

# Partograph: A Tool yet to be utilized Properly

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## ABSTRACT

**Objective:** We have come through a long time since the partograph has been introduced and endorsed by World Health Organization (WHO) for the monitoring of the progress of labor. The aim of the present study was to review the status of its usage in the tertiary center and find out the reasons behind its irregular implementation.

**Materials and methods:** The study was conducted in the Department of Obstetrics and Gynecology, Malda Medical College, Malda, West Bengal, from January to June 2015. The case sheets of 6250 women admitted in active labor in the labor room was included in the study. A structured questionnaire was given to all the doctors and nursing staff who were on labor room duty in different shifts to enquire about the reasons behind the irregular and incomplete usage of partograph.

**Results:** Out of the 6250 case sheets studied partograph was done, only in 507 (8.11%) of cases and out of these it was correctly and completely done only in 40.03% cases. The reasons behind the lack of proper utilization were shortage of staff and negative attitude.

**Conclusion:** In spite of the fact that the importance of the role of partograph has been proved beyond doubt by the evidence-based studies, the proper utilization is yet to reach a standard.

**Keywords:** Attitude, Labor, Partograph.

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## INTRODUCTION

The concept of partograph was introduced by Friedman<sup>1,2</sup> in the year 1954 by depicting the dilatation of cervix using a graph. Philpott and Castle modified the concept in 1972<sup>3,4</sup> by adding an 'action line' and a 'alert line' to it. Presently, the partograph is endorsed by World Health

Organization (WHO) as a modified partograph where the latent phase of labor has been excluded. Partograph has been now made an integral component of all the trainings based on skilled birth attendance.

The aim of the partograph is to monitor the condition of the fetus, condition of the mother and the progress of the labor. In a country like India where the maternal mortality is soaring as high as 178/10000 live births<sup>5</sup> and obstructed labor is one of its leading contributors, the role of partograph cannot be overemphasized. It is a simple tool, convenient to use, freely available yet its use is overtly neglected in many settings.

The aim of this study was to find out the status of utilization of partograph in a tertiary center and probe into the reasons behind its underutilization.

## MATERIALS AND METHODS

The study was conducted in the Department of Obstetrics and Gynecology, Malda Medical College, Malda, from January to June 2015, after obtaining approval from the institutional ethics committee. This was a cross-sectional descriptive study. A total of 6250 cases were studied. Methods used were: (i) obstetric case record review, (ii) interviews with the staff (doctors and nurses who are on labor room duty) using a structured questionnaire. The questionnaire included queries related to their knowledge of partograph (10 components of the partograph, each component given a score of one so a total score of 10 was kept), reason for not doing partograph regularly, reason for incomplete documentation, if any factor was preventing them from implementation of the tool.

## RESULTS

Table 1 shows that, out of the 6250 case sheets studied, partograph was done, only in 507 (8.11%) of cases and out of these 507 it was correctly and completely done only in 40.03% cases (Table 2).

Table 3 is based on the responses obtained through a structured questionnaire given to 40 staffs (20 nursing staffs and 20 doctors) who are on labor room duty in the different shifts. Enquiry into the cause behind not doing the partograph regularly reflected that shortage of staff was the commonest reason cited by 87.50% of the staff. However, negative attitude like considering partograph as a wastage of time and effort, reluctance to learn and implement something new was also prevalent among 67.50% of the staffs.

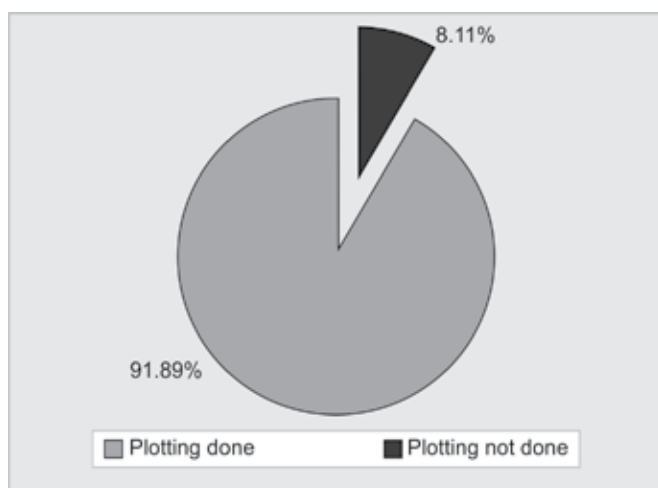
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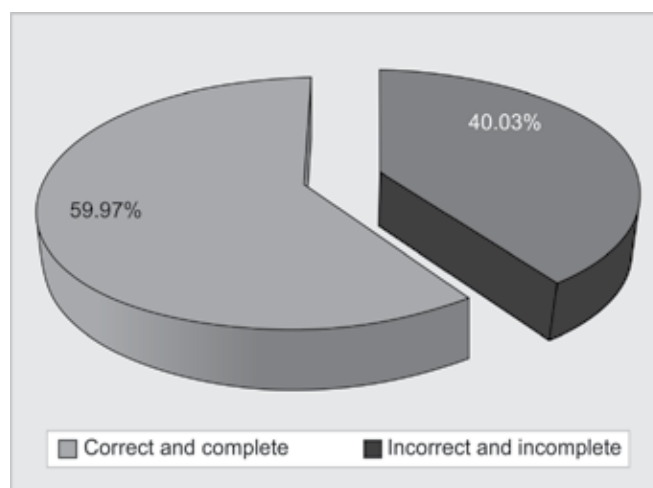
**Table 1:** Plotting of partograph (n = 6250 cases)

	Number	Percentage
Plotting done	507	8.11
Plotting not done	5743	91.88



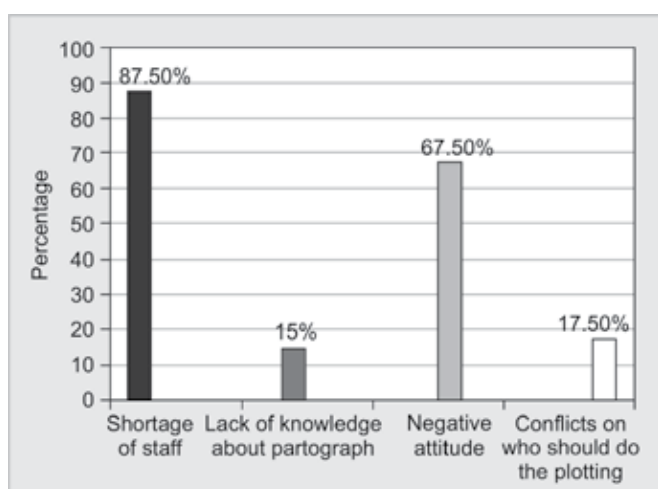
**Table 2:** Cases in which plotting was done (n = 507)

	Number	Percentage
Correct and complete	203	40.03
Incorrect and incomplete	304	59.97



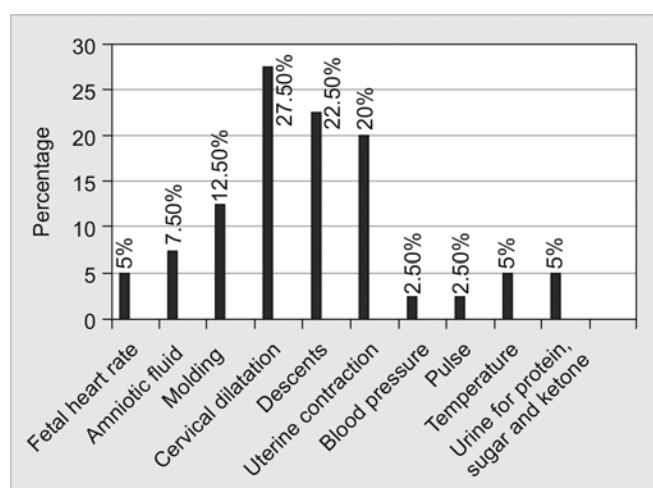
**Table 3:** Reason behind not utilizing partograph

Cause of not utilizing partograph	Number of staff (n = 40)	Percentage
Shortage of staff	35	87.50
Lack of knowledge about partograph	6	15
Negative attitude	27	67.50
Conflicts on who should do the plotting	7	17.50



**Table 4:** Assessment of knowledge of the components of the partograph

Component of partograph	No. of staffs plotting the component wrongly	Percentage
Fetal heart rate	2	5
Amniotic fluid	3	7.5
Molding	5	12.5
Cervical dilatation	11	27.5
Descents	9	22.5
Uterine contraction	8	20
Blood pressure	1	2.5
Pulse	1	2.5
Temperature	2	5
Urine for protein, sugar and ketone	2	5



Assessment of the knowledge of the partograph in Table 4 shows that majority (27.5%) of the staffs plotting the partograph wrongly in plotting the cervical dilatation which is a vital component as far as the progress of labor is concerned.

**DISCUSSION**

There remains no doubt about the fact that partograph is an important tool for monitoring the progress of labor and preventing obstructed labor. It helps in intervening at

the right time before the damage has already been done. In spite of this knowledge when a survey of utilization of the partograph was done in a tertiary center, the results turned out to be gloomy.

Our institution caters a huge population and the annual delivery rate is around 14,000. The study was conducted over 6 months and when the case sheets of 6250 women were scrutinized as far as the plotting of partogram was concerned, it was unfortunately found to be attempted only in 8.11% cases. Out of this, majority, i.e. 59.96%, were either left unfinished or executed wrongly.

A probe into the supply of partograph and equipments for monitoring of labor showed that there was no dearth in the supply. Partograph was procured easily from the store and was freely available in easy to reach places in the labor room. The main reason cited by the providers behind the lack of utilization was shortage of staff and lack of time in a busy labor room. The total number of staffs (doctors and nursing staff) on labor room duties in different shifts in our medical college is 20. This is a new medical college upgraded in 2011 from a pre-existing district hospital, so presently we do not have internees as even the first batch of MBBS students have not completed their course.

The knowledge about the different components of the partograph was also assessed through the structured questionnaire. It was found that majority (11 out of 40 staffs) had confusion regarding the plotting of cervical dilatation. They failed to understand the concept of plotting the first point of cervical dilatation. Although the role of action line was clear to them, most of them did not understand the importance of alert line. Fawole AO<sup>6</sup> in their study in Nigeria also had similar revelation that knowledge about the function of both the alert and action lines was generally poor. Only 16.6% of the respondents could explain the function of the alert line while 24.3% could explain the function of the action line in their study. Even after repeated stressing of the fact that the partograph required only marking of some points as compared to writing the findings in details and that actually it would take lesser time in documentation, it was the negative attitude among the providers that loomed largely behind the underutilization. On further questioning, a conflict was found to be lingering among the providers as to whose role it was to fill the partograph. Some considered it as wastage of time and effort in a busy labor room and preferred to writing down the findings on the case sheets for documentation. It was also observed that the seniors were not serving as the role models to advocate and implement the regular use of partograph.

Wakgari N et al<sup>7</sup> conducted a study on 403 obstetric care providers with a structured questionnaire and concluded that getting on job training, favorable attitude towards partograph and being knowledgeable on partograph were positively associated with partograph utilization.

Another study by Chaturvedi et al<sup>8</sup> in 73 facilities in Madhya Pradesh in India measured that the partograph was used in 6% of the 1466 records reviewed. They found that even training does not support correct use of partograph. Even we found our data agreeing with this because keeping an eye on the insufficient use and lack of knowledge among nursing staffs, a training of trainers (TOT) was conducted in 2014 and two doctors and four nursing tutors were made trainers in skilled birth attendance (SBA). Following this TOT five sessions of SBA were conducted in the district in which one of the nursing staff from the labor room of our institution was included in each session. In this training, hours were dedicated to the theoretical and practical classes on partograph. Even after that the lack of positive attitude seemed to be the main driving force preventing the improvement of usage.

A study by Okokon IB et al<sup>9</sup> on evaluation of knowledge and utilization of partograph aimed to determine and compare the factors that influence utilization of partograph in primary, secondary and tertiary healthcare delivery levels. Lack of detailed knowledge of partograph, its nonavailability and poor staff strength in the study center were factors militating against its ease of utilization. Periodic in service training was recommended by them.

Ollerhead E et al<sup>10</sup> searched Ovid Medline, ovid maternity and infant care, PEPLINE, Web of service and Scopus from 1st January 1994 to 30th Sept 2013 and gathered that the barriers to and incentives for partograph use are related to partograph itself, professional skills and practice, clinical leadership and quality assurance. They also suggested identification of local barriers in low and middle income countries and addressing them separately could help in formulating strategies to improve partograph use. They also realized that effective partograph use requires health workers to 'internalize its function'. Where this occurred professionals valued the partograph highly.

Fantu A et al<sup>11</sup> found that, although the majority of the participants had favorable attitude toward the use of partograph, only 29% of the partograph papers reviewed were properly filled. The reason lurking behind was the insufficient knowledge of partograph. They concluded that favorable attitude by itself was inadequate to ensure use of partograph. They also emphasized the importance of periodic on job training and regular supportive supervision to generate motivation of the staffs for a dedicated documentation.

## CONCLUSION

Prolonged and obstructed labor contributed to 8% of maternal deaths globally which can be reduced by proper

plotting of partograph during labor. Partograph is a simple, easy to use and practical device even in a busy labor room with limited personnel as it does not require repeated documentation of the findings in words. Still its use in labor monitoring was detected to be low particularly due to the rigidity to change habits an attitude. The need of the hour is to realize that we should move forward with the evidence-based tools which when clearly documented not only brings down the maternal mortality but also reflects the accountability of the healthcare provider.

## ACKNOWLEDGMENT

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