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Achieving Results in Preventing Maternal Deaths: Prevention and Treatment of Postpartum Hemorrhage

- **Postpartum hemorrhage (PPH) continues to be the major cause of maternal mortality in the developing world, leading to nearly 34% of maternal deaths in Africa and more than 30% of maternal deaths in Asia.**
- **Uterine atony is responsible for 80% of PPH and the majority of cases occur in women without risk factors having otherwise normal pregnancies and labors.**
- **Evidence-based interventions suitable for low-resource settings are available that reduce the incidence of PPH and can be implemented by skilled providers through the use of active management of third stage of labor (AMTSL), or by women who give birth where there is no skilled provider through community-based distribution of misoprostol.**

Over the past four years, the ACCESS Program has worked globally, regionally and in 25 countries to increase knowledge and expand services to reduce PPH. In several countries, ACCESS has promoted the use of PPH prevention at scale by developing and rolling out national-level guidelines (Kenya) and performance-based standards (Nigeria, Rwanda and Afghanistan). In India and Ghana, ACCESS has implemented district-level programs to test program feasibility of selected interventions that will inform scale up. Overall, the ACCESS program has the potential to reach more than 4.4 million women of reproductive age in program catchment areas where community- and facility-based interventions are being implemented. While prevention and treatment of PPH have been specifically targeted in certain countries, these interventions are also automatically incorporated into all ACCESS activities that build the capacity of skilled providers and services in essential and emergency obstetric and newborn care.

Key ACCESS Program Results to Date

- **Introduced and expanded PPH interventions in 9 countries**
- **Used small grants mechanism to support AMTSL training in 8 countries**
- **Incorporated PPH interventions into pre-service curricula in 3 countries**
- **Influenced the formulation of national-level policies in Nepal and Afghanistan on the community-based use of misoprostol to prevent PPH**
- **Developed national guidelines on prevention and management of PPH in Kenya, Afghanistan and Nepal**

Advocacy and Global Learning

ACCESS has established itself as a global resource and leader in the dissemination of evidence-based practices to prevent and treat PPH. These include well-known but underutilized procedures such as AMTSL (which is comprised of injection of an uterotonic drug, controlled cord traction and uterine massage) as well as cutting-edge interventions such as use of misoprostol at the community level. Dissemination of this knowledge facilitates advocacy for commitment to improve maternal health at national levels as well as to improve the capacity of the health systems and providers in facilities and communities to offer these programs and services at all levels.

In April 2006, ACCESS organized a regional conference, “Preventing Mortality from Postpartum Hemorrhage in Africa: Moving Research to Practice” held in Entebbe, Uganda. More than 200 participants from 22 countries heard technical and programmatic discussions covering the range of interventions to reduce maternal mortality caused by PPH. During the conference, teams of doctors,



midwives and program managers from 19 countries developed action plans. Follow-up of country teams in Benin, Burkina Faso, Cameroon, Democratic Republic of Congo (DRC), Mali, Kenya and Tanzania has shown positive results—including advocacy for improved systems to supply uterotonic to facilities as well as training of providers in AMTSL. As a result of proposals solicited during the conference, seven small grants were awarded to groups in six countries—Burkina Faso, DRC, Ethiopia, Kenya, Madagascar and Mali—to strengthen the ability of their health systems to provide AMTSL to all women.

This conference also acted as a catalyst to promote AMTSL in Kenya at the national level through the formulation of guidelines for prevention and treatment of PPH that are now undergoing approval and will be used by

providers throughout the country. This momentum led the Ministry of Health (MOH) to approve oxytocin as the preferred uterotonic for AMTSL, and this information will be disseminated to providers throughout the country as a component of on-going bilateral programs.

ACCESS also provided leadership in PPH for the MotherNewBorNet meetings held in Bangladesh and India in 2005 and 2006, respectively, and the ANE regional conference “Scaling Up Best Practices in FP/MNCH” held in Bangkok, Thailand, in September 2007. In October 2007, ACCESS provided leadership for panels that presented on PPH at the Women Deliver Conference in London.

In addition, ACCESS developed for USAID a web-based e-learning course that targets USAID program and technical staff globally. To date, nearly 300 people have completed the course on PPH prevention since its posting in 2006.

Other examples of advocacy and knowledge dissemination at the global level include:

- Participation in a WHO expert panel and development of a technical report, “WHO Recommendations for the Prevention of Postpartum Hemorrhage”
- Development and dissemination of a CD-ROM on AMTSL in English, French and Spanish
- Technical Brief on Prevention and Treatment of PPH
- Plenary session and AMTSL demonstration at the ICM Triennial Conference in Brisbane, Australia
- Support to the Prevention of Postpartum Hemorrhage Initiative (POPPHI):
 1. Distribution of PPH Toolkit
 2. Member of PPH Working Group and Chair of Task Forces on Community Interventions and Training; member of Task Force on Uterotonic Drugs and Devices
 3. Participation in development and field test in Kenya of AMTSL training package

ACCESS implements programs targeting the reduction of PPH through the use of AMTSL by skilled providers, and the use of misoprostol in settings without a skilled provider.

Research to Practice

ACCESS has collaborated with MOHs and other USAID partners in Afghanistan, Nepal, India, Cambodia and Nigeria to implement programs targeting the reduction of PPH through the use of AMTSL by skilled providers, as well as a newer approach to demonstrate the use of misoprostol in settings without a skilled provider. These programs are in different stages of implementation, but results to date have been impressive.

Prevention of PPH where there is a skilled provider:

- In Afghanistan, under the ACCESS-led Performance-based Partnership Grants, skilled birth attendants provide services (including AMTSL) in over 36,000 facilities in 36% of districts covering nearly 2 million women of reproductive age.
- In Nepal, 11 facilities in 8 districts were strengthened and providers carry out AMTSL.
- In India, ACCESS is assisting the government of Jharkhand State to test an approach to strengthen auxiliary nurse midwives' capacity to provide maternal and newborn care at the community level. To date, they have performed AMTSL in 95.6% of births.
- In Nigeria, 18 facilities have been strengthened and providers—now equipped with updated knowledge and skills—have performed AMTSL in 89% of births to date.

Prevention of PPH where there is no skilled provider:

- In Afghanistan's Faryab, Jawzjan and Kabul provinces, the Prevention of PPH Demonstration Program showed the intervention was safe, acceptable, feasible and effective, and led to 98.6% of women in the intervention benefiting from either AMTSL or misoprostol. Through this intervention, use of a skilled provider actually increased. The MOPH has requested scale up to more provinces.
- Similar results were found in the Nepal intervention district, which covered 16,500 expected births. Of those, 61% were either attended by a skilled attendant for delivery or took misoprostol for prevention of PPH at an unattended home birth. Using national DHS mortality data from 2006, there would have been 31 maternal deaths expected in the intervention district—in fact, there were only 17 deaths during the intervention period. While additional analysis is needed, these data suggest an approximate 50% reduction in maternal mortality in the intervention area, and perhaps an even greater reduction in PPH-specific mortality.
- More recently, in Cambodia, ACCESS organized national technical and advocacy meetings on PPH that reached 65 participants. A technical advisory group (TAG) on PPH was also created to support PPH reduction efforts in Pursat Province through expanded use of AMTSL for all women giving birth in the referral hospital and attached health centers, and use of misoprostol for women who do not give birth with a skilled provider. Training materials, a behavior change communication (BCC) package, and an evaluation strategy and tools have been developed to support this intervention.

Scale up of Evidence-based Best Practices at the Country Level

The Africa Regional Midwifery Pre-service Initiative—begun in 2004 in collaboration with WHO/AFRO—aims to help midwifery tutors and clinical preceptors in **Ethiopia, Ghana, Malawi** and **Tanzania** prepare the next generation of front-line providers, and to incorporate best practices into midwifery curricula. Students learn AMTSL and the signal functions of basic emergency obstetric and newborn care (BEmONC) that target the treatment of PPH. To date, 15 tutors have received a technical update, clinical skills standardization course, and clinical training skills/instructional design course, and have in turn strengthened a clinical training site with a large volume of deliveries (and its staff) in each of the four countries. Utilizing these clinical sites, they have trained an additional 16 tutors/clinical

AMTSL and Community-based Prevention of PPH Coverage

ACCESS tracks the “reach” of its PPH interventions in two ways:

ACCESS and the POPPHI Project indicators:

- Women in ACCESS-supported facilities and at home in target districts who received AMTSL by skilled providers in 2007:
 - a. Nigeria: 94.6%
 - b. India: 98.9%
- Targeted districts providing AMTSL:
 - c. Afghanistan: 118/329 or 36% of total districts
 - d. Nigeria: 18/774 or 2.3% of total districts
 - e. India: 1/24 or 4.1% of districts in the state of Jharkhand

preceptors from midwifery programs in each country and, in 2008, two countries (**Ethiopia** and **Ghana**) will conduct one more round of site strengthening and train an additional 16 tutors.

In **Tanzania**, the MOH has requested that tutors from all 50 midwifery schools be trained. To reach this goal, two more knowledge and clinical skills courses will occur. In **Malawi**, the core group of tutors will work toward national scale up of nurse-midwife technician training with field funds. Each country has sensitized key stakeholders to this process and plans to incorporate key best practices into its pre-service curriculum. In addition, the WHO office in each country contributed resources to enable this expansion of critical services to women that will result in best practices to prevent and treat PPH.

In Nigeria, AMTSL was not used in program facilities prior to ACCESS intervention—now nearly 95% of women in Program facilities receive AMTSL.

ACCESS has also used regional funding in West Africa to leverage additional funds through UNICEF to introduce or scale up PPH prevention using AMTSL. In these countries—including **Cameroon, Mauritania, Niger** and **Togo**—at least 25% of the facilities in at least one district have been reached. This coverage has also occurred in Asia during interventions to train skilled providers to use AMTSL in both facility and community settings in **Afghanistan, India** and **Nepal**. In **Afghanistan**, ACCESS is supporting national scale up of PPH prevention and treatment activities.



In **Kenya**, ACCESS was asked in 2006 to form a national TAG on PPH Prevention and Treatment, which led to the development and submission to the MOH of a final draft of updated guidelines on AMTSL (using oxytocin as the preferred uterotonic). Two large maternity services in Nairobi—Kenyatta National Hospital and Pumwani Maternity Hospital—were then strengthened, and a core group of 14 midwives and clinical officers from 8 provinces participated in a technical update and clinical skills course on AMTSL and treatment of PPH. The AMTSL Learning Resource Package, formulated by POPPHI in collaboration with ACCESS and other partners, was field tested. To date, 41 service providers in Eastern and Western Provinces have been trained in the use of AMTSL in the first of a series of trainings being carried out in collaboration with the APHIA bilateral programs.

In **Ethiopia, Nigeria** and **Rwanda**, district-level interventions to improve the skills of providers are incorporating AMTSL and treatment of PPH into their activities. In **Ethiopia**, skilled providers in hospitals and health centers learn AMTSL and health extension workers provide misoprostol in community-based births. In **Nigeria**, where AMTSL was not used in program facilities prior to ACCESS intervention, now nearly 95% of women in Program facilities receive AMTSL. In **Rwanda**, ACCESS support to the USAID bilateral (Twubakane) and donors, such as UNICEF, will lead to increased capacity of doctors and midwives to prevent and treat PPH in all district hospitals in the country and in more than half of the health centers.