

Developing A Training Model to Promote Utilization of Partograph by Midwives Working in Labour Ward at selected Kenyan Hospitals

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Abstract: Partograph is graphical tool presentation of key data during the progress of labor. The observations of the mother are interpreted by a midwife or an obstetrician to make conclusions to whether the condition of the mother and fetus is fine. A woman from developing world is 100 times more probable to die during pregnancy or child birth than a woman from a developed country. The purpose of the study is to develop a model to promote partograph utilization by midwives during management of mothers in labour in selected hospitals in Kenya so as to reduce Maternal Mortality rate related to delivery. The study sums up that midwives' knowledge of the partograph is variable, with some having adequate knowledge while others have inadequate knowledge. Inadequate knowledge can lead to ineffective use of the partograph and compromise the quality of care provided to pregnant women during labor. On table 9 indicated that the chi square value was ($\chi^2 = 1.136$) this was less than 5.89 this indicated that at 95% at 13 degree of freedom. The development of a training model to promote the utilization of the partograph by midwives working in labor wards is an important step towards improving the quality of maternal care. The training model should be designed to provide midwives with the necessary knowledge and skills required to effectively use the partograph in the assessment and monitoring of women in labor. The proposed training model can help to promote the utilization of partographs by midwives working in labor wards. By building the competencies of midwives in utilizing partographs, we can improve the quality of care provided during childbirth and reduce maternal and newborn morbidity and mortality. Maternity in-charges should collaborate with health administrators to ensure a regular supply of partograph papers in labor wards and timely procurement of necessary materials to improve the utilization of the Partograph in managing women in labor. To address understaffing in labor wards and improve the utilization of the partograph in managing women in labor in selected hospitals in Kenya, hospital managers should make a proposal to the County policy makers in the Ministry of Health to employ more nurses with Midwifery.

Key words: Partograph, Midwives, Maternal & Utilization.

1.0 Introduction

It is in Africa that the partograph was developed in 1972 by Philpott in Zimbabwe as a tool to be used to record labour progress. Since the introduction of partograph, most midwives are yet to learn to use the tool to identify dysfunctional labour. The midwives are expected to interpret recorded observations on the tool at glance make diagnosis and take prompt intervention (Mathibe – Neke et al, 2014). The reason why World Health Organization recommended partograph to observe labour progress is to minimize maternal mortality due to child birth complications (WHO, 2014). The utilization of partograph to monitor labour progress and assist countries with high maternal deaths related to pregnancy to improve the quality of care. A report on maternal deaths due to pregnancy related causes have shown the need to use partograph so as to take action and refer mothers who may need specialized care in higher level hospitals without delay (UNFPA, 2016).

The midwife together with other skilled birth attendants taking care of the mother in labour should be able to chart the observations that they take. Maternal pulse rates should be taken like after every half an hour, blood pressure and temperature four (4-) hourly,

urine production and dipstick testing for protein, ketones (if accessible) just as glucose subsequent to voiding. All liquids and medications regulated are similarly checked and recorded. On the off chance that the discoveries become irregular, expanded recurrence of perception and testing was required, and intercession may be executed. The woman in labour should be taken care of well, monitored carefully to ensure she is safe with no labour complications (Hodnett et al 2012).

For fetal wellbeing, the fetal heart rate checked for 1 minute every 15–30 minutes after a contraction during the first stage and recorded. In secondary stage every 5 minutes fetal heart rate should be taken and noted down on the tool. During the second stage, if abnormalities are recorded, urgent delivery should be considered by encouraging the mother to push.

Problem Statement

Partograph is a pectoral tool to monitor labour progress which can be utilized and observations interpreted properly, then maternal and foetal deaths can be reduced (WHO, 2017). Both United Nations Population Fund (UNFP) and The African Union Commission (AUC) reported that the risk of losing life due to labour complications. In Africa 1 for every 39 women die of this case as compared to industrialized nations where 1 in every 3800 in women die (AUC-UNFP, 2013). The report reveals that most deaths occur in Africa and other developing countries. These statistics justifies the need for developing Nations particularly those in African to adopt effective and cost-effective mechanism of managing mothers during pregnancy, during labour and during delivery and post-natal period.

Kenya has gradually documented a rise in the number of deliveries in hospitals from 44% in the year 2008 to 61% by 2014 (KNBS, 2015). The increase witnessed, has been accredited to the affordable maternal care policy initiated by the Government (MoH, 2013). This policy has enabled pregnant women all over the country right to free maternity services in all public health hospitals. This has seen an increase delivery in public hospitals associated to free maternity admissions. However, a report by WHO report that maternal mortality remains high in Kenya at 530/ 100,000 (WHO, 2015). This demand the need to increase the number of skilled midwives to attend to mothers during labour using partograph. Partograph use in monitoring women in labour as an affordable and cost-effective health interventions tool, can reduce the number of maternal and neonatal deaths most of which are caused by complications are as a result of obstructed as well as prolonged labour (Lavender et al, 2014). A follow up of the mother in labour will require plotting the cervical dilation, amniotic fluid, as well as fetal heart rate using partograph (Njuguna et al., 2017). Partograph has been more effective in averting prolonged labour and improving neonatal outcome but its use in Kenya is still low. The research intends to provide a solution to the problem by developing a model for training midwives to promote their competencies on utilization of partograph to manage mothers in labor.

2.0 Literature Review

It is in Africa that the partograph was developed in 1972 by Philpott in Zimbabwe as a tool to be used to record labour progress. Since the introduction of partograph, most midwives are yet to learn to use the tool to identify dysfunctional labour. The midwives

are expected to interpret recorded observations on the tool at glance make diagnosis and take prompt intervention (Mathibe – Neke et al, 2014). The reason why World Health Organization recommended partograph to observe labour progress is to minimize maternal mortality due to child birth complications (WHO, 2014). It is in Africa that the partograph was developed in 1972 by Philpott in Zimbabwe as a tool to be used to record labour progress. Since the introduction of partograph, most midwives are yet to learn to use the tool to identify dysfunctional labour. The midwives are expected to interpret recorded observations on the tool at glance make diagnosis and take prompt intervention (Mathibe – Neke et al, 2014). The reason why World Health Organization recommended partograph to observe labour progress is to minimize maternal mortality due to child birth complications (WHO, 2014).

This focus of this research is to promote the use of partograph by midwives so that they are able to manage mothers during labour. The utilization of partograph helps the midwives including other professional birth attendance on how to monitor women in labour so as to detect any diversion from usual labour and carry out decisive action to prevent maternal and neonatal mortality. Partograph is a vital tool used in documenting labour progress by recording the observations and interpret findings of the condition of mother (Lavender, et al 2013). WHO recommended use of partograph in monitoring and labour progresses reduce maternal as well as foetal mortality rates. Even though it has the prospective of improving both maternal and neonatal outcomes, some birth attendants have a great challenge in using partograph in practice. Training in partograph use is limited, and the theory is repeatedly not implemented in clinical practice. This means that the practicing skilled birth attendants not using partograph to monitor labour efficiently require in-service or on- job training so as to utilize the competences effectively. Innovative ways of improving critical training are urgently needed (Hodnett et al. 2012, Lavender, 2013, Yisma et al. 2013, WHO, 2017).

Partograph use by skilled midwives will address the issue reported on the trends in maternal mortality by WHO that maternal mortality remains high in Kenya at 530/ 100,000 (WHO, 2015). The main attributes to this rate is pregnancy and labour related causes. Decrease in maternal and neonatal morbidity or mortality due to labour complications such as prolonged, obstructed labour can be identified through charted partograph (Mathibe-Neke et al. 2013). Practicing midwives and other skilled birth attendants should be assisted to improve their competences in the use of partograph as a labour monitoring tool that has helped other developed countries (WHO, 2015).

The use of partograph in managing mothers in labour has proved to be very useful in detecting prolonged and obstructed labour which is preventable when action is taken promptly according to what is recorded on the graphical tool (Mathibe-Neke, 2014). In a research done by Rotich et al (2011) in evaluating the use of a partograph in two National healthcare facilities in Kenya found that out of the 234 assessed partographs, were either incorrectly filled or incomplete. The other findings of a study in Kenya done by Lavender et al, (2013), on partograph plotting declared the inadequate, incorrect or non-use of the vital tool which is a source of concern and intervention.

The Knowledge of Partograph

Partograph is graphical tool presentation of key data during the progress of labor. It is a vital tool to assist midwives to detect whether labor is normal or abnormal and to warn the woman with the help of the midwife immediately the signs of fetal distress. Bedwell et al. (2017) noted that maternal and fetal complications due to prolonged labour were less common with labour progress observed by the midwives using a partograph. Partograph is used by a trained skilled birth attendant to record the observations to determine mother's condition as well as that of the fetus, and the progress of labour in totality. The midwives should be able to make interpretation of the observations and give feedback to the mother of the progress of labour. In this regard, it is advisable to use the tool while taking care of mother in labour, be it at the facility or at home (WHO, 2018).

The partograph is a chart that helps to find out normal or abnormal labour progress that is prolonged or obstructed. Partograph may alert midwife to any foetal distress. Its main purpose is providing a pictorial labours summary that will warn the birth attendant to abnormalities in labour progress and maternal or fetal safety (Lavender, 2013). According to (WHO 2014). Partograph has three distinctive parts where observations allied to labour progress, maternal and foetal condition is recorded. The Partograph is clearly demarcated as to a tool to control labour complications for example poor labour progress, foetal distress, prolonged or obstructed labour (WHO, 2018).

3.0 Research Methodology and Study Design

The research employed a descriptive cross-sectional study design was conducted among the midwives working in labour wards from the selected hospitals. Data was collected using both quantitative and qualitative methods including, questionnaire and key informant, Focus Group Discussion (FGD) interview was administered to various labour ward midwives. The study shall be carried out in four referral hospitals namely; Kenyatta National Hospital in Nairobi County, Nakuru County Referral Hospital, Thika County Referral Hospital and Machakos County Referral Hospital.

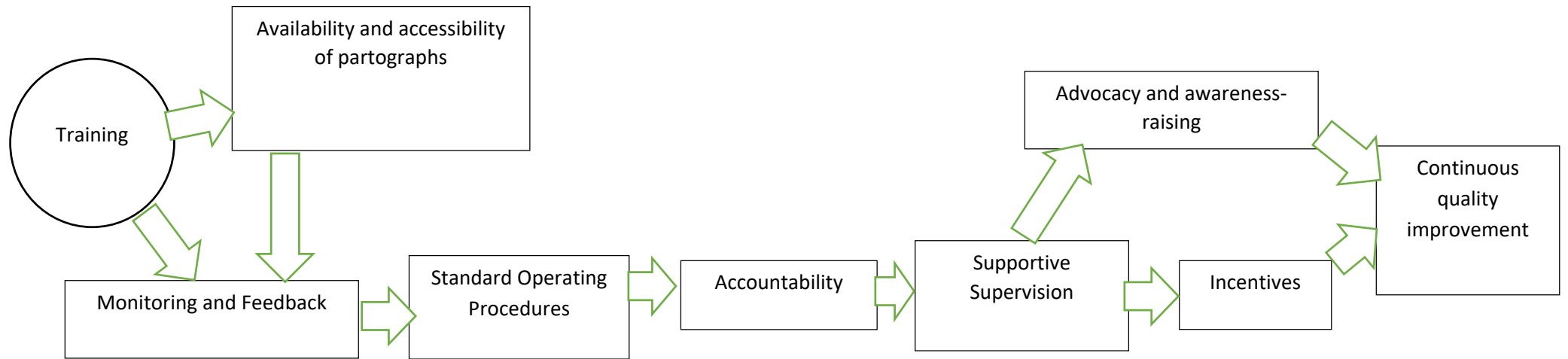
The study included all the midwives who will have consented to be in the study and who was working in maternity labour ward. Data collected was assessed for accuracy then was cleaned, edited, re- classified and coded before entry into Statistical Package for Social Services (SPSS) version 24 for analysis. Means & standard deviations was used to analyzed the quantitative continuous variables.

4.0 Results and Finding

To promote the utilization of the partograph by midwives working in the labor ward, a model could be developed that includes the following components:

- i. Training
- ii. Monitoring and Feedback

- iii. Standard Operating Procedures
- iv. Accountability
- v. Supportive Supervision
- vi. Incentives
- vii. Advocacy and awareness-raising
- viii. Continuous quality improvement



1. Training

Before conducting the training, a pre-training assessment should be conducted to identify the knowledge and skills gaps of the midwives in utilizing partographs. This will help to tailor the training to the specific needs of the midwives.

Midwives should receive comprehensive training on the correct use of the partograph, including how to fill it out accurately, interpret the data, and take appropriate action based on the findings. The training should also include information on the importance of using the partograph in the management of labor and the potential benefits for both mother and baby.

The training should cover the following topics:

- Importance and benefits of using partographs
- Understanding the components of the partograph
- How to accurately record and interpret the progress of labor using a partograph
- How to identify potential complications and respond appropriately
- How to communicate effectively with patients and colleagues regarding the use of partographs

2. Monitoring and Feedback

A monitoring and feedback system should be established to ensure that midwives are using the partograph correctly and consistently. This could involve regular observation and feedback sessions, where midwives receive feedback on their use of the partograph and are provided with additional training or support as needed. The midwives should be given opportunities to practice using partographs in simulated scenarios. This will help to reinforce their knowledge and skills and build their confidence in utilizing partographs in real-life situations. This can be done through pre- and post-training assessments, observation of midwives utilizing partographs in real-life situations, and feedback from patients and colleagues.

3. Standard Operating Procedures

After the initial training, monitoring and feedback sessions should be conducted to reinforce the knowledge and skills learned and address any challenges or questions that arise. The follow-up sessions can be conducted in the form of group discussions, individual mentoring, or refresher courses.

Standard operating procedures should be developed and implemented to ensure that the partograph is used consistently and correctly across all labor wards. This could involve developing a standardized approach to filling out the partograph, interpreting the data, and taking appropriate action based on the findings.

4. Accountability

Accountability measures should be put in place to ensure that midwives are held responsible for the correct use of the partograph.

This could involve regular audits of the partograph to ensure that it is being used correctly and consistently, as well as disciplinary measures for midwives who consistently fail to use the partograph correctly.

5. Supportive Supervision

Supportive supervision should be provided to midwives to ensure that they have the necessary resources and support to use the partograph effectively. This could involve regular supervision sessions, where midwives are provided with feedback, support, and additional training as needed.

6. Incentives

Incentives should be provided to encourage midwives to use the partograph correctly and consistently. This could include recognition programs, financial incentives, or other rewards for midwives who consistently use the partograph correctly and achieve positive outcomes for mothers and babies.

7. Advocacy and awareness-raising

Advocacy and awareness-raising efforts could be undertaken to promote the importance of the partograph in labor management among healthcare providers, policy-makers, and the community at large. This could include campaigns, educational materials, and engagement with stakeholders.

8. Continuous quality improvement

Continuous quality improvement initiatives can be implemented to identify areas for improvement in the use of the partograph and to implement changes to improve outcomes. This can involve regular monitoring of partograph use and outcomes, as well as the use of quality improvement tools such as Plan-Do-Study-Act cycles and root cause analysis.

By implementing this model, midwives working in the labor ward can be trained and supported to use the partograph correctly and consistently, leading to improved outcomes for mothers and babies. The model should be supported by strong leadership, commitment, and investment in resources to ensure its success. The proposed training model emphasizes the importance of interactive and practical training that focuses on building the knowledge and skills of midwives in utilizing partographs. The simulation exercises and follow-up sessions are particularly important in ensuring that midwives can apply what they have learned in real-life situations and receive ongoing support and mentorship.

5.0 Discussion, conclusion and recommendation

Discussion

The development of a training model to promote the utilization of the partograph by midwives working in labor wards is an important step towards improving the quality of maternal care. The training model should be designed to provide midwives with the necessary knowledge and skills required to effectively use the partograph in the assessment and monitoring of women in labor. The model should be based on a competency-based approach and include both theoretical and practical components. The training should be tailored to the specific needs of the midwives and should be conducted on a regular basis. In addition, the training model should be supported by hospital administrators and maternity in-charges who should ensure the regular supply of partograph papers and other necessary materials, and conduct regular supportive supervision. The training model should be evaluated periodically to assess its effectiveness in improving the utilization of the partograph by midwives, and to identify areas for improvement. Overall, the development and implementation of a training model is crucial in ensuring that midwives are equipped with the necessary competencies to promote the early detection and management of complications during labor, and to improve maternal and fetal outcomes.

Conclusion

The proposed training model can help to promote the utilization of partographs by midwives working in labor wards. By building the competencies of midwives in utilizing partographs, we can improve the quality of care provided during childbirth and reduce maternal and newborn morbidity and mortality.

Recommendations

The study recommended the need for regular training and refresher courses to improve midwives' knowledge and competence in the use of partographs. It also recommended the need for supportive supervision and monitoring of midwives to ensure the effective utilization of partographs in managing mothers during labor.

It is important for nurse managers and hospital administrations to ensure that nurses and midwives receive job training in a timely manner to acquire the necessary knowledge and skills required for their job responsibilities. To achieve this, periodic workshops and seminars on the use of the partograph for assessing and monitoring women in labor should be organized through continuous medical education.

Maternity in-charges should collaborate with health administrators to ensure a regular supply of partograph papers in labor wards and timely procurement of necessary materials to improve the utilization of the partograph in managing women in labor. Additionally, they should conduct regular supportive supervision in labor wards and establish practical guidelines on the use of the partograph. This will promote the use of partographs following laid guidelines and standard operating procedures in maternity units.

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