

Tackling the Biggest Maternal Killer

How the Prevention of
Postpartum Hemorrhage
Initiative Strengthened
Efforts Around
the World

November
2009



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POPPIHI
Prevention of Postpartum
Hemorrhage Initiative

About POPPHI

The Prevention of Postpartum Hemorrhage Initiative (POPPHI) was a five-year project (2004–2009) focusing on the reduction of postpartum hemorrhage, the single most important cause of maternal deaths worldwide. Funded by the United States Agency for International Development (USAID), POPPHI was led by RTI as the prime contractor; Program for Appropriate Technology in Health was the technical lead agency. POPPHI's partners also included EngenderHealth, the International Federation of Gynecology and Obstetrics, and the International Confederation of Midwives.



About this document

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POPPHI
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Cover photo: Richard Lord



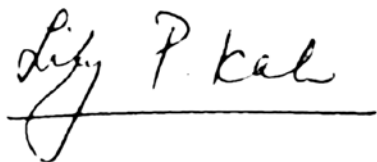
Message From USAID

It is with great pleasure and pride that I introduce *Tackling the Biggest Maternal Killer: How the Prevention of Postpartum Hemorrhage Initiative Strengthened Efforts Around the World*. This document summarizes the culmination of a US Agency for International Development (USAID) special initiative that shone a spotlight on the most important cause of maternal death: postpartum hemorrhage (PPH). This special project—the Prevention of Postpartum Hemorrhage Initiative (POPPHI)—galvanized many partners to join hands and work together to reduce PPH globally.

POPPHI had one simple but immensely challenging mandate: to catalyze the expansion of active management of the third stage of labor (AMTSL) practices worldwide. It worked toward this mandate through partnerships with the International Federation of Gynecology and Obstetrics, the International Confederation of Midwives, professional associations from many developing countries, the World Health Organization, and several USAID partners that implemented global and country-level programs. POPPHI also prioritized community-based strategies for preventing PPH, particularly as data demonstrated the effectiveness of misoprostol and the Uniject® device prefilled with oxytocin became commercially available.

The initiative harnessed the strength of multiple implementation strategies—policy change, systems strengthening, social mobilization, technology development, and research—and yielded many valuable lessons about opportunities, challenges, and strategies for scaling up AMTSL. A key lesson we have learned is that, when there is political commitment, AMTSL is rapidly scalable.

Through leadership, perseverance, collaboration, and inspiration, POPPHI has brought about a sea change in the prevention of PPH. As USAID's special initiative comes to a close, the journey is far from over, and we look forward to an integrated maternal health program that will build on POPPHI's legacy in saving women's lives.

A handwritten signature in black ink, reading "Lily P. Kak", with a horizontal line drawn underneath the signature.

Lily Kak
Contracting Officer's Technical Representative, POPPHI
Senior Maternal and Newborn Health Advisor
Bureau for Global Health
USAID



Introduction

Postpartum hemorrhage (PPH) is the single largest cause of maternal death worldwide,¹ accounting for an estimated 132,000 deaths each year. In developing countries, where most births occur in homes or local clinics, the interventions needed to treat PPH—emergency referrals, obstetric care, blood transfusion, and surgery—are simply out of reach for the majority of women.

Fortunately, the effectiveness of a feasible and inexpensive intervention that prevents PPH has already been proven. Active management of the third stage of labor (AMTSL) consists of three components that can prevent postpartum hemorrhage when used together: administering uterotonic drugs (oxytocin is the drug of choice),

controlled cord traction, and uterine massage after the placenta has been delivered. AMTSL can eliminate at least half of PPH cases.

This document describes the strategies and activities undertaken by the Prevention of Postpartum Hemorrhage Initiative (POPPHI) to expand the use of AMTSL and other approaches that prevent PPH, such as the use of misoprostol and oxytocin in the Uniject® prefilled injection device. By increasing use of evidence-based, lifesaving interventions, POPPHI and its many partners established a critical foundation for global efforts to prevent PPH and save thousands of women's lives.



Defining the challenge

POPPHI began its work by assessing the challenge to effective prevention and treatment of PPH. While AMTSL had been proven to be highly effective, data regarding its use were limited. POPPHI therefore conducted national surveys in ten countries to document use of AMTSL among a diverse group of developing countries. The resulting data would both guide POPPHI's work and provide information to ministries of health and the global community, helping them improve adoption and implementation of AMTSL.

POPPHI's researchers used nationally representative samples of facility-based deliveries to determine AMTSL use and associated factors.

The survey focused on three main issues: policies, providers, and logistics. The team assessed the policy environment through document review and interviews and conducted assessments of facilities and observations of births.

The survey results showed that correct use of AMTSL was low: only 0.5 to 32 percent of observed deliveries (Figure 1). The findings revealed multiple deficiencies in practice: few women were benefiting from the correct use of uterotonics, and even fewer were benefiting from the additional components of AMTSL. Overall, the findings suggest that AMTSL was not used at 1.4 million deliveries per year.²

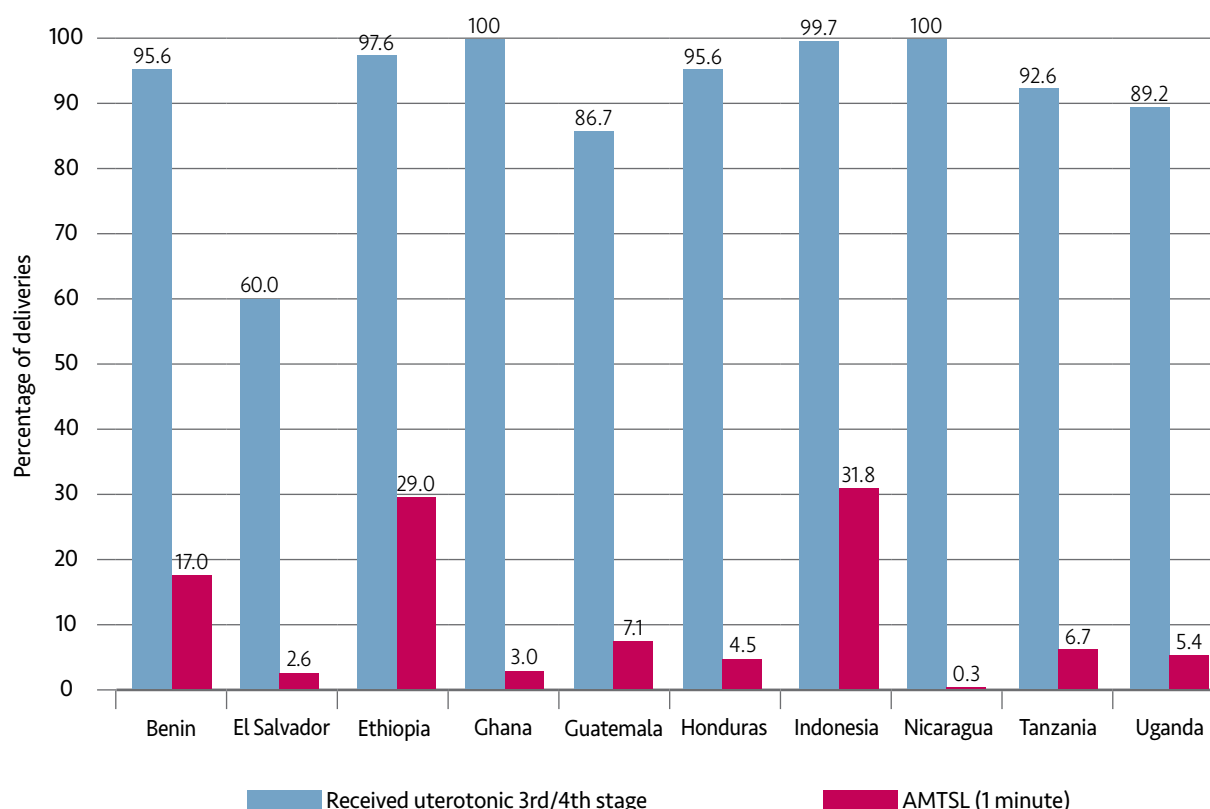


Figure 1. Percentage of observed deliveries in which uterotonic drugs were given during the third/fourth stages of labor and AMTSL was used correctly (including uterotonic administration within 1 minute).

Identifying solutions

Through the global AMTSL survey and related activities, POPPHI identified a need for key solutions: effective approaches for increasing uptake of AMTSL as well as tools and resources that could be used to build provider skill in the method. The team also recognized that innovative ways to introduce and add community-based strategies were needed.

Promising approaches for increasing uptake

POPPHI identified numerous approaches for increasing uptake of AMTSL and preventing PPH. Highlights include the following:

- **Changing AMTSL Behaviors in Obstetrics (CAMBIO).** This method uses proven strategies to change the behavior of providers and increase their use of AMTSL. The approach centers on staff selection of well-respected colleagues who become trained in AMTSL and the CAMBIO method. These opinion leaders hold seminars and then meet with each provider to talk about AMTSL, offer reminders such as posters, and promote data analysis and sharing. Research showed a 67 percent increase in use of AMTSL among providers trained in the method.
- **Site and individual training (SAIN).** The SAIN approach was developed for in-service training of skilled birth attendants. The blended learning approach combines a self-paced study for the theoretical portion followed by a clinical practicum. Training activities are decentralized to the district level, where the SAIN team selects a clinical site and trains providers at the site as mentors. In turn, the mentors update and strengthen their skills and then guide skilled birth attendants and other providers through the learning materials and clinical practice. This approach saves time and funds through decentralization, reducing time providers are away from work and the number of days needed for training.
- **Integrated treatment packages.** An integrated training package that combines AMTSL, essential newborn care, and immediate

postpartum care can effectively address both the woman's and infant's needs during the critical first 24 hours after birth, when most maternal and newborn deaths occur.

- **Pilot projects of misoprostol administration and administration of oxytocin with the Uniject® device.** A pilot study on oxytocin in the Uniject® injection device in Mali allowed providers—including matrones who attend 50 percent of births—to use the prefilled device. Providers' strong enthusiasm prompted the Ministry of Health to conclude that oxytocin-filled Uniject® devices would benefit Mali; the ministry is now investigating ways to purchase them. POPPHI also provided technical assistance to a pilot study of misoprostol in Ghana and identified and connected Ventures Strategies to assist Bangladesh with its misoprostol program. Honduras now plans to conduct pilot studies of oxytocin in the Uniject® device with traditional birth attendants as well as pilot studies on misoprostol.
- **Monitoring and evaluation indicators.** The inclusion of indicators for PPH prevention into national health information systems allows ministry of health leaders and program managers to determine whether increased use or scale-up of AMTSL or community-based approaches is occurring and, if so, whether it is having an impact on PPH prevalence and deaths.

Resources for building skills

To meet the need for materials that could be used to train providers and strengthen their ability to use AMTSL, POPPHI developed resources that partners could use or adapt for local settings.

AMTSL learning materials

POPPHI developed a learning package on prevention of PPH. Consisting of a reference manual, participant's notebook, and facilitator's guide, the package is



designed to increase knowledge of AMTSL among physicians, nurses, and midwives providing childbirth and immediate postpartum care. The materials can also be used during in-service training to equip nurses, midwives, physicians, and other health workers to use AMTSL. The materials are offered in English, French, and Spanish.

Preventing Postpartum Hemorrhage: A Toolkit for Providers

This toolkit provides practical information and materials for health care providers, health management teams, facility managers, and policymakers on the prevention, management, and treatment of PPH.

It provides essential materials for adopting interventions that may be particularly useful to providers and policymakers.



On-site and individual learning package

This learning package on prevention of PPH consists of a facilitator's guide for training mentors, a mentor's guide, a learner's guidebook, and a learner's notebook. The package is designed for in-service training of skilled birth attendants using a mixed or blended learning approach that combines self-paced study and a clinical practicum.



Postpartum hemorrhage prevention website

This comprehensive website (www.pphprevention.org) includes sections on PPH, AMTSL, uterotonic drugs and devices, and monitoring and evaluation. The site also provides learning tools and resources, current PPH research, and materials developed during the POPPHI program.



CD-ROM

The *Active Management of the Third Stage of Labor: A Demonstration*

CD-ROM is an integral part of the PPH toolkit. It includes a narrated presentation that provides basic information on PPH, describes the main steps of AMTSL as well as the rationale for each, and demonstrates the procedure using illustrations and animated sequences. The CD-ROM is available in English, French, and Spanish.



Fact sheet

Active Management of the Third Stage of Labor (AMTSL) for Prevention of Postpartum Hemorrhage (PPH): A Fact Sheet for Policymakers and Program Managers has been distributed worldwide in English, French, and Spanish. The fact sheet

includes information on AMTSL, its role in reducing PPH, when it should be offered, and steps for increasing its use.



Poster

This AMTSL poster depicts and describes the three steps of AMTSL. Available in English, French, and Spanish, the poster has been displayed in delivery rooms around the world.



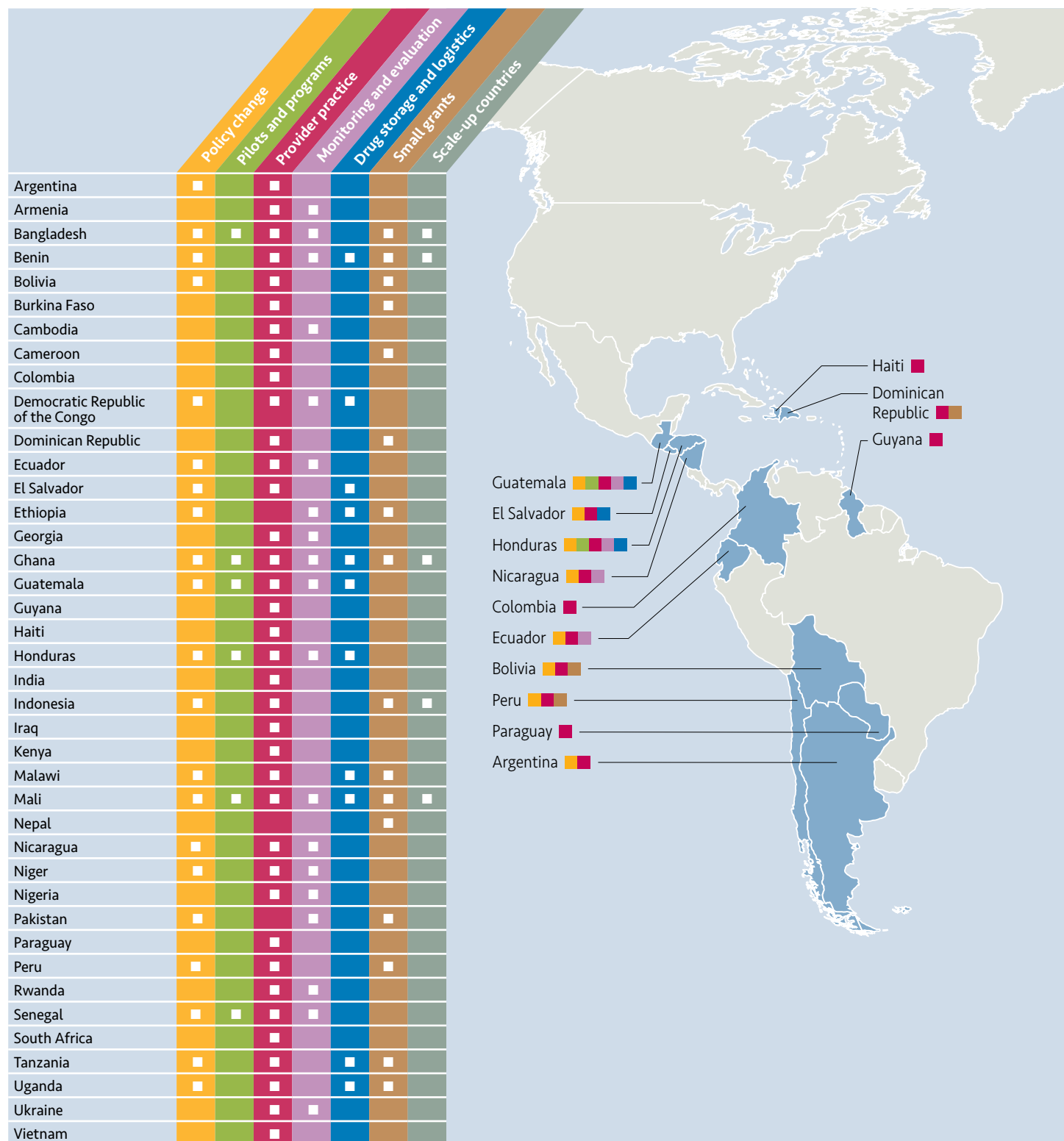
AMTSL/essential newborn care integrated poster

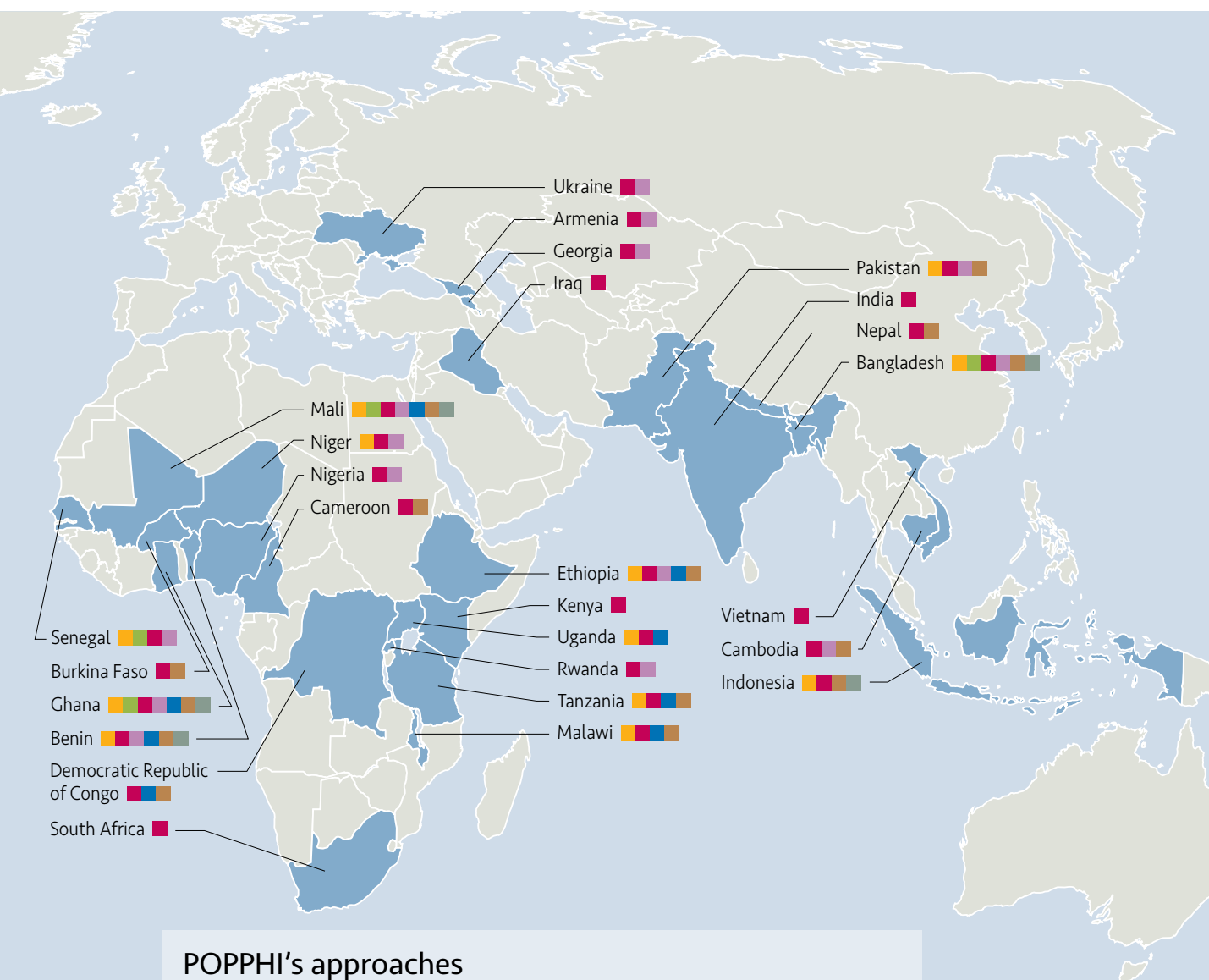
Developed by USAID, POPPHI, and the Pan American Health Organization, this poster describes the three steps of AMTSL while integrating steps for essential newborn care.



Supporting efforts worldwide

POPPHI provided an overall framework and approach for strengthening efforts to prevent PPH. It also engaged with numerous collaborators to support their efforts to strengthen the policies, human resources, and systems required to reduce maternal mortality.





POPPHI's approaches

- Strengthening policy:** national AMTSL surveys, knowledge-sharing meetings with stakeholders and partners, and revised national AMTSL and drug guidelines.
- Pilots and programs:** pilot studies of oxytocin in Uniject and misoprostol administration.
- Improving provider practice:** CAMBIO approach to behavior change, SAIN training, immediate postpartum care package, and AMTSL training.
- Expanding monitoring and evaluation:** addition of indicators to national health management information systems.
- Updating drug storage and logistics:** strengthening of drug supply, storage, and logistics systems; development of visual aids and educational materials.
- Small grants:** support for increasing local AMTSL practice.
- Scale-up countries:** expanded use of proven interventions.

Implementation pathways

In addition to identifying challenges and solutions, POPPHI supported the implementation of numerous projects and activities. To strengthen linkages and share knowledge among organizations that work in maternal health, for example, POPPHI facilitated working group meetings and hosted technical meetings. To ensure that practitioners and decision-makers had the most current information, POPPHI conducted regional workshops for national professional associations in 24 countries and assisted the International Federation of Gynecology and Obstetrics (FIGO) and International Confederation of Midwives (ICM) in creating the *Joint Statement on Prevention and Treatment of Postpartum Haemorrhage: New Advances for Low-Resource Settings*. POPPHI helped FIGO and ICM disseminate this statement as well as their *Joint Statement: Management of the Third Stage of Labour to Prevent Post-partum Haemorrhage*. Through these and other efforts, POPPHI developed mechanisms, such as indicators and reporting formats, that strengthened monitoring and evaluation of this work.

Scaling up efforts in-country

In Bangladesh, Benin, Ghana, Indonesia, and Mali, the POPPHI team worked closely with ministry of health representatives, USAID bilateral projects, and other organizations to scale up interventions that have been proven to prevent PPH. POPPHI acted as a catalyst, using AMTSL survey data to leverage change, linking partners to create win-win efforts, focusing on innovative approaches, and pushing for impact.

BANGLADESH

An estimated 22 percent of maternal deaths in Bangladesh are due to PPH, and about 85 percent of deliveries occur at home. A recent assessment found that AMTSL is practiced in only 16 percent of vaginal deliveries.

The Bangladesh project used a two-pronged approach to reduce PPH: first, it strengthened AMTSL at facilities by training their skilled birth attendants and, second, it made misoprostol available for home deliveries

by orienting community-level skilled birth attendants on AMTSL. These activities were led by EngenderHealth; POPPHI provided survey tools, materials for translation, monitoring and evaluation indicators, and technical assistance.

MAJOR ACTIVITIES

The team implemented a range of interventions, including the following:

- The National Task Force on Prevention of PPH was established in 2006, and EngenderHealth initially served as its secretariat.
- Misoprostol was registered for the prevention and treatment of PPH, and the misoprostol use policy was conditionally approved in May 2008.
- The team strengthened AMTSL practice in 25 of 64 districts. The team provided training-of-trainers support to 160 Government of Bangladesh and nongovernmental trainers as well as skill-based training in AMTSL to 530 doctors and 2,250 nurses. The team adapted AMTSL training materials from POPPHI's resources.
- The team oriented 1,225 community-based skilled birth attendants across 15 districts in AMTSL. In turn, the attendants held community meetings and developed behavior change materials (such as posters, stickers, and flipcharts in Bangla) on misoprostol use. The effort included a Bangla dubbing of an AMTSL video and trainee and community follow-ups.
- Policy-oriented activities included:
 - Standardizing the definition of AMTSL to align with World Health Organization (WHO) and FIGO/ICM recommendations.
 - Including AMTSL in the pre-service and in-service curricula of ob/gyns, general physicians, and nurse-midwives who conduct vaginal deliveries. The pre-service component is still informal at this time, as the curriculum has not been updated. The in-service component has been included in 25 districts since 2008.
- Strengthening monitoring and evaluation.
 - The team worked with the Directorate General of Family Planning Services and the Directorate General of Health



Services to develop recording and reporting mechanisms for AMTSL. Today, the team continues to advocate with the leadership of the directorates' management information systems regarding institutionalizing this approach. For local record-keeping, a rubber seal is used in the existing register column to track AMTSL. Reporting formats have been printed and distributed to all service delivery centers in 25 districts.

KEY RESULTS

Key results of these efforts in Bangladesh include:

- **New task force.** The National Task Force on Prevention of PPH is now firmly established.
- **Government commitment.** The Government of Bangladesh committed to scaling up PPH prevention activities throughout the country, both at the facility and community levels.
- **Increased use of AMTSL.** The method is being practiced in 85 percent of reported cases in the 25 districts where training was provided.
- **Encouraging misoprostol study results.** The misoprostol pilot project demonstrated high levels of misoprostol use among women who delivered at home and no misuse or severe side effects.

BENIN

The Benin Government made a commitment to scale up AMTSL throughout the country after the method was introduced in 2002 and 2003.

POPPHI's AMTSL survey found that while 84 percent of women in Benin gave birth in a facility where providers had received training in AMTSL and 62 percent of health districts had a PPH/AMTSL initiative, only 18 percent of women in the sample received AMTSL that was practiced according to standard. Management Sciences for Health (MSH) and POPPHI worked together with the Integrated Family Health Project to address these issues.

MAJOR ACTIVITIES

Activities in Benin included:

- In 2006, MSH/RPM Plus and POPPHI conducted a national survey and, in 2007, presented findings to a national task force and developed a set of recommendations and a national action plan for improving AMTSL practice.

Subsequently, MSH/RPM Plus disseminated the survey results and recommendations made by the national task force regionally. Each district developed action plans to improve AMTSL practice.

- In 2008, POPPHI reviewed national protocols related to PPH prevention and management and developed recommendations for revision.
- In 2009, MSH/Strengthening Pharmaceutical Systems conducted a survey on uterotonic drug management in 101 health care facilities in Ouémé-Plateau and Zou-Collines. They are presently developing national protocols for quantification, transport, and storage of uterotonic drugs.
- FIGO/ICM held a national workshop on prevention of PPH in 2009, which was also attended by POPPHI. During the workshop, the Beninese midwifery association and the Beninese and Togolese Society for Obstetrics and Gynecology ratified revised protocols and signed a joint statement on the prevention of PPH and rational use of uterotonic drugs.

KEY RESULTS

Key results of these efforts in Benin include:

- **New national post.** Benin developed a national-level post for an AMTSL point person.
- **Scale-up of AMTSL.** AMTSL is now integrated into the national safe motherhood plan.
- **Integration into pre-service education.** AMTSL is integrated into pre-service education programs for nurses, midwives, and physicians as well as other in-service training programs, such as those for emergency obstetric and newborn care.
- **Training.** By September 2009, 29 of 34 health districts had completed AMTSL training.
- **Government commitment.** In 2009, Benin's Minister of Health made a commitment to increasing the number of midwives hired by the government to ensure that all women giving birth in facilities would be assisted by a skilled birth attendant and receive AMTSL.
- **Improved monitoring and evaluation.** The three elements of AMTSL were integrated into the partograph, and AMTSL was integrated into the delivery register. AMTSL is now tracked in districts and regions targeted by USAID. Coverage rates for AMTSL in these zones are 95 to 98 percent.

GHANA

The AMTSL survey, which was conducted in 2007 by MSH with technical assistance from POPPHI, found that only 3 percent of health providers sampled practiced AMTSL to standard. As in Bangladesh and Benin, POPPHI provided survey tools, materials, indicators, and technical assistance, such as reviewing and providing feedback on guidelines. POPPHI also provided technical review of training materials and protocols for two USAID programs, Community-based Health Planning and Services-Technical Assistance (led by the Population Council) and the Quality Health Program (led by EngenderHealth).

In early 2009, Ghana's Minister of Health made a commitment to reducing maternal mortality resulting from PPH.

MAJOR ACTIVITIES

Major activities in Ghana included the following:

- A dissemination meeting for the AMTSL survey results catalyzed action. A variety of participants—Ghana Health Service policymakers, Central Medical Stores staff, pharmacists, pre-service educators, professional ob/gyn and midwifery associations, and health care providers—reviewed their roles and created an action plan to address the country's low rate of AMTSL. The AMTSL survey was repeated in late 2009 to help evaluate the success of AMTSL uptake and expansion.
- Ghana's guidelines were updated to reflect the AMTSL protocol and align with the WHO and the ICM/FIGO Joint Statement. Community-based distribution of misoprostol was included in the guidelines.
- This pilot study was launched to collect data on providing misoprostol for PPH prevention through antenatal clinics. The study will take place in three districts located across three regions.
- The Ghana Registered Midwives Association and the Society of Obstetrics and Gynaecology of Ghana shared the updated AMTSL definition with the private sector and trained 181 midwives.

- The Promoting Maternal and Infant Survival and Excellence (PROMISE) intervention updated five district hospitals and one regional hospital in Ghana's Eastern and Western regions in AMTSL. The team trained teams of mentors in each hospital and all labor and delivery ward staff, and it provided self-paced study for peripheral providers with clinical guidance and practice to increase competence at the hospitals.
- The CAMBIO intervention was implemented in the two major teaching hospitals in Ghana. Throughout these activities, posters, fact sheets, and visual aids were widely distributed to support universal coverage of AMTSL.

KEY RESULTS

Policymakers, program managers, leaders in drug supplies and logistics, education program staff, and health care providers were galvanized to action through the AMTSL survey results. This in turn led to:

- **Policy change.** The safe motherhood guidelines were updated to reflect best practice. In addition, professional associations reached out to the private sector to encourage use of the new guidelines.
- **Misoprostol registration.** Misoprostol was added to the country's Essential Medicine List and registered with the Food and Drug Board as a program drug (until the pilot is completed).
- **Strengthened partnership.** Professional associations became integral partners to this overall effort to reduce PPH and strengthened their collaboration with the private sector.
- **Multiple strategies and alternative training approaches to increase AMTSL.** The experience in Ghana showed that alternative training approaches are technically feasible and cost-effective. The CAMBIO intervention, for example, successfully engaged ob/gyn leaders and teaching hospitals and changed behavior among physicians, midwives, and nurses. The method increased AMTSL use significantly and successfully integrated the AMTSL indicator into reporting mechanisms. Reflecting the impact of these efforts, a repeat AMTSL survey is currently under way, which will, it is expected, show an increase in the use of AMTSL.



INDONESIA

Of the ten countries that POPPHI surveyed, Indonesia had the highest rate of AMTSL practice: 32 percent. POPPHI worked with USAID's Health Services Project (HSP) to support expanded use of AMTSL and to disseminate data from the AMTSL survey.

MAJOR ACTIVITIES

Major activities in Indonesia included:

- Early in the project, a national dissemination meeting promoted dialogue between various sectors within the Ministry of Health—including maternal health, pharmacy/drugs and logistics, and medical services—as well as with professional associations and nongovernmental organizations.
- The POPPHI team assisted the HSP project in developing and revising AMTSL assessment tools and incorporating key elements into supervision tools.
- The POPPHI team worked with the Ministry of Health's maternal health division to develop a national plan of action for PPH prevention.
- The Indonesian Midwives Association, through funds from a small grant from POPPHI, trained and updated midwifery tutors in numerous provinces. In addition, the University of Indonesia's School of Public Health included AMTSL education in the clinical practicum for the community midwifery program.
- After learning of the AMTSL survey results, the Ministry of Health's hospital division initiated training on AMTSL.

KEY RESULTS

- **Updated AMTSL definition and guidelines.** The definition of AMTSL was updated to include delayed cord clamping, and the new definition has since been incorporated into the basic emergency obstetric and neonatal care training. In addition, the national guidelines for AMTSL were changed to align with WHO and the ICM/FIGO joint statement.
- **National plan.** The national plan of action for PPH prevention is ready to be launched and implemented.
- **Expanded cadre of trained midwives.** In all, 122 midwifery tutors from nearly 30 schools

and six private practices were trained in AMTSL. AMTSL theory and practice were also integrated into the community midwifery program at the University of Indonesia.

- **Encouraging results.** The repeat national AMTSL survey is in progress and will show the percentage of providers who practice AMTSL to standard in 2009.

MALI

Mali has shown a national commitment to scaling up AMTSL for all providers attending births in health care facilities since the method was introduced in 2002 and 2003. The activities below were carried out by the National Health Directorate (DNS) with assistance from POPPHI and several USAID projects: the Capacity Project (IntraHealth), Assistance Technique Nationale (Abt Associates), and Projet Keneya Ciwara (Care International).

MAJOR ACTIVITIES

- In 2006, the team conducted an operational research study in three districts (Gao, Koulikoro, and Sikasso) on the feasibility and safety of training auxiliary midwives (matrones) to use AMTSL. In 2007, the team performed a second operational research study on the feasibility and acceptability of introducing oxytocin in the Uniject® device, again in three districts (Bamako, Gao, and Koulikoro). In 2009, the team implemented a survey on uterotonic drug management and use.
- The PPH prevention initiative was launched in 2007 in Bamako, Koulikoro, and Mopti. In 2008, a joint statement on the prevention of PPH and rational use of uterotonic drugs was signed by the Malian Midwifery Association (the Association des Sages-Femmes du Mali, or ASFM) and the Malian Society for Obstetrics and Gynecology.
- In 2006, POPPHI provided a small grant to ASFM to train providers in the private and public sectors in Timbuktu. PPH was featured as the theme for the National Midwifery Day in 2007. The following year, the National Order of Midwives published a bulletin on PPH prevention and rational use of uterotonic drugs.

- In 2007, POPPHI's materials were used to develop learning materials for group-based training; training of national and regional trainers soon followed. In 2008, the team developed a blended learning approach (with a self-paced theoretical portion and a clinical practicum) to train skilled birth attendants in the Mopti and Koulikoro regions, which adapted POPPHI's learning materials for use with the blended learning approach.
- The team also focused on developing national protocols for quantification, transport, and storage of uterotonic drugs.
- **National task force.** A national task force with members from the DNS and international partners was established to develop a plan for scaling up AMTSL and monitoring progress.
- **Scale-up plans.** Procurement of oxytocin in the Uniject® device was included in the national plan for AMTSL scale-up.
- **Integration of AMTSL.** The three elements of AMTSL were integrated into the partograph. In addition, AMTSL was integrated into pre-service education programs for nurses, midwives, and physicians and in other in-service training programs, such as emergency obstetric and newborn care.
- **Increased AMTSL coverage.** AMTSL is tracked in districts and regions targeted by USAID. Coverage rates for AMTSL in these zones are 65 percent (in community health centers) to 100 percent (in reference health centers).

KEY RESULTS

- **Authorization for matrones.** On April 2, 2009, Mali's Minister of Health authorized matrones to provide AMTSL and use oxytocin when practicing AMTSL.

Lessons learned from country scale-up

Although each country is unique, these in-country experiences provide insight and suggest a way forward to maintain the momentum POPPHI and its partners have created. Many of these lessons provide guidance for future activities.

LESSONS

- National survey data serve as a powerful advocacy tool, as they provide a base from which to develop strategic action plans, create partnerships, link allies, implement needed activities, and follow progress toward goals.
- Partnerships are critical to success. Working with professional organizations, for example, can increase the visibility of PPH prevention activities as well as help the professional associations educate or update their members. Engagement with health care providers and major teaching hospitals can foster ownership and successful scale-up of AMTSL. Strong partnerships with experts in drugs and logistics can also strengthen efforts to ensure that AMTSL is practiced.
- Early identification of barriers to AMTSL scale-up and a deep understanding of the priorities of various important stakeholders can markedly increase the success of program scale-up.
- Champions in the ministry of health and at national and regional levels are essential to program uptake.
- Providers are eager to learn about AMTSL, and alternative learning approaches can empower providers and increase AMTSL use. Ongoing in-service training is required, however, given the frequent transfer of trained service providers into other districts. Innovative ways to pass along the needed skills and knowledge are essential.
- Changing a known practice can often be more difficult than introducing a new one, especially when trying to move a practice from routine to lifesaving. Ensuring universal use of AMTSL practice takes persistence and long-term commitment.



- Tracking activities and providing continuous technical assistance can be difficult without a country presence or local office.
- When sufficient numbers of skilled birth attendants are not available, task-shifting of AMTSL to lower-level cadres is essential to increasing AMTSL coverage. Such task-shifting can be difficult, however, when skilled birth attendants are threatened by this change and concerned that this policy change will mean that fewer skilled birth attendants will be hired into the government system.

CHALLENGES

- Tracking AMTSL was difficult, particularly when indicators were not integrated into supervisory tools or national information systems.
- While countries working with POPPHI have made significant progress in incorporating correct information about uterotonic drugs, their storage, and transport, misinformation continues to be prevalent among ministry of health leaders, program managers, central medical store personnel, and pharmacists in many countries. Much work remains to be done.
- Geography and distances became formidable obstacles to scale-up, as seen in Indonesia, particularly for ongoing support and monitoring.
- The provision of uterotonic drugs to women who give birth at home or in communities without skilled birth attendants remains a challenge. Misoprostol and oxytocin in the Uniject® device can increase access to uterotonics among significantly more women.

Small grants

POPPHI issued 16 small grants to countries in Africa, Asia, and Latin America and the Caribbean. The grants, which were issued for approximately US\$8,500 each and up to 18 months of activity, supported collaborative proposals between ob/gyn and midwifery associations. End-line data indicate that by the end of the grant period 88 percent of targeted providers were practicing AMTSL. Examples of three small-grant projects appear below.

Bolivia

The Bolivian ob/gyn and midwifery societies collaborated to develop a curriculum and train professionals from the three regional capital cities, capturing at least one-third of practicing doctors and nurses who did or could potentially practice AMTSL. As Dr. Luis Esteban Zárate Pereira, then president of the Sociedad Boliviana de Obstetricia y Ginecología, told POPPHI, the greatest gain from the small grant was taking AMTSL to all regions of the country. When it appeared in the Ministry of Health's norms, AMTSL became the only method taught in medical schools. Dr. Pereira attributes this

change in behavior to the grant from POPPHI. The small grant also resulted in midwives considering AMTSL the norm for all births.

Pakistan

Mrs. Imtiaz Kamal, then president of the Midwifery Association of Pakistan (MAP), notes that the small grant from the POPPHI project was the first-ever collaborative activity between the Society of Ob/Gyn and MAP. MAP was able to continue the work begun under the small grant through two grants from USAID projects, PAIMAN and TACMIL. Through this support, MAP and its partners improved institutional policies, as AMTSL became the routine practice in almost all institutions where skilled birth attendants were trained in AMTSL. They also raised awareness of PPH and included AMTSL in the curriculum of community midwives.

Uganda

The Uganda Private Midwives Association and the Association of Obstetricians and Gynaecologists of Uganda (AOGU) used their small grant to leverage the impact of new national protocols that included oxytocin along with other uterotonic drugs to prevent PPH. They also granted midwives the

right to administer oxytocin. As a result of the grant, the associations were able to disseminate national protocols, develop a strategy to roll out AMTSL, update service delivery guidelines to include AMTSL for all births, and train providers in AMTSL. As Dr. Beyeza Jolly Kashesya, a member of AOGU, stated, “Our work with POPPHI was an eye-opener that we could do something. We believe that improving care during delivery with AMTSL will go a long way to reduce the very high numbers of maternal deaths in Uganda.”

Lessons learned from POPPHI’s small grants

As these experiences illustrate, the small grants achieved numerous benefits. In particular, they promoted cooperation between obstetric and midwife associations; provided training to providers who would otherwise not have received it; addressed the private sector, which is often forgotten; and contributed to policy changes or leveraged favorable policies.

The grant program also faced challenges. For example, the process required a great deal of administrative attention from POPPHI staff. In addition, the resulting data were limited, as recipients could not always provide hard data, and all data were self-reported.

Collaboration with other USAID projects

POPPHI worked to amplify the impact of other USAID projects working to reduce PPH. Depending on the context, POPPHI collaborated on project implementation, assisted with data collection, provided general technical assistance and materials, and helped projects share information and technical expertise. Each organization’s complete description of their PPH activities is available separately.

Project implementation

POPPHI implemented project activities with a range of organizations and USAID projects, including:

- **Academy for Educational Development (AED).** Through the Support for Analysis and Research in Africa Project and working closely with POPPHI, AED supported the in-country data collection for the AMTSL survey

in Ethiopia, Tanzania, and Uganda and used the findings to promote AMTSL as a standard of care. After AED and the East, Central, and Southern Africa (ECSA) Health Community provided a policy brief to health ministers in March 2009, the ministers urged member states to accelerate the institutionalization of AMTSL in at least 40 percent of health facilities by 2010 and to ensure delivery by skilled providers in 75 percent of women by 2012.

AED and POPPHI also worked to strengthen PPH prevention in Ethiopia and Tanzania. In 2008, AED worked with the Ethiopian Ministry of Health to revise its health management information system to capture information on the use of AMTSL. The system now includes information on uterotonic drugs in the National Drug Formulary, and AMTSL has been integrated into the pre-service training of more than 90 percent of mid-level training schools. In Tanzania, AED worked with the Ministry of Health and Social Welfare to develop new guidelines that include AMTSL.

- **BASICS.** The BASICS and POPPHI projects incorporated AMTSL with essential newborn care in both the Democratic Republic of Congo (DRC) and Senegal. In the DRC, BASICS and POPPHI supported the Ministry of Health and a USAID bilateral project, AXxes, in 43 health districts by providing assistance for AMTSL as well as postnatal care of mothers and newborns. In Senegal, the team and numerous partners supported the Ministry of Health in implementing activities in six districts of the Faticke region. In both countries, AMTSL has gained a strong foothold: research shows that, in Senegal, AMTSL was used in 65 percent of more than 11,000 deliveries in 2009; in DRC, it was used in 61 percent of more than 90,000 deliveries.
- **IntraHealth.** IntraHealth and POPPHI worked to build health care provider skills in Mali. In a collaborative study, IntraHealth found that matrones—auxiliary midwives who attend most births—can effectively perform AMTSL. After training, matrones scored 96 percent on evaluation of their AMTSL skills—nearly the same as skilled birth attendants (97 percent). Mali’s minister of health plans to authorize matrones to practice AMTSL.



- **Jhpiego.** Jhpiego pioneered community-based distribution of misoprostol and introduced the practice into Afghanistan, Indonesia, and Nepal. Data from Nepal and Afghanistan show that nearly universal coverage with a uterotonic drug is possible when community-based misoprostol is made available as AMTSL is scaled up. Together with its partners, Jhpiego is now introducing this practice in eight additional countries. Through the ACCESS program, POPPHI and Jhpiego have collaborated on materials development that support these programs and worked closely in a number of countries. Jhpiego staff have also contributed significantly to the PPH working group and task forces.

Jhpiego also works with providers so they can deliver basic and comprehensive emergency obstetric care. It collaborated with WHO to develop the Managing Complications in Pregnancy and Childbirth manual, which is now available in 28 languages. Jhpiego's emergency obstetric care learning resource package, which is being used in more than 30 countries, incorporates all PPH prevention and treatment components into pre-service education for midwives and doctors. Jhpiego has also made materials on all aspects of PPH-related work available on the ACCESS website.

- **University Research Co. (URC).** URC uses quality improvement methods to overcome implementation barriers for rapid scale-up of AMTSL. The methods focus on strengthening health system performance for integration of high-impact interventions (such as AMTSL) into routine health care processes. In 2008, URC-supported Maternal Newborn Improvement Collaboratives in Benin, Ecuador, Honduras, Nicaragua, and Niger reached an average of 62 percent of country districts within each country, covering more than 190,000 births. In most countries, AMTSL was administered as part of an immediate postpartum package that included essential newborn care and routine postpartum surveillance of mother and newborn. In Benin, Honduras, and Nicaragua, POPPHI provided technical assistance, materials, and guidance on indicator development. In addition, joint dissemination meetings were held in all countries to share the POPPHI survey data.

Data collection

Projects also collaborated on the use of indicators, supported monitoring and evaluation efforts, and provided data on AMTSL use to POPPHI.

These data were critical for USAID and POPPHI, as they provided a snapshot of the global impact of AMTSL use, particularly in USAID-funded project areas.

- **IntraHealth.** In Armenia, where PPH accounts for 31 percent of maternal deaths, IntraHealth worked to increase health care providers' ability to prevent PPH. In particular, its Project NOVA developed a training on emergency obstetric care, including AMTSL. After the training, data showed that 87 percent of providers from NOVA sites performed AMTSL correctly. In addition, the sites reported a decrease in PPH from 3.9 percent in 2007 to 1.1 percent in 2009. Armenia has since institutionalized AMTSL into routine obstetrical practice
- **John Snow, Inc. (JSI).** In Georgia, JSI's efforts to increase use of AMTSL have led to institutionalization of the method in 99 percent of vaginal deliveries that take place in JSI-assisted facilities. POPPHI assisted with data-collection efforts that showed that use of the intervention decreased PPH rates from 8 percent to about 1 percent.

Sharing information and technical expertise

Through POPPHI, programs shared relevant insights and technical expertise.

- **Pathfinder International.** Pathfinder's approach—known as Clinical and Community Action to Address PPH—includes technologies and components that provide a continuum of interventions, both simple and complex, from prevention to treatment. Designed for the community level, primary health centers, and secondary and tertiary care facilities, the continuum encompasses all levels of entry for women vulnerable to or experiencing PPH. The approach also addresses advocacy, clinical services, and community engagement. The strategy, which Pathfinder has been implementing in Bangladesh, India, Nigeria, and Peru, represents a clear advance over the single intervention approach of the past.

Policy changes, 2004–2009

Over the past five years, AMTSL has gained global recognition as an evidence-based and lifesaving intervention. Country after country has made policy changes—including updating their definition of AMTSL, making oxytocin their drug of choice, and removing ergometrine as a first-line drug. New cadres of providers have been trained, and skilled birth attendants at peripheral or community health facilities have been given the right to practice AMTSL and administer oxytocin. In addition, misoprostol is being included in national essential medicine lists for PPH prevention.

Global policy changes

POPPHI has been an initiator, facilitator, supporter (including funder), and advocate for many of the policies listed below. The sponsoring organizations hold primary responsibility for these accomplishments, of course. POPPHI was grateful for the opportunity to support their efforts.

World Health Organization

- *MPS Technical Update: Prevention of Postpartum Haemorrhage by Active Management of Third Stage of Labour* (2006 technical consultation)
- *WHO Recommendations on the Prevention of Postpartum Hemorrhage: A Summary of the Results From a WHO Technical Consultation* (2006)
- *Technical Consultation to Finalize the Recommendation on Postpartum Haemorrhage and Retained Placenta* (2008)
- *WHO Statement Regarding the Use of Misoprostol for Postpartum Haemorrhage Prevention and Treatment* (2009)

International Federation of Gynecology and Obstetrics

- Resolution passed on *Delegated use of Uterotonics for Prevention and Treatment of Post-Partum Haemorrhage* for nurses, midwives, and general practitioners (2009)

- *Joint Statement on Prevention and Treatment of Postpartum Haemorrhage: New Advances for Low-Resource Settings* (2006)
- *Misoprostol Guidelines* (2009)

International Confederation of Midwives

- *Joint Statement on Prevention and Treatment of Postpartum Haemorrhage: New Advances for Low-Resource Settings* (2006)

East, Central, and Southern African Health Community

- Minister-level resolutions urging institutionalization of AMTSL by 2010.
- Ministries' direction for the ECSA Secretariat to develop a prototype policy on AMTSL that countries could adopt.

United States Pharmacopeia

- *Misoprostol for Prevention of Postpartum Hemorrhage: An Evidence-based Review by the United States Pharmacopeia* (2001)
- *Oxytocin Monograph*: changed storage recommendations from 2°C to 8°C to “based on drug stability studies.”

On the country level, Bolivia included AMTSL in its country norms, which means that the method is now taught in all medical schools and used routinely by midwives. In Malawi, a major change in policy occurred and placed oxytocin as the first-line drug for the prevention and management of PPH. Oxytocin is now available for use in health centers where ergometrine had been the norm. In addition, a growing number of countries, including Ethiopia, Tanzania, and Uganda, have included misoprostol in their essential medicine list for PPH prevention.

Furthermore, clear guidance on drug procurement and storage has been and continues to be developed by a number of countries that have highlighted uterotonic drugs for review and updates. Fact sheets and posters have been developed to assist managers, pharmacists, and providers to better manage the drugs.





PATH/Mike Wang

Conclusion

Over the past five years, POPPHI achieved important advances in the prevention and treatment of PPH. Through technical assistance, resources, and system tools, POPPHI strengthened health care professionals' use of AMTSL and improved services and access to services. POPPHI also increased the availability of uterotonics and devices as well as providers' knowledge of their use and storage. While working most intensively in five focus countries, POPPHI also supported efforts and affected change in 35 additional countries.

Through advocacy and training, POPPHI made significant contributions to raising awareness of the dangers of postpartum hemorrhage and equipping policymakers, providers, and others with the tools and skills to address the problem. These important achievements provide a strong foundation for the continuing effort to prevent unnecessary maternal deaths. POPPHI looks to its partners, including the Maternal and Child Health Integrated Project, to build on these efforts and help health care providers around the world safeguard the lives of mothers and their children.

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