



WHO recommendations non-clinical interventions to reduce unnecessary caesarean sections

Executive summary

Introduction

Caesarean section is a surgical procedure that can effectively prevent maternal and newborn mortality when used for medically indicated reasons. Caesarean section rates have increased steadily worldwide over the last decades. This trend has not been accompanied by significant maternal or perinatal benefits. On the contrary, there is evidence that, beyond a certain threshold, increasing caesarean section rates may be associated with increased maternal and perinatal morbidity. Caesarean birth is associated with short- and long-term risks that can extend many years beyond the current delivery and affect the health of the woman, the child and future pregnancies. High rates of caesarean section are associated with substantial health-care costs.

The factors contributing to the rise in caesarean section rates are complex, and identifying interventions to address them is challenging. Factors associated with caesarean births include changes in the characteristics of the population such as increase in the prevalence of obesity and of multiple pregnancies, and increase in the proportion of nulliparous women or of older women. These changes are unlikely, however, to explain the large increases and wide variations in caesarean section rates across countries. Other non-clinical factors such as women increasingly wanting to determine how and when their child is born, generational shifts in work and family responsibilities, physician factors, increasing fear of medical litigation, as well as organizational, economic and social factors have all been implicated in this increase.

The sustained, unprecedented rise in caesarean section rates is a major public health concern. There is an urgent need for evidence-based guidance to address the trend. Clinical interventions that could help to reduce caesarean section rates have been addressed in previously published WHO guidelines. Until now, there have been no global guidelines on non-clinical interventions (defined as interventions applied independently of a clinical encounter between a health-care provider and a patient in the context of patient care). The objective of this guideline is to provide evidence-based recommendations on non-clinical interventions specifically designed to reduce caesarean section rates. (Interventions not specifically designed to reduce caesarean section rates are not included, even if they may incidentally reduce caesarean section rates.)

Target audience

The primary audience for this guideline includes health-care professionals responsible for developing regional, national and local health protocols and policies, as well as obstetricians, midwives, nurses, general medical practitioners, managers of maternal and child health programmes and public health policy-makers in all settings and countries.

Guideline development methods

This guideline was developed in accordance with standard procedures set out in the *WHO handbook for guideline development*.

Evidence on the effectiveness of interventions was derived from an updated Cochrane review of 29 studies. Judgements about values, acceptability, equity, resource implications and feasibility of interventions were informed by three systematic reviews of 49 qualitative studies. The certainty of evidence on safety and effectiveness outcomes was assessed using Grading of Recommendations Assessment, Development and Evaluation (GRADE). Confidence in the qualitative findings was assessed using Confidence in the Evidence from Reviews of Qualitative research (CERQual). The framework for Developing and Evaluating Communication strategies to support Informed Decisions and practice based on Evidence (DECIDE) was used to integrate and present research evidence (benefits and harms of interventions) and relevant considerations (values, acceptability, equity, resource implications and feasibility) to the Guideline Development Group (GDG).

The GDG convened in September 2017 in Geneva, Switzerland, to review the summarized evidence and formulate recommendations. The members of the GDG made three types of recommendation:

1. Recommended: The benefits of implementing this option outweigh the possible harms. This option can be implemented, including at large scale.

2. Context-specific recommendation

- ◆ **Recommended only in the context of rigorous research:** This option indicates that there are important uncertainties about an intervention. In such instances, the implementation can still be undertaken at a large scale, but only as research that is able to address unanswered questions and uncertainties related both to the effectiveness of an intervention and its acceptability and feasibility.
- ◆ **Recommended only with targeted monitoring and evaluation:** This option indicates uncertainty about the effectiveness or acceptability of an intervention, especially regarding particular contexts or conditions. Interventions classified as such can be considered for implementation (including at large scale), provided they are accompanied by targeted monitoring and evaluation.

3. Not recommended: This option should not be implemented.

Recommendations

This guideline targets settings with high rates of caesarean birth, where large numbers of caesarean sections are assumed to be unnecessary. The proportion of unnecessary caesarean sections was not reported in the included studies, however. It is therefore unclear whether the observed changes in caesarean section rates had been accounted for exclusively by those considered unnecessary. Given this uncertainty, caution should be exercised when interpreting the recommendations in this guideline.

The GDG made five recommendations on non-clinical interventions to reduce caesarean births. The recommendations are grouped according to the target of intervention: (a) interventions targeted at women, (b) interventions targeted at health-care professionals and (c) interventions targeted at health organizations, facilities or systems. The recommendations are intended to inform the development of national and subnational policies and protocols to reduce caesarean births. They should be implemented alongside other proven interventions to improve the quality of care for mothers and newborns during childbirth. The recommendations are summarized in Table 1.

Table 1: Summary list of recommendations on non-clinical interventions to reduce unnecessary caesarean sections

A. INTERVENTIONS TARGETED AT WOMEN

Recommendation 1. Health education for women is an essential component of antenatal care. The following educational interventions and support programmes are recommended to reduce caesarean births only with targeted monitoring and evaluation.

(Context-specific recommendation, Low-certainty evidence)

- ◆ **Childbirth training workshops** (content includes sessions about childbirth fear and pain, pharmacological pain-relief techniques and their effects, non-pharmacological pain-relief methods, advantages and disadvantages of caesarean sections and vaginal delivery, indications and contraindications of caesarean sections, among others).
- ◆ **Nurse-led applied relaxation training programme** (content includes group discussion of anxiety and stress-related issues in pregnancy and purpose of applied relaxation, deep breathing techniques, among other relaxation techniques).
- ◆ **Psychosocial couple-based prevention programme** (content includes emotional self-management, conflict management, problem solving, communication and mutual support strategies that foster positive joint parenting of an infant). "Couple" in this recommendation includes couples, people in a primary relationship or other close people.
- ◆ **Psychoeducation** (for women with fear of pain; comprising information about fear and anxiety, fear of childbirth, normalization of individual reactions, stages of labour, hospital routines, birth process, and pain relief [led by a therapist and midwife], among other topics).

When considering the educational interventions and support programmes, no specific format (e.g. pamphlet, videos, role play education) is recommended as more effective.

(Low- to moderate-certainty evidence)

B. INTERVENTIONS TARGETED AT HEALTH-CARE PROFESSIONALS

Recommendation 2.1. Implementation of evidence-based clinical practice guidelines combined with structured, mandatory second opinion for caesarean section indication is recommended to reduce caesarean births in settings with adequate resources and senior clinicians able to provide mandatory second opinion for caesarean section indication.

(Context-specific recommendation, High-certainty evidence)

Recommendation 2.2. Implementation of evidence-based clinical practice guidelines, caesarean section audits and timely feedback to health-care professionals are recommended to reduce caesarean births.

(Recommended, High-certainty evidence)

C. INTERVENTIONS TARGETED AT HEALTH ORGANIZATIONS, FACILITIES OR SYSTEMS

Recommendation 3.1. For the sole purpose of reducing caesarean section rates, collaborative midwifery-obstetrician model of care (i.e. a model of staffing based on care provided primarily by midwives, with 24-hour back-up from an obstetrician who provides in-house labour and delivery coverage without other competing clinical duties) is recommended only in the context of rigorous research. This model of care primarily addresses intrapartum caesarean sections.

(Context-specific recommendation, Low-certainty evidence)

Recommendation 3.2. For the sole purpose of reducing unnecessary caesarean sections, financial strategies (i.e. insurance reforms equalizing physician fees for vaginal births and caesarean sections) for health-care professionals or health-care organizations are recommended only in the context of rigorous research.

(Context-specific recommendation, Very low-certainty evidence)



**World Health
Organization**

WHO/RHR/18.24

© World Health Organization 2018. Some rights reserved. This work is available under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 IGO licence (CC BY-NC-SA 3.0 IGO; <https://creativecommons.org/licenses/by-nc-sa/3.0/igo>).

All reasonable precautions have been taken by WHO to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall WHO be liable for damages arising from its use.