

WHO recommendation on method of pushing

WHO
OMS extranet.who.int/rhl/topics/preconception-pregnancy-childbirth-and-postpartum-care/care-during-childbirth/care-during-labour-2nd-stage/who-recommendation-method-pushing

Recommendation

Women in the expulsive phase of the second stage of labour should be encouraged and supported to follow their own urge to push.

(Recommended)

Publication history

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Remarks

- Qualitative evidence on what matters to women during intrapartum care shows that women want to feel in control of their birth process, with the support of kind, reassuring staff who are sensitive to their needs (1).
- Health care providers should avoid imposing directed pushing on women in the second stage of labour, as there is no evidence of any benefit with this technique.

Background

Globally, approximately 140 million births occur every year (2). The majority of these are vaginal births among pregnant women with no identified risk factors for complications, either for themselves or their babies, at the onset of labour (3,4). However, in situations where complications arise during labour, the risk of serious morbidity and death increases for both the woman and baby. Over a third of maternal deaths and a substantial proportion of pregnancy-related life-threatening conditions are attributed to complications that arise during labour, childbirth or the immediate postpartum period, often as result of haemorrhage, obstructed labour or sepsis (5,6). Similarly, approximately half of all stillbirths and a quarter of neonatal deaths result from complications during labour and childbirth (7). The burden of maternal and perinatal deaths is disproportionately higher in low- and middle-income countries (LMICs) compared to high-income countries (HICs). Therefore, improving the quality of care around the time of birth, especially in LMICs, has been identified as the most impactful strategy for reducing stillbirths, maternal and newborn deaths, compared with antenatal or postpartum care strategies (8).

Over the last two decades, women have been encouraged to give birth in health care facilities to ensure access to skilled health care professionals and timely referral should the need for additional care arise. However, accessing labour and childbirth care in health care facilities may not guarantee good quality care. Disrespectful and undignified care is prevalent in many facility settings globally, particularly for underprivileged populations, and this not only violates their human rights but is also a significant barrier to accessing intrapartum care services (9). In addition, the prevailing model of intrapartum care in many parts of the world, which enables the health care provider to control the birthing process, may expose apparently healthy pregnant women to unnecessary medical interventions that interfere with the physiological process of childbirth.

As highlighted in the World Health Organization (WHO) framework for improving quality of care for pregnant women during childbirth, experience of care is as important as clinical care provision in achieving the desired person-centred outcomes (10).

This up-to-date, comprehensive and consolidated guideline on intrapartum care for healthy pregnant women and their babies brings together new and existing WHO recommendations that, when delivered as a package of care, will ensure good quality and evidence-based care in all country settings. In addition to establishing essential clinical and non-clinical practices that support a positive childbirth experience, the guideline highlights unnecessary, non-evidence-based and potentially harmful intrapartum care practices that weaken women's innate childbirth capabilities, waste resources and reduce equity.

To ensure that each recommendation is correctly understood and applied in practice, the context of all context-specific recommendations is clearly stated within each recommendation, and the contributing experts provided additional remarks where needed.

In accordance with WHO guideline development standards, these recommendations will be reviewed and updated following the identification of new evidence, with major reviews and updates at least every five years.

Methods

These recommendations were developed using standard operating procedures in accordance with the process described in the WHO handbook for guideline development (11). Briefly, these procedures include: (i) identification of priority questions and outcomes; (ii) evidence retrieval and synthesis; (iii) assessment of the evidence; (iv) formulation of the recommendations; and (v) planning for implementation, dissemination, impact evaluation and updating of the guideline.

The quality of the scientific evidence underpinning the recommendations was graded using the Grading of Recommendations Assessment, Development and Evaluation (GRADE) (12) and Confidence in the Evidence from Reviews of Qualitative research (CERQual) (13)

approaches, for quantitative and qualitative evidence, respectively. Up-to-date systematic reviews were used to prepare evidence profiles for priority questions.

The GRADE evidence-to-decision (EtD) framework (14), an evidence-to-decision tool that includes intervention effects, values, resources, equity, acceptability and feasibility criteria, was used to guide the formulation of recommendations by the Guideline Development Group (GDG) – an international group of experts assembled for the purpose of developing this guideline – at two technical consultations in May and September 2017. In addition, relevant recommendations from existing WHO guidelines approved by the Guidelines Review Committee (GRC) were systematically identified and integrated into this guideline for the purpose of providing a comprehensive document for end-users.

Further information on procedures for developing this recommendation are available [here](#).

Recommendation question

For this recommendation, we aimed to answer the following questions:

For women in the second stage of labour (P), does spontaneous pushing (I), compared with directed pushing (e.g. with Valsalva/closed glottis) (C), improve birth outcomes (O)?

Evidence summary

This evidence is derived from a Cochrane systematic review on pushing techniques (15).

Eight RCTs involving 884 women compared spontaneous pushing with directed pushing. Most participants in these studies, which were conducted in Hong Kong Special Administrative Region, Iran, Turkey, the United Kingdom (1 study each) and the USA (3 studies), were nulliparous women with uncomplicated singleton vertex gestations at term. Sample sizes ranged from 32 to 320 participants. One trial (258 women) also included parous women and another comprised a proportion of women with epidural analgesia. The birth position of participants in the studies was not consistent across studies, with one study (72 women) managing the directed pushing group in a supine position, whereas women in the spontaneous group pushed in an upright position. Other aspects of the techniques differed slightly across studies but, in general, women in the spontaneous group were not given specific instructions on how to push and were encouraged, rather, to do what comes naturally.

Comparison: Spontaneous pushing compared with directed pushing

Maternal outcomes

Duration of labour: Evidence on duration of the second stage of labour and the duration of pushing is of very low certainty.

Mode of birth: High-certainty evidence shows that spontaneous pushing makes little or no difference to spontaneous vaginal birth (5 trials, 688 women, RR 1.01, 95% CI 0.97–1.05), and low-certainty evidence suggests that it may have little or no effect on instrumental vaginal birth (2 trials, 393 women, RR 0.56, 95% CI 0.06–5.10). Evidence on caesarean section is of very low certainty.

Perineal/vaginal trauma: Moderate-certainty evidence suggests there is probably little or no difference between spontaneous and directed pushing on perineal lacerations (1 trial, 320 women, RR 0.87, 95% CI 0.45–1.66). Evidence on episiotomy is of very low certainty.

Long-term morbidity: Low-certainty evidence suggests there may be little or no difference in postpartum urinary incontinence between spontaneous and directed pushing (1 trial, 128 women, RR 0.77, 95% CI 0.29–1.69). No studies reported perineal pain, dyspareunia or pelvic floor prolapse.

Birth experience: There may be little or no difference in maternal satisfaction between these techniques, measured on a visual analogue scale, however the evidence is of low certainty (1 trial, 31 women, MD 0.91 higher satisfaction score [from 1.3 lower to 3.12 higher]). Evidence on maternal fatigue after birth is of very low certainty and no studies reported on pain during the second stage.

Fetal and neonatal outcomes

Perinatal hypoxia-ischaemia: Low-certainty evidence suggests there may be little or no difference between spontaneous compared with directed pushing on 5-minute Apgar score less than 7 (1 trial, RR 0.35, 95% CI 0.01–8.43), umbilical arterial cord blood pH less than 7.2 (1 trial, 320 women, RR 0.74, 95% CI 0.24–2.29), and delivery room neonatal resuscitation (2 trials, 352 babies, RR 0.83, 95% CI 0.40–1.75).

Fetal distress: The review did not report this outcome.

Perinatal mortality: The review did not report this outcome.

Additional considerations

Evidence from other studies suggests that women are less likely (than health care providers) to recognize defined, time-bound phases of labour (16), and their ability to cope is more likely to be dependent on a variety of inter-related factors, including the level of pain experienced, the nature of the environment and their perceived level of support (17).

Values

Findings from a review of qualitative studies looking at what matters to women during intrapartum care (1) indicate that most women want a normal childbirth with good outcomes for mother and baby (high confidence in the evidence). Some women also hope for a relatively quick labour but this is often based on the perception that the longer labour lasts the more likely they are to require medical intervention (low confidence in the evidence). Findings also suggest that women are aware of the unpredictability of labour and childbirth and are fearful of potentially traumatic events (including medical interventions and maternal and fetal morbidities) so they would value any technique that reduces their potential exposure to these kinds of outcomes (high confidence in the evidence). Findings also suggest that women would like to “go with the flow” by being aware of and trusting their own physiological signals (including the urge to push), supported by kind, reassuring staff who are sensitive to their needs (high confidence in the evidence).

Additional considerations: Evidence from other studies suggests that women are less likely (than health care providers) to recognize defined, time-bound phases of labour (16), and their ability to cope is more likely to be dependent on a variety of inter-related factors, including the level of pain experienced, the nature of the environment and their perceived level of support (17).

Resources

There is no review evidence on costs associated with these two pushing techniques

Additional considerations: If a pushing technique leads to a longer duration of second stage and/or more interventions, it would have cost implications in terms of staff time and other costs. However, this does not appear to be the case with spontaneous and directed pushing techniques, which, the review found, had little or no effect on the duration of labour and other birth outcomes. Therefore, although based on low-certainty evidence overall, findings suggest that cost implications with these different techniques may be negligible.

Equity

No research evidence was found.

Additional considerations: Encouraging women to use their own natural, physiological method of pushing in the second stage might help women to feel more in control of their childbirth experience and empower them to enjoy their reproductive rights.

Acceptability

A qualitative systematic review of women’s experiences of labour and childbirth (18) found no direct evidence relating to women’s views on pushing. Indirect evidence from this review suggests that in certain LMIC contexts women are more likely to experience disrespectful or abusive care when health care professionals adopt a directive approach to labour and

childbirth (low confidence in the evidence). Findings also indicate that women like to feel “in control” of labour progress but welcome support and advice from reassuring health care professionals, provided it is consistent, coherent and in accord with their perceived physiological and psychological state (low confidence in the evidence). The qualitative systematic review found no direct evidence on health care professionals’ views relating to pushing (18).

Additional considerations: Evidence from a review and case analysis study indicates that women do not like the conflicting internal and external messages, when their internal desire is to push but health care professionals tell them not to, or vice versa (19).

Feasibility

A qualitative systematic review of women’s experiences of labour and childbirth found no direct evidence relating to women’s views on pushing (18). Indirect evidence would suggest that there are unlikely to be any concerns around feasibility. The qualitative systematic review found no direct evidence on health care professionals’ views relating to pushing (18). Indirect evidence would suggest that organizational pressures relating to time and bed space may encourage health care professionals to favour directed pushing in certain contexts based on the perception that it shortens labour (very low confidence in the evidence).

Additional considerations: The teaching of women, by health care professionals, to follow their own instincts to push when they feel the urge is more feasible than teaching women to perform the Valsalva manoeuvre.

Further information and considerations related to this recommendation can be found in the WHO guidelines, available at:

<http://apps.who.int/iris/bitstream/10665/250796/8/9789241549912-websupplement-eng.pdf?ua=1>

<http://apps.who.int/iris/bitstream/handle/10665/260178/9789241550215-eng.pdf;jsessionid=7E800B590A164DC7FC879E73B480D6FC?sequence=1>

Implementation considerations

The successful introduction of evidence-based policies related to intrapartum care into national programmes and health care services depends on well-planned and participatory consensus-driven processes of adaptation and implementation. These processes may include the development or revision of national guidelines or protocols based on this recommendation.

The recommendation should be adapted into locally-appropriate documents and tools that are able to meet the specific needs of each country and health service. Modifications to the recommendation, where necessary, should be justified in an explicit and transparent manner.

An enabling environment should be created for the use of this recommendation, including changes in the behaviour of health care practitioners to enable the use of evidence-based practices.

Local professional societies may play important roles in this process and an all-inclusive and participatory process should be encouraged.

Health policy considerations

- A firm government commitment to increasing coverage of maternity care for all pregnant women giving birth in health care facilities is needed, irrespective of social, economic, ethnic, racial or other factors. National support must be secured for the whole package of recommendations, not just for specific components.
- To set the policy agenda, to secure broad anchoring and to ensure progress in policy formulation and decision-making, representatives of training facilities and professional societies should be included in participatory processes at all stages.
- To facilitate negotiations and planning, situation-specific information on the expected impact of the new intrapartum care model on service users, providers and costs should be compiled and disseminated.
- To be able to adequately ensure access for all women to quality maternity care, in the context of universal health coverage (UHC), strategies for raising public funding for health care will need revision. In low-income countries, donors could play a significant role in scaling up implementation.

Organizational or health-system-level considerations

- Long-term planning is needed for resource generation and budget allocation to address the shortage of skilled midwives, to improve facility infrastructure and referral pathways, and to strengthen and sustain good-quality maternity services.
- Introduction of the model should involve training institutions and professional bodies so that preservice and in-service training curricula can be updated as quickly and smoothly as possible.
- Standardized labour monitoring tools, including a revised partograph, will need to be developed to ensure that all health care providers (i) understand the key concepts around what constitutes normal and abnormal labour and labour progress, and the appropriate support required, and (ii) apply the standardized tools.
- The national Essential Medicines Lists will need to be updated (e.g. to include medicines to be available for pain relief during labour).

- Development or revision of national guidelines and/or facility-based protocols based on the WHO intrapartum care model is needed. For health care facilities without availability of caesarean section, context- or situation-specific guidance will need to be developed (e.g. taking into account travel time to the higher-level facility) to ensure timely and appropriate referral and transfer to a higher level of care if intrapartum complications develop.
- Good-quality supervision, communication and transport links between primary and higher-level facilities need to be established to ensure that referral pathways are efficient.
- Strategies will need to be devised to improve supply chain management according to local requirements, such as developing protocols for obtaining and maintaining stock of supplies.
- Consideration should be given to care provision at alternative maternity care facilities (e.g. on-site midwife-led birthing units) to facilitate the WHO intrapartum care model and reduce exposure of healthy pregnant women to unnecessary interventions prevalent in higher-level facilities.
- Behaviour change strategies aimed at health care providers and other stakeholders could be required in settings where non-evidence-based intrapartum care practices are entrenched.
- Successful implementation strategies should be documented and shared as examples of best practice for other implementers. User-level considerations

Community-level sensitization activities should be undertaken to disseminate information about:

- respectful maternity care (RMC) as a fundamental human right of pregnant women and babies in facilities;
- facility-based practices that lead to improvements in women's childbirth experience (e.g. RMC, labour and birth companionship, effective communication, choice of birth position, choice of pain relief method);
- and unnecessary birth practices that are not recommended for healthy pregnant women and that are no longer practised in facilities (e.g. liberal use of episiotomy, fundal pressure, routine amniotomy).

Research implications

The GDG did not identify any priority question related to this recommendation.

Related links

WHO recommendations on intrapartum care for a positive childbirth experience

(2018) - [full document](#) and [evidence tables](#)

[Managing Complications in Pregnancy and Childbirth: A guide for midwives and doctors](#)

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