

Full Length Research Paper

The partograph: A labour management tool or a midwifery record?

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A partograph is a graphical presentation of a woman's progress of labour. Once the woman has true signs of labour, the midwife initiates the use of the partograph to record her findings. The partograph was endorsed and modified by the World Health Organisation (WHO) between 1990 and 2000 to monitor the fetal and maternal wellbeing during the active stage of labour. Monitoring help the midwives and the mother in achieving spontaneous vaginal delivery with low risk of both morbidity and mortality. Furthermore, accurate partograph recordkeeping enables an effective communication between healthcare professionals who manage women in labour. Documentation and recordkeeping have always been integral to midwifery practice and continue to be so. The aim of the study was to establish the perception of the use of the partograph by midwives, and to establish and describe the factors that contribute to the underutilization of the partograph by midwives during the management of labour. The context of the study was an Academic Hospital and a Midwifery seminar, Gauteng Province, South Africa. A cross-sectional descriptive quantitative study was conducted. Sampling was purposeful. A self-administered questionnaire was used to collect data. The findings revealed that midwives understood the importance of the use of the partograph but do not effectively use it due to a number of factors.

Key words: Labour management, midwife, partograph.

INTRODUCTION

The partograph was designed by Philpott in 1971 in Harare, Zimbabwe. By 1973 the partograph was already considered a simple device used to distinguish normal labour from abnormal labour as it was adopted and used to monitor 15,000 deliveries within 18 months (Studd, 1973). The observations which are carried out on the woman during labour and the accurate recording of these observations are known as the monitoring of labour. World Health organization (WHO) launched the partograph in 1987 as a safe motherhood initiative following a multi-centre trial in South Asia that involved 35,484 women (WHO, 1994).

The observations that are routinely recorded on the partograph are the progress of labour which includes 4 hourly monitoring of cervical dilatation, descent of the fetal head, abdominal palpation of fifths of head felt above the pelvic brim and hourly uterine contractions; the fetal wellbeing that includes hourly fetal heart rate monitoring, 4 hourly checking of whether membranes are intact or ruptured and the state of liquor and moulding of the foetal skull; the maternal wellbeing which are pulse and blood pressure that are monitored and recorded hourly while temperature and urinalysis (volume, protein, ketones) are being monitored and recorded 4 hourly

(Lavender et al., 2009; Clinical Guidelines, 2001).

The partograph serves as a warning system of arising complications during labour as it assists with intervention decisions and the on-going evaluation of the effects of implemented interventions (Fawole et al., 2008), furthermore, the partograph has been widely accepted as one of the measures that assist in reducing maternal and neonatal mortality resulting from obstructed labour (Hofmeyr, 2004). The focus of using the partograph in developing countries including South Africa, as stated by Windrim et al. (2007) is on the prevention of maternal and fetal morbidity and mortality related to prolonged labour, whereas the focus in developed countries is on early identification and management of dystocia in order to offer appropriate intervention.

The skilled management of labour using a partograph, as also stated in the Maternal and Neonatal Health Best Practices (2002), has been endorsed by the WHO and the Society of Obstetricians and Gynaecologists of Canada, who cited the identification and management of dystocia as a major priority (WHO, 1994). The Clinical Guidelines by the OGCCU team in King Edward Memorial Hospital, Western Australia (2001), which were revised in 2011, are to be reviewed in 2014. These guidelines describe the use of the partograph and furthermore advocate for accurate, legible and comprehensive recording on the partograph, as it constitutes a legal document and also an avenue for identifying accountability in midwifery care.

A clinical audit of intra-partum care at the Delek Tibetan Hospital in North India (1996 to 2003) led to the findings of a sustained 50% reduced incidence of postpartum haemorrhage following an introduction of the routine use of the partograph in the management of labour (Mercer et al., 2006). The management of labour by midwives in South Africa is also governed by the rules and regulations of the South African Nursing Council (1990) Regulation 2488 of 1990 (Conditions for Midwifery Practice, as amended), which states that the "midwife should keep clear and accurate records of the progress of labour". Bates (2000) also highlighted that documentation and recordkeeping have always been integral to midwifery practice.

The Saving Mothers Fourth Report on Confidential Enquiries into Maternal Deaths in South Africa from 2005 to 2007 (Department of Health, 2009), led to the development of ten recommendations about the prevention of maternal mortality rate. Recommendation 8 states that "The correct use of the partograph should become the norm in each institution conducting births". One of the department of health's targets is that all institutions conducting births must use the partograph. The department further stated an implementation strategy in a form of a policy regarding the use of the partograph.

Farell and Pattinson (2005) reviewed articles dating back 25 years on the intrapartum care guidelines in South Africa,

the findings led to the notation that the partograph is used in a very small proportion of patients to monitor the progress of labour. Even when one used the partograph, it was often incomplete. The findings recorded on the partograph were often misinterpreted. In some instances the partograph was filled in retrospectively, when women have already given birth, an observation made by the researchers in this study noted during their placement in the labour ward for clinical experience. This brought about a concern that it seemed midwives uses the partograph as a midwifery record rather than as a labour management tool.

Despite the World Health Organization advocating and recommending that the partograph be compulsorily used in monitoring the labour process, it was and is still reported to be used to a limited extent in Africa or elsewhere in developing countries (Maimbolwa et al., 1997; Windrim et al., 2007), especially in primary health care centres where most of the deliveries takes place (Okechukwu et al., 2007). Several articles in the literature justify the use of the partograph as the best tool to establish prolonged and obstructed labour based on the outcome of controlled trials, clinical audits and systematic reviews of randomized trials (Lavender et al., 2009; Orji, 2008; Lavender et al., 2006; Mercer et al., 2006; Hofmeyr, 2004; Pattison et al., 2003).

The objectives of this study were to establish the knowledge of and the understanding of the importance of the partograph by midwives in South Africa, to determine the acceptance of the use of the partograph by midwives during the management of labour and to establish and describe the factors that contribute to the underutilization of a partograph.

Background and problem statement

The conclusion of a retrospective partograph reviewed by Basu et al. (2009) was that the partograph is a poorly used monitoring tool at a Johannesburg Academic Hospital labour ward in South Africa.

Partographs were audited and revealed an inadequate recording in relation to observations documented by midwives and doctors. The study related the high maternal morbidity and mortality rate of 476/100,000 at the hospital to poor usage of the partograph. The Basu et al. (2009) study results are similar to those previously reported in some studies, for example Umezulike et al. (1999) who evaluated the use of the partograph in a Nigeria teaching hospital where only 24% midwives stated that they used the partograph routinely, which was also attributed to the high maternal mortality in that particular hospital, based on the 76% personnel who did not use the partograph. An evaluation of the use of a partograph in two hospitals in Kenya by Rotich et al. (2011) led to a finding that each of the 234 reviewed

partographs was either incomplete or incorrectly filled. These and other findings seem to declare the inadequate, incorrect or non-use of a partograph, a source for concern.

The overall purpose of this study was therefore, to establish the perception of the use of the partograph by midwives in South Africa and to establish and describe the factors that contribute to the underutilization of the partograph by midwives during the management of labour in this Johannesburg Academic Hospital. The findings of the study were presented at the 10th Annual South African Midwifery Congress in 2012 and fostered the sharing of numerous concerns and discussions regarding the limited use of the partograph. The congress delegates shared factors that contribute to the underutilisation of the partograph which were similar to those revealed in this study.

The following are key concepts applied within the context of the study.

Partograph

A graphic recording and an effective means of recording the progress of labour that serves as a tool that can be used by midwives to assess the progress of labour and to identify when intervention is necessary. The principles of using the graph during the active phase of labour are that labour must be confirmed, recording on the graph should commence at 3 cm cervical dilatation, timelines should be followed with each block indicating an hour in time, that the partograph should reflect the fetal wellbeing, maternal wellbeing and the progress of labour. A 4 h record (Fraser et al., 2009; WHO, 1994).

Midwifery record

Midwifery record is a legal document that must be kept meticulously by midwives. They may go before midwifery council conduct committee and usually examined in the audit process of statutory supervision in relation to clinical negligence (Fraser et al., 2009).

Labour management

This is the reflections on interventions and timing of care in order to optimize the wellbeing of the woman and her baby during the course of labour (Sellers, 1997).

Management tool

This is a device that is designed for the purpose of regulating, guiding or administering a process. Within this study context, the "partograph", as a tool, has been designed to guide the management of labour with the

purpose of identifying complications that may arise (Oxford Dictionary, 2008; Random House Webster's Large Print, 1998).

Ethical considerations

Ethical clearance from the Human Research Committee of the University of Witwatersrand was requested and granted Clearance No. M10423.

The research was conducted after permission was sought from the hospital management, the labour ward manager and the midwifery seminar organising committee. An informed and written consent was obtained from the respondents. To ensure privacy and anonymity numbers were used on questionnaires instead of respondents' names. Participation was voluntary. To ensure confidentiality, all completed or uncompleted questionnaires were posted in a sealed collection box. Completed questionnaires were kept locked in a cup-board and used for the intended purpose only. Only the researchers and the supervisor had access to collected data.

The research context, population and sampling

This study was conducted in the labour ward of an Academic Hospital in Johannesburg and extended to a midwifery seminar for partograph use that was held at a Nursing College in Gauteng Province at the same time as data were being collected from the labour ward. The population were midwives working in labour ward. Sampling was purposive. The midwives working in the labour ward were 32 and those who attended the partograph use seminar were 30. The inclusion criteria were midwives who have been working in labour ward for a minimum of six months and who were willing to participate. Six months was chosen as inclusion criteria with an assumption that a midwife should by then be efficient in the use of the partograph based on the guideline that a student midwife undergoes two academic years of midwifery education which includes a clinical exposure of a thousand hours, as stated in the South African Nursing Council (1975) Regulation 425 of 1975 as amended.

RESEARCH METHODS, DESIGN AND DATA COLLECTION

A cross-sectional descriptive and exploratory quantitative approach was used to conduct the study (de Vos et al., 2008). A self-administered questionnaire with closed and open-ended questions was used as a method for data collection. The questionnaire established the respondent's gender, the experience of working in the labour ward, the perception of the use of the partograph, the extent of using the partograph, the categories of personnel using the partograph in the management of labour, if respondents ever attended in-service education on the use of the partograph, data that respondents routinely recorded on the partograph and the

Table 1. The midwives' experience in labour ward.

| Experience (Months) | Frequency | Percent | Cumulative |
|---------------------|-----------|---------|------------|
| 6-12 | 9 | 26.47 | 26.47 |
| 13-24 | 2 | 5.88 | 32.35 |
| >24 | 23 | 67.65 | 100.00 |
| Total | 34 | 100.00 | - |

Table 2. Midwives' experience and the use of the partograph.

| Experience (Months) | Extend | | | Total |
|---------------------|-----------|------------|-------------|--------------|
| | 10-30% | 31-60% | 61-90% | |
| 6-12 | 0 0.00 | 1 11.11 | 8 88.89 | 9 100.00 |
| 13-24 | 0 0.00 | 0 0.00 | 2 100.00 | 2 100.00 |
| >24 | 1 4.76 | 6 28.57 | 14 66.67 | 21 100.00 |
| Total | 1 3.13 | 7 21.88 | 24 75.00 | 32 100.00 |
| Fisher's exact | 0.759 | | | |

factors that contributes to the underutilisation of the partograph and if respondents ever attended in-service education on the use of the partograph. Furthermore, respondents were given an opportunity, in a form of an open-ended question to offer recommendations on the use of the partograph.

The guidelines provided for respondents regarding the completion of the questionnaire were that the responses to the questionnaire were regarded as strictly confidential and will be used only for the purpose of the study, the questionnaire should only be completed as individuals and not in a group, responses to questions were to be indicated by putting a cross (x) in the appropriate box and that after completion, questionnaires were to be sealed in provided envelopes and put in a sealed box.

As the questionnaire was newly formulated, it was tested through a pilot study. The piloting was done in a smaller scale of the population and the results of the pilot study were included within the major results as there were no significant differences in responses from the piloted tools. Prior to bringing the questionnaires, the unit manager was briefed regarding the pending questionnaires. A total of 32 questionnaires enclosed in envelopes were brought to labour ward for the respondents. Three differently marked and secured boxes for the consent, for the distribution of questionnaires and for completed questionnaires were provided. The boxes were put visibly on the nurse's station. The respondents were not allowed to take away the questionnaire but asked to complete it on site. The day and night shift midwives were approached after report taking and handover to ask for their consent and voluntary participation. The researchers were available within the data collection site to clarify any inconsistencies in the questionnaire. Fifteen 15 questionnaires were distributed at the midwifery seminar to delegates who met the criteria for participation. Completed questionnaires were

questionnaires were handed over to the researcher in a sealed box.

Data analysis

Descriptive statistics was applied by use of simple frequency distribution. Data were analyzed using the Stata Release 10 statistical software package. Data analysis included summary statistics frequencies and percentages for discrete variables. The results were statistically transformed into tables for analysis. Data were presented in the form of graphs and tables. Inferential statistics were used in order to make conclusions that go beyond the compiled data as illustrated in the discussion of the results (de Vos et al., 2008).

Validity and reliability

Validity and reliability are important criteria for ensuring the quality of an instrument used to collect data for research (Polit and Beck, 2008). The questionnaire was based on a literature review that reported a general inadequate use of the partograph. The questionnaire was pre-tested to establish face and content validity as according to Burns et al. (2005), it is ideal to test the reliability of the tool pre-use. Face validity refers to the extent to which the measure or question makes logical and common sense, whereas content validity refers to the extent to which the measure includes all elements of a variable being investigated. Content validity was attained through the inclusion of items that respond to the study objectives. All respondents completed the same questionnaire individually. A statistician was consulted during questionnaire design and data analysis to eliminate data analysis and data interpretation errors.

RESULTS

Thirty four completed questionnaires were received. Twenty responses (59%) were from the labour ward and 14 (41%) were from the midwifery seminar. Some respondents did not answer one or two questions and as such were not included within the analysis of that particular question. All respondents were females. They all highlighted the importance of using the partograph in the management of labour.

The duration worked by respondents in the labour ward

Table 1 illustrates the midwives' experience of the duration worked in the labour ward.

The extent and the frequency of use of the partograph

Figures 1 and 2 relate to the extent to which midwives used the partograph. Thirty two responses were included in the analysis as two respondents did not answer this question. The frequency reflected in Figure 2 was used to validate data received regarding the extent of use in Figure 1. Responses in Figures 1 and 2 were further

Table 3. Categories of personnel who used the partograph.

| Category of personnel | No. | Percent |
|--|-----|---------|
| Midwives + obstetricians | 3 | 9 |
| Midwives + obstetricians + undergrad + advanced midwifery students | 5 | 15 |
| Midwives + advanced midwifery students + obstetricians | 2 | 6 |
| Midwives + obstetricians + medical students, undergrad + advanced midwifery students | 21 | 64 |
| Midwives only | 2 | 6 |

Table 4. Parameters recorded on the partograph.

| Maternal wellbeing | Foetal wellbeing (%) | Progress of labour (%) |
|---------------------|--------------------------|-----------------------------|
| Vital signs 15 (44) | Fetal heart rate 14 (41) | Cervical dilatation 14 (41) |
| Urinalysis 9 | Position 1 (5) | Effacement 15 (75) |
| Treatment 9 | Station 4 (20) | Application 4 (20) |
| Infusion fluids 8 | Moulding 3 (15) | Labour progress 14 (70) |
| - | Caput 3 (15) | Membranes 3 (15) |
| - | Presentation 2 (10) | Descent 4 (20) |
| - | Amniotic fluid 1 (5) | - |

Table 5. The frequency of attendance of in-service education by respondents.

| Experience (Months) | serv_train | | | | | Total |
|---------------------|-------------|------------|------------|------------|------------|--------------|
| | Never | >2 years | 2 years | 1 years | 6 months | |
| 6-12 | 7 77.78 | 0 0.00 | 0 0.00 | 1 11.11 | 1 11.11 | 9 100.00 |
| 13-24 | 1 50.00 | 0 0.00 | 0 0.00 | 0 0.00 | 1 50.00 | 2 100.00 |
| >24 | 5 21.74 | 6 26.09 | 3 13.04 | 6 26.09 | 3 13.04 | 23 100.00 |
| Total | 13 38.24 | 6 17.65 | 3 8.82 | 7 20.59 | 5 14.71 | 34 100.00 |
| Fisher's exact | | | | | | 0.086 |

summarised by reviewing the relationship between experience and the use of the partograph as a form of correlation analysis (Table 2).

The categories of staff that uses the partograph in labour ward

There was an indication from 21 (64%) of 33 responses that all the labour ward personnel use the partograph to manage women during labour (Table 3).

The importance of the partograph

Twenty five respondents (74%) indicated that the partograph is important in the management of labour as it helps in monitoring the progress of labour. Seven (21%) indicated that it is important for maternal wellbeing, and further specified that it is important for both maternal and fetal wellbeing. Fifteen (44%) stated that it assist with detecting complications allowing them to intervene accordingly.

Eighteen midwives (53%) specified that the partograph

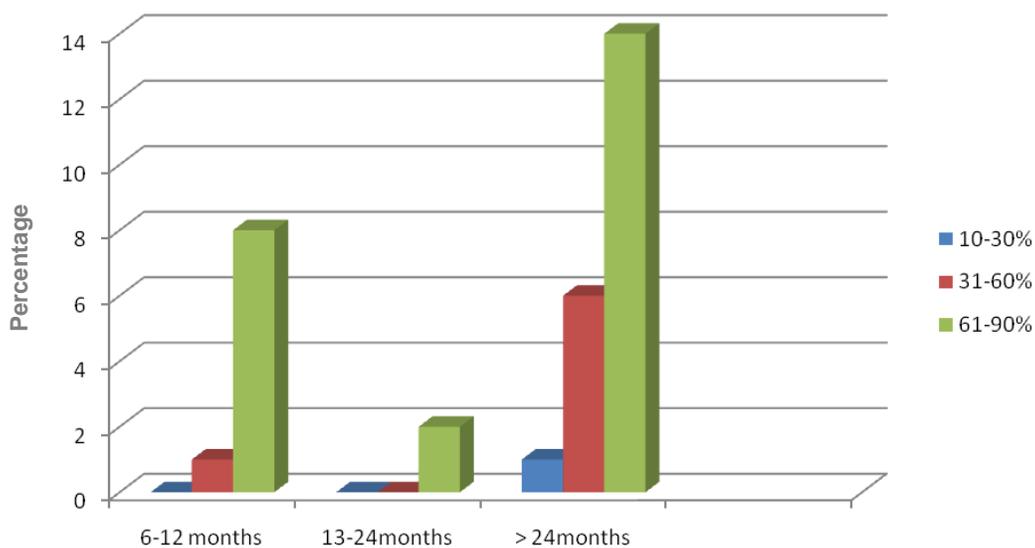


Figure 1. The extent of partograph use in percentages.

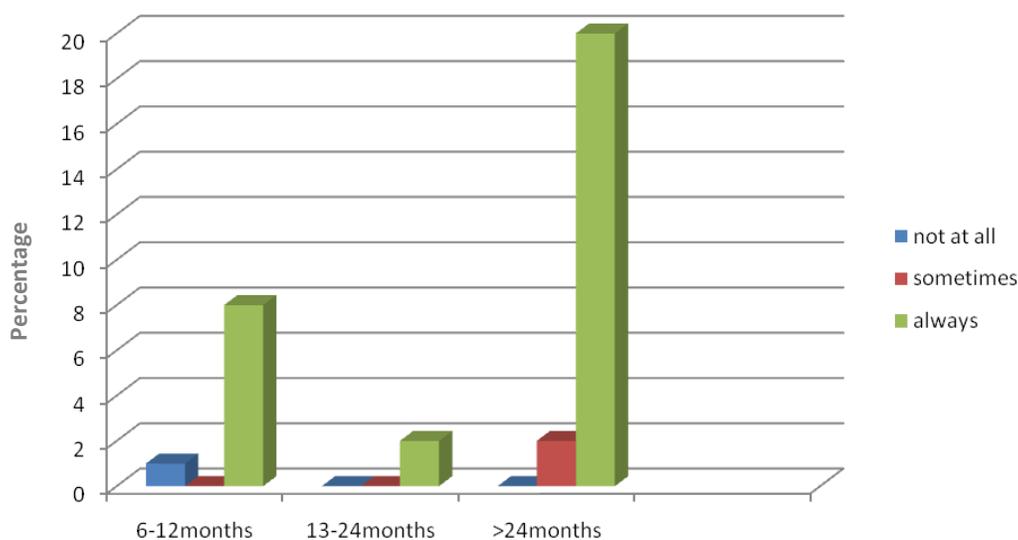


Figure 2. The frequency of partograph use by midwives.

should be initiated during the active phase of the first stage of labour. Some of the responses were non-specific for example, all stages of labour, first stage to discharge, first stage to the fourth stage. Four respondents stated that the partograph is initiated during the latent phase of the first stage of labour which is a recommended guideline but only if the woman is experiencing true labour.

Parameters that are recorded on the partograph

Respondents (n=15, 44%) stated maternal vital signs, (n=14, 41%) fetal heart rate, and (n=14, 41%) cervical

dilatation. Further variables are shown in Table 4 that emerged from responses.

Respondents’ experience in using the partograph

The collective responses to experiences in using the partograph when managing women in labour was that: “it serves as a compass; ease progressing women if used with understanding; can be very difficult to use at the beginning; and gave me an opportunity to identify complications and act accordingly”. Respondents further reported challenges with the use of the partograph, for

example “a pattern of wrong plotting, doctors being unable to plot, students being afraid to plot and midwives not being competent in plotting which resulted in poor record keeping”. The focus of recording seemed to be on cervical dilatation and the fetal heart rate.

Attendance of in-service education

Table 5 illustrates the frequency of attendance of in-service education by respondents.

Factors contributing to the underutilization of the partograph

The factors that were cited by respondents as contributing to the inefficient use of partograph were: shortage of midwives (65%), which seemed to be a major concern that also limits an opportunity to attend in-service training as reflected by 38% of respondents who never attended in-service; the shortage of partographs, the increased number of students to be facilitated in partograph use, lack of understanding the skill of recording, lack of commitment by midwives and ignorance. The outcome of a multicentre clinical trial undertaken in the Pretoria Academic Complex indicated that it was not possible to have a midwife for each woman due to midwives shortage but a midwife was allocated to care for two to three women. A recommendation from the study was that “In deciding the management policy for labour in developing countries, a balance will need to be struck between the staffing of the labour wards and caesarian section rate” (Pattinson et al., 2003).

Other cited factors were discrepancies between midwives and obstetricians regarding per vaginal examination findings ($n=5$), early plotting before the woman is in an active stage of labour ($n=4$) and transfers or referrals from other hospitals ($n=4$). The least common factor was prolonged labour ($n=2$), which might lead to the cervix being fully dilated during the changing of shifts ($n=2$), as a result leading to handing over the woman to the staff of the next shift, disrupting continuity of a carer. Of the two midwives, one indicated that she does not use a partograph, because she forgets and another, because she lacks the knowledge and skill to use the partograph.

Recommendations by respondents

The following were recommendations noted by respondents: “a campaign on the awareness of the importance of using a partograph by all those who are involved in caring for women ($n=19$, 56%), partograph to be used by only those knowledgeable about its use, continuous in-service training for those using the partograph, a need for cooperation between the doctors and the nurses to avoid

discrepancies in recording and doctors to be taught how to use the partograph properly. Staff shortage to be addressed, is an ideal midwife women ratio of 1:2. An adequate supply of partographs should be available in all labour wards.

DISCUSSION

The duration in months worked in the labour ward

A high percentage of midwives (68%), had worked more than two years in the labour ward, which might imply that most of respondents had experience in the management of labour and possibly in the use of the partograph.

The extent and frequency of using the partograph

Regarding the extent and frequency of the use of the partograph, Figures 1 and 2 indicate correlation of experience in labour ward and a higher level or extent of use of the partograph. Furthermore, the two figures further indicated that those who were relatively inexperienced (6 to 12 months) also used the partograph reasonably, which is in keeping with the results of a survey by Umezulike et al. (1999). This survey assessed the knowledge and the use of the partograph among 200 doctors and 220 midwives at primary and secondary levels of public and private maternity units in Enugu, Nigeria, whose findings revealed that the majority of respondents (65%) were of a junior professional rank and had been in practice for ten years or less. Table 2 further illustrates correlation between experience and the use of the partograph as reflected by a higher number of respondents in all three categories having scored 61 to 90%. A 100% score was deliberately excluded in the questionnaire to avoid bias in responses as everyone might opt to a 100% use of the partograph, however, this exclusion of 100% might pose a possible limitation for the study.

The categories of personnel using the partograph

A reasonable number of respondents (63%) stated that the partograph was used by most of the labour ward personnel. However, only 53% of the respondents could be explicit as to when to initiate recording on the partograph. The implication could be that respondents with a 61 to 90% rating reflected in Figure 1 could have initiated it late when the woman is already in an advanced stage of labour.

Data routinely recorded on the partograph

The results reflected in Table 3 indicates that the

midwives had knowledge of the critical parameters that should be monitored during labour by use of the partograph, which are the maternal vital signs, the fetal heart and the cervical dilatation and effacement which gives guidance on the progress of labour and indicates if labour is obstructed or if there is a need for intervention.

However, the focus of recording on the partograph seemed to be directed on the progress of labour and the fetal heart rate as reflected in Table 3, with a limitation on maternal wellbeing and other aspects of fetal wellbeing.

In-service education regarding partograph use

Thirteen midwives (38%) reported that they had never attended an in-service education on partograph use, whereas 11% attended more than 2 years ago. This result signifies a limitation in the attendance of in-service education as the recommended frequency is six monthly. The results reflected an attendance of only 15% of the respondents. One respondent further highlighted the issue of staff shortage as a major contributory factor for midwives not to attend in-service education. A cross-sectional study by Ogwang et al. (2009) on establishing the use of a partograph in Uganda by triangulating record review with conducting interviews, revealed that 80% of staff had never attended in-service training on this area of practice.

A recommendation to policy makers from the Department of Health in South Africa was that quality assurance programs on the use of the partograph should be incorporated within the Knowledge Performance Appraisal (KPA) of the Maternity Care Units (MOU's) managers; that the "partograph use guidelines" should be incorporated within the undergraduate and the post-graduate curricula for both doctors and nurses; managers to ensure that in-service training programs on intrapartum care are provided and the supportive supervision of midwives and obstetricians should be strengthened; quality assurance programs on the "use of the partograph" should be implemented and that there should be a face-to-face outreach training program for the use of the partograph for clinical practice. The focus of the above strategies is an effective and efficient use of the partograph as a measure to reduce maternal morbidity and mortality.

Factors that contributed to ineffective use of the partograph

Several factors that were cited as contributing to the underutilisation of a partograph are in keeping with several studies for example, the outcome of a multicentre clinical trial undertaken in the Pretoria Academic Complex, South Africa, which indicated staff shortage that prohibited the allocation of each woman to a midwife,

but a midwife was allocated to either two or three women. A recommendation from the study was that "In deciding the management policy for labour in developing countries, a balance will need to be struck between the staffing of the labour wards and caesarian section rate" (Pattinson et al., 2003).

The findings of a study by Mathibe-neke (2009) on the facilitation of midwifery students regarding the use of a partograph revealed that students mostly recorded the maternal observations during the first stage of labour, with limited access to recording of cervical dilatation and descent of the presenting part as the latter are traditionally recorded by registered midwives only. This practice reflects an inadequate exposure of midwifery students to the clinical implementation of the partograph which might lead to them as future registered midwives not being competent in the use of the partograph. Furthermore, this could relate to the respondents in this study stating an increased number of students to accompany in practice as one of the challenges for them not having adequate time to use the partograph.

A study conducted by Opiah (2001) and Lavender et al. (2007) on the factors affecting utilization of the partograph in monitoring labour in selected hospitals in Bayelsa State and African countries revealed contributory factors as non-availability of the partographs, shortage of staff, little or no knowledge in the use of partograph and that the partograph is time consuming. The results of the evaluation of the effective use of the partograph amongst African midwives who attended a regional midwifery conference by Lavender et al. (2007) proved partographs to be useful in ensuring standard practice and timely intervention which was consistent with partograph use in Great Britain. Recommendations based on the findings of a cross-sectional study by Ogwang et al. (2009) were a need for proper training of health workers on partograph use, the provision of guidelines for use and adequate resources for example, appropriate midwives women ratio and availability and accessibility of partographs.

Recommendations by respondents

The following were recommendations noted by respondents on the questionnaire:

"a campaign on the awareness of the importance of using a partograph by all those who are involved in caring for women (56%), partograph to be used by only those knowledgeable about its use, continuous in-service training for those using the partograph, a need for co-operation between the doctors and the nurses to avoid discrepancies in recording and doctors to be taught how to use the partograph. Staff shortage to be addressed, a ratio of 1:2 recommended. An adequate supply of partograph must be available to all labour wards especially in rural areas".

There has been little published evidence of the practical application of partograph in primary health care centres where most deliveries take place and where the partograph may be a particularly useful tool.

Conclusion

Although a considerable amount of experience and information on the use of the partograph has been accumulated in the past forty years, it seems not to be effectively used in many developing countries. Proper monitoring of women during labour and continuous accurate recording on the partograph are critical not only in intervening appropriately, but also for the purpose of minimizing unnecessary interventions. Despite respondents displaying reasonable understanding of and the importance of the use of the partograph in this study, there is evidence of limited use. The training of midwives on the use of the partograph as well as periodic workshops and seminars should be seen as vital to ensure the safety of women in labour. Further research on the outcome of an incomplete or wrongly recorded partograph is recommended.

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