

Original Research Article

## Determinants of Midwifery Practice in the Active Management of Third Stage of Labor in Omdurman State, Sudan

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### ABSTRACT

**Background:** Active management of the third phase of labor (AMTSL) has been shown to lessen blood loss in women undergoing vaginal childbirth. It could avert maternal deaths and morbidity.

**Objective:** To assess the Knowledge, skills and identifying barriers to using of Active Management of Third Stage of Labor.

**Methods:** Institution based cross-sectional study supplemented with observation checklist, was conducted among 50 Midwives in Omdurman Maternity Hospital in Sudan. The questionnaires include open as well as, closed-ended questions which cover social, demographic information, knowledge, and practice of midwives on active management of the third stage of labor. The pretest was done for validity and consistency; data were coded and analyzed with SPSS version 17 then presented in tables.

**Result:** About 38 (84.4%) of midwives are not familiar with the current national treatment guidelines, while 7(15.6%) were familiar and 12 (26.7%) are able to use AMSTL.

**Conclusion:** There is malpractice of AMSTL, training and supportive supervision should integrate as necessary to achieve the goals set for Maternal and newborn survival.

**Keywords:** Oxytocin, active management, Third stage of labor, Postpartum Hemorrhage.

### INTRODUCTION

THE third stage of labor is defined as the period between delivery of the fetus and delivery of the placenta. It is considered to be the most critical part of childbirth due to the risk of postpartum hemorrhage (PPH).

<sup>[1]</sup> Approximately 127 000 maternal deaths caused by postpartum hemorrhage are reported worldwide annually. Postpartum hemorrhage remains the leading global cause of maternal mortality, accounting for at least one-quarter of all maternal deaths. Adequate management of the third stage of labor is critical due to the fact that postpartum hemorrhage often presents following that stage. <sup>[2]</sup>

Two approaches, active and expectant, have been proposed for the management of the third stage of labor. Active management involves administration of prophylactic oxytocin before delivery of the placenta, early cord clamping and cutting, and gentle cord traction with uterine contractions when the uterus is well contracted (Brandt-Andrews maneuver). Expectant management involves waiting for signs of placental separation and allowing the placenta to deliver spontaneously or aided by gravity or nipple stimulation. <sup>[1, 3]</sup>

The promotion of AMTSL has occurred through policy advocacy, pre-service, and continuing education of health

care providers. Experience has demonstrated that skilled birth attendants can be readily taught the techniques of AMTSL. [4] In early 2012, the World Health Organization (WHO) held a technical consultation to review global evidence related to the prevention and management of postpartum hemorrhage (PPH), which is still the most common cause of death for women during pregnancy. Since 2007, WHO recommendations have supported active management of the third stage of labor (AMTSL) as a critical intervention for PPH prevention. AMTSL has become a central component of the PPH reduction strategies of governments around the world. As a result of the 2012 meeting, WHO has issued new recommendations regarding AMTSL, which can be used to strengthen and focus the implementation of this life-saving intervention. [5] Current evidence indicates active management of the third stage of labor (administration of uterotonic drugs, controlled cord traction, and fundal massage after delivery of the placenta) can reduce the incidence of postpartum hemorrhage by up to 60 percent in situations where:

– National guidelines support the use of active management of the third stage of labor (AMTSL).

– Health workers receive training in using AMTSL and administering uterotonic drugs.

– Injection safety is ensured.

– Necessary resources (uterotonic drugs and cold chain for storage of uterotonic

Drugs; equipment, supplies, and consumables for infection prevention and injection safety) are available. [6] There are currently gaps in skills and too little of a knowledge base. The single most identified limiting factor in midwifery education in the Sudan is the lack of competent midwifery teachers. Poor physical condition of the schools and the lack of Supplies and teaching materials are a large contributing factor to the poor status of Midwifery education. There is often too little coordination between schools and clinical Skills sites which are crucial for hands-on

experience. [7] Despite the recommendation by the Society of Obstetricians and Gynecologists of Canada (modified since our study) advising, active management, and although we expected some lack of synchrony between Recommendation and practice, we hypothesized that different levels of lack of synchrony would be found in British Columbia among different health care practitioners. [3] Policies should support the practice of AMTSL in all maternity facilities of the health system and by all cadres with midwifery skills. Policies should also direct the routine availability of high-quality oxytocin and encourage the storage of oxytocin in a cool environment. [5]

The aim of this study was to assess the routine management of the third stage of labor after spontaneous vaginal deliveries and to identify gaps that required improving clinical care

## **MATERIALS AND METHODS**

**Research setting:** The study was conducted at Omdurman maternity Hospital, is a Teaching Hospital provides a tertiary level of care equipped with a facility for operative procedures together with an efficient blood bank.

**Participants:** Total samples of 50 women are recruited (total coverage). The interview was carried out with health care providers (HCP) at the delivery room to explain the nature of research and obtain their acceptance to participate.

**Tools of data collection:**

**Data were collected using two tools:**

A tool I: An interview questionnaire tool that was designed by the investigators and pretested for comprehension and validity. It is designed to collect the necessary data based on a review of related literature.

Tool II: A checklist tool is modified according to guideline standard of essential obstetric care

**Ethical consideration:**

Confidentiality is obtained, only available to the investigators and the participants.

**Statistical analysis:**

The statistical analysis was done using SPSS-16 statistical software package and excel for figures. The contents of each tool were analyzed, categorized by the investigator. Data were presented using descriptive statistics in the form of number and percentages for qualitative variables. Statistical significance was considered at ( $p < 0.05$ ), high significance if less than 0.01, or insignificant if more than 0.05

## RESULT

**Table1: Shows social, demographic data of midwives (n=50)**

Description	Freq	Percentage
20years -25years	2	4%
26years -30years	12	24%
31years -35years	29	58%
More than 35years	7	14%
Educational qualification		
Master	0	0%
BSc	17	34%
Diploma	29	58%
Midwifery certificate	4	8%
Experience in years		
1 year	2	4%
2 years	10	20%
3 years	25	50%
More than 3 years	13	26%

The majority of the midwives, who participated in the study, their age around 31- 35 years, have diploma certificate and 3 years of experience.

**Table2: Shows Knowledge about the third stage prophylactic drug of choice, Timing of administration, and the usual dose of Oxytocin**

Variable	Freq	Percentage
<b>Usual third stage prophylactic drug of choice</b>		
Oxytocin	9	18%
Ergometrine	35	70%
Use both Oxytocin and Ergometrine	6	6%
A Syntometrine	0	0%
Total	50	100%
<b>Timing of administration of usual dose of Oxytocin</b>		
At delivery of anterior shoulder	15	30%
Immediately after delivery of Newborn	24	48%
After delivery of placenta	9	18%
At the first sign of excessive blood loss	2	4%
Total	50	100%

**Table 3: Shows practicing Active Management of Third Stage of Labor**

Variable	Freq	Percentage
<b>Administration of uterotonic agent</b>		
Done	42	84.0%
Not done	8	16.0%
Total	50	100%
Controlled cord traction		
Done	25	50.0%
Not done	25	50.0%
Total	50	100%
Fundal massage immediately after placenta delivery		
Done	35	70.0%
Not done	15	30.0%
Total	50	100%

Most of the participants they are not using uterotonic drugs (84%) and Fundal massage (70.0%)

**Tble4: Shows reasons for practicing active management of the third stage of labor**

Variable	Freq	Percentage
Professional training	10	20%
Own experience	38	76%
Colleague opinions	2	4%
Woman's preference	0	0%
Total	50	100%

76% of midwives who participated in my study practiced AMSTL from their own experience while only 20% were professionally trained.

**Table5: shows availability of policy, logistics, and drugs**

Variables	Freq	Percentage
National standard treatment guidelines		
Yes	7	14.0%
No	43	86.0%
Use of AMSTL		
Yes	12	24.0%
No	38	76.0%

About 38(84.4%) of midwives are not familiar with the current national treatment guidelines, while 7(15.6%) were familiar and 12(26.7%) are able to use AMSTL.

## DISCUSSION

Since 2007, WHO recommendations have supported active management of the third stage of labor (AMTSL) as a critical intervention for PPH prevention. AMTSL has become a central component of the PPH reduction strategies of governments around the world. [5] Most of the participant age between 31-35 years old (58%), they attained a diploma in midwifery and have three years experience in their work.

Almost of the midwives prefer to use Oxytocin (18%) as a second prophylactic drug to prevent the postpartum hemorrhage. Some studies prove the less use of ergometrine due to it is the effect of delivery of the placenta. Nevertheless, the midwives in our study prefer to use it. [8] This result inconsistent with the result of the study conducted in AdisAbaba showed that about (89%) of midwives had awareness on Oxytocin intramuscular injection as the first line drug for the management of PPH.

Surprisingly, less than half of midwives administer the uterotonic drugs after delivery of the fetus, this show a high noncompliance to a FIGO/ICM standard of uterotonic drug dosage and timing. [9] Overall, most deliveries (77, 8%) benefited from uterine massage immediately following delivery of the placenta. Active management appears not to be selectively practiced for women considered at high risk, but may be used to a greater extent in national hospitals than in lower level facilities.

Most of the midwives practice AMTSL from their working experience rather than professional training and this tell us about nonadherent of in- service training to promote excellence in midwives practice. Although training on AMTSL, has evidenced to improve midwives awareness and practice. Therefore, it is important for the Ministry of Health to facilitate the process and incorporating the correct use AMTSL according to ICM/FIGO definition into both pre-service and in-service training and provide refresher courses and enough reference materials for staff managing deliveries in the country. [10]

Though lacking explicit guidelines for what clinical health assistants were allowed to do was clearly affecting the effectiveness of task shifting at the facilities included in the study. There is a need for, clear directives from the hospital management about how to accomplish the third stage of labor to probably increase a correct use of AMTSL and improve the situation for novice midwives. [11] Some contributing factors to providing the best possible care have been pointed out in this study, insufficiency in staff coverage and the absence of clear guidelines; this could the impending implementation of AMSTL. A problem seemingly shared by other countries in the region. [12] Further research is needed in order to investigate the amount of time needed for new recommendations from WHO to be fully implemented on a national and regional level in low- or middle-income countries.

## CONCLUSION

There is malpractice of AMSTL, training and supportive supervision should integrate as necessary to achieve the goals set for Maternal and newborn survival. Also, absent for clear Inadequate adherence to existing guidelines must be regarded as a potential threat to safe medical processes and implementation of proper AMTSL.

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