To assist country programs, donors and governments to develop comprehensive and innovative programs to address public health priorities—such as hemorrhage, the leading cause of maternal mortality worldwide—this program guidance document outlines key steps, identifies available resources, and highlights lessons learned from current projects.

**STEP 1: ADVOCATE WITH EVIDENCE FOR ADDRESSING THE PROBLEM**

Preventing tragic maternal deaths due to postpartum hemorrhage (PPH) begins with gaining stakeholders’ buy-in. It is often necessary to advocate for these lifesaving interventions to be introduced into the national public health system.

- **Demonstrate that PPH is a public health priority:**
  - Hemorrhage is a leading direct cause of maternal deaths in the world. 14 million women in developing countries experience PPH—26 women every minute.\(^1\)
  - PPH is preventable through use of simple interventions that should be offered to all women at the time of birth.
  - PPH is treatable, but requires rapid recognition and care to prevent life-threatening consequences; a woman can die from PPH in just two hours.
  - PPH is unpredictable; therefore, every pregnant woman needs care during childbirth from a skilled birth attendant (SBA).\(^2\)
    However, in developing countries, almost 50% of deliveries occur at home without an SBA.\(^3\)
    Women giving birth without an SBA are at increased risk of dying from complications including PPH.

- **Promote evidence-based interventions for PPH prevention and management:**
  - **PPH prevention** can reduce PPH-related deaths through: active management of the third stage of labor (AMTSL) by an SBA; and birth preparedness and complication readiness counseling, PPH prevention counseling, and antenatal provision of misoprostol for use at the time of birth when delivery with an SBA is not possible.
  - **PPH management** can further reduce PPH-related deaths through: a number of interventions mainly available within facilities with skilled providers; and basic or comprehensive emergency obstetric and newborn care (BEmONC or CEmONC) services.
• Provide evidence to key stakeholders and decision-makers to assist in shaping policy. This can be done by:
  • Organizing information sessions that provide the evidence base for recommended PPH prevention and treatment interventions.
  • Conducting a series of technical updates presenting data on: maternal mortality ratio (MMR); country- or region-specific PPH prevalence and rates of skilled attendance at birth; global evidence on PPH prevention and management; and results from PPH prevention and management research and projects.
  • Conducting surveys that study existing practices, policies and training curricula to understand where the country is in terms of PPH prevention and/or treatment.
  • Designing research to help policymakers, program managers and health service administrators understand factors that inhibit access to adequate, affordable interventions for PPH prevention and treatment, especially for vulnerable populations.
  • Identifying innovative interventions and approaches that can be tested and evaluated to demonstrate safety and program feasibility in their context such as: oxytocin in the Unject® device; reducing misoprostol dosage; introducing the non-pneumatic anti-shock garment; and mainstreaming the use of the condom tamponade. Governments should choose a strategic approach that suits their situation, such as beginning with a demonstration project or pilot.

• Develop champions for PPH prevention: To ensure that PPH is on the national agenda, it is helpful to have champions at the national level who are convinced of the evidence and can persuasively advocate to decision makers for PPH interventions. Key government officials, members of professional associations, pre-service and in-service educational programs, and influential clinicians can all be powerful champions.

• Discuss with government counterparts, global agencies, donors, educational institutions, professional associations, local nongovernmental organizations, and maternal health stakeholders to generate support. It is important to build commitment among technical leaders at the national level before beginning programming, keeping in mind that some partners remain focused on certain programmatic approaches, and that the evidence base continues to evolve. In many countries, a national PPH Technical Advisory Group (TAG) was created through which stakeholders from the Ministry of Health and implementing partners could guide the program process.
STEP 2: CREATE ENABLING POLICY ENVIRONMENT

To improve care for women and the ability of providers to prevent and manage PPH, an adequate enabling environment—including resources and policies—must be established.

- **Integrate PPH-relevant interventions where possible:** Working through the national PPH TAG, integrate PPH strategies into existing maternal and newborn health programs to increase the likelihood that interventions for PPH are sustainable and are integrated rather than vertical. The strategy will need to define stages or phases for implementation at all levels along the continuum of care. With the range of PPH prevention and management interventions, integration into existing services, trainings, behavior change communication campaigns, and management information systems (MIS) will expand coverage and save resources.

- **Combine approaches for greater impact:** Policies need to define the PPH-related interventions that are authorized at each level of care (including the home) and by each type of birth attendant (including a family member or the woman herself). Based on the national situation, governments may need to make decisions about which approach to promote at each point of care (home to facility) and by each type of birth attendant (family member or traditional birth attendant to SBA). For example, in settings where a large proportion of births are not attended by SBAs, distribution of misoprostol through antenatal care (ANC) clinics may be promoted. This approach will only be effective, however, if most women attend ANC late in pregnancy when misoprostol could be distributed. In Tanzania, 92% of women presented early in pregnancy for an ANC visit, but only 52% visited after 32 weeks and received misoprostol. A modeling exercise for sub-Saharan Africa estimated that a comprehensive intervention package (health facility strengthening and community-based services) would reduce deaths due to PPH or sepsis after delivery by 32% (compared to just health facility strengthening alone [12% reduction]).
• Develop policies that allow a range of providers to offer PPH-related care: Policies need to be in place that ensure access to PPH prevention and treatment interventions by all women giving birth, regardless of the type of birth attendant or the place a woman chooses to give birth. To do this, policies must support authorization of different cadres of providers to provide defined interventions for prevention and treatment of PPH. For example, in 2009, the Ministry of Health in Mali decreed that AMTSL and oxytocin could be used for the prevention of PPH by doctors, midwives, obstetric nurses and matrons (auxiliary midwives), increasing national coverage of AMTSL.

• Ensure that service delivery guidelines are up to date: National service delivery guidelines should reflect state-of-the-art and evidence-based interventions for prevention and treatment of PPH. These may be adapted from global reference materials, such as publications developed by the WHO. Ministries of Health need to disseminate copies to all levels of the health care system to ensure compliance with the guidelines.

• Address logistics needs for drugs, instruments and equipment: Ensure both oxytocin and misoprostol are on the national Essential Drugs List and are tracked through national logistics management information systems. Although misoprostol is often available in countries for other uses, registration of the drug for importation and use for PPH prevention and treatment is needed.

Program Pitfalls and Lessons Learned: Policy for PPH Programming

• Having a clear understanding of PPH prevalence by place of birth and type of birth attendant will greatly assist policy makers in defining policy for ensuring maximum access to PPH prevention and treatment interventions.

• Ensuring the integration of PPH-related interventions into broader maternal and newborn health programs will ensure maintenance and sustainability.

• Policy should ensure uterotonic drug coverage for all births, including births in vulnerable and marginalized populations.
  – To ensure access to PPH prevention and treatment interventions, MOH policies need to promote provision of selected interventions at all points of care and by all types of birth attendants.
  – The most effective way to prevent PPH and reduce morbidity and mortality from PPH is to promote attendance by SBAs for all births. However, countries with high rates of home deliveries without a skilled provider may need to provide additional focus on PPH prevention at home births until more births are attended by SBAs.
  – If a large proportion of births are not attended by skilled providers and there is an existing network of community health workers (CHWs) or volunteers, it is possible to work with existing community-based providers and networks to achieve high coverage of PPH prevention and to reach disadvantaged segments of the community at higher risk of poorer outcomes.

• Policies cannot be implemented unless logistical and training concerns are first addressed.

• For new projects or studies involving misoprostol, it is important to identify the source of sufficient quantities of tablets as well as to address drug registration issues.

• Use all of the available resources and materials to facilitate implementation—training and counseling materials, program implementation guides, evaluation tools and posters.
STEP 3: TRAIN PROVIDERS TO DELIVER EFFECTIVE CARE

Ensuring that health care providers have adequate knowledge and skills improves the quality of the entire health care system.

- **Develop clinical champions for PPH interventions:** To change clinical practices and attitudes, it is helpful to have clinical leaders at the facility level who are convinced of the evidence and can persuasively convince their peers during the implementation process.

- **Conduct a training needs assessment:** Although most low and middle income countries have been working to reduce maternal mortality through strengthening SBA, BEmONC and CEmONC training, a systematic training needs assessment for all relevant PPH interventions and all types of providers can be useful to prioritize remaining gaps in the training system.

- **Disseminate simple and adapted job aids during training:** Job aids can greatly assist providers in transferring learning to their work site and maintaining standards of care. Job aids could include those for developing a birth preparedness plan (including speaking to the importance of giving birth with an SBA, so as to receive AMTSL), AMTSL, monitoring in the immediate postpartum, storage of uterotonics, and quantification for uterotonics (see Section 4 for available job aids).

- **Develop a training strategy and strengthen training sites:** Based on the training needs assessment findings, any existing pre-service and/or in-service training strategy for SBA, BEmONC and CEmONC can be updated to ensure all aspects of PPH are addressed.
  
  - Training sites may need to be assessed and strengthened to ensure classroom teaching and clinical practices appropriately teach PPH prevention and management.
  
  - Where appropriate and possible, develop alternate training strategies, such as the site and individual (SAIN) learning approach, to reduce cost, increase effectiveness, and increase access to training activities.
  
  - Link managers, pharmacists and clinicians to ensure that supplies and drugs are available to practice AMTSL safely, thus increasing the likelihood that training is transferred to the work site.

### Program Pitfalls and Lessons Learned: Human Resource Development

- Many countries have guidelines and training curricula in place supporting AMTSL within broader maternal and newborn health training initiatives. Other newer PPH interventions may not yet be included, but the effective processes from AMTSL work can be utilized.

- National priorities should focus on human resource development and include training strategies to improve the knowledge and skills of health care workers; all cadres of providers attending births need to be included in a training strategy.

- Sufficient resources are needed for training and supervision to improve provider skills, performance and quality of care (QOC).

- Competency-based and humanistic training approaches must ensure that all participants have the ability to develop clinical skills in actual clinical environments with patients. Before doing so, it is necessary to provide them with the chance to practice in simulated settings with anatomic models.

- Task-shifting to lower level cadres is essential to increasing uterotonic coverage, especially where SBAs are not available. Community-based approaches should be a priority and CHWs should be included in training plans.

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*Section 3*

- Evaluation of training strategies for management of the third stage of labor, POPPHI, 2007
- On-site and individual (SAIN) learning package on PPH prevention, POPPHI, 2009
- Prevention of PPH: Implementing AMTSL, POPPHI, 2007
- Integrating AMTSL and immediate postnatal care (IPNC), POPPHI, 2009
- Managing PPH, WHO, 2008
- Managing the third stage of labor in peripheral health care settings: A guide to train auxiliary midwives, POPPHI, 2009
- Preventing PPH E-Learning Course, USAID, 2007
- AMTSL: A Demonstration Video, ACCESS/Jhpiego, 2004
STEP 4: IMPROVE QUALITY OF CARE

Clinical care and treatment guidelines for prevention of PPH—along with a practical management approach for improving the performance and quality of health services—lead to meaningful, sustainable improvements in health care. Country’s key stakeholders, decision-makers and other leaders should work together to ensure responsiveness to the country’s needs and to foster the broad acceptance necessary for implementation by health care providers.

- Ensure QOC tools exist and are in use: Approaches to ensure quality implementation of programs for PPH prevention and management are needed, regardless of whether the programs focus on household- or hospital-based service delivery. Programs have used various approaches, such as Standards-Based Management and Recognition (SBM-R), Client-Oriented, Provider-Efficient Services (COPE) and Improvement Collaborative to support this process. Providers at each level of the service delivery system need to have clear performance standards, as well as the support and resources to implement them. The process of promoting improved quality is equally important to facilitate and sustain change (such as described in the SBM-R process). The process will also support/strengthen supervision, infection prevention and logistics systems.

- Monitor QOC across sites/facilities: When using a common set of QOC standards, it’s possible to compare quality at a single site over time or across multiple sites/facilities. This allows government, donors and stakeholders to see progress and identify areas where improvements are still needed. It also helps motivate staff and create healthy competition among facilities.

- Strengthen logistics systems to plan and procure sufficient commodities to meet QOC standards: Providers need to have sufficient quantities of oxytocin and other medications and supplies for PPH prevention and treatment. As an example, too often districts only order enough oxytocin to treat hemorrhage, rather than enough to give every woman a dose during AMTSL.
• **Identify and address providers’ barriers to PPH prevention and management:** Provider behaviors and attitudes toward PPH prevention and management need to be addressed. Job aids are practical behavior change communication tools to overcome barriers for providers.

**Program Pitfalls and Lessons Learned: QOC**
- Approaches to improve QOC have led to rapid increase in the use of AMTSL.
- Providers may be more motivated to offer AMTSL to all women at the time of birth if they are required to document its use in a formal hospital record.
- Availability of appropriate drugs is vital for quality care; when providers return to a facility where these drugs are not available, transfer of learning is hampered. Follow-up supervision should be in place to ensure essential resources.
- AMTSL guidelines are often only available at the BEmONC trainings. To achieve improvement in QOC, the guidelines should be widely and proactively disseminated.
- Frequent transfer of providers requires ongoing in-service training and innovative approaches to maintaining skills and knowledge among all providers at a site.

**STEP 5: INCREASE AWARENESS AMONG WOMEN AND THEIR FAMILIES**

Mobilizing families and communities increases demand for services, a vital step in improving care for mothers and newborns. When women and their caregivers understand potential dangers and are prepared, it leads to better outcomes.

• **Identify women’s, families’ and communities’ understanding of the problem and barriers to action:** In countries where PPH is a major killer, especially at home births, the problem is often well-known, but recognizing when bleeding is too much and accessing life-saving care are barriers. Often barriers to PPH prevention and management are larger economic, geographical or cultural issues. National behavior change communication or community mobilization strategies will likely address most barriers, but those specific to PPH prevention seeking behaviors need to be explored and integrated.

• **Develop tools, materials and activities to address barriers and mobilize communities:** Communication messages, materials and activities focused on behavior change for PPH prevention and management can be developed and integrated into existing maternal and newborn health campaigns, reaching pregnant women and their families.
  - In addition, in most countries where misoprostol was distributed for PPH prevention at home births, behavior change communication activities are planned to help name or brand and position the packet of tablets (such as “Immediate Response to Hemorrhage [perdarahan atasi segara]” in Indonesia; “Tablet against PPH [Golee Zed-e-Khoon Reyzee Bad Az Wiladat]” in Afghanistan; and “Mother’s Protection Tablet [matri suraksha chakkij]” in Nepal).

• **Link communities and facilities to improve access and demand for care:** To ensure the continuum of care for PPH prevention and management, referral systems need to be in place to ensure women can get to life-saving care when needed. Linking communities to nearby providers and facilities helps improve communication, care-seeking and referrals.
• Mobilize CHWs and communities for PPH: Many countries have found CHWs invaluable in promoting birth preparedness and complication readiness—some expanding their role to deliver services and commodities, make referrals and monitor outcomes. They can also assist in mobilizing communities for birth preparedness/complication readiness (such as the successful Desa Siaga campaign in Indonesia) to arrange transport, funds and blood donors in emergencies.

STEP 6: MONITOR AND EVALUATE RESULTS

Monitoring and evaluation of programs to prevent and treat postpartum hemorrhage is critical for measuring progress towards expected results and to generate sound data to inform decisions made by policymakers and program implementers at all levels of the health system.

• Conduct nationally representative household and facility surveys that include PPH-related indicators: Periodic national and/or sub-national household and facility surveys can help to document current clinical practices, such as PPH screening, counseling and management, raise awareness, and generate support for PPH programming. Facility surveys that POPPHI conducted in eight countries and MCHIP conducted in six countries identified areas of strength and areas for improvement in service quality. ICF Macro’s Service Provision Assessment (SPA) and WHO’s Service Availability Mapping (SAM) facility surveys collect information on health care provider training and drugs, supplies and equipment to detect and manage severe bleeding in pregnancy. The SPA also includes direct observation of ANC visits and ANC client exit interviews. ICF Macro’s Demographic and Health Surveys (DHS), conducted every five years, and UNICEF’s Multi-Indicator Cluster Surveys (MICS), conducted in select countries every two years, collect population-based data on ANC services received by pregnant women, including counseling about danger signs in pregnancy, specifically bleeding in pregnancy, anemia testing and receipt of iron tablets.

• Integrate PPH-related indicators into the national government health sector M&E plan: Depending on the range and scale of PPH interventions, the national M&E plan can be developed to: assess PPH program baseline; identify key indicators to measure progress (outputs, outcomes and impact); and require review and strengthening of existing data collection systems. Revised global indicators to guide country health monitoring plans will be available in 2011 from a WHO-led maternal health

Program Pitfalls and Lessons Learned: Behavior Change Communication

• Because communities often do not recognize maternal complications as a problem, conducting formative research helps to determine communities’ understanding of the major killers of women and newborns, and enlisting leaders and influential people helps to develop solutions.
• Targeting behaviors, including key essential newborn care practices and care-seeking, can achieve significant improvements.
indicators working group. An existing important resource that provides guidance on how to select and measure indicators related to antepartum and postpartum hemorrhage in the larger context of emergency obstetric care is WHO’s “Monitoring Emergency Obstetric Care: A Handbook,” published in 2009. Routine PPH-related data collection should be integrated into existing government health management information systems (HMIS) to the extent possible. Additional M&E requirements beyond those addressed through the HMIS will need to rely on national surveys, as described earlier, and special studies and monitoring efforts.

- **Ensure the national HMIS adequately captures PPH data, and the information is used for decision-making:** Existing HMIS forms and reports at the community, facility and district levels may not be sufficient to track PPH-related data at home births attended by a skilled birth attendant and antenatal and delivery care at facilities. If the data are captured in the patient charts or registers, they still may not be aggregated and reported up to district/provincial/regional levels. And in areas with high levels of unattended home births, CHW-delivered services (such as misoprostol distribution) may not be reported into the HMIS at all. These data together are needed to monitor uterotonic coverage across a district/province/region, track stockouts, and recognize improvements over time.

- **Document and disseminate results:** Complementing the M&E plan, a knowledge management (documentation) plan needs to be developed to ensure the PPH program will capture sufficient information from prevention and management activities to answer all key programmatic questions. Because programs often begin as small-scale pilots, lessons learned and cost-effectiveness information are desired, but not routinely collected as part of the M&E plan. To ensure results are monitored, documented and disseminated, a documentation plan can help country teams plan to comprehensively capture program process and outputs. Furthermore, qualitative case studies and success stories of women, families, CHWs and facility-based providers help illustrate the effect of these life-saving interventions on program beneficiaries. This plan can also include journal article submissions about innovative program approaches that are of interest to a wider audience.

**Program Pitfalls and Lessons Learned: M&E**

- Inclusion of a national-level indicator for AMTSL—or, at a minimum, the use of a uterotonic in the third stage of labor—in the HMIS requires providers and district and regional officials to report on its use on a regular basis, thus making it more likely to be routinely practiced and recorded.

- The POPPHI Project demonstrated that the use of national survey data can serve as a powerful advocacy tool, as these data can provide a base from which to develop strategic action plans, create partnerships, link allies, implement needed activities, and monitor progress toward goals.

- Stakeholders should be informed and involved throughout program implementation, monitoring progress and reviewing findings, especially during pilot studies on innovative interventions or approaches.

- Because the PPH prevention interventions are evidence-based, M&E can focus on program effectiveness in achieving coverage instead of measuring the reduction in mortality as a result. If there are sufficient resources, changes in mortality over time are powerful for advocating for scale-up.
STEP 7: SCALE-UP FOR NATIONAL IMPACT AND SUSTAINABILITY

Scaling up capacity building, community outreach and demand generation for maternal and newborn health interventions is critical for sustaining program improvements. However, as country programs are selecting strategies and interventions to scale up AMTSL, they encounter large-scale challenges, such as inadequate providers’ skills, low community awareness of danger signs and need for referral, and facilities without evidence-based protocols and medications.

- **Develop a scale up plan considering national priorities, areas of highest need and capacity:** Depending on the national strategy, expansion of PPH initiatives may be phased but should be developed with a long-term vision of routine delivery of these services through existing government systems nationwide. Issues to consider and address in the plan include: logistics; product registration; training; funding; M&E (HMIS); behavior change communication; QOC; and capacity-building.

- **Plan for integration into other programs/services where feasible:** Often PPH prevention and management interventions start as pilots, but once successfully demonstrated, scale up is challenged to shift from a vertical project to integrated activities within the broader maternal and newborn health national program. Integration makes sense when it’s synergistic—mutually strengthening and reducing needed resources (such as human, financial and time).

- **Consider the role of the private sector, including social marketing:** PPH expansion should consider how to achieve the greatest coverage, which may include involving the private sector and social marketing/franchising.

- **Incorporate issues to promote sustainability:** Sustainability can be built into the initial program design using the framework and tools. New innovations in particular need to consider sustainability in the initial design and implementation.

### Program Pitfalls and Lessons Learned: Expansion & Sustainability

- **When ownership of MNH services comes from the grassroots level, creating demand and supply, the health system and policy environment are more flexible to support decentralized implementation of the new interventions.**

- **A modern approach to training in basic EmONC competencies—with a greater focus on skill development—will increase provider confidence and capacity to adopt new practices.**

- **Maternal/newborn health interventions, and specifically BEmONC services, need more focused advocacy with key decision makers.**

- **In many countries with a human resources crisis, addressing improvements systematically is a challenge. Plans should be in place for community-based activities, including task sharing when appropriate, in order to “decongest” maternity hospitals.**

- **Quality and performance improvement approaches, such as SBM-R, should focus an intensified effort on prevention and management of PPH as an essential element of quality care.**

### REFERENCES


2. WHO defines an SBA as “an accredited health professional—such as a midwife, doctor or nurse—who has been educated and trained to proficiency in the skills needed to manage normal (uncomplicated) pregnancies, childbirth, and the immediate postnatal period, and in the identification, management and referral of complications in women and newborns.”


7 WHO is also currently working on a new set of survey tools, the Service Availability and Readiness Assessment (SARA).