

FIGO good practice recommendations for cesarean delivery on maternal request: Challenges for medical staff and families

Diana Ramasauskaite¹ | Anwar Nassar² | Akaninyene Esemé Ubom³ |
Wanda Nicholson⁴ | on behalf of the FIGO Childbirth and Postpartum Hemorrhage
Committee*

¹Center of Obstetrics and Gynecology, Vilnius University Medical Faculty, Vilnius, Lithuania

²Department of Obstetrics and Gynecology, American University of Beirut Medical Center, Beirut, Lebanon

³Department of Obstetrics, Gynecology and Perinatology, Obafemi Awolowo University Teaching Hospitals Complex, Ile-Ife, Nigeria

⁴George Washington University Milken Institute of Public Health, Washington, District of Columbia, USA

Correspondence

Diana Ramasauskaite, Center of Obstetrics and Gynecology, Vilnius University Medical Faculty, M.K. Čiurlionio str. 21/27, Vilnius LT-03101, Lithuania.

Email: dianaramasauskaite@gmail.com

Abstract

Elective cesarean delivery on maternal request is a challenging topic of discussion for patients, their families, and clinicians. Efforts to reduce the rate of cesarean deliveries should include the proportion of cesarean deliveries at term that occur solely due to maternal request rather than a maternal or fetal indication. Additionally, clinicians should follow good clinical practice, which includes family counseling, discussions on the benefits and potential risks of elective cesarean delivery, timing of delivery, and ethical and legal considerations. Furthermore, there is the need for a sustained workforce of perinatal clinicians and staff trained in the appropriate technique and management of operative complications. This article reviews global rates of elective cesarean on maternal request and outlines FIGO's good practice recommendations for counseling expectant mothers and the conduct of elective cesarean versus vaginal delivery.

KEYWORDS

cesarean delivery, elective cesarean, maternal request

1 | INTRODUCTION

Cesarean delivery is a surgical procedure performed to prevent maternal and perinatal mortality and morbidity. As with all surgical procedures, a cesarean is performed for medical or obstetric indications. Optimizing use of cesarean delivery is a global health priority, given the maternal and perinatal morbidity and mortality associated with both overuse and underuse of the procedure.^{1–6} Cesarean delivery rates are increasing worldwide.^{7–11} Published data from 154 countries covering 94.5% of the world's live births found that 21.1% of women gave birth by cesarean globally.¹² Cesarean delivery rates varied among countries, with average rates ranging from 5% in Sub-Saharan Africa to 42.8% in Latin America and the Caribbean.

Moreover, projections for 2030 are alarming. It is expected that 28.5% of all births will be delivered by cesarean, ranging from 7.1% in Sub-Saharan Africa to 63.4% in Eastern Asia.¹²

The main indications for emergency cesarean (labor dystocia, nonreassuring fetal heart tracing, fetal malpresentation) are medically reasonable; however, the biggest problems are associated with elective cesarean. One of the key reasons for elective cesarean is cesarean delivery on maternal request (CDMR), which continues to be a significant contributor to the unprecedented increase in cesarean deliveries.^{13–15} The percentage of CDMR varies across the world; in most countries CDMR contributes to less than 5.0% of all deliveries.¹³ This article summarizes the challenges in management of CDMR for medical professionals and for families,

*Complete list of members presented in Appendix A.

and provides insights on the strategies for decreasing rates of CDMR.

2 | DEFINITION AND INCIDENCE

Different definitions of maternal request can be found in the medical literature. The American College of Obstetricians and Gynecologists and the Society of Obstetricians and Gynecologists of Canada define CDMR as a primary cesarean performed in the absence of any maternal or fetal indications.^{16,17} Schantz et al.¹⁸ performed a systematic literature review and summarized published studies investigating cesarean delivery on demand. The aim of the review was to describe the methodologies and outcomes of CDMR. The study did not include articles with unclear definitions, especially those with no clear distinction among elective, planned, and requested cesarean. The study by Gossman et al.¹⁹ concluded that CDMR might have the following two characteristics: (1) performed before the onset of labor; and (2) performed in the absence of a medical indication. In a second systematic review, Begum et al.¹³ used the definition that was approved by experts during the State of Science Conference in 2006.¹⁴ They defined CDMR as an elective cesarean performed at term for a singleton pregnancy without obstetric and/or any medical reasons. The authors also excluded data from four studies where a previous cesarean was noted as the cause of CDMR. Mazzoni et al.²⁰ conducted a systematic review and meta-analysis of observational studies on women's preferences for cesarean delivery. They included both primary and repeat cesareans. Primary and repeat cesareans were also included in other studies.^{21–24} However, larger studies, systematic reviews, and healthcare authorities follow the position that CDMR is a primary cesarean. It is therefore reasonable to add this statement to the definition of CDMR.

The incidence of CDMR and its contribution to the overall increase in the cesarean delivery rate are not well known due to different definitions and the lack of reporting. Begum et al.¹³ reported that only 14 countries globally reported CDMR proportions. The absolute proportion of CDMR ranged from 0.2% to 42.0%, and the majority of studies ($n=20$) reported a rate below 5.0%. Similar results were reported in a 2019 systematic review.¹⁸ The proportions of CDMR among all deliveries ranged from 0.2% in Ireland to 24.7% in China. However, the proportions of women declaring that they would prefer to give birth by cesarean delivery were higher, ranging from 1.0% in the UK to 62.2% in Iran.¹⁸ Other studies reported a rate below 5.0%, but the numbers are increasing. It is estimated that 2.5% of all cesarean births in the USA,¹⁶ 2% in Canada,²⁵ and 3.9% in the Ontario province²⁶ are a result of CDMR. In Sweden, the rate of CDMR increased from 0.6% to 4.6% from the early 1990s to 2015.²⁷

The rate of CDMR increased significantly from 4.5% to 9% of all cesareans in Italy.²⁸ The absolute proportion of CDMR was 11-fold higher in upper middle-income countries than in high-income countries. The Middle East had the highest CDMR rates followed by East Asia between five geographical regions.¹³ Similar results were found in the systematic review by Mazzoni et al.²⁰ and a

higher preference for cesarean was reported in women living in a middle-income country versus a high-income country (22.1% [95% CI, 17.6%–26.9%] vs. 11.8% [95% CI, 8.9%–15.1%]). This study also found different results for a previous cesarean versus without a previous cesarean. Higher preference for cesarean delivery was reported by women with a previous cesarean (29.4% [95% CI, 24.4%–34.8%] vs. 10.1% [95% CI, 7.5%–13.1%]).²⁰ The incidence of CDMR differs in public and private hospitals, with reporting rates of between 1% and 48% in public sector healthcare systems and 60% in the private sector.²⁹

3 | FIGO GOOD PRACTICE RECOMMENDATIONS

FIGO recommends that CDMR is defined as a primary elective cesarean delivery performed at term in a singleton pregnancy without any obstetric and/or medical reasons. The appropriate reporting of CDMR should be a key priority in maternal health policies and practices to evaluate the real incidence of CDMR and its contribution to the overall cesarean rate. Panel discussion and recommendations on how to achieve this goal are required. The Robson classification system³⁰ classifies all deliveries into 10 groups based on a set of predefined obstetric parameters: parity, previous cesarean, onset of labor, fetal presentation, number of fetuses, and gestational age. Owing to the lack of an International Classification of Diseases (ICD) code for CDMR, the modification of the Robson classification system can be useful for appropriate reporting of CDMR (subgroups in the 2 and 4 groups). FIGO's good practice recommendations for cesarean delivery on maternal request are given in [Box 1](#).

4 | FACTORS CONTRIBUTING TO MATERNAL REQUEST FOR ELECTIVE CESAREAN DELIVERY

Reasons for the choice of CDMR appear to be multifactorial. Women's previous birth experience, fear of vaginal birth and labor pain, and anxiety for fetal injury are the main causes for maternal request.^{31–34} The term tokophobia is mainly used in Scandinavia and the Anglo-American countries to describe strong fear of spontaneous childbirth.^{35,36}

Jenabi et al.³⁷ summarized the data in a systematic review and defined other reasons for CDMR: fear of urinary incontinence, pelvic floor and vaginal trauma, doctor's suggestion, time of birth, previous infertility, anxiety for gynecologic examination, anxiety for loss of control, to avoid long labor, anxiety for lack of support from the staff, fear of feces, emotional aspects, body weight of the infant at birth, and abnormal prenatal examination. In the same systematic review, demographic reasons such as advanced maternal age, parity, occupation, education, maternal obesity, family status, decreasing level of religiosity, household income, number of living children, and

BOX 1 FIGO good practice recommendations for cesarean delivery on maternal request

1. According to the FIGO position statement, cesarean delivery on maternal request (CDMR) is defined as a primary elective cesarean delivery performed at term for a singleton pregnancy without obstetric and/or any medical reasons.
2. Healthcare providers should not recommend cesarean delivery without any evidence or good clinical practice-based indication and no anticipated medical benefit. When there are no evidence-based clinical indications for cesarean delivery, vaginal delivery should be the recommended route of delivery.
3. Every case of CDMR should be managed properly, depending on the individual clinical situation.
4. Counseling of a woman requesting cesarean delivery and her partner is a cornerstone of managing CDMR and reducing the rate of this procedure.
5. Health education, mandatory written informed consent, and evidence-based intrapartum care practice are critical to promote a positive childbirth experience and painless delivery.
6. The appropriate reporting of CDMR is a key strategy in decreasing rates of CDMR.

age at marriage were identified.³⁷ In another small study, seeking permanent sterilization at the same time as cesarean delivery was mentioned as the reason for the decision for CDMR.³⁸

High cesarean delivery rates are strongly influenced by financial, social, cultural, and legal factors. The public perception that a cesarean is a very simple procedure with low risk plays a significant role in choosing CDMR.^{38,39} On the other hand, attitudes of healthcare providers have changed, particularly those of young obstetricians, which leads to increasing numbers of CDMR.^{40,41} In France, women's requests are likely underestimated in medical files, and obstetricians tend to report a medical indication to protect themselves legally.⁴² In other countries where obstetricians feel pressure to justify high cesarean rates, providing the indication "maternal request" shifts the responsibility from the obstetrician to the woman.^{18,43} In some countries the lack of assisted vaginal delivery, proper labor monitoring, and health system capacity can lead to increasing rates of CDMR.^{41,44}

5 | MANAGING ELECTIVE CESAREAN DELIVERY ON MATERNAL REQUEST

Healthcare providers should not recommend cesarean delivery without any evidence of a clinical indication or anticipated medical benefit. When there are no evidence-based clinical indications for

cesarean, vaginal delivery should be the recommended route of delivery.⁴⁵ Every case of CDMR should be managed properly, depending on the individual clinical situation.

6 | MATERNAL COUNSELING

All guidelines and recommendations for healthcare professionals agree that the cornerstone of CDMR management is the proper counseling of women requesting cesarean delivery and their families. Understanding the reasons for CDMR in the individual situation, providing the evidence-based information on the risks and benefits of elective cesarean (Table 1) without medical indications compared with the risks and benefits of supporting an attempt at vaginal delivery, respect of the patient's autonomy, and other ethical principles are the key to successful counseling. When a woman requests a cesarean delivery, the reasons for her request must be identified, discussed, and documented.^{16,17,51}

Healthcare providers play an important role in the decision to undergo a CDMR.^{13,16–18,38,45,51,52} If a woman requests a cesarean, the risks and benefits of the procedure compared with planned vaginal birth must be discussed with the patient and the substance of what was discussed must be subsequently recorded.⁵¹ The patient must reach an informed decision. A Cochrane systematic review in 2012 did not identify any clinical trials comparing CDMR with planned vaginal birth,²⁹ and there are no current trials.⁵² Studies on cesarean before the onset of labor are often used as substitutes to determine risks and benefits.¹⁶ Available observational studies have serious methodological issues or provide indirect evidence because cesarean deliveries in randomized trials were performed for breech presentation.^{53,54}

The risks of cesarean compared with a vaginal delivery should be clearly explained to the patient, including three times greater risk of overall severe morbidity, any hysterectomy during labor and postpartum, major puerperal infection, two times greater risk of hemorrhage requiring hysterectomy, an increase in anesthetic complications, acute renal failure, assisted ventilation or intubation, puerperal venous thromboembolism, in-hospital wound disruption, five times greater risk of cardiac arrest, and obstetric wound hematoma. The short- and long-term risks and benefits of planned cesarean and planned vaginal delivery are provided in Tables 1 and 2.^{46–50,55–60}

One of the main reasons for CDMR—fear of birth and the risk of developing depressive and post-traumatic stress disorder symptoms with vaginal delivery—should be considered.⁶¹ Extended support owing to fear of vaginal delivery should include repeated meetings with a psychosocial team and objective information provided about the benefits and risks related to different delivery modes on future reproductive health. Fear of childbirth can be reduced by emphatic conversation between physician or midwife and the patient, avoiding criticism and helping change their attitude to birth and pregnancy. If a woman continues to request a cesarean after detailed discussion and, if necessary, support from a specialist in perinatal

TABLE 1 Short-term benefit/risk evaluation for mother and newborn.

Type or cause of morbidity	Reference	Vaginal delivery (VD)	Cesarean delivery (CD)	Benefit/risk CD versus VD
Newborn				
Neonatal respiratory morbidity, including transient tachypnea	Morrison 1995. ⁴⁶ The incidence of respiratory distress syndrome at term was 2.2/1000 deliveries (95% CI, 1.7–2.7) The incidence of transient tachypnea was 5.7/1000 deliveries (95% CI, 4.9–6.5)	The incidence of respiratory morbidity after VD - 5.3/1000	The incidence of respiratory morbidity before the onset of labor 35.5/1000 and during labor 12.2/1000	The incidence of respiratory morbidity was significantly higher for the group delivered by CD before the onset of labor compared with CD during labor (OR 2.9; 95% CI, 1.9–4.4; $P < 0.001$) and compared with vaginal delivery (OR 6; 95% CI, 5.0–8.9; $P < 0.001$) The relative risk of neonatal respiratory morbidity for delivery by CD before the onset of labor during week 37 ⁺⁰ to 37 ⁻⁶ compared with week 38 ⁺⁰ to 38 ⁻⁶ was 1.74 (95% CI, 1.1–2.8; $P < 0.02$) and during week 38 ⁺⁰ to 37 ⁺⁶ compared with week 39 ⁺⁰ to 39 ⁺⁶ was 2.4 (95% CI, 1.2–4.8; $P < 0.02$)
Lacerations	Gregory 2012 ⁴⁷	Not applicable	1%–2%	Fetal laceration at time of CD is probably underreported. Although most injuries are mild, affect the skin only, and heal without significant sequela, deeper lacerations causing damage to muscle, nerves, or bones are possible. Even superficial lesions can elongate and cause emotional distress or require cosmetic alteration
Birth trauma				
Shoulder dystocia	Gregory 2012 ⁴⁷	0.2%–2.0%	Not applicable	Although shoulder dystocia may be unique to vaginal delivery, "fetal dystocia" and birth trauma can also occur during CD
Brachial plexus injury	Gregory 2012 ⁴⁷ Hankins 2006 ⁴⁸	2–5/1000	2.1/1000	80%–90% of brachial plexus injuries resolve without longer sequela. Long-term permanent sequela occurs in 1–2/10 000 births. Specifically, brachial plexus injuries have been described in infants born via CD and have been reported to occur prior to the onset of labor.
Fractures	Gregory 2012 ⁴⁷	1%–2%	1%–2%	5000–10 000 CDs would need to be performed to prevent 1 case of permanent brachial plexus injury ³
Breastfeeding	Systematic review and meta-analysis (Prior 2012; 53 studies) ⁴⁹			Rates of early breastfeeding (any initiation or at hospital discharge) were lower after CD compared with after VD (pooled OR 0.57; 95% CI, 0.50–0.64; $P < 0.001$) and lower after prelabor but not after in-labor CD (prelabor OR 0.83; 95% CI, 0.80–0.86; $P < 0.001$; in-labor OR 1.00; 95% CI, 0.97–1.04; $P = 0.86$). In mothers who initiated breastfeeding, CD had no significant effect on any breastfeeding at 6 months (OR 0.95; 95% CI, 0.89–1.01; $P = 0.08$)
Mother				
Overall severe morbidity	Canadian national registry 1991–2005 ⁵⁰	20 639/2 292 420; 9.0%	1279/467 666; 27.3%	An increase for short-term morbidities in the CD group. Adjusted OR 3.1; 95% CI, 3.0–3.3
Hemorrhage requiring hysterectomy	Canadian national registry 1991–2005 ⁵⁰	254/2 292 420; 0.1%	12/467 666; 0.3%	An increase in hemorrhage requiring hysterectomy in the CD group. Adjusted OR 2.1; 95% CI, 1.2–3.8

TABLE 1 (Continued)

Type or cause of morbidity	Reference	Vaginal delivery (VD)	Cesarean delivery (CD)	Benefit/risk CD versus VD
Hemorrhage requiring transfusion	Canadian national registry 1991–2005 ⁵⁰	1500/2292420; 0.7%	11/46766; 0.2%	An increase in hemorrhage requiring transfusion in the VD group. Adjusted OR 0.4; 95% CI, 0.2–0.8
Any hysterectomy	Canadian national registry 1991–2005 ⁵⁰	367/2292420; 0.2%	27/46766; 0.6%	An increase for any hysterectomy in the CD group. Adjusted OR 3.2; 95% CI, 2.2–4.8
Uterine rupture	Canadian national registry 1991–2005 ⁵⁰	660/2292420; 0.3%	7/46766; 0.2%	An increase in uterine rupture in the VD group. Adjusted OR 0.5; 95% CI, 0.2–1.0
Anesthetic complications	Canadian national registry 1991–2005 ⁵⁰	4793/2292420; 2.1%	247/46766; 5.3%	An increase in anesthetic complications in the CD group. Adjusted OR 2.3; 95% CI, 2.0–2.6
Obstetric shock	Canadian national registry 1991–2005 ⁵⁰	435/2292420; 0.2%	3/46766; 0.1%	An increase in obstetric shock in the VD group. Adjusted OR 0.4; 95% CI, 0.1–1.1
Cardiac arrest	Canadian national registry 1991–2005 ⁵⁰	887/2292420; 0.4%	89/46766; 1.9%	An increase in cardiac arrest in the CD group. Adjusted OR 5.1; 95% CI, 4.1–6.3
Acute renal failure	Canadian national registry 1991–2005 ⁵⁰	45/2292420; 0.02%	2/46766; 0.04%	An increase in acute renal failure in the CD group. Adjusted OR 2.2; 95% CI, 0.5–9.0
Assisted ventilation or intubation	Canadian national registry 1991–2005 ⁵⁰	133/2292420; 0.05%	6/46766; 0.1%	An increase for assisted ventilation or intubation in CD group. Adjusted OR 2.0; 95% CI, 0.9–4.5
Puerperal venous thromboembolism	Canadian national registry 1991–2005 ⁵⁰	623/2292420; 0.3%	28/46766; 0.6%	An increase in puerperal venous thromboembolism in the CD group. Adjusted OR 2.2; 95% CI, 1.5–3.2
Major puerperal infection	Canadian national registry 1991–2005 ⁵⁰	4833/2292420; 2.1%	281/46766; 6.0%	An increase in major puerperal infection in the CD group. Adjusted OR 3.0; 95% CI, 2.7–3.4
In-hospital wound disruption	Canadian national registry 1991–2005 ⁵⁰	1151/2292420; 0.5%	41/46766; 0.9%	An increase in in-hospital wound disruption in the CD group. Adjusted OR 1.9; 95% CI, 1.4–2.5
Obstetric wound hematoma	Canadian national registry 1991–2005 ⁵⁰	6263/2292420; 2.7%	607/46766; 1.3%	An increase in obstetric-wound hematoma in the CD group. Adjusted OR 5.1; 95% CI, 4.6–5.5
Hospital stay (days)	Canadian national registry 1991–2005 ⁵⁰	2.56	3.96	An increase in hospital stay in the CD group 1.47 (1.46–1.49)

TABLE 2 Long-term benefit/risk evaluation for mother and newborn.

Type or cause of morbidity	Reference	Vaginal delivery (VD)	Cesarean delivery (CD)	Benefit/risk CD versus VD
Newborn				
Asthma	Meta-analysis (Huang 2015) ⁵⁵	Risk of asthma was also higher in children born by instrumental VD (OR 1.07; 95% CI, 1.04–1.11) but with evidence of heterogeneity ($I^2 = 54.9\%$)		About 20% increase in subsequent risk of asthma was found in children delivered by elective and emergency CD. Elective and emergency CD moderately increased risk of asthma (OR 1.21; 95% CI, 1.17–1.25; $I^2 = 39.9\%$; OR 1.23; 95% CI, 1.19–1.26)
Allergies, hypersensitivity, dermatitis, or atopic conditions	Meta-analysis (Keag 2018) ⁵⁶	23092/760 142 (3.0%)	4743/124 068 (3.8%)	Increased odds of asthma in children aged up to 12 years delivered by CD compared with vaginal delivery (OR 1.22; 95% CI, 1.11–1.33, $P < 0.0001$; $I^2 = 77\%$) There was no statistically significant association between mode of delivery. There was moderate heterogeneity between the studies ($I^2 = 51\%$)
Asthma, systemic connective tissue disorders, juvenile arthritis, inflammatory bowel disease, immune deficiencies, and leukemia.	Meta-analysis (Keag 2018) ⁵⁶			No associations were found between CD and type 1 diabetes, psoriasis, or celiac disease. Children delivered by CD had significantly increased risk of asthma, systemic connective tissue disorders, juvenile arthritis, inflammatory bowel disease, immune deficiencies, and leukemia
Childhood overweight, obesity	Danish national registries in 1977–2012 ⁵⁷			
Childhood overweight	Meta-analysis (Keag 2018) ⁵⁶	9587/145 740 (6.6%)	3191/39 721 (8.0%)	Compared with vaginal delivery, CD was associated with increased odds of childhood overweight (OR 1.19; 95% CI, 1.04–1.35; $P = 0.01$, $I^2 = 42\%$, 3 studies)
Childhood obesity at up to 5 years		5295/57 468 (9.2%)	834/66 45 (12.6%)	Cesarean delivery was associated with increased odds of childhood obesity at up to 5 years when compared with vaginal delivery (OR 1.59; 95% CI, 1.33–1.90, $P < 0.001$, $I^2 = 68\%$; 6 cohorts)
Obesity at 6–15 years		2716/29 700 (9.1%)	655/57 28 (11.4%)	Cesarean delivery was associated with increased odds of childhood obesity at 6–15 years (OR 1.45; 95% CI, 1.15–1.83, $P = 0.002$, $I^2 = 63\%$; 5 cohorts)
Obesity at 20–28 years		3105/25 342 (12.3%)	1250/77 59 (16.1%)	Cesarean delivery was associated with increased odds of obesity at 20–28 years (1250/7759 CD vs. 3105/25342 vaginal delivery; OR 1.34; 95% CI, 1.25–1.44, $P < 0.001$, $I^2 = 0\%$; 5 studies)
Inflammatory bowel disease	Meta-analysis (Keag OE, 2018, 3 studies) ⁵⁶	7806/2 285 965 (0.34%)	878/319 164 (0.28%)	Cesarean delivery was associated with reduced odds of inflammatory bowel disease when compared with vaginal delivery (878/319 164 CD vs. 7806/2 285 965 vaginal delivery; OR 0.73; 95% CI, 0.69–0.79, $P < 0.001$, $I^2 = 0\%$)

TABLE 2 (Continued)

Type or cause of morbidity	Reference	Vaginal delivery (VD)	Cesarean delivery (CD)	Benefit/risk CD versus VD
Mother				
Stress symptoms, anxiety, depression	Taiwan National Health Insurance Database, 2017 ⁵⁸			The cesarean group had a higher cumulative incidence of stress symptoms (0.7% vs. 0.5%, $P < 0.05$) and cumulative incidence of any of the three mental disorders compared with the controls (2.7% vs. 2.3%, $P < 0.05$). The incidence rate of having any of the three mental disorders after CD was 27.6 per 1000 person-years, which was significantly higher compared with the 23.4 per 1000 person-years in the vaginal birth group
Urinary incontinence	Meta-analysis, 6 studies (Keag 2018) ⁵⁶	7129/49 319 (14.5%)	955/6883 (13.9%)	Compared to vaginal delivery, CD was associated with reduced odds of urinary incontinence (OR 0.59; 95% CI, 0.49–0.70, $P < 0.001$; $I^2 = 72\%$)
Pelvic organ prolapse	Meta-analysis, 2 studies (Keag 2018) ⁵⁶	2055/34 310 (6.0%)	116/4898 (2.4%)	Compared to vaginal delivery, CD was associated with reduced odds of pelvic organ prolapse (OR 0.29; 95% CI, 0.17–0.51, $P = 0.005$, $I^2 = 87\%$)
Fecal incontinence	Meta-analysis, 4 studies (Keag 2018) ⁵⁶	663/36 534 (1.8%)	187/6087 (3.1%)	There was no statistically significant difference in rates of fecal incontinence (OR 1.09; 95% CI, 0.71–1.67, $P = 0.69$, $I^2 = 77\%$)
Dyspareunia	Cohort study (McDonald 2015) ⁵⁹ RCT (Hannah 2004) ⁶⁰			When compared with vaginal delivery, CD was associated with increased odds of dyspareunia in one cohort study (OR 1.49; 95% CI, 1.11–2.00), but there was no statistically significant effect demonstrated in the RCT (OR 0.96; 95% CI, 0.61–1.50)
Subfertility	Meta-analysis, 7 studies (Keag 2018) ⁵⁶	978 990/3 075 271 (31.8%)	243 260/560 190 (43.4%)	Increased odds of subfertility after CD when compared to vaginal delivery (OR 1.64; 95% CI, 1.46–1.84, $P < 0.001$; $I^2 = 100\%$)
Subsequent pregnancy outcomes				
Perinatal death	Meta-analysis, 2 studies (Keag 2018) ⁵⁶	385/74 170 (0.52%)	98/17 259 (0.57%)	There was no statistically significant association of mode of delivery with perinatal mortality (OR 1.11; 95% CI, 0.89–1.39, $P = 0.22$; $I^2 = 34\%$)
Placenta previa	Meta-analysis, 10 studies (Keag 2018) ⁵⁶	16 679/6 076 000 (0.28%)	5 039/1 025 692 (0.49%)	Women with previous CD had increased odds of having placenta previa compared to women with a previous vaginal delivery (5039/1 025 692 previous CD versus 16 679/6 076 000 previous vaginal delivery; OR 1.74; 95% CI, 1.62–1.87, $P < 0.001$; $I^2 = 55\%$)
Placenta accreta	Meta-analysis, 3 studies (Keag 2018) ⁵⁶	188/638 867 (0.03%)	44/66 241 (0.07%)	Women with previous CD had increased odds of having placenta accreta compared to women with a previous vaginal delivery (OR 2.95; 95% CI, 1.32–6.60, $P = 0.008$; $I^2 = 47\%$)
Placental abruption	Meta-analysis, 6 studies (Keag 2018) ⁵⁶	23 855/4 808 952 (0.5%)	60 47/858 208 (0.71%)	When compared with women with previous vaginal delivery, women with a previous CD had increased odds of placental abruption (OR 1.38; 95% CI, 1.27–1.49, $P < 0.001$; $I^2 = 54\%$)
Uterine rupture	Meta-analysis, 4 studies (Keag 2018) ⁵⁶	56/749 372 (0.11%)	215/91 837 (0.23%)	When compared with women with previous vaginal delivery, women with a previous CD had increased odds of uterine rupture (OR 25.81; 95% CI, 10.96–60.76, $P < 0.001$; $I^2 = 80\%$)

TABLE 2 (Continued)

Type or cause of morbidity	Reference	Vaginal delivery (VD)	Cesarean delivery (CD)	Benefit/risk CD versus VD
Miscarriage	Meta-analysis, 4 studies (Keag 2018) ⁵⁶	12 663/132 306 (9.6%)	2060/19 106 (10.8%)	When compared with women with previous vaginal delivery, women with previous CD had increased odds of miscarriage (OR 1.17; 95% CI, 1.03–1.32, $P=0.01$; $I^2=79\%$)
Ectopic pregnancy	Meta-analysis, 3 studies (Keag 2018) ⁵⁶	772/240 986 (0.32%)	223/71 040 (0.32%)	When compared with women with previous vaginal delivery, women with previous CD had increased odds of ectopic pregnancy (OR 1.21; 95% CI, 1.04–1.40, $P=0.02$; $I^2=0\%$)
Stillbirth	Meta-analysis, 8 studies (Keag 2018) ⁵⁶	1905/585 370 (0.33%)	496/118 192 (0.42%)	When compared with women with previous vaginal delivery, women with previous CD had increased odds of stillbirth (OR 1.27; 95% CI, 1.15–1.40, $P<0.0001$; $I^2=34\%$)
Hysterectomy	Meta-analysis, 2 studies (Keag 2018) ⁵⁶	31/138 048 (0.02%)	19/29 626 (0.064%)	Women with previous CD had increased odds of hysterectomy (OR 3.85; 95% CI, 1.06–14.02, $P=0.04$; $I^2=69\%$)
Antepartum hemorrhage	Meta-analysis, 2 studies (Keag 2018) ⁵⁶	1237/74 170 (1.7%)	413/17 259 (2.4%)	Women with previous CD had increased odds of antepartum hemorrhage (OR 1.22; 95% CI, 1.09–1.36, $P=0.0007$; $I^2=0\%$)
Postpartum hemorrhage	Meta-analysis, 2 studies (Keag 2018) ⁵⁶	7455/138 048 (5.4%)	1087/29 626 (3.7%)	Women with previous CD had reduced odds of postpartum hemorrhage (OR 0.72; 95% CI, 0.55–0.95, $P=0.02$; $I^2=88\%$)
Preterm labor, small for gestational age, low birth weight (<2500 g) or neonatal death	Meta-analysis (Keag 2018) ⁵⁶			There was no statistically significant association between previous mode of delivery

psychological health with focus on tokophobia, then her request must be granted.⁵¹

Counseling on the risks and benefits of planned cesarean should not only be provided to the woman requesting a cesarean, but also to her partner. Stützer et al.³⁸ found that 50% of women who undergo a cesarean delivery state that their partner encouraged them to use this mode of delivery, whereas 87% of the women were supported by their partner in their choice for a vaginal delivery. Feelings of security and certainty are the basis for trust between medical staff and family. If the partner trusts the physician, it helps to strengthen the choice of mode of delivery and a positive birth experience can be reached.^{38,62,63}

6.1 | Timing of maternal counseling

There are no studies that define the best time in a pregnancy to have a discussion about the mode of birth.⁵¹ Routes of delivery should be discussed in the routine health screenings or pregnancy planning visits because the majority of women have made the decision on the route of delivery before they are pregnant. A study reported that 61% of women choosing CDMR and 82% who opted for the vaginal route had chosen their preferred mode of delivery before pregnancy.³⁸

Other studies⁶⁴ suggest that the mode of birth should be discussed during the early weeks of pregnancy to identify the prospective risk group of women who may need more counseling and support around childbirth.

The importance of re-counseling must not be forgotten because some patients change their mind and have a trial of natural delivery with repeated counseling.

7 | FINANCIAL, ETHICAL, AND LEGAL CONSIDERATIONS

The practices of reimbursement of CDMR are different and depend on healthcare systems in different countries. A study suggested that up to 78% of women would have paid for the CDMR themselves if their insurance had denied coverage.³⁸

CDMR also raises ethical concerns for healthcare professionals. The principle of patient autonomy should be respected. Furthermore, other ethical principles, such as beneficence, nonmaleficence, and justice need to be taken into consideration during patient counseling.^{17,45} The choice of the patient should be respected.

Ethical and juridical issues are related. Italian researchers found that the fear of litigation binds obstetricians and gynecologists to perform a CDMR even if they disagree with this decision for ethical and medical reasons.⁶⁵ If a healthcare provider disagrees to perform CDMR, the woman should be referred to another obstetrician willing to perform a cesarean.⁶⁶ It is estimated that 79% of patients would have gone to another hospital to give birth by CDMR if the cesarean was not offered at a particular hospital.³⁸

Sorrentino et al.⁶⁷ suggested that the main question in ethical and juridical issues surrounding CDMR is counseling and encouraging a woman to make an informed decision and have an overall positive birth experience.⁶⁷

8 | TIMING OF DELIVERY

If a CDMR is planned in an uncomplicated pregnancy, the procedure should be scheduled no earlier than 39 weeks of gestation to minimize the risk of neonatal respiratory distress.^{16,17,51,56}

9 | CONCLUSION

The FIGO Committee on Childbirth and Postpartum Hemorrhage supports optimizing the rate of cesarean deliveries. Better maternal engagement and support is required to reduce CDMR incidence and related health and financial burdens. The routes of delivery should be discussed during routine health screening visits or pre-conception visits because the majority of women have made the decision on mode of delivery before they are pregnant. When there are no evidence-based clinical indications for cesarean delivery, vaginal delivery should be recommended. Every case of CDMR should be managed properly and depending on the individual clinical situation. Counseling of a woman requesting cesarean delivery and her partner is a cornerstone in the management of CDMR and reducing the rate of this operation. Guidelines and recommendations on the management of CDMR should be issued in every country to ensure the highest possible standards of health and well-being for women and also to help healthcare providers practice safely.

AUTHOR CONTRIBUTIONS

Diana Ramasauskaite prepared the original draft. Anwar Nassar, Akaninyene Esemu Ubom, and Wanda Nicholson contributed to review and editing.

CONFLICT OF INTEREST STATEMENT

The authors have no conflicts of interest.

DATA AVAILABILITY STATEMENT

Data sharing is not applicable to this article as no new data were created or analyzed.

REFERENCES

- Sandall J, Tribe RM, Avery L, et al. Short-term and long-term effects of cesarean section on the health of women and children. *Lancet*. 2018;392:1349-1357.
- Sobhy S, Arroyo-Manzano D, Murugesu N, et al. Maternal and perinatal mortality and complications associated with cesarean section in low-income and middle-income countries: a systematic review and meta-analysis. *Lancet*. 2019;393:1973-1982.
- Opiyo N, Torloni MR, Robson M, et al. WHO's Robson platform for data-sharing on cesarean section rates. *Bull World Health Organ*. 2022;100:352-354.
- Boerma T, Ronsmans C, Melesse DY, et al. Global epidemiology of use of and disparities in caesarean sections. *Lancet*. 2018;392:1341-1348.
- Visser GHA, Ayres-de-Campos D, Barnea ER, et al. FIGO position paper: how to stop the caesarean section epidemic. *Lancet*. 2018;392:1286-1287.
- Wiklund I, Malata AM, Cheung NF, Cadée F. Appropriate use of caesarean section globally requires a different approach. *Lancet*. 2018;392:1288-1289.
- Betrán AP, Ye J, Moller AB, Zhang J, Gülmezoglu AM, Torloni MR. The increasing trend in caesarean section rates: global, regional and national estimates: 1990-2014. *PLoS One*. 2016;11:e0148343.
- Antoine C, Young BK. Cesarean section one hundred years 1920-2020: the good, the bad and the ugly. *J Perinat Med*. 2020;49:5-16.
- Dorji T, Dorji P, Gyamtsho S, et al. Rates and indications of caesarean section deliveries in Bhutan 2015-2019: a national review. *BMC Pregnancy Childbirth*. 2021;21:698.
- Santas G, Santas F. Trends of caesarean section rates in Turkey. *J Obstet Gynaecol*. 2018;38:658-662.
- Robson M, Hartigan L, Murphy M. Methods of achieving and maintaining an appropriate caesarean section rate. *Best Pract Res Clin Obstet Gynaecol*. 2013;27:297-308.
- Betrán AP, Ye J, Moller AB, Souza JP, Zhang J. Trends and projections of caesarean section rates: global and regional estimates. *BMJ Glob Health*. 2021;6:e005671.
- Begum T, Saif-Ur-Rahman KM, Yaqoot F, et al. Global incidence of caesarean deliveries on maternal request: a systematic review and meta-regression. *BJOG*. 2021;128:798-806.
- National Institutes of Health. State-of-the-Science Conference Statement: Cesarean Delivery on Maternal Request. 2006 March 27-29, 2006. Report No.: 107:1386-1397.
- Ecker J. Elective cesarean delivery on maternal request. *JAMA*. 2013;309:1930-1936.
- ACOG Committee Opinion No. 761: cesarean delivery on maternal request. *Obstet Gynecol*. 2019;133:e73-e77.
- Alsayegh E, Bos H, Campbell K, Barrett J. No. 361-caesarean delivery on maternal request. *J Obstet Gynaecol Can*. 2018;40:967-971.
- Schantz C, de Loenzien M, Goyet S, Ravit M, Dancoisne A, Dumont A. How is women's demand for caesarean section measured? A systematic literature review. *PLoS One*. 2019;14:e0213352.
- Gossman GL, Joesch JM, Tanfer K. Trends in maternal request cesarean delivery from 1991 to 2004. *Obstet Gynecol*. 2006;108:1506-1516.
- Mazzoni A, Althabe F, Liu NH, et al. Women's preference for caesarean section: a systematic review and meta-analysis of observational studies. *BJOG*. 2011;118:391-399.
- Karlström A, Rådestad I, Eriksson C, Rubertsson C, Nystedt A, Hildingsson I. Cesarean section without medical reason, 1997 to 2006: a Swedish register study. *Birth*. 2010;37:11-20.
- Kottmel A, Hoesli I, Traub R, et al. Maternal request: a reason for rising rates of cesarean section? *Arch Gynecol Obstet*. 2012;286:93-98.
- Sydsjö G, Möller L, Lilliecreutz C, Bladh M, Andolf E, Josefsson A. Psychiatric illness in women requesting caesarean section. *BJOG*. 2015;122:351-358.
- Jackson NV, Irvine LM. The influence of maternal request on the elective caesarean section rate. *J Obstet Gynaecol*. 1998;18:115-119.
- Hanley GE, Janssen PA, Greyson D. Regional variation in the caesarean delivery and assisted vaginal delivery rates. *Obstet Gynecol*. 2010;115:1201-1208.
- Guo Y, Murphy MSQ, Erwin E, et al. Birth outcomes following caesarean delivery on maternal request: a population-based cohort study. *CMAJ*. 2021;193:E634-E644.
- da Silva CP, Hansson Bittar M, Vladic SY. Indications for increase in caesarean delivery. *Reprod Health*. 2019;16:72.
- Tranquilli AL, Giannubilo SR. Cesarean delivery on maternal request in Italy. *Int J Gynecol Obstet*. 2004;84:169-170.

29. Lavender T, Hofmeyr GJ, Neilson JP, Kingdon C, Gyte GML. Caesarean section for non-medical reasons at term. *Cochrane Database Syst Rev*. 2012;2012(3):CD004660.
30. Robson MS. Classification of caesarean sections. *Fetal Matern Med Rev*. 2001;12:23-39.
31. Hamama-Raz Y, Sommerfeld E, Ken-Dror D, Lacher R, Ben-Ezra M. The role of intra-personal and inter-personal factors in fear of childbirth: a preliminary study. *Psychiatry Q*. 2017;88:385-396.
32. Dehghani M, Sharpe L, Khatibi A. Catastrophizing mediates the relationship between fear of pain and preference for elective caesarean section. *Eur J Pain*. 2014;18:582-589.
33. Wiklund I, Edman G, Andolf E. Caesarean section on maternal request: reasons for the request, self-estimated health, expectations, experience of birth and signs of depression among first-time mothers. *Acta Obstet Gynecol Scand*. 2007;86:451-456.
34. Nieminen K, Stephansson O, Ryding EL. Women's fear of childbirth and preference for caesarean section: a cross-sectional study at various stages of pregnancy in Sweden. *Acta Obstet Gynecol Scand*. 2009;88:807-813.
35. Sahlin M, Carlender-Klint AK, Hildingsson I, Wiklund I. First-time mothers' wish for a planned caesarean section: deeply rooted emotions. *Midwifery*. 2013;29:447-452.
36. Wiklund I. New guidelines for caesarean section on maternal request. *Sex Reprod Healthc*. 2012;3:97.
37. Jenabi E, Khazaei S, Bashirian S, Aghababaei S, Matinnia N. Reasons for elective caesarean section on maternal request: a systematic review. *J Matern Fetal Neonatal Med*. 2020;33:3867-3872.
38. Stützer PP, Berlit S, Lis S, Schmahl C, Sütterlin M, Tuschy B. Elective caesarean section on maternal request in Germany: factors affecting decision making concerning mode of delivery. *Arch Gynecol Obstet*. 2017;295:1151-1156.
39. Masciullo L, Petruzzello L, Perrone G, et al. Caesarean section on maternal request: an Italian comparative study on patients' characteristics, pregnancy outcomes and guidelines overview. *Int J Environ Res Public Health*. 2020;17:4665.
40. D'Souza R, Arulkumaran S. To 'C' or not to 'C'?/caesarean delivery upon maternal request: a review of facts, figures and guidelines. *J Perinat Med*. 2012;41:5-15.
41. Hong X. Factors related to the high caesarean section rate and their effects on the "price transparency policy" in Beijing, China. *Tohoku J Exp Med*. 2007;212:283-298.
42. Coulm B, Blondel B, Alexander S, Bouvain M, Le Ray C. Potential avoidability of planned caesarean sections in a French national database. *Acta Obstet Gynecol Scand*. 2014;93:905-912.
43. Gamble J, Creedy DK. Women's request for a caesarean section: a critique of the literature. *Birth*. 2000;27:256-263.
44. Prah J, Kudom A, Afrifa A, Abdulai M, Sirikiyi I, Abu E. Caesarean section in a primary health facility in Ghana: clinical indications and foeto-maternal outcomes. *J Public Health Afr*. 2017;8:704.
45. FIGO. FIGO statement. FIGO Ethics and Professionalism Guideline: decision making about vaginal and caesarean delivery. June 29, 2020. Accessed April 26, 2023. <https://www.figo.org/decision-making-about-vaginal-and-caesarean-delivery>
46. Morrison JJ, Rennie JM, Milton PJ. Neonatal respiratory morbidity and mode of delivery at term: influence of timing of elective caesarean section. *Br J Obstet Gynaecol*. 1995;102:101-106.
47. Gregory KD, Jackson S, Korst L, Fridman M. Caesarean versus vaginal delivery: whose risks? Whose benefits? *Am J Perinatol*. 2012;29:7-18.
48. Hankins GD, Clark SM, Munn MB. Caesarean section on request at 39 weeks: impact on shoulder dystocia, fetal trauma, neonatal encephalopathy, and intrauterine fetal demise. *Semin Perinatol*. 2006;30:276-287.
49. Prior E, Santhakumaran S, Gale C, Philipps LH, Modi N, Hyde MJ. Breastfeeding after caesarean delivery: a systematic review and meta-analysis of world literature. *Am J Clin Nutr*. 2012;95:1113-1135.
50. Liu S, Liston RM, Joseph KS, Heaman M, Sauve R, Kramer MS. Maternal Health Study Group of the Canadian Perinatal Surveillance System. Maternal mortality and severe morbidity associated with low-risk planned caesarean delivery versus planned vaginal delivery at term. *CMAJ*. 2007;176:455-460.
51. Louwen F, Wagner U, Abou-Dakn M, et al. Caesarean section. Guideline of the DGGG, OEGGG and SGGG (S3-Level, AWMF Registry No. 015/084, June 2020). *Geburtshilfe Frauenheilkd*. 2021;81:896-921.
52. Wen SW, Murphy MSQ, Walker M, El-Chaâr D. Does caesarean delivery on maternal request cause adverse outcomes? *Am J Obstet Gynecol*. 2022;227:553-556.
53. Hannah ME, Hannah WJ, Hewson SA, Hodnett ED, Saigal S, Willan AR. Planned caesarean section versus planned vaginal birth for breech presentation at term: a randomised multicentre trial. Term Breech Trial Collaborative Group. *Lancet*. 2000;356:1375-1383.
54. Norwitz ER. Caesarean birth on maternal request. www.UpToDate. Literature review current through June 2023. Last updated: February 16, 2023
55. Huang L, Chen Q, Zhao Y, Wang W, Fang F, Bao Y. Is elective caesarean section associated with a higher risk of asthma? A meta-analysis. *J Asthma*. 2015;52:16-25.
56. Keag OE, Norman JE, Stock SJ. Long-term risks and benefits associated with caesarean delivery for mother, baby, and subsequent pregnancies: systematic review and meta-analysis. *PLoS Med*. 2018;15:e1002494.
57. Sevelsted A, Stokholm J, Bønnelykke K, Bisgaard H. Caesarean section and chronic immune disorders. *Pediatrics*. 2015;135:e92-e98.
58. Chen HH, Lai JCY, Hwang SJ, Huang N, Chou YJ, Chien LY. Understanding the relationship between caesarean birth and stress, anxiety, and depression after childbirth: a nationwide cohort study. *Birth*. 2017;44:369-376.
59. McDonald EA, Gartland D, Small R, Brown SJ. Dyspareunia and childbirth: a prospective cohort study. *Obstet Gynecol Surv*. 2015;70:319-320.
60. Hannah ME, Whyte H, Hannah WJ, et al. Maternal outcomes at 2 years after planned caesarean section versus planned vaginal birth for breech presentation at term: the international randomized term breech trial. *Am J Obstet Gynecol*. 2004;191:917-927.
61. Olieman RM, Siemonsma F, Bartens MA, Garthus-Niegel S, Scheele F, Honig A. The effect of an elective caesarean section on maternal request on peripartum anxiety and depression in women with childbirth fear: a systematic review. *BMC Pregnancy Childbirth*. 2017;17:195.
62. Karlstrom A, Nystedt A, Hildingsson I. A comparative study of the experience of childbirth between women who preferred and had a caesarean section and women who preferred and had a vaginal birth. *Sex Reprod Healthc*. 2011;2:93-99.
63. Hobson JA, Slade P, Wrench IJ, Power L. Preoperative anxiety and postoperative satisfaction in women undergoing elective caesarean section. *Int J Obstet Anesth*. 2006;15:18-23.
64. Begum T, Fuglenes D, Aas E, Botten G, Øian P, Kristiansen IS. Maternal preference for caesarean delivery: do women get what they want? *Obstet Gynecol*. 2012;120:252-260.
65. Indraccolo U, Scutiero G, Matteo M, Indraccolo SR, Greco P. Caesarean section on maternal request: should it be formally prohibited in Italy? *Ann Ist Super Sanita*. 2015;51:162-166.
66. National Institute for Health and Care Excellence. NICE guideline [NG192] Caesarean birth. Published March 31, 2021. Accessed April 26, 2023. <https://www.nice.org.uk/guidance/ng192/resources/caesarean-birth-pdf-66142078788805>
67. Sorrentino F, Greco F, Palieri T, et al. Caesarean section on maternal request-ethical and juridic issues: a narrative review. *Medicina (Kaunas)*. 2022;58:1255.

How to cite this article: Ramasauskaite D, Nassar A, Ubom AE, Nicholson W. . FIGO good practice recommendations for cesarean delivery on maternal request: Challenges for medical staff and families. *Int J Gynecol Obstet.* 2023;163(Suppl. 2):10-20. doi:[10.1002/ijgo.15118](https://doi.org/10.1002/ijgo.15118)

APPENDIX A

FIGO CHILDBIRTH AND POSTPARTUM HEMORRHAGE COMMITTEE

Wanda Nicolson (Chair), Jolly Beyeza, Anwar Nassar, Ravi Chandran, Didier Riethmuller, Rodolfo Pacagnella, Alison Wright, Ferdousi Begum, Sardar Muhammad Al Fareed Zafar, Diana Ramašauskaitė, Akaninyene Ubom, Inês Nunes, Thomas Burke, Monica Oguttu, Gerhard Theron, Gerard Visser, Eytan Barnea.