical next step, especially given the strong physiological link between labour and birth, skin-to-skin contact, breastfeeding, attachment, and health (3). Public health will be able to apply lessons learned from BFI Ontario, as well as leverage the existing relationships with HCPs, organizations and hospitals, to support implementation of best practices for labour and birth.

Through advocating for access to consistent, evidence-based information necessary for informed decisions about labour and birth, public health has been helping to shift the dialogue from an illness model to one that supports wellness. This aligns with the OPHA RHWG's focus on health promotion. Furthermore, investing in informed decision-making and skill-building for working with the pain of labour and birth can contribute to the sustainability of the health care system by reducing costs of maternity care and by improving long-term health outcomes.

Alignment with Patient-Focussed Care

The Ministry of Health and Long-Term Care (MOHLTC) has been promoting reforms to Ontario’s health care system to reduce gaps and strengthen patient-centred care (45). Public health initiatives to support, promote, and protect physiological labour and birth and informed decision-making for labour and birth align with many components of a patient-focussed approach and the principles of Ontario’s Patients First Act and Action Plan. These public health initiatives are outlined below.

| Patients First Goals | Public Health Initiatives |
|--|--|
| <p>1. “More effective integration of services and greater equity” (45 p. 5).</p> | <ul style="list-style-type: none"> Public health provided input through the OPHA to an expert panel that was established by the PCMCH to review low-risk birth practice across Ontario. |
| <p>2. “Inform: Support people and patients – providing the education, information and transparency they need to make the right decisions about their health” (46 p. 5).</p> | <ul style="list-style-type: none"> The Minister of Health was directed to develop a one-stop website of health information to help individuals make informed decisions and navigate the health care system (47). Public health is well positioned to advocate for the inclusion of comprehensive information about physiological labour and birth and making informed decisions in this one-stop website. Public health addresses the prenatal educational needs of pregnant individuals and their families through prenatal education programs, social media and social marketing strategies and is equipped to inform the public about the importance of physiological labour and birth and making informed decisions. Public health prenatal education programs address both targeted and universal populations to help reduce health equity gaps. |
| <p>3. “Protect: Protect our universal public health care system – making decisions based on value and quality, to sustain the system for generations to come” (46 p. 5).</p> | <ul style="list-style-type: none"> Public health plays a prevention role through prenatal education; assisting the public to make informed decisions that will reduce maternity care costs and improve long-term health outcomes. This contributes to a more sustainable health care system for future generations. |

The Importance of Physiological Labour & Birth to Lifelong Wellness

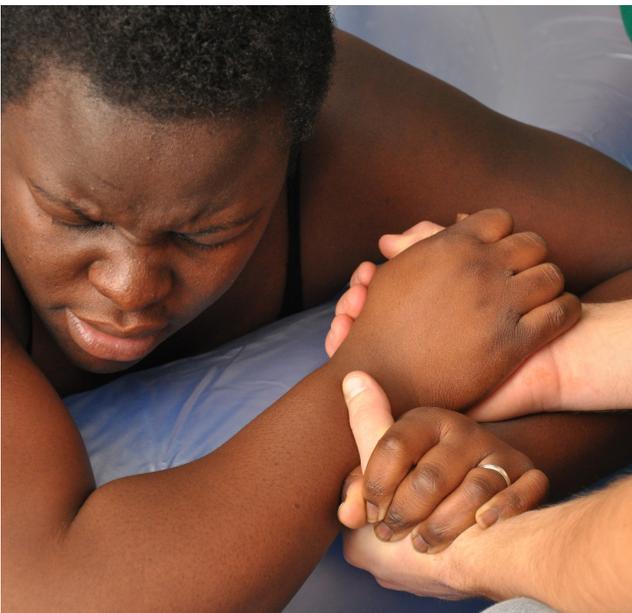
To set the context for informed decision-making for labour and birth, the importance of physiological labour and birth to lifelong health and wellness must be included in any informed decision-making discussion about the use of medical interventions. From a public health perspective, this is a key upstream health promotion strategy for the prevention of poor health outcomes for mothers and babies.

There is a growing body of evidence regarding the importance of physiological labour and birth. Short- and long-term health benefits may exist for both mother and infant, including:

- Hormonal optimization (1) (3);
- Supporting breastfeeding success (1) (3);
- Maternal mental health (1) (3);
- Chronic disease prevention (1) (3), and
- Avoidance of potential harm from unnecessary interventions (3).

In addition, major hormonal systems are turned on during physiological labour and birth that promote:

- Effective labour patterns (1) (13);
- Enhanced endorphin levels [to facilitate pain relief] (1) (13);
- Facilitation of cardio-respiratory transition and thermoregulation of the newborn (1) (13);
- Successful lactation (1) (13), and
- Enhanced bonding behavior between the mother and infant (1) (13).



Allowing spontaneous labour to unfold reduces the risk of unnecessary intervention and fetal compromise (1), and increases the likelihood of immediate and uninterrupted skin-to-skin. Uninterrupted skin-to-skin further supports hormonal processes that facilitate the newborn's transition to extra-uterine life (3). Skin-to-skin "is also an accurate predictive factor of subsequent exclusive breastfeeding and a well-structured mother-infant bonding" (48 p. 456).



The health benefits of breastfeeding are substantial; protecting babies and mothers against a spectrum of adverse health outcomes. Breastfed babies have a lower incidence of otitis media (49), sudden infant death syndrome (50), childhood obesity (51) and overall infection-related mortality (52). Breastfeeding mothers have a lower risk of breast and ovarian carcinoma (53), and type 2 diabetes (54). Longer durations of breastfeeding have been associated with a reduced risk of postpartum depression (54).

In addition to these benefits, there are some emerging areas of research related to epigenetic programming and gut colonization that occur during the labour and birth process.

- Interruption of the normal hormonal processes that occur during labour and birth can impact epigenetic programming, resulting in non-communicable diseases and biobehavioural problems (3). The potential long-term effects on health and development must not only be considered for the individual, but also for generations to come.
- Gut colonization during vaginal birth may prevent non-communicable diseases such as colon cancer, diabetes and asthma later in life (55).

The health promoting benefits of physiological labour and birth are "beneficial to the family and society through enhanced family functioning and cost-effective care. Importantly, a focus on these aspects of normal physiological birth will help to change the current discourse on childbirth as an illness state where authority resides [with the HCP or institution] to one of wellness in which women and clinicians share decisions and accountability" (1 p.3). In all health care settings, the innate hormonally driven processes for both mother and baby are foundational and should be supported, promoted and protected, as far as safely possible, to increase the likelihood of healthy outcomes for both mother and baby (56).

The Risks and Costs of Using Unnecessary Intervention for Labour & Birth

Medical interventions were developed to protect maternal and fetal well-being. However, high rates of common maternity care practices and interventions are occurring in the absence of complications and/or without support from high-quality evidence (3). Not only do these maternity care practices and interventions disrupt the hormonal physiology of the mother and baby (3), thereby increasing the risk for maternal and fetal complications (2), they also “undermine the woman’s own capability to give birth and negatively impacts her childbirth experience” (4 p. 1). The resulting consequences of medical intervention may last through the perinatal period and beyond (3).

Since 1985, a caesarean section rate of between 10% and 15% has been considered ideal by international experts in the health care community (57). However, the challenge of identifying a maximum threshold for medically necessary caesarean sections at a population level was noted in a 2015 WHO statement (57). Caesarean section rates can vary widely between health care facilities due to differences in patient populations, clinical protocols, and resources (57). The SOGC proposed that caesarean section rates can be compared across institutions, regions and countries when the [Modified Robson Classification System](#) is consistently used in caesarean section data collection processes (58).

Ontario’s Better Outcomes Registry & Network (BORN) collects and interprets caesarean section data provided by Ontario hospitals using the Robson Classification System (59). A 2016 BORN infographic identified discrepancies in caesarean section rates for women having low-risk pregnancies in Ontario hospitals that have more than 500 births per year (42). Top performing Ontario hospitals have caesarean section rates of 10.5% to 14.9% compared to the lowest performing hospital caesarean section rates of 24.0% to 33.0% (42). Such a large caesarean section rate discrepancy suggests a proportion of caesarean sections may be done unnecessarily. Caesarean sections cost twice as much as vaginal births (60), thereby causing undue financial strain on our health care system when they occur without medical need (40). Overall, a first-time caesarean birth costs approximately \$2,265 more than a vaginal birth with no interventions (61). This additional cost applies to the 80.3% of women greater than or equal to 37 weeks pregnant with one baby in a head down position who have a repeat caesarean section during subsequent pregnancies (Robson Classification 5) (18).

Risks to maternal morbidity and mortality associated with caesarean section have decreased over time, with maternal death now rarely occurring in the developed world (62). However, potential risks related to caesarean section do still exist, including:

Immediate Risks:

- Not establishing breastfeeding (63);
- Non-exclusive breastfeeding (22);

- Infection (22) (62) (63);
- Post-operative pain and recovery (22) (62) (63);
- Surgical injury (22) (62) (63);
- Miscellaneous complications from surgery (62);
- Admission to Intensive Treatment Unit (22) (62), and
- Anaesthetic risks (22) (62).

Delayed Risks:

- Thromboembolic Disease (22) (62);
- Hospital readmission (22) (62);
- Postoperative adhesion/pain (22) (62), and
- Incisional hernias (62).

Risks in future pregnancies:

- Lower rates of future childbearing (22) (62);
- Delay in subsequent pregnancy (62) (63);
- Increase risk of spontaneous miscarriage (62) (63);
- Increase risk of ectopic pregnancy (62) (63);
- Increase risk of abnormal placental implantation and migration (22) (62) (63);
- Fetal growth restriction and preterm birth (62);
- Stillbirth at or after 34 weeks (62) (63);
- Uterine scar dehiscence or rupture (22) (62) (63);
- Peripartum hysterectomy (22) (62) (63), and
- Repeat caesarean section (22) (62).

Labour induction is another common medical intervention where discrepancies in practice across Ontario were highlighted by BORN. For low-risk pregnancies, induction should be used only when the pregnancy exceeds 41 weeks (42). This would suggest that women experiencing low-risk pregnancies and giving birth in similar environments would be expected to have similar induction rates. However, for women who are expecting their first child, having similar low-risk pregnancies, top performing hospital induction rates are 9.5% compared with bottom performing hospitals at 42.4% (42).

Medical interventions can have unintended effects on labour and birth that may lead to new problems requiring further intervention (39) (64). Each intervention can lead to the need for additional interventions which is commonly known as the ‘cascade of intervention’ (39) (64). This cascade moves the path of labour further from the physiological process (3) (64); thereby increasing risk of maternal and fetal complications (2). The ‘cascade of intervention’ may also

result in poor short- and long-term health outcomes for both mother and baby (3). Practices that may lead to this cascade include:

- Use of various medications to induce labour (64);
- Artificial rupture of membranes before or during labour (64);
- Use of synthetic oxytocin to augment labour (64);
- Medications for pain relief (64), and
- Being confined to bed (64).

Factors that Affect Use of Interventions

An individual's self-efficacy and ability to give birth are "enhanced or diminished by every person who gives them care and by the birth environment" (41). With this in mind, provider and environmental factors that may contribute to the use of unnecessary interventions include the hospital effect, the provider effect, and the model of care practiced. Though these factors are not mutually exclusive, as each can have an effect on the other, they are discussed separately here.

The Hospital Effect

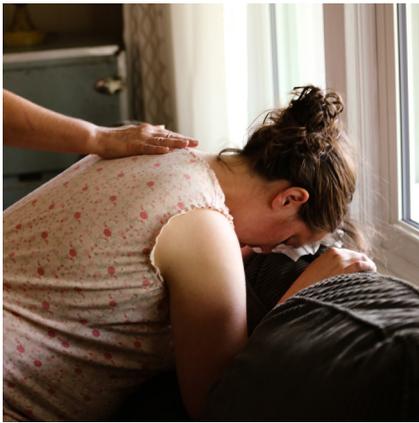
The most obvious example of the hospital effect is hospital policy unsupported by current best practices, such as not allowing eating during labour. However, the impact of hospital design on unnecessary interventions in labour is in the exploratory phase. Researchers are exploring the impact that the built environment of the hospital has on the variation in intervention rates at different hospitals using caesarean section rates as the research proxy (65). Specific hospital design elements are hypothesized as potentially contributing to caesarean section rates, including:

- **Accessibility of labour support equipment.** The presence and accessibility of labour support equipment in the rooms (e.g., birth balls, birth stools, birth tubs) may decrease caesarean rates by increasing the support to manage physiological labour (65).
- **Prominence of technology.** Rooms designed to facilitate medical interventions may increase caesarean rates. Greater visual presence and use of technology (e.g. monitoring equipment) increases reliance on interventionist practices (65).
- **Staff access to views and natural light.** Decreasing staff stress within the work environment through access to outdoor views and natural light may decrease caesarean rates (65).
- **Patient accessible circulation.** More area available for individuals to walk and move during labour, including outdoor spaces, facilitates physiological labour and may decrease caesarean rates (65).

More research is necessary, but the potential impact of facility design on use of interventions needs to be considered when designing or remodelling birth facilities.

The Provider Effect

The provider effect is described as “how the philosophy or methodology guiding a healthcare provider’s practice influences outcomes for the population receiving care” (66). Two recent studies found a 3-fold variation in caesarean rates within providers with similar credentials (67) (68). One study focused on the nurse provider effect at one institution (68), and the other on the physician provider effect at another institution (67). The evidence suggests a provider effect can influence whether or not an individual will have a caesarean section. More research is necessary to determine if the provider effect has an impact on other labour interventions.



Labour and birth is a physiological process that does not inherently require intervention (4) (21) (41).



The Model of Care

An additional factor that influences the use of interventions for labour and birth is the model of care practised by the HCP (69). There are several ways to provide care for individuals during labour and birth – these are called ‘models of care’ (70). Two primary models of care used within maternal-child health are the medical model and the midwifery-led model. The medical model is based upon the diagnosis and treatment of illness; looking for risks and pathology (71). The midwifery-led model views birth as a normal, physiological process; viewing individuals as partners in care (71) (72).

A survey of HCP attitudes towards labour and birth found that obstetricians, as well as family physicians who provided antenatal care but not labour and birth care, were more likely to reflect positive attitudes towards the use of interventions (73). In contrast, midwives’ attitudes were more likely to reflect negative attitudes towards the use of interventions (73). Family physicians who provided labour and birth care fell somewhere between obstetricians and midwives’ attitudes (73).

The majority of births in Ontario are low risk (74). Mothers report that maternal-newborn care is too often ‘over-medicalized’ and should instead be viewed as a normal process (75). “While models of care that support normal birth are not exclusive to any profession, midwives have a body of expertise that is essential to creating a normal birth culture” (72 p. 2). The midwife-led continuity-of-care model is recommended by the WHO where well-functioning midwifery programs exist (4).

One of the challenges that Ontario women currently face is limited access to midwifery care. Four out of ten Ontarians who request a midwife are unable to access one (17). See Figure 1 for distribution of low-risk births across delivering HCP specialties. Improved access to midwives increases satisfaction (17) (70), reduces use of interventions (17) (70), results in comparable health outcomes (70), and is more fiscally accountable (17) (70).

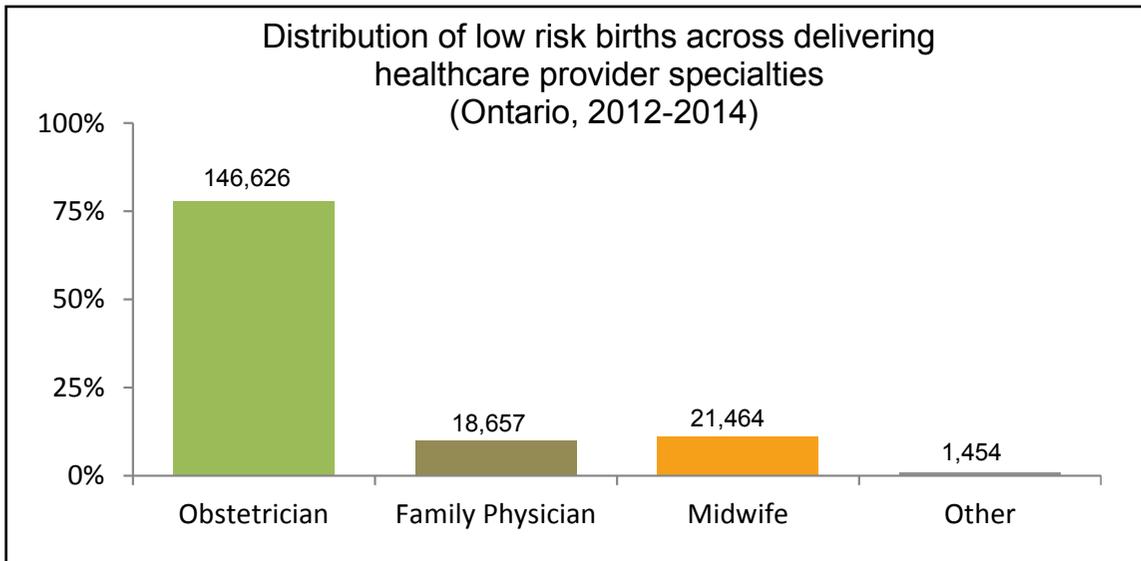


Figure 1. Source: Provincial Council for Maternal and Child Health (18)

Informed Decision-Making

Health care situations may present with more than one care option, with each option having benefits and risks (5). The process of informed decision-making supports individuals to make knowledgeable choices in the context of their own values and preferences (5).

There are three components necessary to make an informed decision:

- An expert on the evidence (i.e., a HCP) (5);
- An expert on which features are the most important (i.e., the patient) (5), and
- A way to communicate their views with one another (5).

Deciding on a care path becomes an easier decision for both HCP and patient when the patient's values are understood (6). In the scope of labour and birth, it is necessary to explore an individual's values and beliefs during pregnancy to help facilitate informed decision-making during labour if the need arises (6).

As part of the process of informed decision-making, informed consent is the act of consenting or refusing a care path. If a patient does not have the right to refuse a care path, then the act of giving consent has no meaning (7). Informed consent and refusal is a fundamental human right (7) (8) (9) (10) (11).

Multiple organizations acknowledge maternal health as a human rights issue (4) (8) (9) (10) (11) (76). One example, the International MotherBaby Childbirth Organization (IMBCO); has developed a charter of twenty MotherBaby Rights (see Appendix A) (8). The charter asserts that women have the right to quality information, respect, and self-determination for themselves and their babies (8) (20) (77). HCPs have a responsibility to uphold these rights by:

- Explaining all care options using the best available evidence, including benefits, risks and alternatives of each option, and in language and terms understood by the patient (10) (29) (30) (77).
- Respecting and responding to each patient's preferences, needs, values and decisions (41) (43).

Over the past decade, informed decision-making has become an emerging policy priority for improving health care quality around the world (28) (35). In Ontario, the focus on Patients First and patient-centred care suggests that education, information, and the transparency individuals need for self-determination will result in an improved health care experience and better health outcomes (46).



Decision Aids

Decision aids are tools to help individuals participate in their own informed health care decisions (5) (16). They identify the risks and benefits of all care options that individuals may value differently (5). An individual considers the evidence presented in the decision aid and chooses the care option that aligns with their own values and preferences (5) (16). “Decision aids differ from usual health education materials because of their detailed, specific and personalised focus on options and outcomes for the purpose of preparing people for decision making” (78 p. 2).

A 2017 Cochrane Review corroborates the value of decision aids by concluding that “people exposed to decision aids feel more knowledgeable, better informed, and clearer about their values, and they probably have a more active role in decision-making and more accurate risk perceptions. There is growing evidence that decision aids may improve values-congruent choices” (79 p. 2). As a quality control measure, the International Patient Decision Aid Standards Collaboration developed a checklist to ensure decision aids are credible tools for decision-making (80). A [quality criteria checklist](#) helps individuals, HCPs, and policy makers feel confident to use these tools (80).

An informed decision about medical interventions takes time. Fortunately, a full-term pregnancy is nine months, providing individuals the time to access and process high quality information (26). Individuals are then able to identify their preferences based on values and engage in shared decision-making with their HCP (26). “Therefore, access to high-quality information and decision support should be provided at appropriate points in pregnancy and those related to labor and birth should be provided well before labor. In addition, novel tools and processes are needed to support shared decision-making around the time of birth” (26 p. 3).

Few decision aids have been developed and tested for labour and birth, which is inconsistent with individuals’ identification of pregnancy and birth as a time when they need to be part of their care decisions (78). Raynes-Greenow et. al (2010) showed that women who received information about the risks and benefits of pain relief options for labour and birth while still in the prenatal period were more likely to feel they had the necessary information to make a decision that was right for them. Being informed and participation in decision-making have been associated with an overall satisfaction with the birth experience (4) (81).

Another example where access to a pregnancy decision aid is valuable is in the case of induction for prolonged pregnancy. In a study by Stevens & Miller (2012), women who were given directive (and therefore partial) information in favor of medical intervention were more likely to prefer the procedure than women presented with the benefits, risks, and alternatives to the procedure. Not having all the information contributes to a decision outcome that may be inconsistent with patient values (82).

Situations do arise in obstetrics when a HCP and patient have conflicting values. Identifying these issues during the prenatal period allows time for the HCP to process the difference and determine how best to provide care that is consistent with the patient’s values (6). Extreme conflict between

the patient's and HCP's values may require a transfer of care to another HCP to ensure the patient's values are reflected in the care being given (6). This can only happen when conversations about medical interventions are started early in the pregnancy (6).

Not only does informed decision-making during pregnancy and birth benefit women, it challenges the overuse of non-evidence based practices amongst HCPs that may have negative impacts on maternal and fetal well-being (1) (3) (83). Use of decision aids for making informed decisions will ultimately ensure that interventions used during labour and birth are congruent with evidence-based practice, and patients' values. It is recommended that additional decision aids be developed for a range of options that may arise during labour and birth to facilitate informed decision-making.

Facilitating & Supporting Informed Decisions for Labour & Birth

Physiological labour and birth is a biological process that relies on the innate capacity of both mother and baby (1). A physiological labour and birth is more likely to be safe and provide healthy outcomes, in both the short and long term, because health-promoting-biological processes are not disrupted (1) (2). Some women and/or babies will develop complications that require medical interventions to facilitate a safe birth (1). However, there is a societal misconception that HCPs are responsible for deciding whether or not a medical intervention is used during labour and birth. In order to make an informed decision, individuals must receive the best scientific evidence of the benefits, risks and alternatives of an intervention from their HCP (12) (13). It is then the responsibility of the patient, through discussion with their HCP, to make the decision that is right for them (13). The role of the HCP should also include informing women about how to achieve best outcomes by preserving the normal physiological processes of labour and birth as much as possible (1) (3) (13) even in the presence of interventions (1) (3). This helps to achieve a patient-centred care approach in which a woman makes informed decisions in the context of her own values and life circumstances (12). Patient-centred care is crucial; leading to a higher level of patient engagement and better self-perceived patient outcomes (14) (15).

Feeling uninvolved in decision-making during labour and birth can lead to a traumatic birth experience (84). In a study by Elmir et al. (2010), women often became distressed when recalling their labour and birth experience as the decisions surrounding their care were made for them, without their involvement (84). They also reported feeling 'out of control', vulnerable, and powerless; causing some women to adhere to medical interventions even more just to get through the trauma faster (84). HCPs have the opportunity to increase individuals' sense of self control by providing information about all aspects of labour and birth and supporting them to make informed decisions (28) (84). SOGC recommends that all HCPs support and promote "an environment that values and recognizes the ability of the labouring women, their partners, and their newborns" (13).

International, national, and provincial efforts are being made to improve practice relating to evidence-based maternity care built on informed decision-making and physiological labour and birth

principles. A summary of promising strategies and resources, that support best practice, is outlined below.

1. International

International MotherBaby Childbirth Initiative

The [10 Steps of the IMBCI](#) (see Appendix B) equip all HCPs with evidence-based practice recommendations that support informed choice, promote hormonal physiology, and minimize harm. Maintaining the integrity of the 10 steps provides the “best possible health outcomes and benefits with the most appropriate and conservative use of resources and technology” (77). The IMBCO’s vision is for all birthing facilities to practise the 10 steps, resulting in consistent evidence-based care, reduced mortality and morbidity, and enhanced birth outcomes for mothers and babies (20).

To build further evidence in support of the initiative, IMBCO selected nine pilot sites around the world to implement the principles, philosophy, and the 10 steps. L’Hôpital Brome Missisquoi Perkins, the first Canadian hospital to be designated Baby-Friendly, was one of the selected pilot organizations (20). This hospital believed that implementation of IMBCI would result in improved birth outcomes and staff satisfaction, as well as additional benefits reaching well beyond childbirth itself (20).

Recently, the IMBCO joined forces with the International Federation of Gynecology and Obstetrics (FIGO) to form a new initiative called the [International Childbirth Initiative: 12 Steps to Safe and Respectful MotherBaby-Family Maternity Care](#). They are in the process of forming a Task Force to disseminate and promote the initiative.

Childbirth Connection

Childbirth Connection is a not-for profit organization whose mission is “to improve the quality and value of maternity care through consumer engagement and health system transformation. Childbirth Connection promotes safe, effective and satisfying evidence-based maternity care and is a voice for the needs and interests of childbearing families” (21). The landmark report, [Hormonal Physiology of Childbearing: Evidence and Implications for Women, Babies, and Maternity Care](#) was launched in 2015 along with a number of related resources for women, clinicians and policymakers. As a result of this report, [Hormonal Physiology of Childbearing, an Essential Framework for Maternal-Newborn Nursing](#) was developed in 2016 to support, promote, and protect physiological labour and birth. Ten practice-related recommendations for nurses in maternity settings are suggested by the authors (56). Dr. Buckley has also developed education, policy, practice, and research recommendations to support the necessary systemic change arising from her Hormonal Physiology of Childbearing report (3) (see Appendix C).

California Maternal Quality Care Collaborative (CMQCC)

The CMQCC was founded in 2006 with the aim to reducing morbidity, mortality, and racial inequalities in maternity care. In 2016, they developed comprehensive, evidence-based best practice

guidelines supporting informed decision-making and physiological labour and birth. The [Toolkit to Support Vaginal Birth and Reduce Primary Caesareans](#), is designed to educate and motivate maternity clinicians to apply best practices for supporting vaginal birth and reducing primary caesarean (22).

World Health Organization (WHO)

In 2018, the WHO released its [WHO recommendations: intrapartum care for a positive childbirth experience](#). Through a holistic, human rights-based approach, the guideline reflects the importance of birth physiology and the right for all women to have a positive childbirth experience (4). The evidence-based recommendations for care optimize health and well-being and support respectful, informed and patient-centred maternity care (4).

2. National

The Society of Obstetricians and Gynaecologists of Canada

In 2018, the SOGC released [Physiologic Basis of Pain in Labour and Delivery: An Evidence-Based Approach to its Management](#). This guideline provides recommendations that address managing pain through support measures and nonpharmacological methods to reduce the use of medical interventions and support the hormonal physiology of childbirth (13). Two appendices are included in the guideline that describe obstetrical practices that support hormonal physiology and practical ways to provide support (13).

Choosing Wisely Canada

“Choosing Wisely Canada is the national voice for reducing unnecessary tests and treatments in health care” (23). They acknowledge that unnecessary interventions can cause harm for the patient and lead to further testing and intervention. The website has recommendations and resources for a wide variety of medical specialties; including a list of recommendations provided by the SOGC that identify [Ten Things Physicians and Patients Should Question in Obstetrics and Gynaecology](#) (23).

Family-Centred Maternity and Newborn Care: National Guidelines

[The Family-Centred Maternity and Newborn Care: National Guidelines](#) are intended to assist in the planning, implementation, and evaluation of health care policies and practices affecting maternal and newborn health (24). The guiding principles identify that pregnancy and birth are healthy, physiological processes and that a family-centred approach to care is optimal (24). Key recommendations include:

- “Health care providers (HCPs) establish a rapport with women and ask them about their wishes and expectations for labour and birth. Throughout labour and birth, communication needs to be ongoing and responsive to the women’s needs” (24).
- “Hospitals and birthing centres are encouraged to develop protocols and policies supporting traditional birthing customs and cultural practices” (24).

- “Women are treated with respect; supported in the process of continued informed choice throughout labour and birth; and encouraged to actively participate in their care decisions” (24).
- “HCPs demonstrate mutual respect and communicate and collaborate effectively, recognizing the vital role each plays in providing a safe and satisfying childbirth for women and their families” (24).
- “Maternal and newborn interventions only occur when the reasons to do so are well documented and evidence based” (24).

3. Provincial

Provincial Council for Maternal and Child Health

In 2015, the PCMCH began exploration of a Low-Risk Maternal and Newborn Strategy. Their work was founded on the following expected outcomes:

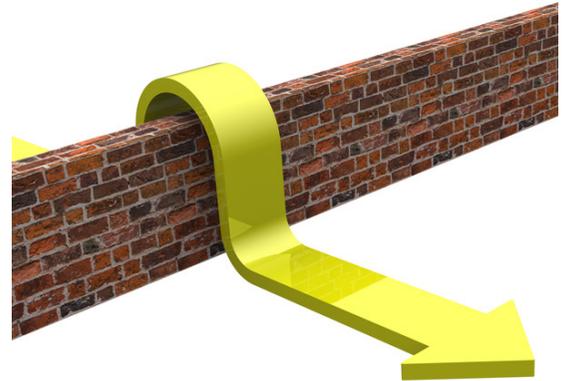
- “[Optimize] system/provider practices that promote ‘normal birth’
- [Promote] equitable access to normal pregnancy and birth services that is woman/person and family-centred
- [Support] a system of care that provides women and their families with equitable choice in birth environment and provider” (18 p.8)

This strategy was reflected in the province’s proposal to increase low-risk birth options and availability as a means of improving quality of care within the Patients First framework in 2016 (47).

They subsequently released their [Quality-Based Procedure for Low Risk Birth](#) in 2018. The objective of the quality-based procedure (QBP) is to reduce the caesarean section rate variation across the province through evidence-based guidelines that promote vaginal birth (25). Resources include a guideline handbook, implementation toolkit and clinical educational package.

Barriers to Informed Decision-Making

The importance of informed decision-making for labour and birth is clear; however, in many cases practice has not caught up with the evidence. Women face limited care options (32) and a scarcity of balanced information regarding the available choices for labour and birth (28) (32). Identifying barriers to the process of informed decision-making is an important step towards making critical system and practice changes. These barriers may include:



1. Incomplete, inaccurate, biased, or unavailable patient education resources.

- Availability of evidence-based, in-person prenatal education varies by geography (27).
- Online prenatal information and education has been a helpful tool for individuals to access prenatal information; however, the quality of online information is inconsistent (26).
- In cases where in-person programs are unavailable, and where there is limited or no access to web based-programs, prenatal information may be entirely unavailable.
- Online prenatal information and education provides the opportunity for knowledge acquisition but are limited in their ability to support the pregnant person to develop the coping skills necessary to work with labour pain.
- Hospital philosophies and policies aren't always consistent with evidence-based childbirth education (22). This may create challenges for women who enter the hospital to give birth, as their understanding of best practices may conflict with hospital policies or provider care preferences (22) (28). Collaboration between hospitals, physicians, midwives, nurses, and childbirth educators is important to ensure that evidence-based curriculum taught in classes is relevant for individuals when they enter hospital birthing units (22).
- Health literacy issues related to language and low literacy can create a greater health equity gap (29) (30).

2. Societal acceptance of labour and birth as an inherently dangerous event requiring medical intervention.

- Often maternity care culture focuses on fear and risks associated with childbirth. In addition, the routine use of medical technology and interventions during labour and birth limit women's awareness and knowledge of physiological childbirth (22) (32).
- Misrepresentation of pregnancy and childbirth by the media perpetuates the perception that technologically based maternity care (22) (26) (28) (31) and passive decision-making (26) (28) (31) are necessary.

- Cultural bias and lack of support for cultural values may lead to a greater health equity gap if there is conflict between the provider's and the patient's values and preferences.
- 3. Erosion of women's legal and ethical rights to informed consent.**
- Women often unknowingly delegate decision-making for their care to their HCPs which may result in a decision more congruent with the HCP's values or motivations (26). The deferral of decision-making to HCPs can erode the right to informed consent.
 - In addition, low health literacy may lead to acceptance of HCP's preferences without question (16). It can be assumed that for those often marginalized, a greater health equity gap may be created.
 - Informed consent is a fundamental principle of health care; requiring more than a signature on a consent form (22). Before an individual can make an informed decision to provide or refuse consent, the HCP must share information about the benefits, risks and alternatives of any proposed intervention (22). If this information is not provided comprehensively, consent will not be truly informed.
 - A woman's right to informed consent "is rarely talked about but is critical information that every pregnant woman should know" (7).
- 4. Obstacles to meaningful conversations between HCPs and pregnant individuals about their specific needs and preferences.**
- Obstetrical prenatal care visits are often short (22), on average 5-10 minutes (26), with the majority of time spent completing the medical checklist of physical assessment measurements (26).
 - Cultural and language barriers can hinder effective communication creating additional health equity gaps (29) (30).
- 5. Continued use of non-evidence-based practices in maternity care settings (24).**
- Non-evidence-based practices may not benefit the patient and may lead to additional interventions, increasing risks for both mother and baby. Options that pose less risk and improve outcomes are often not used (32), such as non-pharmacological pain management methods and intermittent auscultation of fetal heart (22) (33).
 - Allowing labour to start on its own instead of labour induction, planned vaginal birth after caesarean instead of repeat caesarean sections, and multidisciplinary internal quality assessment audits have the potential for decreasing caesarean section rates (33).
- 6. Policies and practices that lead to non-adherence to individuals' informed decisions.**
- Institutional policies and caregiver practices often take priority over an individual's informed choice, even when their choice aligns with best practice (28).

- A randomized controlled trial of a decision aid by Shorten et al. (2005) found that decision aids improved knowledge and decreased decisional conflict, but there was little evidence that these informed decisions led to the patient's informed choice actually happening. Work is needed "to enhance women's power in decision-making within the doctor-patient relationship" to ensure patient preferences are translated into practice (34 p. 252).

7. Challenges relating to implementing decision aids into practice.

- Barriers to HCPs implementing decision aids into practice have been organized into three categories; readiness, willingness, and ability (35). Further exploration of the individual barriers within each of these categories, as well as possible solutions, is needed to ensure uptake and long-term use of decision aids in practice (35).
- Despite the evidence about the value of decision aids, few are available specifically for labour and birth interventions.

Conclusions

Physiological labour and birth has significant benefits that optimize the lifelong health and wellbeing of mothers and infants. From a public health perspective, this is a key upstream health promotion strategy for the prevention of poor health outcomes. With the provincial government's focus on a low-risk birth strategy, investing in initiatives that support and promote physiological labour and birth is opportune. OPHA believes that all HCPs, including public health practitioners, play a vital role in assisting mothers to make informed decisions regarding interventions for labour and birth and understanding the importance of preserving the physiological processes of labour and birth as much as possible. To properly assist individuals in making informed health decisions, it is imperative that they receive accessible information based on current evidence and best practice.

When circumstances require that medical intervention options be considered, the HCP can promote informed decision-making by using decision aids and practicing in accordance with the guidelines provided in Step 1 of the IMBCI:

“Treat every woman with respect and dignity, fully informing and involving her in decision-making about care for herself and her baby in language that she understands, and providing her the right to informed consent and refusal” (19).

To reduce health equity gaps within the health care system, all individuals need to be given the opportunity to make informed health decisions and be supported in the informed decisions they make. Furthermore, to help families make truly informed decisions that align with their values and preferences, HCPs need to be knowledgeable about and comfortable discussing the long-term health benefits of physiological labour and birth, in addition to the benefits, risks, and alternatives of any medical intervention.

Public health currently provides prenatal education, skill-building, and health promotion for expectant individuals and families across Ontario. As a result, public health should continue providing prenatal education as a universal strategy to promote lifelong health and well-being, incorporating information and skill building related to informed decision-making and supporting physiological labour and birth.

Through advocating for access to consistent, evidence-based information necessary for informed decisions about labour and birth, public health has been helping to shift the dialogue from an illness model to one that supports wellness. This aligns with the OPHA RHWG's focus on promotion of wellness and a provincial focus on patient-centred care. Furthermore, investing in informed decision-making and skill-building for working with the pain of labour and birth can contribute to the sustainability of the health care system by reducing maternity care costs and improving long-term health outcomes.

Recommendations

The following recommendations address the identified barriers and challenges and are proposed to support, promote, and protect physiological labour and birth and informed decision-making in Ontario:

1. Implement IMBCI within all birthing facilities.
2. Develop and increase access to credible labour and birth decision aids for HCPs and birthing families.
3. Develop and implement profession-specific best practice guidelines that support, promote, and protect physiological labour and birth and informed decision-making for all professions that support birthing families (e.g., SOGC, AOM, Registered Nurses' Association of Ontario).
4. Include public health representation at provincial level policy planning and implementation related to low-risk birth in Ontario. (e.g., PCMCH Low Risk Maternal-Newborn Strategy).
5. Include labour and birth in the OPHS and its guidelines to support:
 - a) The integration of information and skills related to physiological labour and birth and making informed decisions in public health prenatal education classes, social media, and social marketing strategies.
 - b) Advocacy and policy work related to implementation of best practice for physiological labour and birth and informed decision-making.
6. Include content about the importance of physiological labour and birth and making informed decisions in all HCP educational curriculums.
7. Increase collaboration between public health and hospital HCP partners to:
 - a) Enhance practitioners' skills to support labouring individuals with less intervention and better facilitate informed decisions (e.g., [Champlain Maternal Newborn Regional Program Labour Support Workshop](#)).
 - b) Increase consistency of messaging related to the importance of physiological labour and birth and supporting informed decision-making.
8. Increase access to midwifery care in Ontario.
9. Increase availability of credible online information for the public regarding the importance of physiological labour and birth and making informed decisions.
10. Consider the role the hospital built environment may play on the use of interventions when designing or renovating birthing facilities in Ontario.
11. Continue developing a comprehensive list of Choosing Wisely recommendations for labour and birth interventions.

OPHA Resolution on Informed Decision-Making for Labour & Birth

WHEREAS informed consent is a fundamental right of birthing families;

WHEREAS in order to make a truly informed decision, birthing families require knowledge of both the benefits and risks of the available options and alternatives;

WHEREAS HCPs are unique in their obligation to be an objective source of current, evidence-based information for the public that is reflective of best practice;

WHEREAS there is a growing body of evidence regarding the importance of physiological labour and birth; with evidence indicating both short- and long-term health benefits for mother and infant including the optimization of infant attachment and breastfeeding;

WHEREAS there are a limited number of medically determined evidence-based reasons to interrupt the process of physiological labour and birth;

WHEREAS HCPs need knowledge, skill, and support for facilitating and supporting informed decision-making regarding labour and birth interventions;

WHEREAS the financial cost of unnecessary medical intervention for labour and birth adds an increased burden to our health care system.

Be it resolved

THAT OPHA endorse the IMBCI and uphold the principles of informed decision-making and physiological labour and birth as written within when advising the MOHLTC on future protocols about labour and birth;

That OPHA advocate for the development of high quality, user friendly decision aid tools for all labour and birth interventions;

THAT OPHA collaborate with other professional groups and constituent societies to advocate for the inclusion of informed decision-making and decision aid tools in labour and birth practice guidelines, positions, and policies;

THAT OPHA collaborate with other professional groups and constituent societies to advocate for all maternity models of care to support, promote, and protect physiological labour and birth in practice guidelines, positions, and policies;

THAT OPHA advocate for inclusion of informed decision-making and supporting, promoting, and protecting physiological labour and birth into the OPHS and its guidelines;

THAT OPHA encourage and support public health units to address informed decision-making and physiological labour and birth by providing this position paper and recommending resources to consider in program planning;

THAT OPHA advocate for the development of knowledge, skill, and competency of health professionals within educational curricula and continuing education; addressing the importance of physiological labour and birth and the risks of unnecessary medical interventions in keeping with best practices for labour management and support.

THAT OPHA advocate for the development of knowledge, skill, and competency of health professionals within educational curricula and continuing education related to informed decision-making.

THAT OPHA advocate for the development of effective consumer engagement resources to inform individuals about the importance of physiological labour and birth and informed decision-making.

THAT OPHA advocate for increased capacity for and accessibility of midwifery care in Ontario.

Implementation Strategy

The resolution will be implemented by the OPHA RHWG with the cooperation of the OPHA Board of Directors and Executive where appropriate and as required.

Copies of the position paper and accompanying resolution will be sent to the following:

- Chief Medical Officer of Health for Ontario
- Ontario Minister of Health and Long-Term Care
- Ontario Minister of Children, Community and Social Services
- Public Health Agency of Canada
- Association of Local Public Health Agencies
- Provincial Council for Maternal and Child Health
- Health Canada
- Association of Ontario Midwives
- Society of Obstetricians and Gynaecologists of Canada
- College of Family Physicians Canada
- Ontario College of Family Physicians
- Registered Nurses' Association of Ontario
- Breastfeeding Committee for Canada
- BFI Ontario
- Baby-Friendly Initiative (BFI) Strategy for Ontario
- Other relevant organizations

Opportunities for enhancing the knowledge of the public related to informed decision-making and the importance of physiological labour and birth will be sought.

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Appendix A

International MotherBaby Childbirth Organization: MotherBaby Rights (8)

1. You and your baby have the right to be treated with respect and dignity.
2. You have the right to be involved in and fully informed about care for yourself and your baby
3. You have the right to be communicated with in a language and in terminology that you understand.
4. You have the right to informed consent and to informed refusal for any treatment, procedure or other aspect of care for yourself and your baby.
5. You and your baby have the right to receive care that enhances and optimizes the normal processes of pregnancy, birth and postpartum under a model known as the midwifery (or motherbaby) model of care.
6. You and your baby have the right to receive continuous support during labour and birth from those you choose.
7. You have the right to be offered drug-free comfort and pain-relief measures during labour and to have the benefits of these measures and the means of their use explained to you and to your companions.
8. You and your baby have the right to receive care consisting of evidence-based practices proven to be beneficial in supporting the normal physiology of labour, birth and postpartum.
9. You and your baby have the right to receive care that seeks to avoid potentially harmful procedures and practices.
10. You have the right to receive education concerning a healthy environment and disease prevention.
11. You have the right to receive education regarding responsible sexuality, family planning and women's reproductive rights, as well as access to family planning options.
12. You have the right to receive supportive prenatal, intrapartum, postpartum and newborn care that addresses your physical and emotional health within the context of family relationships and your community environment.
13. You and your baby have the right to evidenced-based emergency treatment for life-threatening complications.
14. You and your baby have the right to be cared for by a small number of caregivers who collaborate across disciplinary, cultural and institutional boundaries and who provide consultations and facilitate transfers of care when necessary to appropriate institutions and specialists.

15. You have the right to be made aware of and to be shown how to access available community services for yourself and your baby.
16. You and your baby have the right to be cared for by practitioners with knowledge of and the skills to support breastfeeding.
17. You have the right to be educated concerning the benefits and the management of breastfeeding and to be shown how to breastfeed and how to maintain lactation, even if you and your baby must be separated for medical reasons.
18. You and your baby have the right to initiate breastfeeding within the first 30 minutes after birth, to remain together skin-to-skin for at least the first hour, to stay together 24 hours a day and to breastfeed on demand.
19. Your baby has the right to be given no artificial teats or pacifiers and to receive no food or drink other than breast milk, unless medically indicated.
20. You have the right to be referred to a breastfeeding support group, if available, upon discharge from the birthing facility.

Appendix B

10 Steps of the International MotherBaby Childbirth Initiative (IMBCI) (77)

The 10 Steps of the MotherBaby Childbirth Initiative are based on the results of best available evidence about the safety and effectiveness of specific tests, treatments, and other interventions for mothers and babies. “Safe” means that care is provided through evidence-based practices that minimize the risk of error and harm and support the normal physiology of labour and birth.

“Effective” means that the care provided achieves expected benefits and is appropriate to the needs of the pregnant woman and her baby based on sound evidence. Safe and effective care of the MotherBaby provides the best possible health outcomes and benefits with the most appropriate and conservative use of resources and technology.

Step 1 - Treat every woman with respect and dignity, fully informing and involving her in decision-making about care for herself and her baby in language that she understands, and providing her the right to informed consent and refusal.

Step 2 - Possess and routinely apply midwifery knowledge and skills that enhance and optimize the normal physiology of pregnancy, labour, birth, breastfeeding, and the postpartum period.

Step 3 - Inform the mother of the benefits of continuous support during labour and birth, and affirm her right to receive such support from companions of her choice, such as fathers, partners, family members, doulas, or others. Continuous support has been shown to reduce the need for intrapartum analgesia, decrease the rate of operative births and increase mothers’ satisfaction with their birthing experience.

Step 4 - Provide drug-free comfort and pain-relief methods during labour, explaining their benefits for facilitating normal birth and avoiding unnecessary harm, and showing women (and their companions) how to use these methods, including touch, holding, massage, labouring in water, and coping/relaxation techniques. Respect women’s preferences and choices.

Step 5 - Provide specific evidence-based practices proven to be beneficial in supporting the normal physiology of labour, birth, and the postpartum period, including:

- Allowing labour to unfold at its own pace, while refraining from interventions based on fixed time limits and utilizing the partogram to keep track of labour progress.
- Offering the mother unrestricted access to food and drink as she wishes during labour.
- Supporting her to walk and move about freely and assisting her to assume the positions of her choice, including squatting, sitting, and hands-and-knees, and providing tools supportive of upright positions.

- Techniques for turning the baby in utero and for vaginal breech delivery.
- Facilitating immediate and sustained skin-to-skin MotherBaby contact for warmth, attachment, breastfeeding initiation, and developmental stimulation, and ensuring that MotherBaby stay together.
- Allowing adequate time for the cord blood to transfer to the baby for the blood volume, oxygen, and nutrients it provides.
- Ensuring the mother's full access to her ill or premature infant, including kangaroo care, and supporting the mother to provide her own milk (or other human milk) to her baby when breastfeeding is not possible.

Step 6 - Avoid potentially harmful procedures and practices that have no scientific support for routine or frequent use in normal labour and birth. When considered for a specific situation, their use should be supported by best available evidence that the benefits are likely to outweigh the potential harms and should be fully discussed with the mother to ensure her informed consent.

- shaving
- enema
- sweeping of the membranes
- artificial rupture of membranes
- medical induction and/or augmentation of labour
- repetitive vaginal exams
- withholding food and water
- keeping the mother in bed
- intravenous fluids (IV)
- continuous electronic fetal monitoring (cardiotocography)
- insertion of a bladder catheter
- supine or lithotomy (legs-in-stirrups) position
- caregiver-directed pushing
- fundal pressure (Kristeller)
- episiotomy
- forceps and vacuum extraction
- manual exploration of the uterus
- primary and repeat caesarean section
- suctioning of the newborn
- immediate cord clamping
- separation of mother and baby

Step 7 - Implement measures that enhance wellness and prevent emergencies, illness, and death of MotherBaby:

- Provide education about and foster access to good nutrition, clean water, and a clean and safe environment.
- Provide education in and access to methods of disease prevention, including malaria and HIV/AIDS prevention and treatment, and tetanus toxoid immunization.
- Provide education in responsible sexuality, family planning, and women's reproductive rights, and provide access to family planning options.
- Provide supportive prenatal, intrapartum, postpartum, and newborn care that addresses the physical and emotional health of the MotherBaby within the context of family relationships and community environment.

Step 8 - Provide access to evidence-based skilled emergency treatment for life-threatening complications. Ensure that all maternal and newborn HCPs have adequate and ongoing training in emergency skills for appropriate and timely treatment of mothers and their newborns.

Step 9 - Provide a continuum of collaborative maternal and newborn care with all relevant HCPs, institutions and organizations. Including traditional birth attendants and others who attend births out of hospital in this continuum of care. Specifically, individuals within institutions, agencies and organizations offering maternity-related services should:

- Collaborate across disciplinary, cultural, and institutional boundaries to provide the MotherBaby with the best possible care, recognizing each other's particular competencies and respecting each other's points of view.
- Foster continuity of care during labour and birth for the MotherBaby from a small number of caregivers.
- Provide consultations and transfers of care in a timely manner to appropriate institutions and specialists.
- Ensure that the mother is aware of and can access available community services specific to her needs and those of her newborn.

Step 10 - Strive to achieve the 10 Steps to Successful Breastfeeding as described in the WHO/UNICEF Baby-friendly Hospital Initiative:

1. Have a written breastfeeding policy that is routinely communicated to all health care staff.
2. Train all health care staff in skills necessary to implement the policy.
3. Inform all pregnant women about the benefits and management of breastfeeding.
4. Help mothers initiate breastfeeding within a half-hour of birth. Place babies in skin-to-skin contact with their mothers immediately following birth for at least an hour and encourage mothers to recognize when their babies are ready to breastfeed, offering if needed.
5. Show mothers how to breastfeed and how to maintain lactation, even if they should be separated from their infants.

6. Give newborn infants no food or drink other than breastmilk, unless medically indicated.
7. Practice “rooming in”-- allow mothers and infants to remain together 24 hours a day.
8. Encourage breastfeeding on demand.
9. Give no artificial teats or pacifiers (also called dummies or soothers) to breastfeeding infants.
10. Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic

Appendix C

Hormonal Physiology of Childbearing Recommendations (3 p. 170)

The following recommendations for education, policy, practice, and research arise from the synthesis presented here. Care practice recommendations below are intended to apply whenever safely possible.

To optimize hormonal physiology in childbearing:

1. Educate all maternity care providers in the hormonal physiology of childbearing.
2. Use effective policies and quality improvement strategies to foster consistent access to physiologic childbearing.
3. Strengthen and increase access to care models that foster physiologic childbearing and safely limit use of maternity care interventions.
4. Use effective consumer engagement strategies to inform women about physiologic childbearing and involve them in related aspects of their care.
5. Provide prenatal care that reduces stress and anxiety in pregnant women.
6. Foster the physiologic onset of labour at term.
7. With hospital birth, encourage admission in active labour.
8. Foster privacy and reduce anxiety and stress in labour.
9. Make nonpharmacologic comfort measures for pain relief routinely available, and use analgesic medications sparingly.
10. Make nonpharmacologic methods of fostering labour progress routinely available, and use pharmacologic methods sparingly.
11. Promote continuous support during labour.
12. Foster spontaneous vaginal birth and avoid unneeded cesareans.
13. Support early and unrestricted skin-to-skin contact after birth between mother and newborn.
14. Support early, frequent, and ongoing breastfeeding after birth.
15. Identify and carry out priority research into hormonal physiology of childbearing, and routinely incorporate this perspective in maternity care research.