Factors That Influence Midwives' Compliance in Completing the Partograph

Erna Kusumawati [1], Siti Istiana [2]

[1.2]Universitas Negeri Semarang, Central Java, Indonesia

Corresponding author: ernakusumawati@students.unnes.ac.id

Abstract: Partograph monitoring during labor is an intrapartum intervention that significantly reduces perinatal mortality. This is because the partograph helps health workers identify slow labor progress and provides an early warning system for early referral and can also help initiate appropriate interventions in a timely manner. In fact, the partograph is not used optimally, both in terms of incomplete filling, incorrect interpretation that affects clinical decisions and the absence of supervision from the leadership. Objectives methods cross-sectional design using Binary Logistic multivariate analysis with the help of SPSS Statistics 24. Results there are 5 variables tested, namely the availability of partographs, partograph policies, supervision of partograph completeness, training, partograph filling skills, through 4 stages it was found that supervision had the most influence on midwives being able to fill out the partograph correctly with Exp (B) / Odd Ratio of 136.432. Then followed by the skill or skill of midwives in filling out the partograph correctly Exp (B) / Odd Ratio of 45.987. Conclusions require drills or many periodic case studies for midwives to acquire the correct partograph filling skills and to be able to draw conclusions to make decisions and supervision from the leader or coordinating midwife in terms of availability, data accuracy, correct filling methods and appropriate actions according to the findings of the partograph results.

Keywords: partograph, supervision, skill, compliance

INTRODUCTION

Maternal mortality refers to deaths due to complications of pregnancy or childbirth. From 2000 to 2020, the global maternal mortality ratio (MMR) declined by 34% from 339 deaths to 223 deaths per 100,000 live births. This represents an average annual rate of decline of 2.1 percent. While substantial, this is about one-third of the 6.4 percent annual rate needed to achieve the Sustainable Development Goal (SDG) of 70 maternal deaths per 100,000 live births by 2030.(WHO, 2021)

Maternal deaths can be caused directly by postpartum hemorrhage, preeclampsia, and hypertensive disorders, pregnancy-associated infections, and complications of unsafe abortion, and indirectly by pre-existing medical conditions that are aggravated by pregnancy. Most maternal deaths can also be prevented if births are attended by skilled health workers such as doctors, nurses, or midwives. Because complications require prompt access to quality obstetric care, these skilled health workers, who are regularly supervised and have adequate equipment and supplies,

can prevent maternal deaths by providing life-saving medications such as antibiotics, blood transfusions, cesarean sections, and other surgical procedures.(WHO, 2021)

Strategies to end preventable maternal deathsAndending preventable maternal deaths is a new focus on improving the health and well-being of mothers and newborns., WHO works with partners to support countries towards: addressing inequalities in access to and quality of reproductive, maternal and newborn health care services; ensuring universal health coverage for comprehensive reproductive, maternal and newborn health care; addressing all causes of maternal mortality, reproductive and maternal morbidity and related disabilities; strengthening health systems to collect high-quality data to respond to the needs and priorities of women and girls; and ensuring accountability to improve quality of care and equity.(Document et al., 2015)

The Maternal Mortality Rate (MMR) in Indonesia is still the highest in Southeast Asia, ranking third, and is still far from the global SDG target of reducing MMR to 183 per 100,000 live births in 2024 and less than 70 per 100,000 live births in 2030. This condition indicates the need for more strategic and comprehensive efforts, because to achieve the MMR target of reducing to 183 per 100,000 live births in 2024, at least a 5.5% reduction in maternal mortality per year is required. Based on data from the Maternal Perinatal Death Notification (MPDN), the Ministry of Health's maternal mortality recording system, the number of maternal deaths in 2022 reached 4,005 and in 2023 increased to 4,129. Meanwhile, infant deaths in 2022 were 20,882 and in 2023 were recorded at 29,945.(Mediakom Editorial, 2024)

The direct causes of maternal death are hypertensive disorders in pregnancy (33.1%), obstetric hemorrhage (27.03%), non-obstetric complications (15.7%), other obstetric complications (12.04%), pregnancy-related infections (6.06%), and other causes (4.81%) (SRS 2016). These causes of maternal death indicate that maternal death can be prevented if service coverage is accompanied by good service quality. The incidence of maternal death as much as 77% was found in hospitals, 15.6% at home, 4.1% on the way to the hospital/health facility, and 2.5% in other health care facilities.(Minister of Health of the Republic of Indonesia, 2020)

The phenomenon of three delays still occurs, namely late decision-making to be referred to the right health facility, late arrival at the referral site, and late being handled properly. In this decision-making, one of the midwives or health workers must be able to interpret the partograph results with accurate data.

The partograph is a simple, low-cost monitoring tool for intrapartum care recommended by the World Health Organization (WHO) that has the potential to identify obstetric complications. The

World Health Organization recommends the universal use of the partograph during labor, and its routine use is helpful in making better decisions for the diagnosis and management of prolonged labor and obstructed labor. Studies in developing countries, including Ethiopia, have shown that the use of the partograph is still poor despite the simple and inexpensive preparation of the tool for intrapartum labor monitoring.(Bedada et al., 2020)

The partograph is a graphical presentation of the progress of labor, and the condition of the fetus and mother during labor. It consists of four parts: maternal information, fetal condition record, labor progress record, and maternal condition record. The fetal condition record can track the fetal heart rate, amniotic fluid, and fetal cranial indentation. The labor progress record tracks cervical dilation and fetal head descent over time, comparing it to the “alert” and “action” lines. The maternal condition record includes contractions, blood pressure, pulse, urine output, temperature, and medications given including medications to help contract the uterus.(Ayehubizu et al., 2022)Therefore, proper use of partograph can improve delivery outcomes. Thus, proper partograph monitoring of labor should be improved at the national level to reduce perinatal mortality and poor delivery outcomes.(Desta et al., 2021)

In the results of a study by Bedada et al in 2021 on Low Utilization of Partograph and Its Associated Factors among Obstetric Care Providers in Governmental Health Facilities at West Shoa Zone, Central Ethiopia, it was stated that the utilization of partographs by most respondents stated that they had used partographs 61.2% to monitor the condition of women in labor, most respondents 78.3% reported that partographs were always available in health facilities, and 92.2% said that partographs were a mandatory tool to improve the quality of services provided to women in labor. 52.2% did not have a standard policy or protocol for partograph use guidelines. The frequency of partograph use by obstetric care providers showed that 31.1% of them used it routinely, (32.9%) used partographs sometimes, 22.7% used partographs occasionally, and 13.4% did not use partographs. However, less than half (40.6% of obstetric care providers in hospitals had used partographs and 27% of respondents used them in health centers(Bedada et al., 2020)

Universal use of partograph during labor is recommended by the World Health Organization because routine use of partograph helps in better decision making for the diagnosis and management of prolonged and obstructed labor. Partograph is still not widely used in developing countries, especially in Africa, including Ethiopia. Studies conducted in Baghdad, metropolitan area in Ghana, and Lusaka, Zambia, showed that 58%, 54%, and 87.5% of participants used partograph to monitor the progress of labor. In Ethiopia, there was no consistent use of partograph during

labor; A study conducted in Asella referral and teaching hospital, Sidama zone, Bale zone, East Gojjam zone, Addis Ababa city administration; showed that 26%, 50.7%, 70.2%, 53.85% and 69% of participants used partograph to monitor the progress of their labor respectively. This inconsistency in partograph use is due to several factors such as participant gender, age, years of clinical service, health profession, and knowledge(Ayehubizu et al., 2022)

The results of clinical studies published in BMC Pregnancy and Childbirth 2014, 14.281, the WHO report in 2013 and research by Abebe et al published in the Science Journal of Clinical Medicine 2013: 2(2) 26-42 on the use of partographs by health workers (doctors, midwives and nurses) stated that although this instrument for assessing the progress of labor has been used since 1970, the results are still very unsatisfactory.(Ayenew & Zewdu, 2020)

This gap occurs due to the lack of understanding of officers about how to fill in and analyze data on the partograph chart, the level of compliance with the requirement to use a partograph at every delivery, regulations that require the partograph to be attached to obtain reimbursement for delivery service costs and so on, so that the real purpose (monitoring the progress of delivery) of using the partograph is not achieved or its use is neglected, and is often misused.(Abdulbaki et al., 2024)

As many as 50% of midwives in the village have not used partographs routinely because they feel it is difficult and takes a long time to monitor because the delivery is carried out at the patient's home and the recording is complicated. Thirty percent (30%) of PMB have not used partographs. They reason that detection of labor complications can be done with experience helping or feeling so they consider the use of partographs to be a waste of time and also has no effect on their duties and careers.(Erickson, 2023)

METHOD

Cross-sectional study design to assess factors associated with midwife compliance in the use of partographs. The study population was all midwives in Semarang City, both those working in hospitals, health centers and independent midwife practices. The number of samples was 61 midwives. The variables studied were length of service, availability of partographs, policy on the obligation to have partograph documents, supervision of partograph completeness, related training, and skills in filling out partographs. Analysis using SPSS using multivariate analysis with binary logistic regression.

RESULTS

Table 1. Results of multivariate analysis

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
Step 1	Availability of partograph	1,417	3.211	.195	1	.659	4.124	.008	2232.080
	Partograph policy	1,669	1,902	.770	1	.380	5.307	.128	220,752
	Supervision of partograph completeness	4.626	1.253	13,635	1	.000	102.120	8,764	1189.940
	Last followed APN	-.541	1.155	.220	1	.639	.582	.061	5,597
	Partograph filling skills	3.935	1,790	4,832	1	.028	51,166	1,532	1709.364
	Constant	-14,768	5,577	7.013	1	.008	.000		
Step 2	Partograph policy	2.015	1,636	1,517	1	.218	7,504	.304	185,302
	Supervision of partograph completeness	4.678	1.255	13,886	1	.000	107,516	9.183	1258.807
	Last followed APN	-.429	1.117	.147	1	.701	.651	.073	5,810
	Partograph filling skills	3,971	1,796	4,891	1	.027	53,054	1,571	1791.761
	Constant	-13,990	4,794	8,516	1	.004	.000		
Step 3	Partograph policy	2,086	1,639	1,620	1	.203	8,053	.324	200,004
	Supervision of partograph completeness	4.695	1.252	14,060	1	.000	109,407	9.402	1273.142
	Partograph filling skills	4.053	1,780	5.185	1	.023	57,568	1,758	1884.713
	Constant	-14,885	4.288	12,051	1	.001	.000		
Step 4	Supervision of partograph completeness	4.916	1.208	16,557	1	.000	136,432	12,782	1456.281
	Partograph filling skills	3,828	1,722	4,942	1	.026	45,987	1,573	1344.391
	Constant	-12,558	3.391	13,717	1	.000	.000		

The variables of partograph availability, partograph policy, partograph supervision, APN training and partograph filling skills were analyzed together to obtain the most influential variables, namely the highest in the supervision and partograph filling skills variables. The supervision variable of partograph completeness has a Sig (p value) of 0.000 (<0.05) concluding that supervision of partograph completeness has a partial effect on midwife compliance in filling out partographs with Exp (B) / Odd Ratio of 136.432. The partograph filling skill variable has a Sig (p value) of 0.026

(<0.05) concluding that partograph filling skills have a partial effect on midwife compliance in filling out partographs with Exp (B) / Odd Ratio of 45.987.

DISCUSSION

Supervision of partograph completeness has a partial effect on midwife compliance in filling out partographs with Exp (B)/ Odd Ratio of 136.432. Supervision is an effort to help foster and improve the ability of the supervised party so that they can carry out the assigned tasks efficiently and effectively. Supervision is defined as an activity carried out to provide technical assistance to program implementers in carrying out the tasks assigned to them.(Yuliastuti et al., 2015).

This result is different from Yuliastuti's 2015 study, namely the Chi Square test results showed no influence of supervision perception on compliance in the use of partographs with a p value of 0.79. Supervision is the midwife's view of the coaching or technical guidance carried out by the coordinating midwife or Health Center related to the use of partographs which includes the methods and processes in providing coaching, the role and attention of the coordinating midwife in monitoring the use of partographs, evaluations and sanctions given by the head of the health center / coordinating midwife to midwives who do not use partographs. Evaluation of the use of partographs is one of the activities carried out by the coordinating midwife when conducting supervision.(Yuliastuti et al., 2015)

This study is in line with Ayehubizu in 2022, namely less than half (42.5%) of respondents said that lack of orientation was the reason for not using a partograph when monitoring women in labor. According to the Big Indonesian Dictionary (KBBI), orientation is a review to determine the right and correct attitude. In addition, orientation can also be interpreted as a view that underlies thoughts, attention, or tendencies. With supervision, it helps midwives measure and assess midwives in the use of partographs(Ayehubizu et al., 2022)

In the 2020 Bedada study, the main reasons mentioned by participants who were aware of the use of the partograph but did not use it to monitor laboring mothers were as follows: lack of orientation/- training on how to use it (112, 34.8%), availability of other observation methods (43, 13.4%); 128, 39.8%), workload (199, 61.8%), and lack of supervision (172, 53.4%)(Bedada et al., 2020)

Partograph filling skills have a partial effect on midwife compliance in filling out the partograph with Exp (B)/ Odd Ratio of 45.987. Based on Afriani's research in 2023, the analysis of

the results of observations of all respondents when providing delivery care was quite good and implemented the partograph optimally, although it was not yet fully consistent in its use. Where the results of labor monitoring are not directly written on the partograph sheet but on another sheet in monitoring at any time and then will be copied/filled in on the partograph sheet after the delivery process is complete or at a certain time. This condition shows that the application of the partograph has not been used effectively according to theoretical standards as expected(Afriani, Zulaeha A Amdadi, 2023)

Another study found that the main challenges for health care providers included unavailability of partographs, shortage of health care providers, inadequate knowledge and competence, and limited training opportunities. Partograph training led to improved knowledge, tool utilization, and attitudes, as demonstrated by significant differences in post-assessment outcomes.(N & Thayumanavan, 2023)

An overall upward trend from 29% to 61% was seen in partograph use practices. Simultaneously the completeness of partograph completion increased from 32% to 81%. Staff competency in completing partographs improved markedly. An integrated approach of training, mentoring and quality improvement approaches could be used in similar settings to strengthen partograph use. Training was not provided in isolation but coupled with ongoing mentoring which may have contributed significantly to midwives' motivation and confidence. It suggests that training alone does not improve knowledge and practice and may require continued mentoring and problem solving.(Bajpayee et al., 2020)

An integrated approach helps effective midwives to reduce the many problems in partograph use. While training and mentoring increase their confidence in using and interpreting the partograph, the involvement of clinical leadership in overseeing and supporting the correct and regular use of the partograph is essential in driving practice in the labour ward.(Bajpayee et al., 2020)

A study by Archbald Bahizi in Uganda about 8-13 parameters were documented correctly in 71.5% of partographs. About 38.9%, 24.7%, 99.7%, 22.5% and 16% of the partographs had no documentation of obstetric risk factors, fetal heart rate, liquor color, uterine contractions and cervical dilatation respectively. About 12.1% of cervicographs crossed the action line and 61.4% of partographs where cervicographs crossed the action line had no documentation of the action taken. The use of partographs allows for early detection of labor so that immediate interventions can be taken. However, this only happens when the pregnant woman is monitored properly, all parameters

on the partograph are recorded and interpreted correctly. The study revealed that fetal heart rate was not recorded in 24.7 percent of partographs and blood pressure was not recorded in 34.0 percent of partographs. The study also revealed that cervical dilatation was not recorded in 16.4 percent of partographs.(Bahizi et al., 2023)

CONCLUSION(S)

The conclusion of this study is that supervision is more influential in improving partograph filling. Supervision is needed by the leader, for example the coordinating midwife, including assistance, training, routine evaluation and sanctions. This greatly increases midwife compliance in making partographs. So that the use of partographs can be carried out optimally by midwives as birth assistants in monitoring the progress of labor, can pour data into the partograph correctly, have the ability to read the results of partograph findings and provide fast and appropriate action to reduce the number of delays in making clinical decisions.

Conflict of Interest

In this study, approval has been obtained from the professional party, namely the Indonesian Midwives Association, Semarang City Branch.

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