

Review Article

WHO LABOUR CARE GUIDE VS. PARTOGRAPH: A CRITICAL REVIEW OF LABOUR MONITORING PARADIGMS

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ABSTRACT

Background: The WHO-modified Partograph has been widely used for intrapartum monitoring for decades, particularly in low- and middle-income countries. However, its reliance on rigid thresholds, including the “1 cm/hour” cervical dilatation rule, and limited scope in documenting supportive care have raised concerns about its effectiveness and clinical relevance. In 2020, WHO introduced the Labour Care Guide (LCG), a next-generation monitoring tool designed to provide individualized, evidence-based, and woman-centered intrapartum care. **Objective:** To critically compare the WHO Labour Care Guide with the traditional Partograph, highlighting conceptual differences, clinical outcomes, maternal and neonatal impact, user acceptability, and implementation feasibility.

Materials and Methods: A comprehensive literature review was conducted using PubMed, Scopus, Cochrane Library, and Google Scholar up to August 2025. Eligible studies included randomized controlled trials, observational studies, systematic reviews, and WHO technical documents comparing the Partograph and LCG, or evaluating their role in intrapartum monitoring. Data were synthesized narratively under four domains: conceptual framework, clinical performance, maternal–neonatal outcomes, and user acceptability.

Results: Forty-two publications met the inclusion criteria. The Partograph demonstrated utility in reducing prolonged labour when properly applied, but evidence for improved maternal or neonatal outcomes was inconsistent, and real-world compliance remained low. In contrast, early evaluations of the LCG indicated improved recognition of abnormal labour patterns, potential reduction in cesarean section rates, and higher user acceptability due to its structured, checklist-based design and integration of respectful maternity care practices. Neonatal outcomes appeared comparable between the two tools, though large-scale randomized trials are still lacking.

Conclusion: The WHO Labour Care Guide represents an evolution in intrapartum monitoring, offering a more comprehensive and patient-centered alternative to the Partograph. While preliminary evidence is promising, particularly regarding user compliance and early detection of complications, further multicountry implementation studies and large-scale randomized trials are required to confirm its effectiveness and guide policy adoption globally.

Keywords: Labour Care Guide, Partograph, intrapartum monitoring, maternal outcomes, neonatal outcomes, WHO, respectful maternity care.

INTRODUCTION

Labour is a dynamic physiological process that requires continuous monitoring to ensure maternal and fetal wellbeing. Globally, obstructed labour,

prolonged labour, and delayed recognition of complications remain important contributors to maternal and perinatal morbidity and mortality. For decades, the WHO-modified Partograph has been the standard tool recommended for intrapartum

monitoring, particularly in low- and middle-income countries. It provided a simple graphical method to record cervical dilatation, uterine contractions, fetal heart rate, and maternal parameters, aiming to detect abnormal labour early and guide timely interventions. Despite its widespread adoption, evidence from large-scale studies and systematic reviews has questioned the effectiveness of the Partograph in improving labour outcomes. Concerns include its reliance on the outdated “1 cm/hour rule” of cervical dilatation, its limited scope in addressing supportive care, and its contribution to unnecessary interventions due to rigid thresholds. These limitations prompted WHO to reassess labour monitoring practices in light of updated evidence and contemporary maternity care values.

In 2020, the WHO Labour Care Guide (LCG) was introduced as a new generation intrapartum monitoring tool, shifting the focus from a purely graphical recording system to a comprehensive clinical decision-support guide. Unlike the Partograph, the LCG emphasizes individualized labour progress, evidence-based thresholds, maternal experience, respectful care, and documentation of supportive practices such as mobility, pain relief, and companionship.^[1,2]

This review critically compares the Partograph and the Labour Care Guide, highlighting their conceptual differences, strengths, limitations, and clinical implications. By examining emerging evidence and practical challenges, it aims to assess whether the LCG represents an evolution in intrapartum monitoring and how its adoption could influence maternal and neonatal outcomes globally.

MATERIALS AND METHODS

This review was conducted to critically compare the WHO Labour Care Guide (LCG) with the traditional WHO-modified Partograph in the context of intrapartum monitoring. A comprehensive literature search was performed in electronic databases including PubMed, Scopus, Google Scholar, and Cochrane Library up to August 2025. Search terms used in combination were: “Partograph,” “WHO Labour Care Guide,” “intrapartum monitoring,” “labour progress,” “maternal outcomes,” “perinatal outcomes,” and “labour management tools.”

Inclusion Criteria Comprised

1. Studies published in English.
2. Randomized controlled trials (RCTs), observational studies, systematic reviews, and meta-analyses comparing the Partograph with LCG, or evaluating their effectiveness in labour monitoring.

3. Guidelines and technical documents published by WHO or other recognized professional bodies.

Exclusion criteria included studies with insufficient data on maternal or neonatal outcomes, commentaries without primary data, and conference abstracts without peer-reviewed full texts.

Data were extracted on study design, sample size, geographical setting, outcomes assessed (labour duration, cesarean section rate, maternal complications, neonatal outcomes, and user acceptability), and key findings. Relevant qualitative studies addressing health worker perspectives and implementation challenges were also included to provide a broader contextual understanding.

The extracted evidence was synthesized narratively under the following themes:

- Conceptual framework of the Partograph and LCG
- Clinical performance and impact on outcomes
- User acceptability and feasibility in different healthcare settings
- Strengths and limitations of each paradigm
- Policy and implementation perspectives

RESULTS

A total of 42 relevant publications were included, comprising randomized controlled trials, observational studies, systematic reviews, and WHO technical reports. The evidence was synthesized under four domains: clinical outcomes, maternal–neonatal outcomes, feasibility, and user acceptability. A total of 42 relevant publications were included, consisting of randomized controlled trials (n=12), observational studies (n=15), systematic reviews and meta-analyses (n=7), and WHO technical reports (n=8). The studies were conducted across diverse geographical regions, predominantly in low- and middle-income countries where both the Partograph and Labour Care Guide (LCG) have been introduced as intrapartum monitoring tools. Findings were synthesized under four domains: conceptual framework, clinical outcomes, maternal–neonatal outcomes, and user acceptability/feasibility.

The Partograph, originally developed in the 1970s and adopted by WHO in 1994, primarily focuses on graphical recording of labour progress based on the “1 cm/hour” cervical dilatation rule. In contrast, the LCG, introduced in 2020, shifts towards a comprehensive decision-support guide, incorporating not only labour progress but also maternal wellbeing, fetal status, intrapartum interventions, and respectful maternity care practices. Unlike the rigid linear thresholds of the Partograph, the LCG emphasizes individualized progress and flexibility in assessment. [Table 1]

Table 1: Conceptual and Structural Differences

Parameter	partograph	WHO Labour care guide (LCG)
Year introduced	1970s (Philpott & Castle, WHO adoption 1994)	2020 (WHO)
Primary Focus	Monitoring labour progress with alert/action lines	Individualized monitoring, supportive care, timely intervention
Key Indicators	Cervical dilatation, fetal heart rate, contractions, maternal vitals	Progress of labour + supportive care + intrapartum interventions + respectful care
Approach	Linear, time-bound (1 cm/hr progress rule)	Non-linear, flexible, considers variability in labour
Documentation	Manual plotting	Checklist-style format; adaptable for digital tools

Evidence on the effectiveness of the Partograph in reducing prolonged or obstructed labour is mixed. While early studies reported decreased incidence of prolonged labour when the tool was properly implemented, large-scale observational studies revealed inconsistent adherence and limited overall impact.

In comparison, preliminary evaluations of the LCG suggest improved recognition of abnormal labour patterns and more timely interventions. Some early multicenter reports noted a trend toward lower cesarean section rates with the LCG, although findings remain heterogeneous. Data on instrumental deliveries are inconclusive for both tools. [Table 2]

Table 2: Clinical Outcomes

Outcome	Evidence with Partograph	Evidence with LCG
Prolonged/Obstructed Labour	Reduced if properly applied; inconsistent use limits effectiveness	Early pilot studies show better recognition of abnormal patterns
Cesarean Section Rates	Mixed evidence; no consistent reduction	Some reports suggest lower cesarean rates compared to partograph use
Instrumental Deliveries	Variable impact	No significant difference yet
Maternal Complications	Reduced incidence of obstructed labour in some studies	Potentially better early intervention, but large-scale trials pending

The Partograph has been associated with an indirect reduction in obstructed labour–related complications, including postpartum hemorrhage, when consistently applied. However, no consistent improvements were observed in neonatal outcomes such as low Apgar scores or NICU admissions.

Emerging evidence from LCG implementation studies indicates potential benefits for maternal safety through individualized monitoring and early intervention, though large-scale randomized trials are still pending. Neonatal outcomes remain largely comparable between the two paradigms. [Table 3]

Table 3: Maternal and Neonatal Outcomes

Indicator	Partograph	LCG
Postpartum Hemorrhage	Indirect reduction by timely intervention	Expected improvement with individualized monitoring
Apgar Score (<7 at 5 min)	No consistent improvement	Comparable to partograph
NICU Admission	No significant change	No significant difference in early studies

Several studies identified the Partograph as complex, time-consuming, and poorly adhered to, particularly in resource-constrained settings where staff shortages and high patient loads are common. Compliance with Partograph documentation was frequently below 50%.

Conversely, the LCG’s checklist-based structure and explicit emphasis on respectful care and

companionship were viewed as more user-friendly and aligned with modern maternity care values. Early qualitative studies among health workers report higher acceptability, improved clarity, and better compliance with the LCG. Nonetheless, successful implementation requires structured training and institutional support, particularly in low-resource environments. [Table-4]

Table 4: User Acceptability and Feasibility

Aspect	Partograph	LCG
Ease of Use	Reported as complex, time-consuming	Structured checklist, better clarity
Training Requirements	High, often inadequate	Requires structured training but easier to adopt
Compliance	Poor in many low-resource settings	Early studies show higher compliance
Patient-Centeredness	Limited	Explicit inclusion of respectful maternity care, birth companionship

DISCUSSION

While historically foundational, the Partograph is increasingly seen as outdated and underutilized. Realist syntheses highlight that, despite widespread endorsement, its effectiveness is compromised by inconsistent completion and limited real-world use.¹ In Ethiopia, a meta-analysis found only ~55% utilization among obstetric caregivers, influenced by factors like training, knowledge, attitude, tool availability, and professional cadre.² Similar barriers—such as workload, documentation fatigue, and staffing shortages—are reported in Nigeria and Sub-Saharan Africa.³

The LCG represents a paradigm shift. A randomized controlled trial at a tertiary center in North India reported a dramatic reduction in cesarean section rates—from 17.8% with the Partograph to 1.5% with the LCG, coupled with shorter active labor duration and high user satisfaction post-learning curve.⁴ In rural Uganda, a comparative ambispective study found that the LCG detected six times more prolonged or obstructed labor cases (aOR ≈ 5.94), with a twelve-fold increased detection of obstructed labour specifically. These gains translated to higher rates of timely interventions, such as cesarean delivery and labour augmentation, alongside better Apgar outcomes, without increased maternal or perinatal harm.⁵ A mixed-methods study in Indonesia among midwives found high perceived usability, acceptability, and design satisfaction—though respondents cited the need for sufficient training and time to implement the tool effectively.⁶ Complementing these findings, another study highlighted that the LCG is both feasible and acceptable across diverse clinical settings and encourages a woman-centered approach to intrapartum care.⁷

To bridge evidence gaps, a stepped-wedge cluster-randomized pilot underway in India is evaluating a comprehensive LCG implementation strategy—combining training, supervision, audit, and feedback—and will assess impacts on clinical outcomes, care processes, and women's experiences.⁸

Collectively, these findings suggest that the LCG addresses key limitations of the Partograph by Enhancing early detection of labour abnormalities. Encouraging timely and appropriate interventions. Improving user engagement through its checklist format and alignment with respectful maternity care values. Being prognostically sensitive and contextually relevant across settings. However, while early data are promising, they derive largely from pilot studies, single-site RCTs, or cohort designs. The broader effectiveness of the LCG across varied health systems and its long-term impact on maternal/neonatal mortality remain to be clarified through scale-up evaluations and rigorous trials.

The Partograph remains a useful tool in theory but suffers from poor real-world implementation and outdated thresholds. The LCG demonstrates promise as a comprehensive, patient-centered, and feasible alternative, with higher user acceptability and early signals of improved maternal outcomes. Evidence is still evolving, and large-scale, multicountry implementation studies are needed to establish the LCG's impact on maternal and neonatal morbidity and mortality.

Strengths

The review synthesizes recent quantitative and qualitative evidence, spanning multiple countries and settings.

It frames the LCG within contemporary priorities of respectful, patient-centered care.

Limitations

Many studies are small-scale or observational; large-scale randomized controlled data are limited.

Context-specific factors (e.g., staffing, culture, resources) may affect generalizability.

Potential bias exists in studies led by tool developers or early adopters.

CONCLUSION

The WHO Labour Care Guide stands as an evolution in intrapartum monitoring—offering individualized, evidence-based guidance aligned with modern values of respectful care. Preliminary data demonstrate its potential to improve detection of labor complications and reduce unnecessary surgical deliveries. However, its full promise will only be realized through rigorous, scaled—and context-sensitive—research and implementation.

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