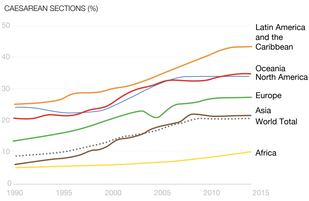
WHO recommendations
non-clinical interventions to reduce unnecessary caesarean sections

Why this guideline is needed

A caesarean section is a surgical procedure that, when undertaken for medical reasons, **can save the life of a woman and her baby.**

Caesarean section rates have been steadily increasing worldwide over the last few decades above levels that cannot be considered medically necessary. This trend has not been accompanied by significant maternal or perinatal benefits.



On the contrary, there is evidence that **potentially unnecessary caesarean sections may put the lives and well-being of women and their babies at risk –** both in the short and long-term.

Rise in caesarean section

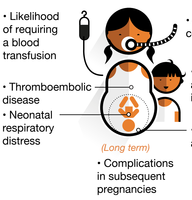
The rise in caesarean section affects low-, middle- and high-income countries, although the consequences of unnecessary caesarean sections may be different across settings and countries, depending on the human or financial resources available, and the capacity to perform caesarean section safely and to manage associated complications.

Potential risks of caesarean section

As with any surgery, caesarean section is associated with short- and long-term risks. These can extend many years beyond the current delivery and affect the health of the woman, the child and future pregnancies.

Caesarean section increases the likelihood of requiring a blood transfusion, the risks of anaesthesia complications, organ injury, infection, thromboembolic disease and neonatal respiratory distress, among other short-term complications.

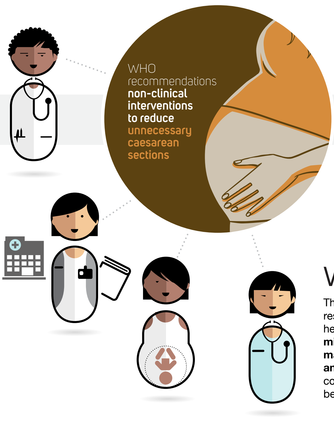
Caesarean section increases the likelihood of:



Caesarean section has been associated in the long term with an increased risk of asthma and obesity in children, and complications in subsequent pregnancies, such as uterine rupture, placenta accreta, placenta praevia, ectopic pregnancy, infertility, hysterectomy and intra-abdominal adhesions, with the risk of these morbidities progressively increasing as the number of previous caesarean deliveries increases.

Sandall J, Tribe RM, Avery L, et al. Short-term and long-term effects of caesarean section on the health of women and children. Lancet 2018; published online Oct 11. http://dx.doi.org/10.1016/S0140-6736(18)31930-5.

Keag OE, Norman JE, Stock SJ. Long-term risks and benefits associated with cesarean delivery for mother, baby, and subsequent pregnancies: systematic review and meta-analysis. PLoS Med 2018; 15: e1002494.



WHO guidelines on non-clinical interventions

Non-clinical interventions – in this guideline, those interventions applied independently of a clinical encounter between a particular provider and patient in the context of patient care.

In recognition of the urgent need to address the sustained and unprecedented rise in the use of caesarean section, WHO has produced evidence-based guidance on non-clinical interventions specifically designed to **reduce unnecessary caesarean section.**

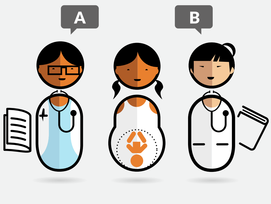
Who this guideline is for

This guideline can be useful to **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 where increasing use of caesarean section has been identified as a problem.

Five recommendations

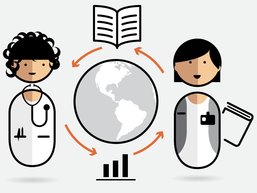
1. Educational interventions for women

Health education for women is an essential component of antenatal care. The following educational interventions and support programmes are recommended to reduce caesarean births with monitoring and evaluation: providing childbirth training workshops for mothers and couples, relaxation training programmes led by nurses, psychosocial couple-based prevention programmes and psychoeducation for women with fear of pain or anxiety.



2. Clinical guidelines and second opinion

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



3. Clinical guidelines, audit and feedback

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

4. Collaborative midwifery-obstetrician model of care

For the sole purpose of reducing caesarean sections, 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.

5. Financial strategies

For the sole purpose of reducing 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.

This guideline incorporates the views, fears, and beliefs of both women and health professionals about caesarean sections. It also considers the complex dynamics and limitations of health systems and organizations and relationships between women, health professionals, and organization of health-care services.

For further information, please contact:
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World Health Organization

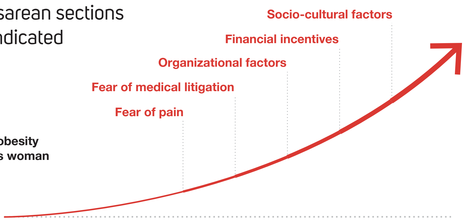
Why non-clinical interventions?

A growing proportion of caesarean sections globally are not medically indicated

Changes in the characteristics of the population such as:

- increase in the **prevalence of maternal obesity**
- increase in the **proportion of nulliparous woman**
- **Higher maternal age at birth**
- increase in **multiple births**

have been cited to **contribute to the rise.**



These factors are unlikely, however, to explain the large increases observed and the wide variations between countries.

Other factors such as differences in style of professional practice, Fear of pain, fear of medical litigation, and organizational, economic, social and cultural factors have all been implicated in this trend.

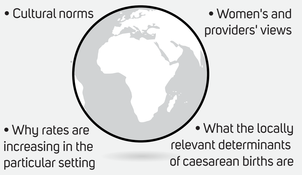
Addresing these non-clinical factors is crucial to **reduce unnecessary caesarean sections**

Understanding context:

if you are planning to use the recommendations, take into account:

1. Other WHO clinical guidelines

Although more women than ever before are giving birth in health-care facilities in many parts of the world, suboptimal quality of care continues to impede attainment of optimal health outcomes. These recommendations should not be considered in isolation but integrated within the efforts to adopt the **WHO recommendations on intrapartum care for a positive childbirth experience** and the **WHO recommendations on antenatal care for a positive pregnancy experience.**

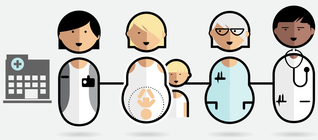


2. Local context

There are many complex reasons for the increase of caesarean section rates, and these vary widely between health facilities and countries. Before implementing any intervention to reduce rates, research should be done which identifies and defines why rates are increasing in the particular setting, what the locally relevant determinants of caesarean births are, women and providers' views and cultural norms. **WHO is preparing a generic formative research protocol to assist countries to conduct this phase.**

3. Multiple component interventions

Interventions to reduce rates that do not address the complex, multi-faceted reasons for the increase of rates, will be likely to have limited impact. **Interventions that have multiple components are likely to be more successful and are therefore more desirable.**



4. Various stakeholders

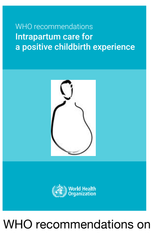
Interventions that target the various stakeholders (e.g. women, families, health-care providers, organizations) are likely to be more successful than interventions targeting a single stakeholder and are therefore more desirable.

5. Make every effort to provide caesarean section to all women in need

While many women undergo the procedure unnecessarily, many other in need do not have access to caesarean section. **Interventions to reduce unnecessary caesarean sections need to align and not interfere with efforts to increase the use among those in need.**

The support of other WHO guidelines

Recommendations to reduce unnecessary caesarean sections can only be implemented in the context of other relevant WHO guidelines such as:



WHO recommendations on intrapartum care for a positive childbirth experience

WHO recommendations on antenatal care for a positive pregnancy experience

It is essential to monitor and asses caesarean section rates and maternal and perinatal outcomes in a standardized and action-oriented manner taking into account the specific characteristics of the populations served (obstetrical case mix). For this purpose, **WHO recommends the Robson Classification system as a global standard.**

Robson classification implementation manual

Evidence supporting the WHO recommendations on non-clinical interventions to reduce unnecessary caesarean sections

One updated Cochrane review of 29 studies provides the evidence on effectiveness. Judgements about values, acceptability, equity, resource implications and feasibility of interventions are derived from three qualitative evidence synthesis.

• Chen I, Opiyo N, Tavender E, Mortazhejri S, Rader T, Petkovic J, Yogasingam S, Taljaard M, Agarwal S, Laopaiboon M, Wasiak J, Khunpradit S, Lumbiganon P, Gruen RL, Betran AP. Non-clinical interventions for reducing unnecessary caesarean section. Cochrane Database of Systematic Reviews 2018 , Issue 9 . Art. No.: CD005528. DOI: 10.1002/14651858.CD005528.pub3.

• Kingdon C, Downe S, Betrán AP. Women's and communities' views of educational interventions targeted at them to reduce unnecessary caesarean section: a qualitative evidence synthesis. Reprod Health. 2018 Jul 24;15(1):130.

• Kingdon C, Downe S, Betrán AP. Too much caesarean section? Health professionals' views of interventions to reduce unnecessary caesarean section targeted at them: a qualitative evidence synthesis. 2018. BMJ Open (under review).

• Kingdon C, Downe S, Betrán AP. Non-clinical interventions to reduce unnecessary caesarean section targeted at organisations, facilities and systems: a qualitative evidence synthesis of stakeholders' views. PLoS ONE. 2018, 4;13(9):e0203274.

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