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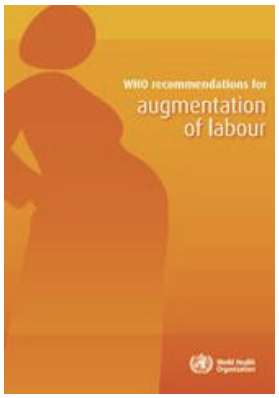
Recommendations for Augmentation of Labour

Highlights and Key Messages from World Health Organization's 2014 Global Recommendations

Key Messages of WHO's Augmentation of Labour Guidelines

- Augmentation of labour is a useful and important intervention when appropriate treatment, based on evidence-informed guidelines, is provided for delay in labour.
- This intervention aims to prevent prolonged labour while tackling the problem of high caesarean section rates, a growing global problem.
- The inappropriate use of this intervention may cause harm, resulting in uterine hyperstimulation with adverse effects, such as fetal asphyxia and uterine rupture.

Background



Difficult labour (or dystocia) is characterized by abnormally slow labour progress arising from inefficient uterine contractions, abnormal fetal presentation or position, inadequate bony pelvis or abnormalities of the mother's pelvic soft tissues. It is more common among nulliparous women and is associated with considerable maternal and perinatal morbidity and mortality as a result of infections, uterine rupture and operative deliveries.

In clinical practice, identifying the precise cause of slow labour progress can be challenging. Thus, "failure to progress" has become an increasingly popular description of delayed labour and one of the leading indications for primary caesarean section. There is growing concern that caesarean section is performed too soon in many cases, without due consideration for less invasive interventions that could lead to vaginal birth. Augmentation of labour is the process of stimulating the uterus to increase the frequency, duration and intensity of contractions after the onset of spontaneous labour. It has commonly been used to treat delayed labour when uterine contractions are assessed to be insufficiently strong.

Figure 1. Summary of recommended and non-recommended practices.

	Prevention	Treatment
Recommended	• Active phase partograph with a four-hour action line to monitor labour progress • Routine assessments with digital vaginal exams at four-hour intervals • Encouraging mobility and upright position • Continuous companionship	• The use of oxytocin alone for treatment of delay in labour • The use of amniotomy and oxytocin for treatment of **confirmed** delay in labour
Not Recommended	• The use of a package of care ("active management of labour") for prevention of delay in labour • Administration of an enema • The use of early amniotomy with early oxytocin augmentation • The use of amniotomy alone • Pain relief for preventing delay • Restricting fluid and food intake for women at low risk • The use of intravenous fluids to shorten labour	• Augmentation with intravenous oxytocin prior to confirmation of delay in labour • High starting and increment dosage regimen of oxytocin • The use of oral misoprostol • The use of amniotomy alone • The use of internal tocodynamometry (compared with external tocodynamometry)

Labour augmentation has traditionally been performed with the use of intravenous oxytocin infusion and/or artificial rupture of amniotic membranes (amniotomy). Although augmentation of labour may be beneficial in preventing prolonged labour, its inappropriate use may cause harm. Augmentation with synthetic oxytocin may result in uterine hyperstimulation with adverse effects, such as fetal asphyxia and uterine rupture, and, thus, increase the risk of a cascade of interventions during labour and

delivery. Unwarranted clinical intervention also deprives women of their autonomy and dignity during labour and may negatively impact their childbirth experience. There is wide disparity in the current practice of oxytocin augmentation between countries and between hospitals in the same country. As a common intrapartum intervention, improving the practice of labour augmentation through provision of evidence-informed guidelines has significant implications for labour outcomes in both low- and high-income countries. The **goal of this evidence brief** is to summarize the guidelines for effective interventions for safe labour augmentation to accelerate their dissemination and use.

Summary Recommendations Grouped by Process of Care

For all recommendations below, a common set of policy/programme actions should be undertaken to quickly and systematically update national clinical guidelines and reinforce evidence-based care:

- Review/update national clinical guidelines, pre-service educational materials and in-service training materials to ensure they reflect current evidence.
- Engage national ob/gyn and midwifery associations to update their members (e.g., at annual meetings, newsletters, continuing medical education sessions, etc.) on the new recommendations and the evidence basis for each.
- Encourage efforts to improve the quality of care at health facilities to monitor these key practices and mentor providers onsite when practice is outdated or potentially harmful.
- Where feasible, engage policymakers in the rational use of drugs and supplies to quantify cost savings to the health system and potential remedy to stock-outs (i.e., overuse of oxytocin to augment labour may lead to stock-outs when it is needed for active management of the third stage of labour).
- Use existing platforms (e.g., short message service (SMS) for providers, monthly meetings) to remind providers regularly of key practices.
- Link promotion of evidence-based practices related to women's comfort and choice with respectful maternity care and advocacy activities (e.g., White Ribbon Alliance).
- If routine maternal and perinatal death audits occur at facilities, use the review and action-planning process to flag outdated practices that may be harmful.

Steps for Diagnosing Delay
(in the First Stage of Labour)

- Reinforce the use of partographs.
- Confirm that partographs with four-hour action line (rather than those with earlier action lines) are included in national guidelines, pre-service and in-service training materials and health management information system.
- Conduct digital vaginal exams at intervals of four hours for routine assessment.
- Minimize the total number of vaginal examinations.

Augmentation of Labour: Policy and Programme Actions to Incorporate New Guidelines	
WHO Recommendation 2014	**Justification and Policy/Programme Action**
I. Provide appropriate vigilance and monitoring	
Recommendation 1: Use of an active phase partograph with a four-hour action line to monitor labour progress is recommended.	• Reinforce the use of partographs because they can allow providers to determine when labour is following an expected course or when labour may benefit from augmentation. The use of the partograph can be maximized when used in conjunction with a standard labour protocol. • Confirm that partographs with four-hour action line are included in national guidelines, pre-service and in-service training curricula and health management information system (if centrally printed and supplied to facilities). Ensure providers are trained on partograph.
Recommendation 2: Digital vaginal exams at intervals of four hours are recommended for routine assessment and identification of delay in active labour.	• Regarding vaginal examinations at more frequent intervals, priority must be given to the woman's wishes and preferences and to minimizing the total number of vaginal examinations. • Ensure that rectal exams for routine labour assessment are not performed, given that they can be more uncomfortable for women.
II. Reduce inappropriate interventions falsely believed to prevent slow labour	
Recommendation 7: The use of antispasmodic agents for prevention of delay in labour is not recommended.	• The available data addressing the use of antispasmodic agents for prevention of delay in labour are heterogeneous and are not generalizable. Based on the existing data, it appears there is a clinically inconsequential shortening of the first stage of labour, and no improvement in critical maternal and neonatal outcomes.
Recommendation 8: Pain relief for preventing delay and reducing the use of augmentation in labour is not recommended.	• Pain relief can have substantial benefits during labour and is an essential component of good intrapartum care. Yet, there is no clear evidence that any form of pain relief is associated with any reduction in labour duration or frequency of labour augmentation.

Augmentation of Labour: Policy and Programme Actions to Incorporate New Guidelines	
WHO Recommendation 2014	**Justification and Policy/Programme Action**
Recommendation 9: The use of intravenous fluids with the aim of shortening the duration of labour is not recommended.	• Avoid the routine administration of intravenous fluids to shorten labour because this does not have benefits that outweigh potential harms, such as maternal fluid overload. The widespread use of routine intravenous fluids for all women in labour in facilities in low-, middle- and high-income settings increases cost, impacts resources, and decreases women's mobility.
Recommendation 13: Administration of enemas for reducing the use of labour augmentation is not recommended.	• Avoid the administration of enemas. Routine use of enemas has not been shown to reduce the duration of labour or confer any other clinical benefit. It is considered invasive and uncomfortable for women.
III. Improve the woman's capacity to have a natural labour	
Recommendation 10: For women at low risk, oral fluids and food intake during labour is recommended.	• Avoid restricting oral fluid and food intake during labour. Allowing oral intake during labour respects women's choices and wishes, and restriction of oral fluid and food intake during labour has no beneficial effects on important clinical outcomes, including the use of labour augmentation, the duration of labour, the rate of caesarean sections or neonatal intensive care unit (NICU) admissions.
Recommendation 11: Encouraging mobility and an upright position during labour in women at low risk is recommended.	• Allow women to choose upright and ambulant positions in labour because this appears to shorten the first stage of labour in nulliparous women and reduce the overall caesarean rate. There is no increased risk of perinatal mortality, fetal distress, or admission to the NICU. Allowing women to be mobile or upright in labour is a beneficial, inexpensive intervention that is easy to implement, respects women's choices and is strongly recommended. • Advocate for the inclusion of this recommendation in national policies and guidelines, and include it as a process indicator in national programmes.
Recommendation 12: Continuous companionship during labour is recommended for improving labour outcomes.	• Permit women support with continuous companionship during labour because this appears to improve several maternal outcomes, including decreasing the length of labour, decreasing the rate of both operative vaginal deliveries and caesarean sections. • Advocate for the inclusion of this recommendation in national policies and guidelines, and include it as process indicator in national programmes.
IV. Provide appropriate treatment for delay in labour progress	
Recommendation 14: The use of oxytocin alone for treatment of delay in labour is recommended.	• Ensuring the judicious use of oxytocin in cases of insufficient contractions can prevent excessively long labour. When the primary cause of delay in labour is insufficient uterine contractions, oxytocin use as a single intervention for augmentation is reasonable.
Recommendation 19: The use of amniotomy and oxytocin for treatment of confirmed labour delay is recommended.	• Stimulation of uterine contractions with oxytocin and amniotomy is a reasonable clinical choice if a delay in labour progress is associated with lack of regular uterine contractions.
Recommendation 20: The use of internal tocodynamometry compared to external tocodynamometry, with the aim of improving outcomes for augmented labour is not recommended.	• Avoid the use of internal tocodynamometry, which is resource intensive and not widely practiced in many settings. Compared to external tocodynamometry in women undergoing labour augmentation, the potential benefits of internal tocodynamometry do not outweigh the potential harm.
V. Avoid practices not beneficial for treatment of prolonged labour	
Recommendation 3: A package of care for active management of labour for prevention of delay in labour is not recommended.	• Avoid the systematic use of a package of interventions ("active management of labour") to prevent possible labour delay because it is highly prescriptive and can undermine women's choices and autonomy during care.
Recommendation 4: The use of early amniotomy with early oxytocin augmentation for prevention of delay in labour is not recommended.	• Avoid routine amniotomy and early oxytocin administration for augmentation when slow progress is detected early in labour. Although this may shorten the first stage of labour, there is no demonstrated difference in other important clinical outcomes.
Recommendation 5: The use of oxytocin for the prevention of delay in labour in women receiving epidural analgesia is not recommended.	• Avoid routine use of oxytocin for augmentation of labour in women who receive epidural analgesia. Augmentation of labour with oxytocin should be performed only when indicated as treatment of confirmed labour delay. There is no difference in important maternal and neonatal outcomes, therefore, it is not recommended.
Recommendation 6: The use of amniotomy alone for prevention of delay in labour is not recommended.	• For women infected with HIV, avoid early amniotomy as it may increase the risk of perinatal HIV transmission.

Augmentation of Labour: Policy and Programme Actions to Incorporate New Guidelines	
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Recommendation 15: Augmentation with intravenous oxytocin prior to confirmation of delay in labour is not recommended.	• Avoid augmentation with intravenous oxytocin unless delay in labour has been diagnosed. When early intervention with oxytocin is used, prior to confirmation of delay in labour, there may be an increased risk of uterine hyperstimulation, fetal heart rate changes, and poorer maternal and neonatal outcomes.
Recommendation 16: High starting and increment dosage regimen of oxytocin is not recommended for labour augmentation.	• Avoid a high starting and increment dosage regimen of oxytocin for labour augmentation. There is a little evidence on neonatal outcomes when initiating and increasing oxytocin at high dosage levels, and it is important to emphasize caution in its use, given the danger associated with arbitrary use of oxytocin in clinical practice.
Recommendation 17: The use of oral misoprostol for labour augmentation is not recommended.	• Avoid the use of misoprostol for labour augmentation. Misoprostol is not a safe substitute for oxytocin for labour augmentation in settings with or without skilled birth attendants. Misoprostol for this use has demonstrated a high rate of uterine hyperstimulation and fetal heart rate changes, and can lead to adverse maternal and neonatal outcomes.
Recommendation 18: The use of amniotomy alone for treatment of labour delay is not recommended.	• Amniotomy alone in the setting of delayed labour is not recommended. The available data are limited to one small trial, and they are insufficient to draw conclusions on the benefits or harms of routine amniotomy for treatment of dysfunctional labour.
Recommendation 20: The use of internal tocodynamometry compared to external tocodynamometry, with the aim of improving outcomes for augmented labour is not recommended.	• Avoid the use of internal tocodynamometry, which is resource intensive and not widely practiced in many settings. Compared to external tocodynamometry in women undergoing labour augmentation, the potential benefits of internal tocodynamometry do not outweigh the potential harm.

Conclusions

Optimizing outcomes for women in labour at the global level requires evidence-based guidance of health workers to improve care through appropriate patient selection and use of effective interventions. The goal of the present guideline is to consolidate the guidance for effective interventions that are needed to reduce the global burden of prolonged labour and its consequences. The ultimate goal of this guideline is to improve the quality of care and health outcomes related to labour augmentation.

The successful introduction of evidence-based policies related to augmentation of labour into national programmes and health services depends on well-planned and participatory consensus-driven processes of adaptation and implementation. These processes may include the development or revision of existing national guidelines or protocols based on this document. The recommendations contained in the present guideline should be adapted into locally appropriate documents that are able to meet the specific needs of each country and its national health service. Readers are encouraged to review and use the full guideline document when planning implementation and/or adaptation. Changes to the recommendations, where necessary, should be limited to weak (conditional) recommendations, and justifications for any changes should be made in an explicit and transparent manner.

An enabling environment should be created for the use of these recommendations, including changes in the behaviour of health care practitioners and managers to enable the implementation of these evidence-based practices (for example, providing screens for a woman and her birth companion to ensure privacy). Local professional societies may play important roles in this process, and an all-inclusive and participatory process should be encouraged. Ultimately, these guidelines are intended to underscore the importance of respect for women's rights and dignity as recipients of care, and the need to maintain high ethical and safety standards in clinical practice.

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