



Why Is the National U.S. Cesarean Section Rate So High?

More recent studies reaffirm earlier World Health Organization recommendations about optimal rates of cesarean section. The best outcomes for women and babies appear to occur with cesarean section rates of 5% to 10%. Rates above 15% seem to do more harm than good (Althabe and Belizan 2006).

The national U.S. cesarean section rate was 4.5% and near this optimal range in 1965 when it was first measured (Taffel et al. 1987). Since then, large groups of healthy, low-risk American women who have received care that enhanced their bodies' innate capacity for giving birth have achieved 4% cesarean section rates and good overall birth outcomes (Johnson and Daviss 2005, Rooks et al. 1989). However, the national cesarean section rate is much higher and, after more than a decade of increasing steadily, has recently experienced the first dip since the mid-1990s. With the 2010 rate at 32.8% (Hamilton et al. 2011), about one mother in three now gives birth by cesarean section.

Most mothers are healthy and have good reason to anticipate uncomplicated childbirth. Cesarean section is major surgery and increases the likelihood of many short- and longer-term adverse effects for mothers and babies (some of these harms are listed below). There are clear, authoritative recommendations for more judicious use of this procedure (U.S. Department of Health and Human Services 2000). So why is a pregnant woman's chance of having a cesarean section so high?

Three Myths about the Cesarean Section Rate

To explain the high cesarean section rate, health professionals and journalists often point the spotlight on mothers themselves. Many assume that leading factors in the trend are: 1) more and more women are asking for c-sections that have no medical rationale, 2) the number of women who genuinely need a cesarean is increasing, and 3) liability pressure is driving rates up. None appears to account for a large portion of the growth in the cesarean rate since 1996.

Despite a lot of talk about "maternal request" cesareans, few women appear to be taking this step. Childbirth Connection's national *Listening to Mothers* survey of women who gave birth in hospitals in 2005 was the first study to poll women about these decisions in the United States. When we asked mothers who had had a cesarean why they had it and who had initiated it, just one woman among nearly 1600 survey participants reported that she had had a planned first c-section with no medical reason at her own request (Declercq et al. 2006a). Those who have looked at this question in other countries have found similar results (McCourt et al. 2007).

Many have also pointed to changes in the population of childbearing women, such as more older women who have developed medical conditions and more women with extra challenges of multiple births. While there are some overall changes in this population, researchers have found that cesarean section rates have gone up for all groups of birthing women, regardless of age, the number of babies they are having, the extent of health problems, their race/ethnicity, or other breakdowns (Declercq et al. 2006b). In other words, there is a change in practice standards that reflects an increasing willingness on the part of professionals to follow the cesarean path under all conditions. In fact, one quarter of the *Listening to Mothers* survey participants who had cesareans reported that they had experienced pressure from a health professional to have a cesarean (Declercq et al. 2006a).

Finally, fear of malpractice liability is frequently cited as a major driver of the extensive use of cesarean section. However, a series of studies have examined this question and have concluded that the role of liability pressure is modest at best and overpowered by the role of variation in professional practice style (e.g., Baicker et al. 2006).

Reasons for the High Cesarean Section Rate

The following interconnected factors appear to contribute to the high cesarean rate.

Low priority of enhancing women's own abilities to give birth. Care that supports physiologic labor, such as providing the midwifery model of care, providing continuous support during labor through a doula, and using hands-to-belly movements to turn a breech (buttocks- or feet-first) baby to a head-first position, reduces the likelihood of a cesarean section. The decision to switch to cesarean is often made when caregivers could use watchful waiting, positioning and movement, comfort measures, oral nourishment and other approaches to facilitating labor progress. The cesarean section rate could be greatly lowered through such care.

Side effects of common labor interventions. Current research suggests that some labor interventions make a c-section more likely. For example, labor induction among first-time mothers when the cervix is not soft and ready to open appears to increase the likelihood of cesarean birth. Continuous electronic fetal monitoring has been associated with greater likelihood of a cesarean. Having an epidural early in labor or without a high-dose boost of synthetic oxytocin ("Pitocin") seems to increase the likelihood of a c-section, and epidural analgesia appears to increase the likelihood of cesareans performed in response to "fetal distress."

Refusal to offer the informed choice of vaginal birth. Many health professionals and/or hospitals are unwilling to offer the informed choice of vaginal birth to women in certain circumstances. *The Listening to Mothers* survey found that many women with a previous cesarean would have liked the option of a vaginal birth after cesarean (VBAC) but did not have it because health professionals and/or hospitals were unwilling (Declercq et al. 2006a). More than nine out of ten women with a previous cesarean section are having repeat cesareans in the United States. Similarly, few women with a fetus in a breech position have the option to plan a vaginal birth.

Casual attitudes about surgery and variation in professional practice style. Our society is more tolerant than ever of surgical procedures, even when not medically needed. This is reflected in the comfort level that many health professionals, insurance plans, hospital administrators and women themselves have with cesarean trends. Further, the cesarean rate varies broadly across states and areas of the country, hospitals, and maternity professionals. Most of this variation is due to "practice style" rather than differences in the needs and preferences of childbearing women (Baicker et al. 2006, Clark et al. 2007).

Limited awareness of harms that are more likely with cesarean section. Cesarean section is a major surgical procedure that increases the likelihood of many types of harm for mothers and babies in comparison with vaginal birth. Short-term harms for mothers include increased risk of infection, surgical injury, blood clots, emergency hysterectomy, intense and longer-lasting pain, going back into the hospital and poor overall functioning. Babies born by cesarean section are more likely to have surgical cuts, breathing problems, difficulty getting breastfeeding going, childhood-onset diabetes, and asthma in childhood and beyond. Perhaps due to the common surgical side effect of "adhesion" formation, cesarean mothers are more likely to have ongoing pelvic pain, to experience bowel blockage, to be injured during future surgery, and to have future infertility. Of special concern after cesarean are various serious conditions for mothers and babies that are more likely in future pregnancies, including ectopic pregnancy, placenta previa, placenta accreta, placental abruption, and uterine rupture (Childbirth Connection 2006).

Incentives to practice in a manner that is efficient for providers

Many health professionals are feeling squeezed by tightened payments for services and increasing practice expenses. The flat "global fee" method of paying for childbirth does not provide any extra pay for providers who patiently support a longer vaginal birth. Some payment schedules pay more for cesarean than vaginal birth. A planned cesarean section is an especially efficient way for professionals to organize hospital work, office work and personal life. Average hospital charges are much greater for cesarean than vaginal birth, and may offer hospitals greater scope for profit.

All of these factors contribute to a current national cesarean section rate of over 30%, despite evidence that a rate of 5% to 10% would be optimal.

References

Althabe F, Belizan JF. Cesarean section: The paradox. *The Lancet* 2006;368:1472-3.

Baicker K, Buckles KS, Chandra A. Geographic variation in the appropriate use of cesarean delivery. *Health Aff* 2006;35:w355-w367.

Childbirth Connection. *What Every Pregnant Woman Should Know About Cesarean Section*, 2nd ed. New York: Childbirth Connection, December 2006. Available at <http://www.childbirthconnection.org/cesareanbooklet/>.

Clark SL, Belfort MA, Hankins GDV, Meyers JA, Houser FM. Variation in the rates of operative delivery in the United States. *Am J Obstet Gynecol* 2007;196(6):526.e1-526.e5.

Declercq ER, Sakala C, Corry MP, Applebaum S. *Listening to Mothers II: The Second National U.S. Survey of Women's Childbearing Experiences*. New York: Childbirth Connection, October 2006a. Available at <http://www.childbirthconnection.org/listeningtomothers/>.

Declercq E, Menacker F, MacDorman M. Maternal risk profiles and the primary cesarean rate in the United States, 1991-2002. *Am J Public Health* 2006b;96:867-72.

Hamilton BE, Martin JA, Ventura SJ. Births: preliminary data for 2010. *Natl Vital Stat Rep* 2011;60(2):1-25. Available at www.cdc.gov/nchs/data/nvsr/nvsr60/nvsr60_02.pdf.

Johnson KC, Daviss B-A. Outcomes of planned home births with certified professional midwives: Large prospective study in North America. *BMJ* 2005;220:1416. Available at <http://www.bmj.com/cgi/content/full/330/7505/1416>.

McCourt C, Weaver J, Statham H, Beake S, Gamble J, Creedy DK. Elective cesarean section and decision making: A critical review of the literature. *Birth* 2007;34:65-79. Available at <http://onlinelibrary.wiley.com/doi/10.1111/j.1523-536X.2006.00147.x/full>.

Rooks JP, Weatherby NL, Ernst EK, Stapleton S, Rosen D, Rosenfield A. Outcomes of care in birth centers: The National Birth Center Study. *New Engl J Med* 1989;321:1804-11.

Taffel SM, Placek PJ, Liss T. Trends in the United States cesarean section rate and reasons for the 1980-85 rise. *Am J Public Health* 1987;77:955-9.

U.S. Department of Health and Human Services. Office of Disease Prevention and Health Promotion. Maternal, infant, and child health. Healthy People 2020. Washington, DC: 2010. Available at <http://healthypeople.gov/2020/topicsobjectives2020/overview.aspx?topicid=26#>.