WHO recommendation on digital vaginal examination at intervals of four hours for routine assessment of active first stage of labour in low-risk women

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Recommendation

Digital vaginal examination at intervals of four hours is recommended for routine assessment of active first stage of labour in low-risk women.

(Low-quality evidence, strong recommendation)

Publication history

First published: September 2015

Updated: no update planned

Assessed as up-to-date: September 2015

Remarks

- There is currently no direct evidence on the most appropriate frequency of vaginal examinations to prevent infectious morbidity in the mother and baby, and this recommendation was based on consensus reached by the GDG, and in agreement with an existing recommendation in the WHO recommendations for augmentation of labour.(1)
- The recommended time intervals are consistent with timing of vaginal examination on the partograph and further reinforce the importance of using partograph as an essential tool to implement this practice. Priority must be given to restricting the frequency and total number of vaginal examinations. This is particularly crucial in situations where there are other risk factors for infection (e.g. prolonged rupture of amniotic membranes and long duration of labour).
- The GDG acknowledged that the frequency of vaginal examinations is dependent on the context of care and the progress of labour. The group agreed that vaginal examinations at intervals more frequent than specified in this recommendation may be warranted by the condition of the mother or the baby.
- Vaginal examinations of the same woman by multiple care givers around the same time or at different time points should be avoided. The group noted that this practice is common in teaching settings where multiple cadres of staff (or students) perform vaginal examinations for learning purposes.

Background

Bacterial infections during labour and the puerperium are among the leading causes of maternal mortality worldwide, accounting for about one tenth of the global burden of maternal deaths.(2, 3) While the number of deaths arising from these infections has decreased considerably in high-income settings, the situation has
not improved in resource-limited settings. Most of the estimated 75,000 maternal deaths occurring worldwide yearly as a result of infections are recorded in low-income countries.(4) Although the reported incidence in high-income countries is relatively low (between 0.1 and 0.6 per 1000 births), it is nonetheless an important direct cause of maternal mortality.(4, 5)

Apart from deaths and acute morbidities associated with infections during or following childbirth, long-term disabilities such as chronic pelvic pain, fallopian tube blockage and secondary infertility can also occur. Maternal infections around childbirth also have a considerable impact on newborn mortality, and an estimated 1 million newborn deaths are associated with such infections annually.(6, 7) In addition, infection-related morbidities and prolonged hospitalization can interfere with mother–infant bonding in the first days after birth.

**Methods**

The recommendation was developed using standardized operating procedures in accordance with the process described in the “WHO handbook for guideline development”, guided by the GRADE approach.(8) Outcomes used for this recommendation were aligned with the prioritized outcomes from the WHO recommendations on prevention and treatment of maternal peripartum infections (2015).(9)

A Cochrane systematic review evaluating the effectiveness of vaginal examination at term for assessing labour progress was conducted.(10) In the review, randomized controlled trials relevant to the key question were screened by review authors, and data on relevant outcomes and comparisons were extracted. Evidence profiles (in the form of GRADE tables) were prepared for comparisons of interest, including the assessment and judgments for each outcome, and the estimated risks.

WHO convened a Guideline Development Group (GDG) meeting on recommendations on prevention and treatment of maternal peripartum infections in September 2015, where this recommendation was developed. The GDG comprised of a group of independent experts, who used the evidence profiles to assess evidence on effects on the pre-specified outcomes. GDG members discussed the balance between desirable and undesirable effects, overall quality of supporting evidence, values and preferences of stakeholders, resource requirements, cost-effectiveness, acceptability, feasibility and equity, to formulate the recommendation. Remarks were added to clarify the recommendation, and aid implementation.

**Recommendation question**

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

- Among pregnant women undergoing labour monitoring (P), does routine vaginal examination at intervals of four hours (I), compared with shorter intervals (C), prevent infectious morbidities and improve outcomes (O)?

**Evidence Summary**

Evidence on the intervals of vaginal examination during labour was extracted from a Cochrane systematic review evaluating the effectiveness of vaginal examination at term for assessing labour progress.(10) The review included two trials, each examining a different comparison. One trial conducted in Ireland in 307 women with ruptured membranes compared routine vaginal examinations (every one or two hours) with rectal examinations to assess progress in labour. A trial in the UK compared two-hourly with four-hourly vaginal examinations in nulliparous women in labour (150 women randomized, 109 included in the analysis).

*Two-hourly versus four-hourly vaginal examinations in labour (no GRADE table included)*

- In the UK trial with 109 women comparing two versus four-hourly vaginal examination to assess progress in labour, no maternal or neonatal critical outcomes related to infection were reported. However, the trial reported no significant differences between the two intervals for duration of labour,
caesarean section, operative vaginal birth and use of labour augmentation.

Implementation considerations

- The successful introduction of this recommendation into national programmes and health-care services depends on well-planned and participatory consensus-driven processes of adaptation and implementation. The adaptation and implementation processes may include the development or revision of existing national guidelines or protocols based on this recommendation.
- The recommendation should be adapted into a locally appropriate document that can meet the specific needs of each country and health service. Any changes should be made in an explicit and transparent manner.
- A set of interventions should be established to ensure that an enabling environment is created for the use of the recommendations, and that the behaviour of the healthcare practitioner changes towards the use of this evidence-based practice.
- In this process, the role of local professional societies is important and an all-inclusive and participatory process should be encouraged.

Research implications

The GDG did not identify further research priorities on this topic.

Related Links


Supporting systematic review:


References


Citation


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