

## Pharmaceutical Management of Uterotonic Medicines for Health Care Providers Practicing Active Management of the Third Stage of Labor: Training Workshop Report, March 2009

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## **About SPS**

The Strengthening Pharmaceutical Systems (SPS) Program strives to build capacity within developing countries to effectively manage all aspects of pharmaceutical systems and services. SPS focuses on improving governance in the pharmaceutical sector, strengthening pharmaceutical management systems and financing mechanisms, containing antimicrobial resistance, and enhancing access to and appropriate use of medicines.

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## **Key Words**

pharmaceutical management, uterotonic medicines, AMTSL

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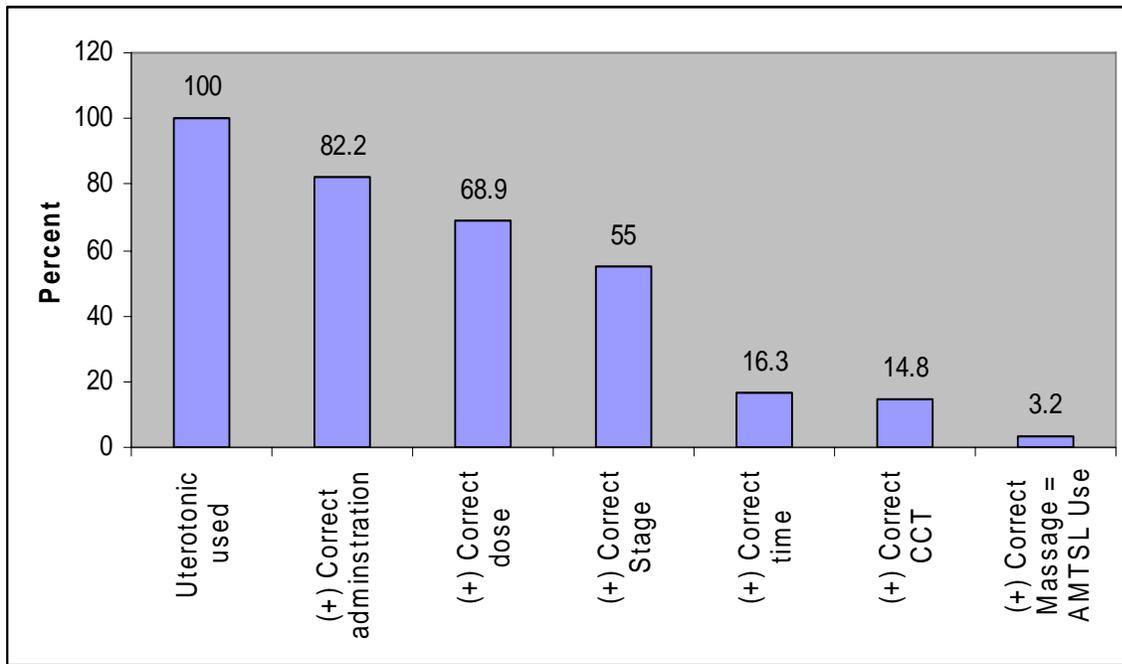
## ACRONYMS

AMTSL	active management of the third stage of labor
DG	Director-General
FIGO	International Federation of Gynecologists and Obstetricians
GHS	Ghana Health Service
ICM	International Confederation of Midwives
MCH	Maternal and Child Health
MSH	Management Sciences for Health
PPH	postpartum hemorrhage
SPS	Strengthening Pharmaceutical Systems
TBA	traditional birth attendant



## INTRODUCTION

A nationally representative survey of the practice of active management of the third stage of labor (AMTSL) was carried out in Ghana in 2007. The results of the survey indicated that AMTSL according to internationally accepted standards was practiced in less than 4 percent of 322 deliveries observed in 25 selected health care facilities in the 10 regions of the country.<sup>1</sup> Figure 1 highlights the components of AMTSL that were observed during the survey and how each of these contributed to the improper practice of AMTSL.



**Figure 1. Percentage of deliveries with components of AMTSL**

One of the factors contributing to the low rate in the practice of AMTSL was the inefficient pharmaceutical management of uterotonic medications, attributed to the fact that most of the health care providers practicing AMTSL have not received proper training in the pharmaceutical management of uterotonic medications. It was observed that a specific training for health care practitioners—nurse/midwives, pharmacists, and obstetricians/gynecologists—would be beneficial to the practice of AMTSL.

### Training Objectives

The specific objectives of the training were to build and strengthen the participants' skills in—

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<sup>1</sup> D. Armbruster, A. Johnson, and E. Nfor. 2008. *Active Management of the Third Stage of Labor in Health Care Facilities: Results of a National Study in Ghana, 2007*. Submitted to the U.S. Agency for International Development by the Rational Pharmaceutical Management Plus Program. Arlington, VA: Management Sciences for Health.

- Defining and understanding the practice of AMTSL
- Identifying the uterotonic medications used in the practice of AMTSL
- Explaining the advantages and disadvantages of the major uterotonic medications used in Ghana
- Describing how to decide which uterotonic medicines to use in AMTSL
- Understanding the importance of the proper pharmaceutical management uterotonic medicines in AMTSL
- Understanding specific techniques to be carried out in terms of pharmaceutical management of uterotonic medicines, such as inventory management, quantification, and rational use

### **Preworkshop Activities**

A visit to Korle Bu Teaching Hospital, which is a health care facility where AMTSL is practiced, preceded the training workshop. The aim of the visit was to observe the inventory management and storage practices for uterotonic medicines at the teaching hospital from the pharmacy to the delivery room. To get an understanding of the flow of inventory of uterotonic medicines in the maternity department of Korle Bu Teaching Hospital, the team members were first taken to the receiving area and the central processing point of all medicines (including uterotonics).

The team observed storage conditions for uterotonic medicines used for the practice of AMTSL. Brief interviews were conducted with the storekeeper to ascertain the procedures followed as part of the management of the inventory of uterotonic medicines. Next, team members visited the pharmacy of the maternity unit of the hospital and two separate labor wards to observe the storage practices. They interviewed the pharmacists at the pharmacy and the nurse/midwives at the labor wards. Questions asked centered on the problems encountered in adhering properly to the storage recommendations for uterotonic medicines.

Health care personnel indicated an interest in having tools such as job aids or posters that will provide guidance for the proper storage of uterotonic medicines and further enhance their ability to practice AMTSL properly. In addition, team members noted their observations, which served as discussion points for some of the training workshop sessions.

An additional site visit was carried out at the Central Medical Stores to observe the storage practices for uterotonic medicines. The cold storage facility was observed, and photos were taken to present these to the participants at the workshop to establish an understanding of what the expectations were in terms of the storage practices for uterotonic medicines.

## PHARMACEUTICAL MANAGEMENT TRAINING WORKSHOP FOR UTEROTONIC MEDICINES USED IN AMTSL

### Overview of the Training Workshop

**Day 1** of the workshop (Monday, March 2, 2009) started with the registration formalities and introduction of the participants and the resource people. James Kyei, Director of Pharmaceutical Services of Ghana Health Service (GHS), formally opened the workshop on behalf of the Director-General (DG), Dr. E. K. Sory. In his opening remarks, Kyei underlined the importance of paying attention to issues of maternal health and the need to focus on reducing postpartum hemorrhage (PPH) as part of the efforts to reduce maternal mortality. Dr. Cynthia Bannerman (Director, Institutional Care Division, GHS) made opening remarks.

Inua Yusuf presented an overview of the training goals and objectives to provide participants with general expectations for the workshop. The first session was facilitated by the obstetrician/gynecologist of Tamale Teaching Hospital, Dr. Bamaaha Gandau, who made a presentation on the maternal health situation in Ghana and the current efforts to reduce PPH. Afterward, a discussion session was conducted with key resource people, who responded to the questions raised by participants.

Following the presentation, a video demonstration on the correct practice of AMTSL highlighted the procedures to be followed. Abiola Johnson of Management Sciences for Health's Strengthening Pharmaceutical Systems Program (MSH/SPS) facilitated a discussion session that provided a forum to summarize the progress made on the recommendations from the dissemination workshop held in February 2008. Two of the participants who were also present at the dissemination workshop gave an overview of the progress made in their health care facilities. Participants acknowledged the need for additional interventions as part of efforts to improve the pharmaceutical management of uterotonic medicines at the facility level, including development of job aids and posters that will provide clear and specific storage guidelines for uterotonic medicines used in Ghana.

Kyei provided an overview of the general pharmaceutical management of uterotonic medicines, followed by an introduction to the elements of pharmaceutical management presented by Saviour Yevutsey, a Senior Pharmacist of the GHS. Participants provided pertinent examples of the issues they had encountered in managing uterotonic medicines for AMTSL at their facilities.

**Day 2** (Tuesday, March 3, 2009) consisted of sessions on quantification, facilitated by Saviour Yevutsey (GHS), Grace Adeya (MSH/SPS), and Peter Gyimah (Manager, Central Medical Stores). Sessions included the following: An Introduction to Quantification, Issues for Quantifying the Needs of Uterotonic Medicines, Data Requirements for Carrying Out the Process of Quantification, and the Process of Quantification. The session formats included PowerPoint presentations, discussion questions, and group work. The quantification exercises were tailored to a facility-based setting using local examples. Exercises featured both the consumption and morbidity methods. Although most of the participants were able to provide a description of the flow of uterotonic medicines from the health care facility to the patient, they

were not all involved in the quantification process in their respective health care facilities. One of the highlights of the discussion was understanding that the burden of carrying out the quantification process in the health care facilities fell for the most part on the pharmacists. Workshop facilitators pointed out that each health care practitioner handling uterotonic medicines for AMTSL needs to have at least rudimentary knowledge about the quantification process and how to carry it out.

**Day 3** (Wednesday, March 4, 2009) began with a brief exercise on quantification facilitated by Grace Adeya (MSH/SPS), followed by a session on managing inventory and storing uterotonic medicines facilitated by Saviour Yevutsey (GHS) and Abiola Johnson (MSH/SPS). Participants provided an overview of the flow of inventory in their various facilities, indicating the advantages and disadvantages of the system. The facilitators outlined the correct inventory management procedures as well as the correct storage practices for the uterotonic medicines used in Ghana. During the discussion session, participants provided key examples of the storage practices involving uterotonic medicines in their various facilities, highlighting the aspects that represent improper management of uterotonic medicines. Recommendations were made on ways to improve these.

Inua Yusuf (MSH/SPS) and Cynthia Bannerman (GHS) facilitated a session on ensuring the quality of uterotonic medicines. Issues discussed regarded how to maintain the quality of uterotonic medicines and how to avoid situations where the quality of these medicines and health commodities could be compromised. A session facilitated by Bamaaha Gandau provided participants with an understanding of how to use uterotonic medicines for AMTSL to achieve good treatment results. The session ended with a discussion of pharmaceutical management issues for the treatment of eclampsia. James Kyei, who represented the GHS DG, officially closed the session. Closing remarks were made by the GHS and MSH/SPS, represented by Kwesi Eghan.

## **Major Issues Addressed during the Workshop**

### ***Current Uterotonic Medicine Situation***

The following uterotonic medicines are available in Ghana and appear on the fifth edition (2004) of the Essential Medicines List under the category of oxytocics—

- Ergometrine injection 0.5 mg/ml
- Ergometrine tablet 0.5 mg
- Misoprostol vaginal tablet 200 mcg
- Oxytocin injection 5 IU

Oxytocin is the most commonly used uterotonic in Ghana. Based on the information provided during the site visit to the health care facility by the team from MSH/SPS, about 1,000 units of oxytocin appear to be requested every week. However, ergometrine and misoprostol are also used. It is recommended to use 10 IU of oxytocin for the prevention of PPH. However, in Ghana, the strength of oxytocin usually available is the 5 IU per ampoule. Most of the nurse/midwives

who participated in the workshop indicated that they were familiar with the 5 IU ampoule, which means they use two ampoules of 5 IU when practicing AMTSL. It was pointed out that because they were used to using the 5 IU ampoule of oxytocin, the possibility existed that if the 10 IU ampoule were introduced into the system, the nurse/midwives would still use two ampoules, without paying much attention to the dose on the ampoule. Nurse/midwives were therefore cautioned to always check the strength written on the ampoules before administering the medication, in accordance with good nursing practice. Workshop facilitators also introduced the participants to the new prefilled oxytocin Uniject device, which is already prepared with 10 IU required for AMTSL. Although it is not available in Ghana currently, it could be introduced in the near future.

The brand of misoprostol that is currently available in health care facilities (which is not procured through the Central Medical Stores) is Cytotec. This brand is not indicated by the manufacturers for obstetric use and is recommended for the treatment of gastric ulcers. In addition to being used for AMTSL, Cytotec is used to carry out safe abortions. Reports exist of widespread misuse of Cytotec in the country; for this reason, GHS is planning to introduce a new brand of misoprostol that will be strictly for AMTSL called Misotac. It has been approved by the Food and Drug Board of Ghana and will be procured exclusively through the Central Medical Stores and distributed to the health care facilities. Health care providers who participated in the training workshop indicated that the new brand of misoprostol might not be readily accepted by health care practitioners who are used to Cytotec. GHS will need to work actively with the health care workers practicing AMTSL to ensure that this brand of misoprostol is used.

### ***Profile of Health Care Workers in the Pharmaceutical Management of Uterotonic Medicines***

As previously highlighted, the health care workers who participated in the training workshop comprised pharmacists, obstetricians/gynecologists, and nurse/midwives. Most participants agreed that additional attention should be paid to the role of other key players in the pharmaceutical management of uterotonic medicines. These include storekeepers who are in charge of managing the logistical issues of all medicines, including uterotonics. Storekeepers need to be aware of some of the core elements of pharmaceutical management of uterotonic medicines to be able to maintain their quality, such as adhering to the manufacturers' storage recommendations. For example, storekeepers need to be aware of the fact that certain uterotonic medicines need to be kept in cold storage and the temperatures at which these uterotonic medicines need to be kept to be able to safeguard their efficacy.

For the most part, pharmacists have the major role to play in the pharmaceutical management of uterotonic medicines, which is often burdensome. However, some participants insisted that nurse/midwives also play a role and are responsible for maintaining good storage practices for uterotonic medicines. All the health care providers practicing AMTSL need to have a thorough understanding of the core elements of the pharmaceutical management of uterotonic medicines.

Another highlighted issue was the role of traditional birth attendants (TBAs) in practicing AMTSL. The workshop participants pointed out that TBAs perform a high percentage of births in non-health care facility settings. The recommendations by the World Health Organization call

for administration of uterotonic medicines in a health care facility by skilled health care workers<sup>2</sup> because the lack of knowledge and education of TBAs might somehow lead to dosing discrepancies, which can lead to poor treatment outcomes. One of the ways this over- or underdosing problem has been overcome is by introducing oxytocin via Uniject, a prefilled device. Although matrons in Mali<sup>3</sup> have successfully used oxytocin in Uniject, it has not yet been introduced to health care workers in Ghana.

Another option to be explored is providing the expectant mothers with misoprostol before delivery at the last prenatal care visit, especially women who have a history of delivering at home with the help of a TBA. Although this option might seem easier in theory, in practice, it is important to consider a number of issues, such as the potential for misuse—especially because misoprostol can act as an abortifacient—and the lack of basic training of some of the TBAs who will perform the births and ultimately have to administer the uterotonic medicine.

Participants agreed that providing focused AMTSL training to TBAs is important to overcome these issues. In addition to TBAs, health care providers practicing AMTSL at the health care facilities need in-service training to address certain shortcomings that might be encountered in practicing AMTSL. This training should include all the cadres of health workers so the working relationship and collaboration among health care workers practicing AMTSL is strengthened at every level.

Workshop participants were selected from public health facilities; however, the role of the private sector in the practice of AMTSL and by extension the pharmaceutical management of uterotonic medicines was often highlighted during the workshop. Those health care workers practicing AMTSL in private health care facilities should also receive training on the pharmaceutical management of uterotonic medicines for AMTSL. Participants acknowledged that this training would be beneficial for the patients who deliver in private health care facilities.

### ***Quantification of Uterotonic Medicines***

During the quantification session, participants pointed out that not all the cadres of health care workers are involved in the quantification process. Nevertheless, the workshop facilitators indicated that all health care workers need to have a basic understanding of the quantification process, especially the method used to quantify. One of the major highlights of this session was the need to involve nurse/midwives in the quantification process because they are at the forefront of deliveries, and in most cases, they are the ones that use the uterotonic medicines more frequently and are in a better position to provide the necessary data for the quantification process. They also use uterotonic medicines to induce labor and treat PPH. The need was emphasized to have a thorough and efficient quantification process to prevent stockouts and overstocking.

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<sup>2</sup> WHO. 2007. *World Health Organization Recommendations for the Prevention of Postpartum Haemorrhage*. Geneva: WHO Department of Making Pregnancy Safer.

<sup>3</sup> USAID and PATH. 2008. "Introducing Oxytocin in the Uniject™ Device: An Overview for Decision Makers." PATH, Seattle, WA.

Both participants and facilitators understood that the process of quantification is complicated and requires a great deal of data that might not be readily available. In addition, the method used for quantification needs to be consistent with the reality at the health care facility to prevent the use of arbitrary figures to calculate and estimate the uterotonic medicines needs.

### ***Storage of Uterotonic Medicines***

The most important issue discussed during the workshop was the storage of uterotonic medicines. The injectable nature of uterotonic medicines requires them to be stored at low temperatures, usually a range of 2–8°C. This applies to two of the uterotonic medicines available in Ghana—oxytocin and ergometrine. As previously indicated, during the site visit to the Central Medical Stores, where most of the health care facilities obtain their uterotonic medicines, excellent storage facilities were observed. Ergometrine<sup>4</sup> was stored at the recommended temperature.

Workshop participants indicated that the storage practices in their health care facilities concerning uterotonic medicines were less than optimal. One of the reasons for the poor storage practices was lack of basic infrastructure. For instance, to be able to store oxytocin at the recommended temperature of 2–8°C, refrigerators or coolers need to be available; however, remote health care facilities do not always have them. In addition, power supply needed to maintain the cold storage is not always constant. Power outages have the potential to be disruptive of the storage of uterotonic medicines.

In addressing this situation, an analogy was drawn between the storage of uterotonic medicines and vaccines used for immunization. It was pointed out that even in the most remote areas of the country where the temperature levels can be high, immunization programs are still being carried out successfully, using vaccines that have been transported in cold storage and whose efficacy is still guaranteed at the point of immunization. For this reason, the problem of cold storage of uterotonic medicines can easily be overcome if proper attention is paid to the key aspects. One suggestion is to introduce uterotonic medicines into the storage mechanisms used by the United Nations Children's Fund for storing vaccines for immunization. The importance of ensuring and maintaining the quality of uterotonic medicines at every step of the supply chain was emphasized during the workshop.

Workshop participants indicated that nurse/midwives practicing AMTSL in certain health care facilities are also responsible for maintaining good storage practices, which is not confined to the pharmacists.

### ***Nonpharmaceutical Management Aspects of AMTSL***

Although the workshop focused on the pharmaceutical management of uterotonic medicines, it was important to provide the whole AMTSL picture to be able to address the issue holistically.

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<sup>4</sup> No oxytocin was available at the time of the visit.

According to the recommendations of the International Federation of Gynecologists and Obstetricians (FIGO) and International Confederation of Midwives (ICM), AMTSL involves three procedures—

1. Use of a uterotonic agent (preferably oxytocin) within one minute following the delivery of the baby
2. Delivery of the placenta with controlled cord traction
3. Massage of the uterus after delivery of the placenta

Although the first procedure is the most essential and is addressed under pharmaceutical management of uterotonic medicines, the other two are also vital in preventing PPH and thereby reducing the rate of maternal mortality. However, the workshop participants indicated that enough attention is not paid to the other two procedures because of a lack of basic understanding as well as the lack of health care workers to be able to carry out the procedures. Because of the busy nature of the labor wards, once the child has been delivered and ascertained to be healthy, the mother is often left alone, and nurse/midwives and other health care workers attending to the delivery move on to other tasks, such as delivering other babies.

Workshop participants indicated that some of the health care workers practicing AMTSL do not understand controlled cord traction and thus do not properly practice it. A video demonstration was shown to the participants, pointing out how to carry out controlled cord traction properly.

In addressing the lack of personnel to carry out the massage of the uterus, which is the last step in the practice of AMTSL, some workshop participants indicated that in their health care facilities, the patients are taught how to carry out the uterine massage themselves. Then, the patients are directed to carry out the uterine massage under supervision of the health care workers.

### **Recommendations Made during the Workshop**

During the workshop, facilitators and participants come up with of the following recommendations to improve the pharmaceutical management of uterotonic medicines and the overall treatment outcomes when AMTSL is practiced.

- Review the list of uterotonic medicines on the essential medicines list to ensure inclusion of the various dosage forms and modes of administration.
- Maintain the cold chain from the point of procurement through the Central Medical Stores until the point where the medication is administered to the patient. This can be done by clearly outlining the specific storage guidelines required. Uterotonic medicines are not always stored in the refrigerator at the pharmacy and in the delivery room. To ensure adherence to storage recommendations, create posters that clearly outline the storage guidelines for uterotonic medicines. These posters will serve as job aids to assist

health care providers practicing AMTSL to improve the standard for storage practices observed.

- Centralize the supply of uterotonic medicines for both public and private health care providers to ensure the quality of the medicines and maintain the cold chain from the point of procurement from the manufacturers to the health care facilities until the delivery room where the medicine is administered.
- To maintain the quality of the uterotonic medicines and to address the problem of the break in the cold chain, advocate to include uterotonic medicines in the national cold chain supply system for vaccines.
- To maintain the cold chain system and accommodate the amount of uterotonic medicines being procured, purchase adequate number of refrigerators of the appropriate sizes for the regional medical stores. In addition, purchase adequate sizes and numbers of cold boxes for health care facilities for transporting the uterotonic medicines from the central and regional medical stores to the health care facilities.
- Develop a standard set of guidelines for the storage of uterotonic medicines, inventory management, and quality assurance.
- Purchase thermometers and place them in refrigerators at various levels of the supply chain to monitor the cold storage temperatures at all levels.
- Ensure that the office of the GHS DG adopts a leadership role in seeing that the cold chain is maintained at all levels. One first step in accomplishing this is for the DG's office to send out a circular emphasizing the need to store uterotonic medicines in cold storage at all levels. A similar circular was previously sent, but not all health care facilities received this directive. It is important that the relevant officers at the GHS follow up with health care facilities providing AMTSL as an intervention to ensure that the storage recommendations are properly adhered to.
- Improve the coordination among pharmacists, nurse/midwives, and obstetricians/gynecologists as well as storekeepers at all levels of the supply chain to ensure the continuous supply and rational use of good-quality uterotonic medicines.
- Establish mechanisms to strengthen postmarket surveillance for uterotonic medicines. This can be accomplished by promoting advocacy for policy changes.
- Emphasize the importance of adhering to all the elements of pharmaceutical management of uterotonic medicines during the monitoring and supervisory visits from the office of the GHS DG.
- Revise the checklist for monitoring and supervisory visits by the office of the GHS DG to include aspects of the pharmaceutical management of uterotonic medicines.

- Develop a list of key indicators for the pharmaceutical management of uterotonic medicines.
- Establish and maintain links with existing family health focal persons in all 10 regions.
- Develop job aids, flyers, and posters promoting access, rational use, and quality assurance of uterotonic medicines at national and facility levels.
- Carry out supplementary training on pharmaceutical management of uterotonic medicines at the regional and district levels. Selected participants should include facility heads, administrators, and supply officers.
- Consult key personnel from all health care cadres who are involved in the practice of AMTSL to improve the process of quantification of uterotonic medicines. This includes nurse/midwives and obstetricians/gynecologists as well as pharmacists.
- Revive and make functional Medicine and Therapeutic Committees at all health care facility levels.
- Analyze the supply chain system at all health care facilities to explore opportunities to reduce the length of the supply chain from procurement to the end user.

## **Follow-up Activities and Next Steps**

### ***Development of Job Aids and Posters***

This activity will focus on improving the storage practices of uterotonic medicines at the facility level by using text and photos to provide guidelines and directions to health care workers on the proper storage of uterotonic medicines. These posters will then be pilot-tested at selected health care facilities before being rolled out to health care facilities in the regions.

### ***Development of Key Indicators for Pharmaceutical Management of Uterotonic Medicines***

The aim of developing these indicators is to provide guidance for the monitoring and evaluation of the pharmaceutical management of uterotonic medicines at the facility level. The key indicators to be developed will focus on storage and inventory management practices, quantification, and rational use of uterotonic medicines. The indicators developed will be pilot-tested at selected health care facilities in Ghana and will be rolled out in other countries supported by MSH/SPS maternal health activities.

## EVALUATION OF WORKSHOP

During the workshop, the participants evaluated the content material as well as the flow of information. The evaluation consisted of an understanding of the objectives of the workshop and an assessment of whether these objectives were accomplished. On the last day of the workshop, participants carried evaluated the entire workshop, taking into consideration administration, content material, and flow of sessions. Table 1 provides an overview of the scores assigned to the sessions by the workshop participants.

**Table 1. Session Scores**

Session	Score
Session I: Overview of the maternal health situation and efforts to reduce PPH	4.2
Session II: Pharmaceutical Management of Uterotonic Medicines Introduction to the Elements of Pharmaceutical Management	4.0
Session III: Quantification	3.8
Session IV: Inventory Management and Storage	4.5
Session V: Quality Assurance of Uterotonic Medicines	4.1
Session VI: Rational Use of Uterotonic Medicines	

Guide to scores

5	4	3	2	1
Excellent	Very Good	Good	Fair	Poor

Table 2 provides an overview of the participants' perceptions about whether the workshop met the objectives outlined.

**Table 2. Achievement of the Workshop Objectives**

Objective	Score
Define and understand the practice of AMTSL	4.4
Identify the uterotonic medications used in the practice of AMTSL	4.4
Explain the advantages and disadvantages of the major uterotonic medicines used in Ghana	4.3
Describe how to decide which uterotonic medicines to use for AMTSL	4.4
Understand the importance of the proper pharmaceutical management of uterotonic medicines in AMTSL	4.2
Understand specific techniques to be carried out in terms of the pharmaceutical management of uterotonic medicines, such as inventory management, quantification, and rational use of medicines	4.0

Guide to scores

5	4	3	2	1
Excellent	Very Good	Good	Fair	Poor

Table 3 provides an overview of the participants' appreciation of the workshop. These responses were based on the overall evaluation carried out on the final day of the workshop.

**Table 3. General Appreciation of the Workshop**

How would you rate your overall satisfaction with the course?	4.3
To what extent has this course met your training expectations and needs? Elaboration responses—	
<ul style="list-style-type: none"> <li>• <i>My expectations of getting new knowledge and ideas in the management of the third stage of labor were met</i></li> <li>• <i>Clarification on the storage and temperature requirements for uterotonic medicines</i></li> <li>• <i>Refreshing eye-opener</i></li> <li>• <i>Helped to understand the need for good communication and teamwork</i></li> <li>• <i>Exposed weaknesses in supply-chain management</i></li> <li>• <i>Looking forward to implementing positive changes in the health care facility</i></li> <li>• <i>Updated knowledge on the requisition of uterotonic medicines</i></li> </ul>	4.2
Were the facilitators clear and easy to understand?	4.4

Participants provided the additional following comments on the useful elements of the workshop as well as suggestions on how the workshop can be improved—

**What were the most useful features of this course?**

- *Bringing key players together as one team with one goal*
- *How to store and keep oxytocin potent*
- *Rational use of uterotonic medicines and pharmaceutical management of uterotonic medicines*
- *Practice of AMTSL*
- *Overview of the recommendations made to improve the management of medicines used for AMTSL*
- *Calculation of need requirement and inventory and storage*
- *Discussion sessions*
- *The presence of a multidisciplinary team assembled for the course*

### How could this course be improved?

- *Additional players like the storekeepers and medical suppliers should be included in the team receiving this course*
- *Organizing refresher courses and involving storekeepers*
- *Periodic reviewer (half-yearly)*
- *Further discussion on the challenges in the field and how they could be overcome*
- *Post-training, sharing of individual experiences*
- *Field visit to either a labor ward or the CMS/RMS*

### Post-training Evaluation

As a follow-up to the training workshop, the Maternal Health team will carry out a post-training evaluation that will include pilot-testing the key indicators of pharmaceutical management already developed as well as administering evaluation forms/questionnaires that will be developed as part of the follow-up to the training.

Table 4 provides an overview of the timelines for the follow-up activities outlined for Ghana.

**Table 4. Follow-up Activities Outlined for Ghana**

<b>Activity</b>	<b>Timeline</b>
Develop job aids/posters	April/May 2009
Pilot-test job aids/posters	June/July 2009
Develop key indicators for pharmaceutical management of uterotonic medicines	April/May 2009
Develop evaluation forms/questionnaires for post-training follow-up	April/May 2009
Post-training evaluation process	June/July 2009



## CONCLUSION

The training workshop on pharmaceutical management of uterotonic medicines was the first of its kind carried out by the Maternal Health team. The participants made a number of recommendations on how the course could be further improved. These recommendations include involving additional players in the context of pharmaceutical management of uterotonic medicines, such as storekeepers and medical suppliers, in future courses as well as organizing refresher courses for health care providers practicing AMTSL.

One of the key elements of pharmaceutical management of uterotonic medicines that was evidently inefficient during the 2007 survey and during discussions carried out with the various participants was the storage of uterotonic medicines. The interventions planned by MSH/SPS—development and pilot-testing of job aids and posters focusing on improving storage practices—are expected to be able to address the gaps encountered in the storage of uterotonic medicines. However, additional interventions will be needed on the part of the Ghana Health Service under the Ministry of Health to ensure that the necessary cold chain facilities are in place to optimize the storage practices.



## ANNEX 1. WORKSHOP CONTENT

<i>Pharmaceutical Management of Uterotonic Medications</i>					
Session	Learning Objectives	Brief Description of Session Content	Activities	Facilitators	Approximate Duration
<b>Session 1: Overview of the maternal health situation in Ghana and efforts to reduce postpartum hemorrhage (PPH); Summary of Ghana AMTSL survey results</b>	<p><i>This introductory session provides the participants with a brief overview of the following issues—</i></p> <ul style="list-style-type: none"> <li>• Maternal health situation in sub-Saharan Africa</li> <li>• Causes of maternal mortality</li> <li>• Efforts to reduce maternal mortality</li> <li>• Active Management of the Third Stage of Labor (AMTSL)</li> </ul>	<ul style="list-style-type: none"> <li>• Maternal mortality ratio and causes of maternal death</li> <li>• Efforts to reduce maternal mortality</li> <li>• Definition of AMTSL</li> <li>• Summary of AMTSL survey results</li> <li>• Video presentation of the practice of AMTSL</li> </ul>	<ul style="list-style-type: none"> <li>• Video presentation</li> <li>• PowerPoint presentation</li> <li>• Discussion</li> </ul>	<p>Dr Gandau OB/GYN Tamale Teaching Hospital</p> <p>Gloria Asare Maternal Health unit Ghana Health Service</p>	45 minutes
<b>Session 2a: An overview of pharmaceutical management of uterotonic medications</b>	<p><i>This session provides a brief overview of the following—</i></p> <ul style="list-style-type: none"> <li>• The uterotonic medications that are used in the practice of AMTSL with an emphasis on the ones used in Ghana</li> <li>• The elements of pharmaceutical management</li> </ul>	<ul style="list-style-type: none"> <li>• Description of the practice of AMTSL and the uterotonic medications used to carry out the intervention</li> <li>• An overview of the advantages and disadvantages of uterotonic medications</li> <li>• Brief introduction to the elements of pharmaceutical management and linking these elements to uterotonic medications</li> </ul>	<ul style="list-style-type: none"> <li>• PowerPoint presentation</li> <li>• Discussion</li> </ul>	<p>James Kyei Chief Pharmacist Ghana Health Service</p>	45 minutes

<b>Pharmaceutical Management of Uterotonic Medications</b>					
<b>Session</b>	<b>Learning Objectives</b>	<b>Brief Description of Session Content</b>	<b>Activities</b>	<b>Facilitators</b>	<b>Approximate Duration</b>
<b>Session 2b: Introduction to the elements of the pharmaceutical management and the pharmaceutical management cycle in the AMTSL</b>	<p><i>This session gives the participants an understanding of the following —</i></p> <ul style="list-style-type: none"> <li>• The key aspects of ensuring the sufficient supply of uterotonic medicines</li> <li>• The Uterotonics Supply Management Cycle</li> <li>• A description of the Uterotonics Supply Management Cycle</li> </ul>	<ul style="list-style-type: none"> <li>• The effect of good pharmaceutical management of uterotonic medications on AMTSL</li> <li>• The Uterotonics Supply Management Cycle</li> <li>• Selection of uterotonics (in general and in country)</li> <li>• Procurement of uterotonic medicines (medicine quality and supplier selection )</li> <li>• Distribution of uterotonic medications for the use of AMTSL</li> <li>• Rational use of uterotonic medicines</li> <li>• Management support for uterotonic medications for AMTSL</li> </ul>	<ul style="list-style-type: none"> <li>• PowerPoint presentation</li> <li>• Discussion</li> <li>• Examples</li> </ul>	Saviour Yevutsey Senior Pharmacist Ghana Health Service	45 minutes
<b>Session 3: Quantification of uterotonic medications</b>	<p><i>At the end of this session, trainees should be able to—</i></p> <ul style="list-style-type: none"> <li>• Understand the rationale for purposeful quantification strategies</li> <li>• Describe the critical issues in quantifying AMTSL-related commodity needs</li> <li>• Identify methods commonly used in the quantification process and their differences</li> <li>• List and describe the various types of data needed and their potential sources</li> <li>• Describe the rationale for formal quantification of uterotonic medications used for AMTSL</li> <li>• Apply the methods for quantification to estimate the needs of uterotonic medications for AMTSL</li> </ul>	<ul style="list-style-type: none"> <li>• Introduction to quantification</li> <li>• Concepts used in quantification</li> <li>• Methods commonly used in quantification and their differences</li> <li>• Data requirements for quantifying uterotonic medicines</li> <li>• Special considerations and issues when quantifying uterotonic medications for AMTSL</li> <li>• Application of the methods for quantification to determine order quantities of uterotonic medications in a case example</li> </ul>	<ul style="list-style-type: none"> <li>• PowerPoint presentation</li> <li>• Discussion</li> <li>• Practical exercise on quantification of uterotonic medications at the facility level</li> </ul>	Grace Adeya MSH/SPS  Saviour Yevutsey Senior Pharmacist Ghana Health Service  Peter Gyimah Manager Central Medical Stores	8 hours

*Annex 1. Workshop Content*

<b>Pharmaceutical Management of Uterotonic Medications</b>					
<b>Session</b>	<b>Learning Objectives</b>	<b>Brief Description of Session Content</b>	<b>Activities</b>	<b>Facilitators</b>	<b>Approximate Duration</b>
<b>Session 4: Inventory management and storage</b>	<p><i>The session provides the participants with an understanding of the following—</i></p> <ul style="list-style-type: none"> <li>• The importance of good inventory management</li> <li>• How to address specific problems and challenges in inventory management practices</li> <li>• Different aspects of good storage practices</li> <li>• Special storage conditions applicable to uterotonic medicines</li> <li>• Solutions to the specific storage problems identified at their facilities</li> </ul>	<ul style="list-style-type: none"> <li>• Ordering and stock rotation (good practices in general and in-country practices)</li> <li>• Receiving and Issuing (good practices in general and in-country practices)</li> <li>• Tools used in recordkeeping and calculating stock requirements for inventory management</li> <li>• Good Storage Practices</li> </ul>	<ul style="list-style-type: none"> <li>• Discussion</li> <li>• PowerPoint presentation</li> <li>• Practice exercises</li> </ul>	<p>Abiola Johnson MSH/SPS</p> <p>Saviour Yevutsey GHS</p>	2 hours
<b>Session 5: Quality assurance of uterotonic medicines</b>	<p><i>At the end of this session, trainees should be able to—</i></p> <ul style="list-style-type: none"> <li>• Discuss underlying issues of quality assurance</li> <li>• Discuss the importance of quality assurance of uterotonic medicines</li> <li>• Discuss the possible methods for ensuring the quality of uterotonic medicines</li> </ul>	<ul style="list-style-type: none"> <li>• Definition of terms used to describe medicine quality</li> <li>• Description of how medicines quality is assessed</li> <li>• Tools to use to ensure and maintain the quality of uterotonic medicines</li> </ul>	<ul style="list-style-type: none"> <li>• PowerPoint presentation</li> <li>• Discussion</li> <li>• Examples</li> <li>• Case studies</li> </ul>	<p>Inua Yusuf MSH/SPS</p> <p>Cynthia Bannerman GHS</p>	
<b>Session 6: Rational use of uterotonic medications</b>	<p><i>At the end of this session, trainees should be able to—</i></p> <ul style="list-style-type: none"> <li>• Understand the importance of proper prescribing and dispensing practices</li> <li>• Understand the correct mode and dose of uterotonic medications, correct stage of labor and timing to administer uterotonic medications</li> <li>• Identify effective strategies to improve the use of uterotonic medications</li> <li>• Describe the importance of educational, managerial, and regulatory interventions in promoting rational use of uterotonic medicines</li> </ul>	<ul style="list-style-type: none"> <li>• Definition and importance of rational use of medicines</li> <li>• The importance of proper administration of uterotonic medications according to the FIGO and ICM standards</li> <li>• Methods to improve the rational use of uterotonic medicines— educational, managerial, and regulatory</li> </ul>	<ul style="list-style-type: none"> <li>• PowerPoint presentation</li> <li>• Discussion</li> <li>• Examples</li> <li>• Case studies</li> </ul>	<p>Dr Gandau OB/GYN Tamale Teaching Hospital</p>	2 hours



## ANNEX 2. AGENDA

**Sunday, March 1, 2009**

TIME	ACTIVITY	FACILITATORS
5:00–7:00 PM	Arrival of participants from regions	All
7:00–8:00 PM	Dinner	All

**Monday, March 2, 2009**

Chair: Dr. Cynthia Bannerman

TIME	ACTIVITY	FACILITATORS
8:00–8:30 AM	Registration	Eric Agyedenah (MSH/SPS)
8:30–9:15 AM	Self Introduction Official Opening	All Kwesi Eghan (MSH/SPS) Gloria Asare (MCH, GHS) E. K. Sory (DG, GHS)
9:15–9:45 AM	Overview of training goals and objectives	Inua Yusuf (MSH/SPS)
9:45–10:15 AM	Overview of the maternal health situation and efforts to reduce postpartum hemorrhage	Gandau Bamaaha (Ob/Gyn, TTH) Gloria Asare (MCH, GHS)
10:15–11:00 AM	Practice of AMTSL: Demonstration of AMTSL— Video from Prevention of Postpartum Hemorrhage Initiative	Panel of Experts
<b>11:00–11:15 AM</b>	<b>COCOA BREAK</b>	
11:15–Noon	Overview of the recommendations made to improve the management of medicines used for AMTSL at the dissemination workshop	Abiola Johnson (MSH/SPS) Peter Gyimah (Manager, CMS)
<b>Noon–1:00 PM</b>	<b>LUNCH</b>	
1:00–1:45 PM	Pharmaceutical management of uterotonic medicines	James Kyei (Chief Pharmacist, GHS)
1:45–2:00 PM	Discussion, Questions and Answers	Saviour Yevutsey (Senior Pharmacist, GHS)
<b>2:00–2:15 PM</b>	<b>COCOA BREAK</b>	
2:15–3:00 PM	Introduction to the elements of pharmaceutical management	James Kyei (Chief Pharmacist, GHS)
3:00–4:00 PM	Discussion, Questions and Answers	Saviour Yevutsey (Senior Pharmacist, GHS)
4:00–4:15 PM	Evaluation and Close	Eric Agyedenah (MSH/SPS)

**Tuesday, March 3, 2009**

Chair: Dr Bamahaa Gandau

<b>TIME</b>	<b>ACTIVITY</b>	<b>FACILITATORS</b>
8:30–8:45 AM	Recap of the previous day	TBD
8:45–9:15 AM	Quantification of Uterotonic Medicines—an Introduction	Peter Gyimah (Manager, CMS) Saviour Yevutsey (Senior Pharmacist, GHS) Grace Adeya (MSH/SPS)
9:15–10:00 AM	Quantification—Issues for Quantifying Needs of Uterotonic Medicines	
10:00–10:30 AM	Discussion, Questions and Answers	
<b>10:30–11:00 AM</b>	<b>COCOA BREAK</b>	
11:00–11:45 PM	Quantifying Uterotonics—Data Requirements and Assumption	Peter Gyimah (Manager, CMS) Saviour Yevutsey (Senior Pharmacist, GHS) Grace Adeya (MSH/SPS)
11:45–Noon	Discussion, Questions and Answers	
<b>Noon–1:00 PM</b>	<b>LUNCH</b>	
1:00–2:30 PM	Quantifying Uterotonics—the Process	Peter Gyimah (Manager, CMS) Saviour Yevutsey (Senior Pharmacist, GHS) Grace Adeya (MSH/SPS)
2:30–3:00 PM	Discussion, Questions and Answers	
<b>3:00–3:15 PM</b>	<b>COCOA BREAK</b>	
3:15–4:45 PM	Group Work	Peter Gyimah (Manager, CMS) Saviour Yevutsey (Senior Pharmacist, GHS) Grace Adeya (MSH/SPS)
4:45–5:00 PM	Evaluation and Close	Eric Agyedenah (MSH/SPS)

*Annex 2. Workshop Agenda*

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**Wednesday, March 4, 2009**

Chair: Dr James Kyei

<b>TIME</b>	<b>ACTIVITY</b>	<b>FACILITATORS</b>
8:30–8:45 AM	Recap of the previous day	TBD
8:45–9:15 AM	Quantification Practice Exercise	Grace Adeya
9:45–10:00 AM	Inventory Management and Storage	Saviour Yevutsey (Snr Pharmacist, GHS) Abiola Johnson (MSH/SPS)
10:00–10:30 AM	Group Work, Discussion, and Practical Exercises	
<b>10:30–10:45 AM</b>	<b>COCOA BREAK</b>	
10:45–11:45 AM	Quality Assurance of Uterotonic Medicines	Cynthia Bannerman (Acting Director, ICD, GHS) Inua Yusuf (MSH/SPS)
11:45–Noon	Discussion, Questions and Answers	
<b>Noon–1:00 PM</b>	<b>LUNCH</b>	
1:00–2:00 PM	Rational Use of Uterotonic Medicines	Gandau Bamaaha (Ob/Gyn, TTH) Inua Yusuf (MSH/SPS)
2:00–2:45 PM	Discussion, Questions and Answers	
<b>2:45–3:00 PM</b>	<b>COCOA BREAK</b>	
3:00–4:00 PM	Pharmaceutical Management Issues for Eclampsia Discussion, Questions and Answers	Grace Adeya(MSH/SPS)
4.15–4:30 PM	Evaluation and Close	Eric Agyedenah (MSH/SPS)
4:30–5:00 PM	Official Closing	Kwesi Eghan (MSH/SPS) Gloria Asare (MCH, GHS) E. K. Sory (DG, GHS)

**Thursday, March 5, 2009**

<b>TIME</b>	<b>ACTIVITY</b>	<b>FACILITATORS</b>
6:00–7:00 AM	Breakfast	All
7:00–8:00 AM	Departure of participants to regions	All



## ANNEX 3. WORKSHOP EVALUATION FORM

Session: \_\_\_\_\_

### A. Overall Rating of this Session

*Please use the following rating scale to answer the questions below:*

<i>Poor</i>	<i>Fair</i>	<i>Good</i>	<i>Very good</i>	<i>Excellent</i>
<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

### B. I liked...

List the aspects you most liked and/or found useful from this session.


### C. How about...

List things that could be done to improve this session.


**A. Overall rating of the course**

*Please rate on a scale from 1–5:*

<b>Poor</b>	<b>Fair</b>	<b>Good</b>	<b>Very good</b>	<b>Excellent</b>
1	2	3	4	5

**B. Achievement of the course’s objectives**

**To what extent were the following course objectives achieved? What would you like to see improved?**

Objectives	Average rating	What would you like improved?
1. Define and understand the practice of AMTSL		
2. Identify the uterotonic medications used in the practice of AMTSL		
3. Explain the advantages and disadvantages of the major uterotonic medications used in Ghana,		
4. Describe how to decide which uterotonic medications to use for AMTSL		
5. Understand the importance of the proper pharmaceutical management uterotonic medications in AMTSL		
6. Understand specific techniques to be carried out in terms of pharmaceutical management of uterotonic medications such as inventory		
7. Management, quantification, and rational use of medicines		

**C. General appreciation of the course**

<b>Question</b>	<b>Average rating</b>	<b>What would you like improved?</b>
1. How would you rate your overall satisfaction with the course?		
2. To what extent has this course met your training expectations and needs? Please elaborate on your response.		
3. Were the facilitators clear and easy to understand?		

**D. Course content, format, and material**

<b>Questions</b>	<b>Average rating</b>	<b>What would you like improved?</b>
1. How would you rate the degree of difficulty of the course content?		
2. Did the course cover all essential topics? Are there any additional topics you would like to see covered?		
3. How effective was the overall format of the sessions, case studies, exercises, and discussions? Please elaborate on your response.		
4. How would you rate the materials for this course (handouts, slides, supplementary materials)? Please elaborate on your response.		
5. Were the topics covered relevant to your current position?		

**E. Course organization**

<b>How do you rate the following?</b>	<b>Average rating</b>	<b>What would you like improved?</b>
1. Overall time management (Schedule) <ul style="list-style-type: none"> <li>• Course duration</li> <li>• Punctuality</li> </ul>		
2. Time allocated to the sessions		
3. Coordination of the sessions (e.g., distribution of the training material and tools used for the facilitation)		
4. Overall structure and organization of practicum visit		
5. Meals and accommodation		
6. Conference room facilities		

**F. Comments**

<b>1. What were the most useful features of this course?</b>	
<b>2. What were the least useful features of this course?</b>	
<b>3. How could this course be improved?</b>	

## ANNEX 4. LIST OF PARTICIPANTS AND RESOURCE PEOPLE

### Participants

S/N	Name	Designation	Health Care Facility	Region	Contact Information
1.	Nora Ena Blege	Nurse/Midwife	Volta Regional Hospital	Volta Region	0240366330 0208831247
2.	Ernestina Apeatse	Nurse/Midwife	Central Regional Hospital	Central Region	0244849389 0285161642
3.	Dr Evans Ekanem	OB/GYN	Central Regional Hospital	Central Region	0242306917
4.	Paulina Fosuaa	Nurse/Midwife	Regional Hospital—Sunyani	Brong-Ahafo	0244843404
5.	Mariam Sackey	Pharmacist	Volta Regional Hospital	Volta Region	0244164716
6.	Dr Isaac O Koranteng	OB/GYN	Korle-Bu Teaching Hospital	Greater Accra	0244271278 <a href="mailto:iaicd@yahoo.com">iaicd@yahoo.com</a>
7.	Angelina W Kwofia	Nurse/Midwife	Effia-Nkwanta Regional Hospital	Western Region	03123151-4
8.	Dr K. Addai Darko	OB/GYN	Regional Hospital – Sunyani	Brong-Ahafo	0243363329 <a href="mailto:kwaddaidarko@yahoo.com">kwaddaidarko@yahoo.com</a>
9.	Salamatu Abukari	Nurse/Midwife	Regional Hospital Bolgatanga	Upper East	0246278929
10.	Dr Chris Opoku Fofui	OB/GYN	Upper West Regional Hospital Wa	Upper West	0246527176
11.	Oburi-Yeboa K.	Pharmacist	Kwahu Government Hospital	Eastern Region	0207191001
12.	Dr Peter Baffoe	OB/GYN	Bolga Regional Hospital	Upper East	0242317800
13.	Veronica Amedo	Nurse/Midwife	Korle-Bu Teaching Hospital	Greater Accra	0209324167
14.	Kwame Anim-Boamah	OB/GYN	Regional Hospital, Koforidua	Eastern Region	0208119721
15.	Doreen Tetteh	Pharmacist	Korle-Bu Teaching Hospital	Greater Accra	0208971049

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S/N	Name	Designation	Health Care Facility	Region	Contact Information
16.	Rosina Asantewaa	Nurse/Midwife	Regional Hospital, Koforidua	Eastern Region	0243432676 <a href="mailto:rosantewaa@yahoo.com">rosantewaa@yahoo.com</a>
17.	Dr Samuel Agyeman	OB/GYN	Effia Nkwantaa Hospital	Western Region	0208173799 <a href="mailto:agyeman@yahoo.com">agyeman@yahoo.com</a>
18.	Dominic K. Otchere	OB/GYN	Juaso District Hospital	Ashanti Region	0242216812 <a href="mailto:dkorsahotchere@yahoo.co.uk">dkorsahotchere@yahoo.co.uk</a>
19.	Stephen Arbenser	Pharmacist	Tamale Teaching Hospital	Northern Region	02486136777 arbenser792002@yahoo.com
20.	Dr Eric Yao Ankara	OB/GYN	Volta Regional Hospital	Volta Region	0244018882
21.	Abena Duah Gyang	Pharmacist	Komfo Anokye Teaching Hospital	Ashanti Region	0208164358
22.	Mary Owusu-Boateng	Nurse/Midwife	Komfo Anokye Teaching Hospital	Ashanti Region	0244531189
23.	Dr Thomas O Konney	OB/GYN	Komfo Anokye Teaching Hospital	Ashanti Region	0208152094 <a href="mailto:tom.konney@yahoo.com">tom.konney@yahoo.com</a>
24.	Daniel Ofori Asante	Pharmacist	Central Regional Hospital	Central Region	0285176842 <a href="mailto:otoo@hotmail.com">otoo@hotmail.com</a>
25.	Tiah Salifu Al-Hassan	Pharmacist	Tamale West Hospital	Northern Region	0243256404 <a href="mailto:salifautiah@yahoo.com">salifautiah@yahoo.com</a>
26.	Shine Atiemoh	Nurse/Midwife	Tamale West Hospital	Northern Region	0243845066
27.	Grace Grant	Pharmacist	Effia Nkwanta Regional Hospital	Western Region	0244367916 <a href="mailto:maamegrant@yahoo.co.uk">maamegrant@yahoo.co.uk</a>
28.	Samuel F. Gyeng	Pharmacist	Bolga Regional Hospital	Upper East Region	0243103956
29.	Mary Saan Diedong	Pharmacist	Regional Hospital Sunyani	Brong-Ahafo Region	0208234109
30.	Dr D. Asante-Mantie	OB/GYN	Man Iyia Hospital Kumasi	Ashanti Region	0244807070 <a href="mailto:asantman1@yahoo.com">asantman1@yahoo.com</a>
31.	Erica Awinoor	Nurse/Midwife	Man Iyia Hospital Kumasi	Ashanti Region	0244208211 <a href="mailto:erimoses@yahoo.com">erimoses@yahoo.com</a>
32.	Joyce Ofori-Akufa	Nurse/Midwife	Ridge Hospital	Greater Accra	0244016865
33.	Joseph Adjei Tsatse	Pharmacist	Ridge Hospital	Greater Accra	0208172860

## Resource People

S/N	Name / Designation	Organization	Contact Information
34.	Dr Bamahaa Gandau	Ghana Health Service Tamale Teaching Hospital	0243347039 <a href="mailto:gandau@yahoo.com">gandau@yahoo.com</a>
35.	Dr. Gloria Quansah-Asare	Family Health Division Ghana Health Service	0244281732
36.	Mrs Gladys Brew	Family Health Division Ghana Health Service	0243104588
37.	Dr Cynthia Banneman	Ghana Health Service	021684209
38.	James Ohemeng Kyei	Ghana Health Service	0244825454 <a href="mailto:pharmacyunit@yahoo.com">pharmacyunit@yahoo.com</a>
39.	Festus Korang	Ghana Health Service	0244252887
40.	Saviour Yevutsey	Pharmacy Unit Ghana Health Service	0244570354 <a href="mailto:syevutsey@yahoo.com">syevutsey@yahoo.com</a>
41.	Eric Ellington Agyedenah	MSH/SPS	
42.	Inua Yusuf	MSH/SPS	
43.	Abiola Johnson	MSH/SPS	
44.	Grace Adeya	MSH/SPS	
45.	Kwesi Eghan	MSH/SPS	



## ANNEX 5. PREWORKSHOP QUESTIONNAIRE FOR PARTICIPANTS

### Overview

A nationally representative survey of health care facilities in Ghana was carried out in 2007 to analyze the practice of Active Management of the Third Stage of labor (AMTSL). One of the recommendations based on the results of the survey was to carry out a training workshop on pharmaceutical management of uterotonic medicines for health care workers practicing AMTSL at the facility level. It is designed for obstetricians/gynecologists, pharmacists, and nurses/midwives.

This informal questionnaire was developed to ascertain the knowledge of the health care practitioners who will be participating in the training workshop, especially in terms of pharmaceutical management issues. In addition, it is an opportunity for participants to share the various tools and documents used to address issues related to the pharmaceutical management of uterotonics in their respective facilities.

Please respond as thoroughly as possible to the questions outlined below:

Your name: \_\_\_\_\_

1. Which of the following health care cadres do you belong to:

- Obstetrician/Gynecologist
- Nurse/Midwife
- Pharmacist
- Other, please specify: \_\_\_\_\_

2. Did your health care facility participate in the 2007 survey on AMTSL practice?

- Yes
- No
- Don't know

If yes, please state the name of your health care facility:

\_\_\_\_\_

3. Did you participate in the 2008 dissemination workshop for the AMTSL survey?

- Yes
- No

4. Do you have a copy of the Ghanaian Essential Medicines List (EML) in your health care facility?

Yes; Edition/Year \_\_\_\_\_  
 No  
 Don't know

5. Do you have a copy of the Standard Treatment Guidelines (STGs) for the prevention and treatment of postpartum hemorrhage (PPH) in your health care facility?

Yes; Edition/Year \_\_\_\_\_  
 No  
 Don't know

6. Have you previously participated in any training in pharmaceutical management?

Yes  
 No

If yes, please specify below, including the year the training took place:

\_\_\_\_\_

7. Have you received any training in AMTSL?

Yes  
 No

If yes, please specify below, including the year the training took place:

\_\_\_\_\_

8. Does your health care facility have a pharmacy?

Yes  
 No

9. Are you involved in the procurement/purchasing of uterotonics and other commodities used for AMTSL in your health care facility?

- Yes  
 No

If yes, please describe the extent of your involvement:

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10. Are you involved in the process of estimating the need (quantification) for uterotonics and other commodities used for AMTSL in your health care facility?

- Yes  
 No

If yes, please describe the extent of your involvement

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11. Which of the following uterotonic medicines is used for AMTSL in your health care facility?  
Please select all that apply:

- Oxytocin injection  
 Ergometrine injection  
 Ergometrine tablet  
 Misoprostol tablet  
 All of the above  
 None of the above

12. Please select from the list below the dose of uterotonic medicines dispensed in your facility:

- 5 IU—Oxytocin injection  
 10 IU—Oxytocin injection  
 0.2 mg—Ergometrine injection  
 0.5 mg—Ergometrine tablet  
 200 mcg—Misoprostol tablet  
 Other, please specify \_\_\_\_\_

13. Does your health care facility have Standard Operating Procedures (SOPs) that address specific issues related to the pharmaceutical management?<sup>5</sup>

- Yes
- No
- Don't know

If yes, please specify below as many as possible. You will be required to share these during the training workshop, so kindly bring copies of them, if available.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

14. Does your health care facility have specific tools or guidelines that are used for any of the pharmaceutical management procedures listed below?

- Expiry Date Tracking
- Inventory Management
- Storage
- Other, please specify \_\_\_\_\_

You will be required to share these during the training workshop, so kindly bring copies of these, if available.

15. Additional comments:

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Thank you

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<sup>5</sup> SOPs are guides that specify in writing what should be done, when, where, and by whom in terms of detail routine and repetitive operations in a specified setting, such as a pharmacy or a health care facility. For example, Standard Operating Procedure (SOP) for managing and controlling the stock of uterotonic medicines at the pharmacy.