

Cesarean Section Rates in the United States

Year	Total Number Cesareans	Total Rate	Primary Rate	Primary Rate (Revised 2004)	Primary Rate (Revised 2005)	Repeat Rate	Total Number VBACs	VBAC Rate	VBAC Rate (Revised 2004)	VBAC Rate (Revised 2005)
2006#		31.1								
2005	1,248,815	30.3	20.3	23.4	24.3	N/A	N/A	7.9	12.0	10.1
2004	1,190,210	29.1	20.6			37.8	45,838	9.2		
2003	1,119,388	27.5	19.1			38.8	51,602	10.6		
2002	1,043,846	26.1	18.0			39.2	59,248	12.6		
2001	978,411	24.4	16.9			38.5	74,048	16.4		
2000	923,991	22.9	16.1			37.5	89,978	20.6		
1999	862,086	22.0	15.5			37.1	97,680	23.4		
1998	825,870	21.2	14.9			37.0	108,903	26.3		
1997	799,033	20.8	14.6			37.1	112,145	27.4		
1996	797,119	20.7	14.6			36.8	116,045	28.3		
1995	806,722	20.8	14.7			36.8	112,439	27.5		
1994	830,517	21.2	14.9			37.3	110,341	26.3		
1993	861,987	21.8	15.3			37.4	103,581	24.3		
1992	888,622	22.3	15.6			37.6	97,549	22.6		
1991	905,077	22.6	15.9			37.1	90,690	21.3		
1990	914,096	22.7	16.0			37.1	84,299	19.9		
1989	826,955	22.8	16.1			36.8	71,019	18.9		
1988	966,000	24.7	17.5			36.3	50,000	12.6		
1987	929,000	24.4	17.4			35.3	36,000	9.8		
1986	905,000	24.1	17.4			34.3	29,000	8.5		
1985	854,000	22.7	16.3			34.6	21,000	6.6		
1980	596,000	16.5	12.1			29.9	6,000	3.4		
1975	327,000	10.4	7.8			27.1	2,000	2.0		
1970	205,000	5.5	4.2			25.2	1,000	2.2		

Contact:

Mary Hyde
Director
Pamela Van Hine
Reference Librarian
Jean Riedlinger
Reference Librarian
resources@acog.org

data is preliminary.

Primary rate is the number of 1st Cesarean Sections per 100 deliveries to women who did not have a previous Cesarean Section. For 2005 this data is broken down by states that have not adopted the 2003 revision (37), those who adopted in 2004 (7), and those that did so in 2005 (12).

Repeat rate is the proportion of all Cesarean Sections that are repeat cesareans.

VBAC rate is the rate/per 100 = number who had a Cesarean Section in the past and now had a successful vaginal delivery. For 2005 this data is broken down by states that have not adopted the 2003 revision (37), those who adopted in 2004 (7), and those that did so in 2005 (12).

Sources: : Cesarean Section Rates: 2006: 56(7), Figure 4. 2005: NVSR 56(6), Table D, Table 28. 2004: NVSR 55(1), Table 28. 2003: NVSR 54(2), Table 39. 2002: NVSR 52(10), Table 39. 2001: NVSR 51(2), Table 39. 2000: NVSR 50(5), Table 39. 1999: NVSR 49(1), Table 39. 1998: NVSR 48(3), Table 39. 1997: NVSR 47(18), Table 39. 1996: MVSR 46 (11 Supp), Table 39. 1995: MVSR 45 (11 Supp), Table 39. 1970-1985: MMWR 42 (15), Table 1.



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

Updated December 2012

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. After steeply increasing over more than a decade, it leveled off at 32.8% in 2010 and 2011 (Hamilton et al. 2012). So, 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). Why, then, is the cesarean rate 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 it began to rise in 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

characteristics (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 can account for just a fraction of the steep recent rise (Sakala et al. 2013). Further, this factor is 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, doula care providing continuous support during labor, 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. Quite a few cesareans are carried out because the fetus seems large, even though this estimate is often wrong and a cesarean has not been shown to offer benefits in this situation. The decision to switch to cesarean is often made during labor when caregivers could use watchful waiting, positioning and movement, comfort measures, oral nourishment and other approaches to facilitate comfort, rest, and labor progress. Providing more women with such care would lower the cesarean section rate.

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 and/or 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, and twins are increasingly born via planned cesarean section.

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 quite a bit 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 unintended surgical cuts, infection, blood clots, emergency hysterectomy, going back into the hospital, a challenging recovery, and death. Babies born by cesarean section are more likely to have breathing problems and to develop several chronic diseases: childhood-onset diabetes, allergies with cold-like symptoms, and asthma in childhood and beyond. Perhaps due to the common surgical side effect of scarring and "adhesion" formation, cesarean mothers are more likely to have ongoing pelvic pain and to have infertility in the future. Of special concern after cesarean are various serious conditions for mothers and babies that are more likely in future pregnancies. For mothers, these include ectopic pregnancy, placenta previa, placenta accreta, placental abruption, emergency hysterectomy, and uterine rupture. Babies in future pregnancies are more likely to need breathing help and have extended hospital stays. Preliminary research suggests that many other harms are more likely with cesarean section, and more studies are needed (Childbirth Connection 2012).

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. Even when payment is similar for both, a planned cesarean section is an especially efficient way for professionals to organize their hospital work, office work and personal life. Average hospital payments 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.