



POSITION STATEMENT

Induction of Labor

It is the position of the American College of Nurse Midwives that:

- Spontaneous labor offers substantial benefit to the mother and her newborn. Disruption of this process without an evidence-based medical indication represents a risk for potential harm.
- Induction of labor should be offered to women only for medical indications that are supported by scientific evidence which indicate the benefit outweighs the risk of induction of labor, including the potential risks of prematurity.
- Informed consent prior to labor induction should include discussion of the normal processes of labor and the benefits and potential harms of induction, including the optimal method to use during the induction process.
- Development of the state of the science regarding the use of obstetric interventions for healthy childbearing women should continue, focusing on both the health outcomes associated with induction of labor and the context in which the decision for induction of labor occurs between health care providers and childbearing women.
- Through a process of education and discussion, midwives can assist childbearing women to make informed decisions regarding induction of labor.

Background

Rates of induction of labor are increasing in the United States. The Agency for Healthcare Research and Quality (Russo, Wier, & Steiner, 2009) recently reported that as many as 51.4% of childbearing women experience an induction of labor, for medically and non-medically indicated reasons.

Evidence-based medically indicated inductions of labor offer an opportunity to improve maternal and infant health outcomes when selected complications of pregnancy are present (Mozurkewich et al., 2009). Evidence-based medically indicated inductions of labor are generally considered within a risk-benefit decision making process, in which the risks of the medical condition worsening or causing harm are balanced against the risks of an induction of labor, including consideration of the gestational age of the fetus.

In contrast, induction of labor without an evidence-based medical indication – often termed elective induction – is not an evidence-based practice and represents a misapplication of obstetric interventions (Mozurkewich et al., 2009; Sakala and Corry, 2008).

Elective inductions have been cited as contributing to the recent increase in late pre-term births (Davidoff et al., 2006; Declercq et al., 2006a; March of Dimes, 2009) and cesarean sections

(Declercq et al., 2007; Kaufman, Bailit, & Grobman, 2002; March of Dimes, 2009), prompting policy statements discouraging the practice of inductions of labor prior to 39 weeks gestation (March of Dimes 2009; ACOG, 2009). Additionally, labor induction interferes with the normative physiological processes of spontaneous labor, the full extent of which is not yet known nor well understood (Carter, 2003; Wahl, 2004). There is also insufficient research to determine the full impact of labor induction on other outcomes such as fetal brain development near term (Kinney, 2006). Recent evidence also suggests that some critical processes, such as lactogenesis, attachment, and parenting, are interrupted by induction of labor, though the extent is uncertain.

The context in which elective inductions of labor are performed raises ethical concerns and merits further scrutiny. In some instances, maternity care providers have reported that elective inductions of labor are primarily performed based on maternal request, for convenience or other non-medically indicated reasons (AHQ, 2009). In other instances, women report that maternity care providers are encouraging or pressuring them to induce their labor in the absence of medical indications (Declercq, Sakala, Corry & Applebaum, 2006).

The decision to induce labor requires consideration of the potential for harm compared to possible benefits, including short- and long-term implications for the woman and her baby, as well as the risk of iatrogenic prematurity if an induction is conducted prior to 39 weeks of gestation without verification of lung maturity. When induction of labor is medically necessary, careful evaluation of the need for cervical ripening should be considered to improve the opportunity for success and limit the risk of cesarean delivery as a consequence of a failed induction (Ramsey, Ramin & Ramin, 2000; AHRQ, 2009).

References

- Agency for Healthcare Research and Quality. (2009). *Maternal and neonatal outcomes of elective induction of labor*. AHRQ Evidence Report/Technology Assessment No. 176. Rockville, MD. Available at <http://www.ahrq.gov/downloads/pub/evidence/pdf/elindlabor/eilabor.pdf>.
- Alexander, J., McIntire, D., & Levino, K. (2000). "Forty weeks and beyond: Pregnancy outcomes by weeks of gestation." *Obstet Gynecol*, 96(2):291-293
- American College of Obstetricians and Gynecologists [ACOG]. (2009). *Induction of labor*. ACOG Practice Bulletin No. 10 Washington DC: American College of Obstetricians and Gynecologists. (UPDATED VERSION)
- American College of Obstetricians and Gynecologists [ACOG], (2004). Management of Postterm Pregnancy. ACOG Practice Bulletin No. 55. Washington DC: American College of Obstetricians and Gynecologists.
- Carter CS. (2003). Developmental consequences of oxytocin. *Physiol Behav*, 79(3), 383-97.

- Declercq, E.M., Barger, M., Cabral, H.J., Evans, S.R., Kotelchuk, M., Simon, C., Weiss, J., and Heffner, L.J. (2007). Maternal outcomes associated with planned primary cesarean births compared with planned vaginal births. *Obstetrics & Gynecology*, 109(3):669-77.
- Declercq, E.F., Menacker, and MacDorman, M. (2006a). Maternal risk profiles and primary cesarean rate in the United States. *American Journal of Public Health*, 96(5):867-72.
- Declercq E, Sakala C, Corry M, Applebaum S. (2006). *Listening to mothers II: Report of the second national U.S. survey of women's childbearing experiences*. New York: Childbirth Connection.
- Eaton, J. (2006). Physiology of fetal lung fluid clearance and the effect of labor. *Seminar Perinatol*, 30 (1): 34-43.
- Gabbe, S., Niebyl, J., Simpson, J., (2007). *Obstetrics: Normal and Problem Pregnancies 5th Ed.* Philadelphia, PA: Churchill Livingstone.
- Gulmezoglu, A.M., Crowther, C.A., & Middleton, P. (2006). Induction of labour for improving birth outcomes at or beyond term. *Cochrane Database Syst Rev*, (4):CD004945.
- Heffner, I., Elkin, E., & Fretts, R. (2003). Impact of labor induction, gestational age, and maternal age on Cesarean delivery rates. *Obstet Gynecol*, 102(2): 287-93.
- Heimstad, R., Skogvell, E., Mattsson, L. A., Johansen, O. J., Eik-Nes, S. H., & Salvesen, K. A. (2007). Induction of labor or serial antenatal fetal monitoring in post term pregnancy: a randomized controlled trial. *Obstet Gynecol*, 109(3), 609-17.
- Irion O, Bouvain M. Induction of labour for suspected fetal macrosomia. (1998) *Cochrane Database of Systematic Reviews 2*. CD000938.
- Jain, L., and Eaton, D., (2006) Physiology of fetal lung fluid clearance and the effect of labor. *Seminar Perinatol*, 30:34-43.
- Kaufman, K.E., Balit, J.L, and Grobman, W. (2002). Elective Induction: An Analysis of Economic and Health Consequences. *American Journal of Obstetrics & Gynecology*, 187(4):858-63.
- Kinney, H. (2006). The near term (late preterm) human brain and risk for periventricular leukomalacia: A review. *Seminar Perinatol*, 30, 81-88.
- March of Dimes. (2009). Pregnancy & Newborn Health Education Center: Inducing Labor. Available at http://www.marchofdimes.com/pnhec/240_20202.asp.
- Maslow S., & Sweeney L. (2000). Elective induction of labor as a risk factor for cesarean delivery among low risk women at term. *Obstet Gynecol*, 95(6 Pt 1):917-22
- Moore, L.E., & Rayburn, W.F. (2006). Elective induction of labor. *Clinical Obstetrics & Gynecology*, 49(3), 698-704.
- Ramsey, P.S., Ramin, K.D., & Ramin, S.M. (2000). Labor induction. *Curr Opin Obstet Gynecol*, 12, 463-473.

Mozurkewich, E., Chilimigras, J., Koepke, E., Keeton, K., King, V.J. (2009) Indications for induction of labour: a best evidence review. *BJOG* 116:626-636.

Russo, C.A., Wier, L., & Steiner, C. (2009). *Hospitalizations related to childbirth, 2006*. HCUP statistic brief #71. Agency for Healthcare Research and Quality: Rockville, MD

Sakala, C. & Corry, M.P. (2008). *Evidence-based maternity care: What it is and what it can achieve*. New York: Childbirth Connection, Reforming States Group, and Milbank Memorial Fund.

Vrouenraets, F., Roumen, F., Dehing C., van den Akker, E., Arts, M., & Scheve, E., (2005). Bishop score and risk of Cesarean delivery after induction of labor in nulliparous women. *Obstet Gynecol*, 105(4):690-709

Wahl RU. (2004). Could oxytocin administration during labor contribute to autism and related behavioral disorders?--A look at the literature. *Med Hypotheses*, 63(3), 456-60.

Consumer information:

Childbirth Connection

http://www.childbirthconnection.org/pdfs/LTMII_pressrelease.pdf

March of Dimes

http://www.marchofdimes.com/pnhec/240_20202.asp

Agency for Health Care Research on Quality <http://www.ahrq.gov/clinic/tp/eiltp.htm>

Source: Division of Standards and Practice

Approved by the Board of Directors, October 2010