

Midwives' knowledge and use of partographs at Juba Teaching Hospital, South Sudan

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Background: Evidence shows that good knowledge of partographs and proper application of this knowledge results in a remarkable reduction in prolonged and obstructed labour and reduces maternal mortality. Obstructed labour can be prevented by a simple and cost-effective health intervention tool, the partograph. A partograph is a graphical record of the progress of labour and salient conditions of the mother and foetus plotted against time in hours. This provides an opportunity for early identification of deviation from normal progress. Early detection of prolonged labour greatly contributes to prevention of obstructed labour and related complications.

Objective: To assess midwives' knowledge and use of partographs in the maternity ward of Juba Teaching Hospital, South Sudan.

Methods: A cross-sectional descriptive study was conducted to assess utilisation of partographs among healthcare providers in Juba Teaching Hospital. All providers working at the time of the study were included. An interviewer administered questionnaire prepared in English was used to assess socio-demographic and other related variables of respondents as well as knowledge and practice. Ethical procedures were followed at every step.

Results: Only 20% of the 30 respondents were registered midwives, 67% knew the components of a partograph, and 93% could differentiate between normal and abnormal labour with the use of a partograph. The factors affecting the use of partographs included; shortage of partographs in the ward, lack of protocols on partograph use, understanding semantics of the English language, absence of refresher training, late reporting of mothers to the ward, and a shortage of staff.

Conclusions: Despite good knowledge of the partograph, about half of the providers do not use them. We recommend training and recruitment of more qualified midwives, a continuous supply of partographs to improve use of partographs continuous supportive supervision, mentoring of staff and motivation schemes.

Keywords: *maternal health, midwives, partograph, South Sudan*

Introduction

In 2015, about 830 women died every day due to complications of pregnancy and childbirth. Almost all of these deaths occurred in low and middle-income countries [1]; 550 occurred in Africa and 180 in Southern Asia, compared to only 5 in high income countries. The risk of a woman dying in a developing country from a maternal-related cause during her lifetime is about 33 times higher compared to a woman living in a developed country [2].

Sub-Saharan Africa and South Asia account for 88% of maternal deaths annually. These regions suffer from the highest maternal mortality ratio, at 546 maternal deaths per 100,000 live births, or 201,000 maternal deaths a year. Many of these maternal deaths resulted from obstructed and prolonged labour, which accounts for 8-10% of the maternal deaths worldwide [2].

Evidence shows that good knowledge of partographs and proper application of this knowledge results in a remarkable reduction in the incidence of and outcomes

from prolonged and obstructed labour and reduces maternal mortality [3]. A partograph is defined as a graphical record of progress of labour and key conditions of the mother and foetus plotted against time in hours. This provides an opportunity for early identification of deviation from normal conditions. [4].

South Sudan has the worst health indicators globally, in spite of modest improvements over the last five years. The maternal mortality ratio has stagnated at 2,054 per 100,000. More than 90% of births in South Sudan happen without the help of a skilled birth attendant due to a shortage of qualified staff, poor infrastructure, poor financial status and a lack of resources [5].

The use of a partograph during labour is affected by factors such as lack of knowledge, lack of training of obstetric caregivers on the use of partographs, a lack of positive attitudes towards the use of partographs [4], a shortage of trained health workers, lack of protocols on the use of partograph and an absence of guidelines on

partograph use [6]. The aim of this study was to assess midwives' knowledge and practice related to utilising partograph in the maternity ward of Juba Teaching Hospital(JTH).

Materials and methods

This was a descriptive and quantitative study conducted in the maternity ward of JTH from 1 to 30 May 2017. Thirty staff in the maternity ward were involved. All of the midwives and maternity nurses were included because they were few in number.

The research proposal was submitted simultaneously to the ethical committee of the Juba College of Nursing and Midwifery and Juba Teaching Hospital. Ethical approval was provided to the researcher. Informed consent was obtained from the respondent and privacy and confidentiality were ensured.

A well-structured questionnaire was used to obtain the information from respondents, and pretesting was done to ensure its validity and consistency. These questionnaires consisted of closed and open ended questions and the researchers used face-to-face oral interviews. Data cleaning, coding, and checking for consistency and completeness were done, then data was entered manually into Microsoft Excel. Descriptive statistics were computed to determine the proportion of utilisation.

The recommendations were given to the Ministry of Health, head of the Obstetrics Unit, the person in-charge of maternity, midwives to explain the importance and utilisation of partographs and the community to know the importance of hospital delivery.

Results

All 30 midwives working in JTH were involved in the study making the response rate of 100%. 63% of the respondents have a good knowledge of partographs.

Table 1 shows the number of respondents who had used a partograph, and their knowledge of partographs including the reasons for using or not using partographs, conditions not diagnosed by a partograph, and the time to start a partograph plot when monitoring labour.

Table 2 shows respondents' views of factors affecting utilisation of partographs such as the time it takes to receive partograph supplies in the maternity ward, problems encountered while using a partograph, a labour management protocol that encourages use of a partograph and its key items, length of training on the use of partographs, and whether there is a need for a refresher course on the use of partographs.

Figure 1 shows the problems that the midwives encountered with the use of partograph. The most important was lack of partographs in the labour ward, and the limited number of staff.

Table 1. Respondents' utilisation of partographs

Variable	n	%
Use a partograph in the maternity ward:		
- Yes	10	33
- No	20	67
Reasons for using a partograph:		
- Monitor the wellbeing of the mother and foetus and the progress of labour	30	100
Reasons for not using a partograph:		
- Not allowed	2	7
- Few staff members on duty	15	50
- It is time consuming	10	33
- It is for doctors only	3	10
Monitor all mothers in labour using a partograph:		
- Yes	6	20
- No	20	67
- Sometimes	4	13
Condition not diagnosed by use of a partograph:		
- Inefficient uterine contraction	3	10
- Prolonged labour	2	7
- Foetal distress	1	3
- Pre-eclampsia	24	80
Time for starting to plot a partograph when monitoring labour:		
- When the cervix dilates to 4 cm and above	25	83
- When the cervix is fully dilated	3	10
- When a mother reports to the maternity ward with any complaint	2	7

Discussion

Most of the respondents were above 45 years of age, the majority were married and almost half said they had attained a tertiary level of education. Half of them were certified midwives and a quarter had work experience of 11-20 years.

The partograph can give valuable information in visual form [7]. Regarding the respondents' actual partograph utilisation, only 33% used the partograph for monitoring the maternal/foetal condition and the progress of labour. A study by the University of Nairobi showed that knowledge of partograph utilisation was poor, as only 23.8% of used partographs had been filled in correctly [8]. In south India only 3.8% of births were monitored using a partograph [9].

Table 2. Factors affecting respondents' utilisation of partographs

Variable	n	%
Receive a regular supply of partographs in the maternity ward:		
- Yes	3	10
- No	27	90
Encounter problems with the use of partographs:		
- Yes	29	97
- No	1	3
Facility has a labour management protocol for using partographs:		
- Yes	1	3
- No	29	97
Key items in the labour management protocol:		
- Monitoring mothers in labour using partographs	1	3
- No idea	29	97
Received training on the use of partographs:		
- Yes	20	67
- No	10	33
Received refresher training on the use of partographs:		
- Yes	12	40
-No	18	60
Need to have a refresher course on the use of partograph:		
- Yes	29	97
- No	1	3

Conclusion and recommendaton

Midwives' knowledge and use of partographs in the maternity ward of JTH play an important role as obstructed and prolonged labour can be detected by the use of the partograph. We therefore make these recommendations:

1. Ministry of Health:
 - Training of more midwives, recruitment of trained midwives, increased salaries and organization of refresher courses on the use of partographs.
2. Head of the Obstetrics Unit of JTH:
 - Provision of partographs in the labour ward, translation of the partographs into Arabic and having protocols on the use of partographs.
3. Person in-charge:
 - Allocation of midwives duties, monthly evaluation of staff work and addressing of problems facing staff during monthly meetings.
4. Midwives:
 - Self-motivation in using partographs and explaining to mothers dangers of home delivery and the importance of antenatal visits.
5. Community leaders:
 - Raising awareness among community members about the importance of hospital delivery and the dangers of home delivery, identification of complications and early referral of cases.

Constraints

This study was limited by the sample size. As it does not

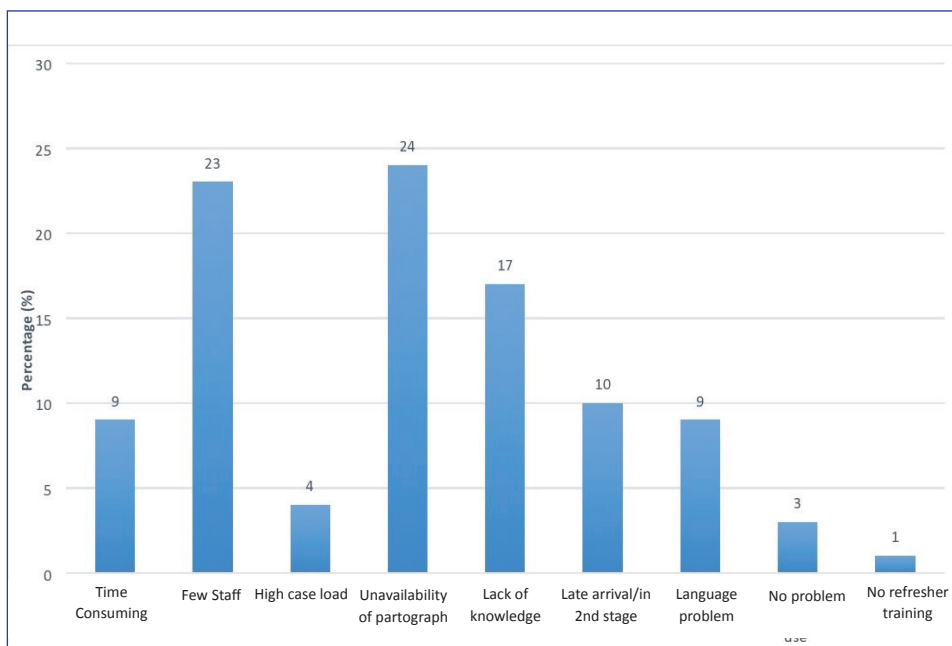


Figure 1. Problems encountered with the use of partograph

involve regression analysis, some confounders may obscure or mask the significant knowledge and use of partographs. However, the findings can provide an insight into how midwives can utilize partographs in the maternity ward of JTH. We recommend a more comprehensive study.

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