

Helping Mothers Survive



Implementation Guide
July 2016

HMS Implementation Guide

Draft v 2 (July 2016)

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Abbreviations and Acronyms

AMTSL	Active Management of Third Stage of Labor
BAB	Bleeding after Birth
BEmONC	Basic Emergency Obstetric and Newborn Care
CCT	Controlled Cord Traction
CEmONC	Comprehensive Emergency Obstetric and Newborn Care
DHO	District Health Office
EmONC	Emergency Obstetric and Newborn Care
EONC	Essential Obstetric and Newborn Care
HMIS	Health Management Information System
HMS	Helping Mothers Survive
HRH	Human Resources for Health
IRB	Institutional Review Board
L&D	Labor and Delivery
LDHF	Low Dose, High Frequency
LOE	Level of Effort
M&E	Monitoring and Evaluation
MNH	Maternal and Newborn Health
ModCAL®	Modified Computer-Assisted Learning\

Abbreviations and Acronyms (continued)

MOH	Ministry of Health
MOU	Memorandum of Understanding
NGO	Nongovernmental Organization
OJT	On-the-Job Training
OSCE	Observed Structured Clinical Examination
PPH	Postpartum Hemorrhage
QI	Quality Improvement
SBA	Skilled Birth Attendant
TAG	Technical Advisory Group
USAID	U.S. Agency for International Development
UUIFB	Uterotonic Used Immediately Following Birth
WHO	World Health Organization

Introduction to Helping Mothers Survive

An overview of the HMS approach, including the basics of district implementation

- ▶ Introduction to this Guide
- ▶ HMS Strategic Approach
- ▶ HMS at the Health Facility
- ▶ Developing HMS Training/Mentoring Capacity
- ▶ HMS Summary

About this Implementation Guide

This guide shares the essential information and provides the reader with resources to be able to design and implement HMS in a low-resource setting.

Contact us at hms@jhpiego.org
with questions about
implementing HMS and to share
your experiences.

The Helping Mothers Survive (HMS) Program aims to improve maternal and newborn care (MNH) skills among midwives, nurses, doctors, and other health care providers. At scale, HMS can improve the clinical practice in places where preventable deaths continue to occur.

HMS uses a single to several-day, facility-based learning approach that is followed by short, frequent practice sessions to reinforce skills. The first module in the HMS suite developed in 2012 and tested in 2013—**Bleeding after Birth (BAB)**—prepares health care providers to **prevent and manage postpartum hemorrhage (PPH)**. Having demonstrated the effectiveness of the training approach, additional modules were developed to target other causes of maternal death. The task ahead is to implement HMS in countries where maternal mortality and morbidity remain unacceptably high. This guide will focus on the BAB as an example module of the HMS approach, however the principles are applicable to all modules in the suite.

For more information about HMS:

- Helping Mothers Survive website: www.helpingmotherssurvive.org
- Helping Mothers Survive Bleeding after Birth demonstration [Video \(You Tube\)](#)
- Laerdal Global Health: www.laerdalglobalhealth.com/doc/2538/Helping-Mothers-Survive-Bleeding-After-Birth
- ReprolinePlus: reprolineplus.org/resources/helping-mothers-survive-bleeding-after-birth-training-package

HMS BAB

Getting Started: Using this Guide

This guide has been developed to help introduce, integrate, and scale up HMS in low-resource settings. It familiarizes the user with HMS approaches, using the BAB module to present concrete examples of how to rapidly design, plan, implement, and monitor a HMS training program—along with links to available resources.

Purpose: To provide straightforward, step-by-step guidance on how to design and implement HMS

Users: Program managers, technical advisors, and master trainers

Structure: Sections provide general programming guidance and direct the reader to additional tools and resources.

Tools and Resources: The guide provides a number of materials to help implement HMS and for BAB programs:



- On a USB drive that accompanies this guide
- On the HMS website helpingmotherssurvive.org (also found on reprolineplus.org)

Look at Annex A for
the full list of tools
& resources

Helping Mothers Survive



The Laerdal Foundation for Acute Medicine



International Confederation of Midwives
Strengthening Midwifery Globally



American Academy of Pediatrics



DEDICATED TO THE HEALTH OF ALL CHILDREN™

Helping Mothers Survive (HMS) is a package of targeted capacity building modules delivered through a simulation-based learning approach to build and sustain competencies of the health workforce in countries with high burdens of maternal mortality.

HMS was developed by Jhpiego, in collaboration with Laerdal Global Health, The International Confederation of Obstetricians and Gynecologists (FIGO), International Confederation of Midwives (ICM), International Council of Nurses (ICN), UNFPA, and the American Association of Pediatrics (AAP).

It aims to improve and sustain critical MNH skills of midwives, nurses, doctors, and others. It is targeted to address the leading causes of maternal and neonatal mortality—to end preventable deaths.

HMS Mandate

- Equip all providers who care for women and newborns with knowledge and essential skills to prevent and manage the major causes of maternal and neonatal mortality globally.
- Focus on improving quality of care on the day of birth—because over 40% of maternal deaths occur in the first 24 hours after birth.²
- Scale an evidence-based learning and mentoring approach to improve and maintain the competencies of health care providers.

¹ Ending Preventable Maternal Mortality: USAID Maternal Health Vision for Action, June 2014

² Every Newborn, An Executive Summary for The Lancet's Series, May 2014

HMS: Modules

Available

Near Final, Available 2016

Under Development, 2016–2017

**Bleeding After Birth
(BAB)**

**Pre-Eclampsia &
Eclampsia**

**Labor &
Birth**

Pre-Term Birth

**Bleeding After Birth
Plus (BAB+)**

**Complications of
Labor & Birth**

While focused on maternal health, HMS modules cover clinical competencies which affect newborn outcomes. HMS also considers the mother and newborn as a pair so newborn care is integrated where appropriate.

For newborn health, a similar series of **Helping Babies Survive (HBS)** modules have been developed, focused on newborn care. Available modules include Helping Babies Breathe (HBB) (www.helpingbabiesbreathe.org) and Essential Care for Every Baby (www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/global/Pages/eceb.aspx).

This guide highlights where there are natural synergies between HMS and HBS modules, such as for intrapartum care, and provides suggestions on how they can be integrated during implementation.

See Annex B for a
specific example

Helping Mothers Survive

HMS is designed to change the practices of health care providers by increasing their knowledge, skills, attitudes, and confidence. It also catalyzes support and a sense of teamwork among the staff who provide maternal and newborn care within a health facility. This graphic summarizes the key elements of HMS that together help create changes in practice.



The ability of HMS to change practices has value added for MNH programs because it complements and extends the reach of:

1. **Quality improvement (QI)** efforts to improve maternal and newborn care services at health facilities. Skilled providers are critical to deliver quality care to every pregnant woman, mother and newborn.
2. **Competency-based training** programs, particularly in-service training (such as essential obstetric and newborn care [EONC]).

HMS also can be integrated into pre-service education.

*HMS uses a low-dose, high-frequency (LDHF) approach to the shared facilitation of practice, which is described in detail later in this section.

Helping Mothers Survive:

Who is trained?

All health care providers* authorized to provide maternal and newborn care can benefit from HMS training.
Within a facility, they are all trained together as a team.

Skilled birth attendants (SBAs) can specifically benefit from HMS training in related advanced care.

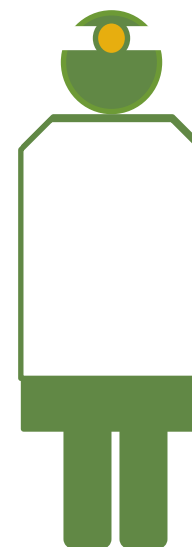
Non-SBAs who assist with birth (nursing assistants, health orderlies)



SBAs—midwives, nurses, auxiliary nurse midwives, doctors



Other providers who manage complications (doctors, clinical officers, medical assistants, specialists)



* HMS is not designed for traditional birth attendants.

Helping Mothers Survive:

The HMS approach to maternal and newborn care

Lifesaving

Targets the leading causes of maternal and neonatal death



HMS can be a useful tool to global and country-specific programs to further reduce maternal and neonatal mortality.

Focused

Primarily focused on the intrapartum period when most deaths occur



HMS improves care on the day of birth—for both mother and baby. HMS integrates care and promotes survival.

Practical

Evidence-based action plans simplify care for health care providers



HMS materials are simple, highly intuitive, and graphic. HMS teaches simple ways to prevent, recognize, and respond to problems.

Helping Mothers Survive:

The evidence for HMS

Targeted, repetitive interventions result in better learning outcomes.

Training on-site at the provider's workplace results in sustained knowledge and skills.

The HMS approach was shaped by key findings from a 2011 Jhpiego literature review³ that identified effective training approaches for continuing professional education for health workers (i.e., in-service training).

- The most effective educational techniques to improve and sustain knowledge and skills acquisition and maintenance are:
 - Case-based learning,
 - Clinical simulations, and
 - Practice and feedback.
- Passive instruction—such as reading or lecture—have little or no impact on learning outcomes or improving clinical practice.
- Repetitive interventions, rather than single interventions, are better for learning outcomes.
- Settings in or closest to the workplace improve skill acquisition and performance.

These findings together provide clear recommendations on how to improve training for greater impact on learning and performance.

³Bluestone J, Johnson P, Fullerton J, Carr C, Alderman J, Bontempo J. Effective in-service training design and delivery: evidence from an integrative literature review. *Hum Resour Health*. 2013; 11(1):51.

Helping Mothers Survive:

Low-dose, high-frequency approach

Capitalizing on these findings, the HMS capacity building approach is designed to more effectively change the practices of health care providers. HMS facility-based learning and practice are powerful and innovative because of the low-dose, high-frequency (LDHF) approach. **It is the principle of LDHF that is essential to HMS design and implementation.**



HMS one-day clinical training emphasizes simulation using anatomic models, role play, and case-based learning opportunities.

Following the one-day training, **a series of weekly LDHF practice sessions using clinical simulations** are conducted in the workplace to reinforce lifesaving practices. During the weekly session, each health care provider practices key skills for 10–15 minutes with a peer. Practice options include: skills practice, scenario session, games, and team simulation.

LDHF within HMS is not prescriptive in terms of numbers of sessions or the minimum number of hours, although some guidance is provided within each module. The key to success is that practice is facilitated by a “Peer Practice Coordinator” or “Clinical Mentor” to help ensure all providers practice.

Helping Mothers Survive:

Other key elements of HMS training approach

Hands-on

Learning through case studies, role plays, skills stations, and clinical simulations



HMS uses a simulation-based training approach that enables hands-on learning for skills acquisition and repeated practice, while also improving provider knowledge.

On-site

Learning and practice in the health care provider's facility improves performance



Evidence shows that using health workers' daily work environment as the classroom improves learning and changes in practice. HMS reduces service disruptions due to off-site training.

Team-oriented

Learning and practicing together ensures all health care providers are ready



Ideally, all providers and supervisors involved in labor and birth in the facility join the HMS training and practice sessions. This strengthens teamwork and communication, which are critical during emergencies.

HMS at a Health Facility

A snapshot of HMS training and LDHF practice as it is implemented at a health facility

If you are already
familiar with HMS,
skip ahead to
Section 2.

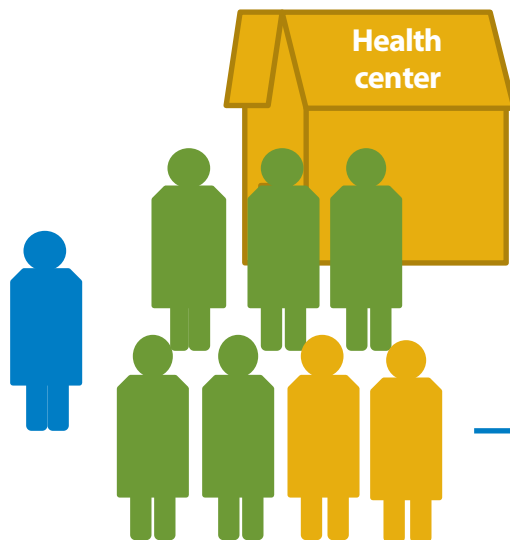
Helping Mothers Survive: *HMS in a health facility*

PART 1: HMS TRAINING

One-day training for all staff who are involved in labor and delivery services, conducted by a HMS Trainer.

HMS Champions training is conducted for all authorized providers and support staff based on module content.

Each trainer is assigned several facilities. S/he visits each facility for HMS on-site learning. The trainer brings the HMS materials.* Each training should have no more than six participants (i.e., a ratio of one trainer to six providers). Larger groups need additional trainers, or multiple HMS Champions trainings can be scheduled. Providers, support staff, and supervisors or in-charges are trained as a team so roles are clear.



Two Peer Practice Coordinators at each facility are selected and oriented.

After HMS Champions training, the trainer spends a day with two Clinical Mentors to orient them to the role as facilitator of the LDHF phase. The Practice Coordinators are given weekly practice session plans and a simulator if needed.

PART 2: LDHF-FACILITATED PRACTICE SESSIONS

Weekly practice session or clinical simulation, based on a pre-defined scenario and organized by a Clinical Mentor.



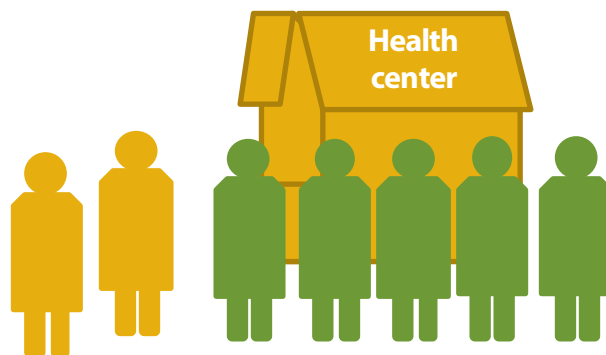
The Practice Coordinators organize once-weekly practice after HMS training (e.g., eight weeks for HMS BAB).

Either Coordinator runs practice sessions or clinical simulation individually or in groups each week with all providers. For example, a practice session has each provider practice for approximately 15 minutes, based on a pre-defined scenario.

* Some modules use a clinical simulator (see Annex H for information on simulators for HMS BAB-related simulators).

HMS:

LDHF Practice at a Facility, HMS BAB example



Week 1: Prevention of postpartum hemorrhage (PPH): active management of third stage of labor (AMTSL) and review of transport plan

Week 2: Atony resolving with massage and medication

Week 3: Atony requiring bimanual uterine compression

Week 4: Team simulation—atony requiring bimanual uterine compression

Week 5: Retained placenta resolving with continued controlled cord traction (CCT)

Week 6: Retained placenta requiring transfer

Week 7: Retained placenta that resolves and then becomes atony, resolving with massage and medication

Week 8: Team simulation—retained placenta requiring transfer

Developing HMS Training/ Mentoring Capacity

Details on the roles needed to provide HMS in health facilities and how they are developed, including:

- *Training/Mentoring Roles*
- *HMS Champions*
- *Master Trainer and Trainer Preparation*
- *Peer Practice Coordinators OR Clinical Mentors*

HMS Training/Mentoring Roles



ROLE

HMS Advocate

- National advocate

MNH Provider

- Provider or a national advocate
- May be preparing for HMS Trainer role

Peer Practice Coordinator/Clinical Mentor

- Provider and facility advocate
- Coordinates and records LDHF practice
- Coordinates with HMS Trainer

HMS Trainer

- District advocate
- Training of providers: conducts HMS Champions training in a facility
- Facilitates selection of clinical mentors
- Supports LDHF practice

HMS Master Trainer

- National advocate
- Trainer of trainers for HMS BAB
- Monitoring and evaluation (M&E) guidance
- Training commodities support

QUALIFICATIONS

- Proficient MNH provider or stakeholder for MNH*
- Trained as HMS Champion

- Proficient MNH provider
- Trained as HMS Champion

- Proficient MNH provider
- Trained as HMS Champion
- Trained/mentored
- Oriented as clinical mentor
- The title should suit the local context

- Proficient MNH provider
- Trained as HMS Champion
- Qualified trainer**
- Trained as HMS Trainer
- Mentored as HMS Trainer
- Trained in clinical mentor selection, training, and mentoring

- Proficient MNH provider
- Trained as HMS Champion
- Trained as HMS Master Trainer
- Mentored as HMS Master Trainer**
- Positioned (professional association, nongovernmental association [NGO], government council)

* The HMS Champions course is designed for clinically active providers, but stakeholders (e.g., Ministry of Health officials, development partners) participate.
 ** Any training pathway or other pathway recognized by a country's national training board/organization.

HMS Champion Training:

The gateway to HMS

At the heart of an HMS program are its Champions. All HMS programs start with the one-day HMS Champion Training. **This is the basic provider course, and all who successfully complete it are HMS Champions.** The course is for health care providers of all types who care for women during birth, their supervisors, and those who advocate for quality maternity services. Providers, maternal health advocates, Peer Practice Coordinators / Clinical Mentors, future HMS Trainers, and Master Trainers all begin their involvement in HMS programs as Champions.



Who is an HMS Champion?

An individual who is highly committed to significantly reducing preventable maternal and neonatal mortality—most often a health care provider who cares for women and newborns at birth.

HMS Champions are primarily clinically active MNH care providers who use their new skills to provide services, but can include advocates and stakeholders who want to understand HMS better and promote its use.

HMS Champions become part of a global HMS Alumni network (database) and may be contacted for updates on HMS progress within their community.

The HMS Champion Training

Example from HMS BAB

The one-day HMS Champion Training presents the HMS approach to capacity building, provides clinical updates, orients users to simulation for learning, and provides participants with hands-on practice.

The training uses a number of methods, including role plays, demonstration, and return demonstrations using simulators and local supplies and teaches clinical care algorithms based on HMS Action Plans.

The first Champion course in a project or country is typically conducted to launch HMS and is often held as a workshop for advocates and trainers.

Objectives

The course objectives include:

- Understand the principles of HMS training
- Demonstrate the clinical care and decision-making for the clinical topic—all according to standards
- Understand the importance of LDHF practice at the facility after training

Trainer: Participant Ratio

One trainer to no more than six participants.

It is important to keep six or fewer participants per trainer so everyone has time for practice and the observed structured clinical examination (OSCE)

Design

The one-day HMS Champion course remains the same whether it is run to launch an HMS program, to train health care providers at a facility, or to prepare a group of HMS Trainers.

What differs is the training participants (the “audience”), AND if there are other workshop days added to the original one-day training (for planning, facilitation support, mentoring, etc.).

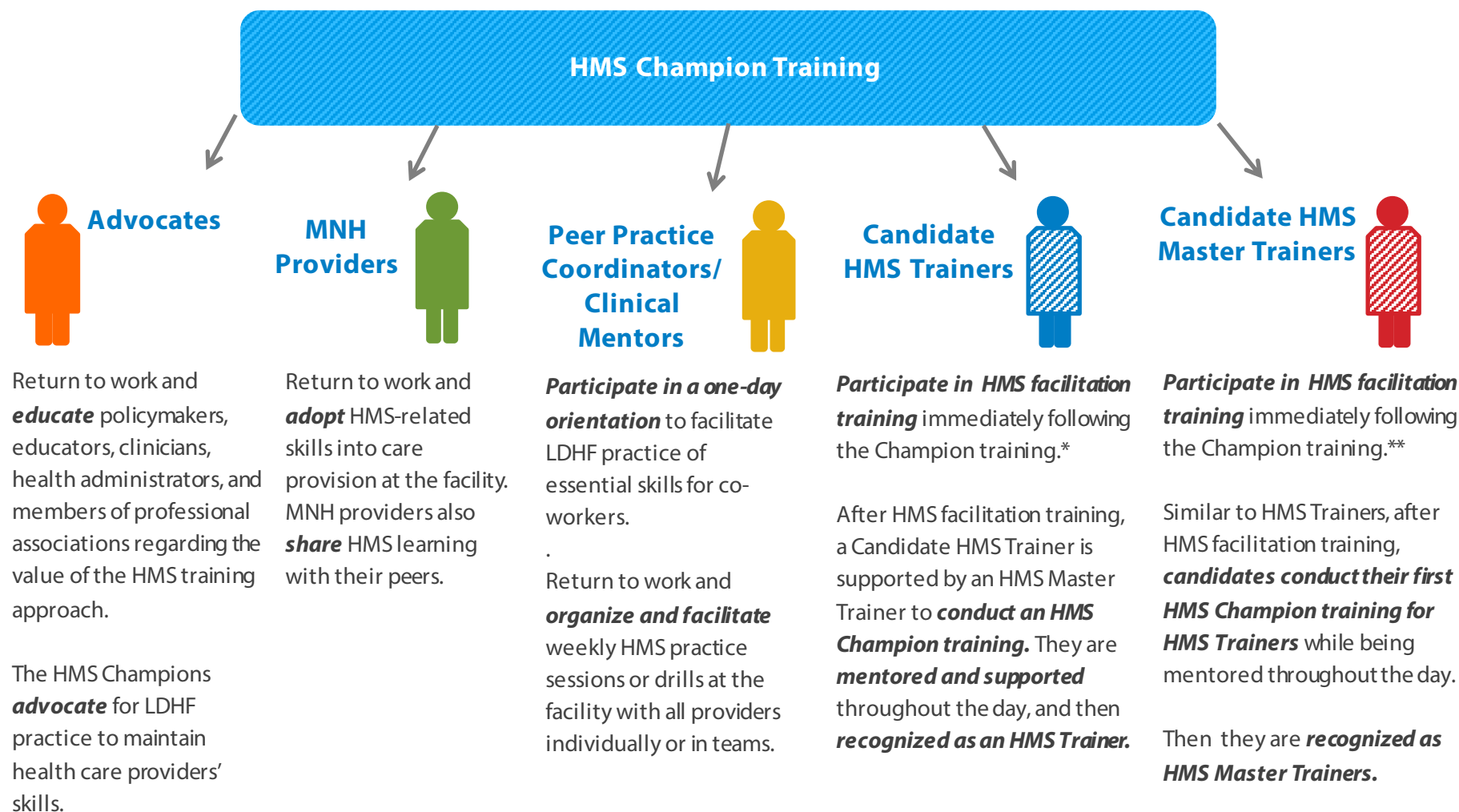
**Interested in participating
in an HMS Champion
Training?**

**Interested in running an
HMS Champion Training?**

Contact us

hms@jhpigo.org

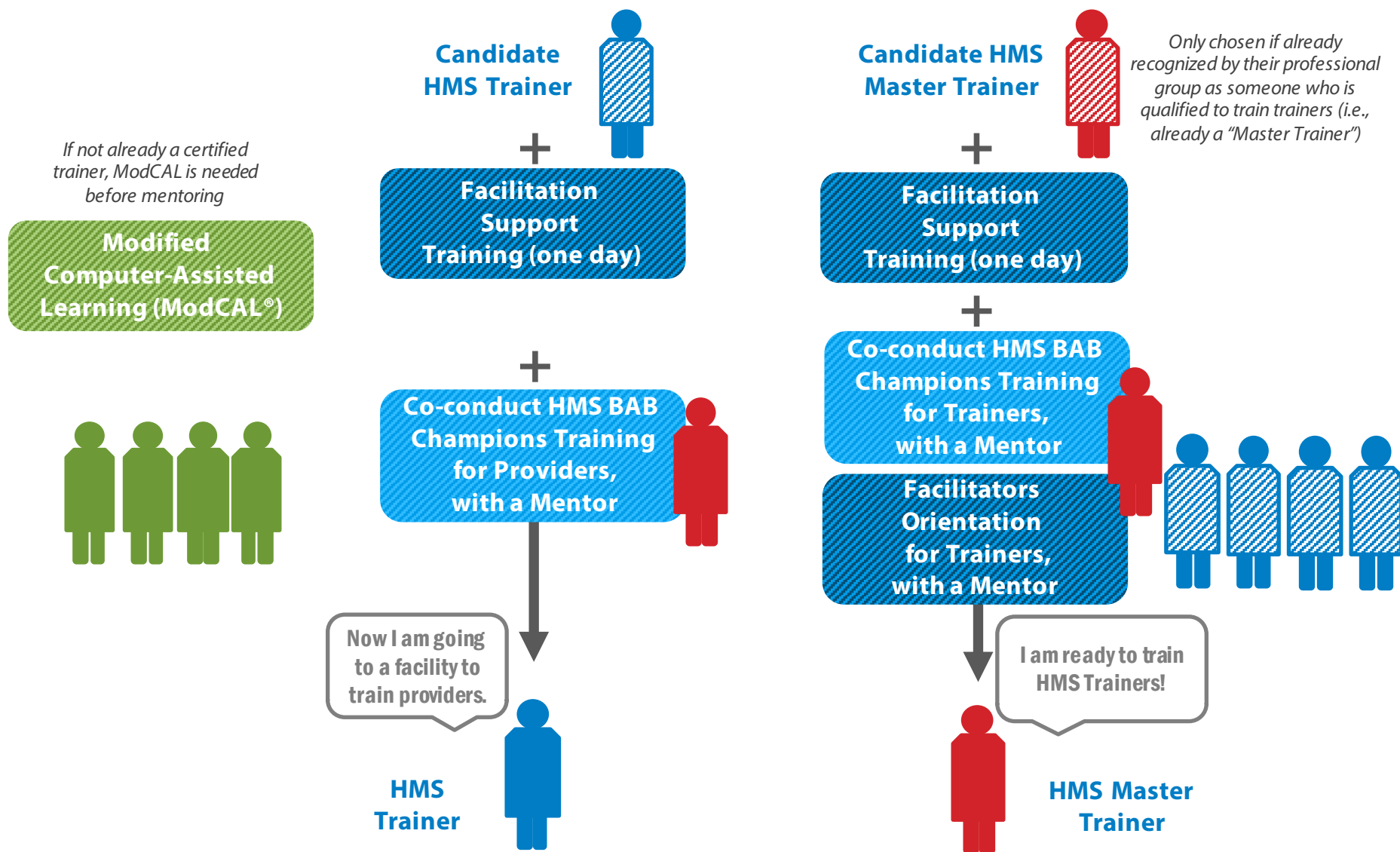
After the HMS Champion Training



* To become an HMS Trainer, individuals must be recognized by their professional group as a Trainer. If not a certified Trainer, complete Modified Computer-Assisted Learning (ModCAL*) online: <http://reprolineplus.org/files/learning-modcal-training-skills> (see next page for details).

** To be prepared as HMS Master Trainers, individuals must be recognized by their professional group as a Master Trainer.

HMS Trainer Development: After the HMS Champion Training

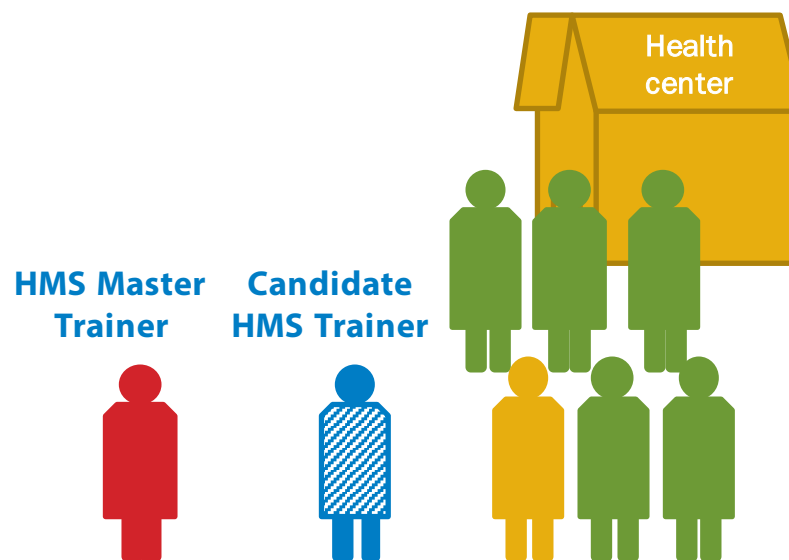


Qualifying Trainers through Mentoring

Mentoring is critical to the design of HMS, and without it the effectiveness of the training cascade greatly diminishes. Mentoring as a part of developing and qualifying HMS Trainers and Master Trainers is not optional—it is essential to the design and implementation of HMS programs.

For example, a candidate HMS Trainer conducts an HMS Champion training with the support of a Master Trainer. The Master Trainer helps prepare, guides the HMS Candidate Trainer, answer questions, and provides an extra set of hands when needed during the training day.

After the training is over, they debrief about the day and if the Master Trainer feels confident that the HMS Candidate Trainer can independently conduct the HMS Champion course and orient the practice coordinators/clinical mentors, the HMS Candidate Trainer is qualified.



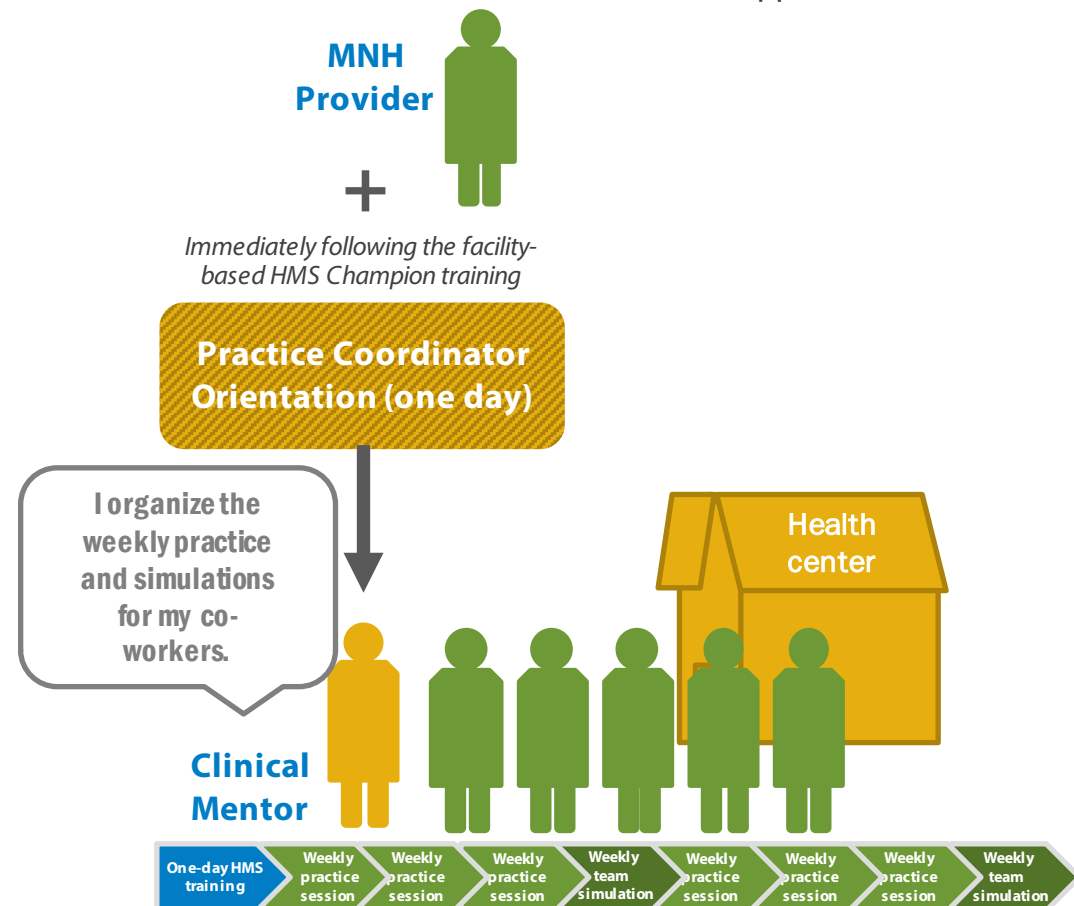
The candidate HMS Trainer conducts the HMS Champion training at a facility for providers while being mentored on-site.

The HMS Master Trainer observes, provides support and feedback, and ultimately qualifies the HMS Trainer at the end of the day.

HMS Peer Practice Coordinator / Clinical Mentor Development

Well-prepared, motivated Practice Coordinators are critical to HMS success. It does not matter what title is used and this can be based on local preference. Although the word “mentor” often refers to a senior, experienced professional guiding junior staff, in this role Clinical Mentors or Peer Practice Coordinators serve more as a facilitator to make sure the LDHF practice sessions occur each week and that all staff participate. Two are chosen to make practice easier and to help manage staff transfers. Practice can be scheduled or it can be opportunistic and occur when staff are not busy.

HMS recommends two Practice Coordinators are selected and oriented per facility.



HMS Summary

This first section introduces the key HMS concepts and approaches that together create changes in practice. This initial orientation to HMS provides the context for thinking about how HMS can fit into existing programs that address the leading causes of maternal and neonatal mortality.

More detail is provided in the next sections of this guide to assist in the development of HMS activities.

Please also review the annexes for additional resources, such as glossary of terms.



Bleeding after Birth Basics

The First HMS Module

- ▶ Key Interventions
- ▶ HMS BAB Resources

Helping Mothers Survive:

Bleeding after Birth

Bleeding after Birth is the first module in the Helping Mothers Survive series.

The first HMS module focuses on **prevention and management of PPH**—the leading cause of maternal mortality globally. In Africa and Asia, PPH contributes to approximately 30% of maternal deaths.⁴

Many of these deaths can be averted through AMTSL. The HMS training package clearly outlines the evidence-based practices for AMTSL in a visual Action Plan, which is used during training and as a support tool for decision-making during clinical care.

See Annex D for
more PPH-related
information



⁴World Health Organization(WHO) recommendations for the prevention and treatment of PPH, 2012.

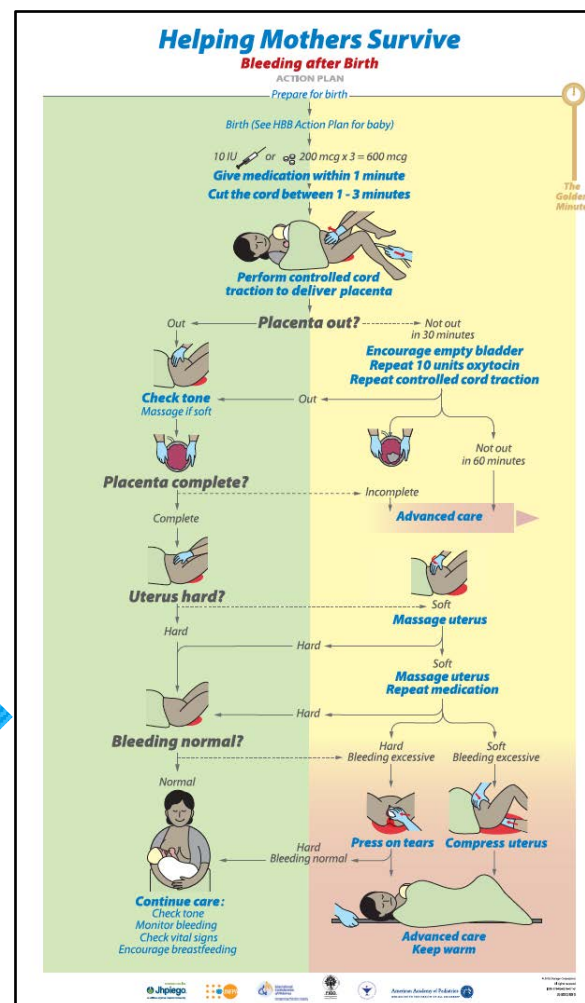
PPH: Key Interventions

To make internationally-accepted clinical recommendations on PPH prevention and management⁵ more accessible and actionable for health care providers (and to reinforce prior learning), HMS BAB translates global recommendations into a simple, visual action plan. HMS BAB combines provider-focused, action-oriented materials with an approach that simulates clinical experiences so providers can practice and prepare for PPH emergencies.

Recommendations from WHO, ICM and FIGO:

- Use a uterotonic immediately following the delivery of the newborn, preferably oxytocin.
- Delay cord clamping for 1–3 minutes following birth.
- Utilize CCT to deliver the placenta if desired.
- Assess uterine tone to identify uterine atony.
- Give a second dose of oxytocin in the case of retained placenta.
- Give a second dose of uterotonic in the case of atony.

Action Plan



⁵WHO, 2012; Lalonde, A. Prevention and treatment of postpartum hemorrhage in low-resource settings. International Journal of Gynecology and Obstetrics 117 (2012) 108–118

HMS: BAB Advanced Care

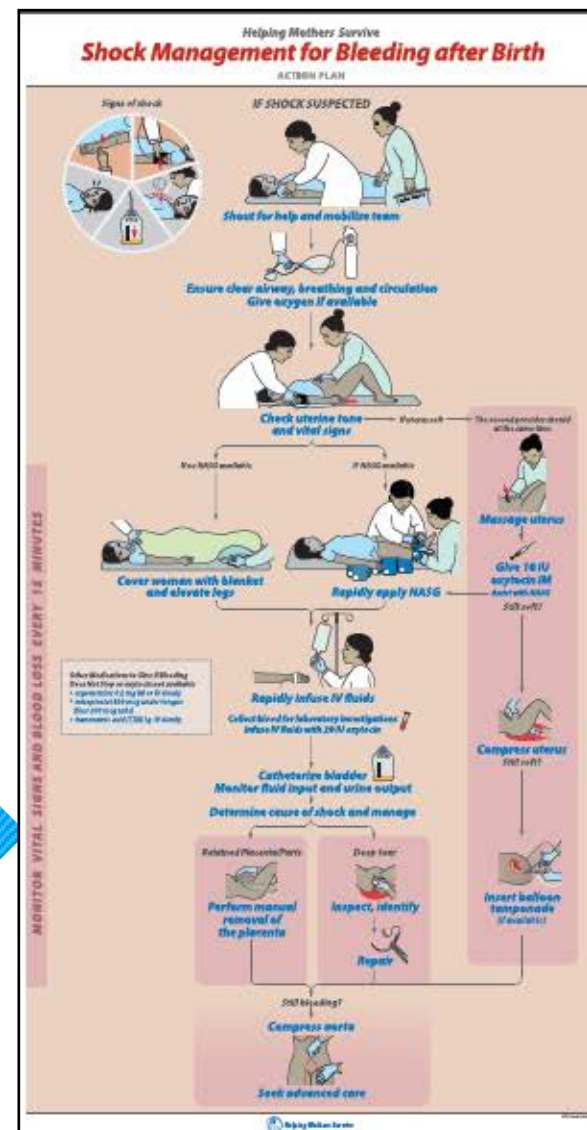
Action Plan

For situations where PPH is not managed with BAB skills and women need advanced care, HMS has developed an additional module to extend training. The BAB Advanced Care module makes WHO recommendations on PPH prevention and management⁵ part of complementary learning materials that are visually accessible for health care providers in these emergency situations.

This module completes the skills set for basic emergency obstetric and newborn care (BEmONC) and includes selected comprehensive emergency obstetric and newborn care (CEmONC) interventions.

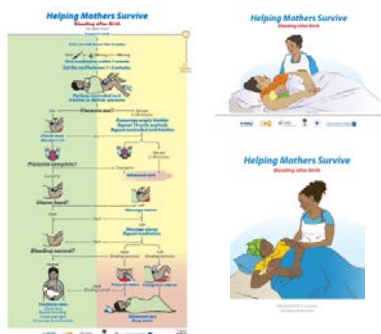
BAB Advanced Care for PPH:

- Shock management—including IV infusion and catheterization
- Aortic compression
- Repair of vaginal and cervical tears
- Manual removal of the placenta
- Use of an intrauterine balloon tamponade and non-pneumatic anti-shock garment



HMS BAB Resources

To see HMS BAB materials and understand how the clinical simulator works, take a moment to look online at the Helping Mothers Survive website, helpingmotherssurvive.org



Helping Mothers Survive Bleeding after Birth materials

Training materials consist of the Provider's Guide, Action Plan poster, and the Flipbook.

Materials currently are available in English, French, Portuguese, Russian, Hindi, and Swahili. English materials are available in two versions, with graphics appropriate for African or South Asian settings.

<http://reprolineplus.org/resources/helping-mothers-survive-bleeding-after-birth-training-package>



Helping Mothers Survive Bleeding after Birth video

This four-minute video provides an introduction to one of the clinical simulators that can be used during HMS BAB training.

<https://www.youtube.com/watch?v=Hu8Na5gqnog>

Look at Annex A for the full list of tools & resources

Design and Planning

A walk-through the initial design and planning to determine how HMS can make the greatest contribution

- ▶ **Rapid Assessment**
- ▶ **Design Considerations**
- ▶ **Planning**
- ▶ **Work Planning**

Before You Begin

Certain elements should be in place before you design and implement an HMS BAB Program.

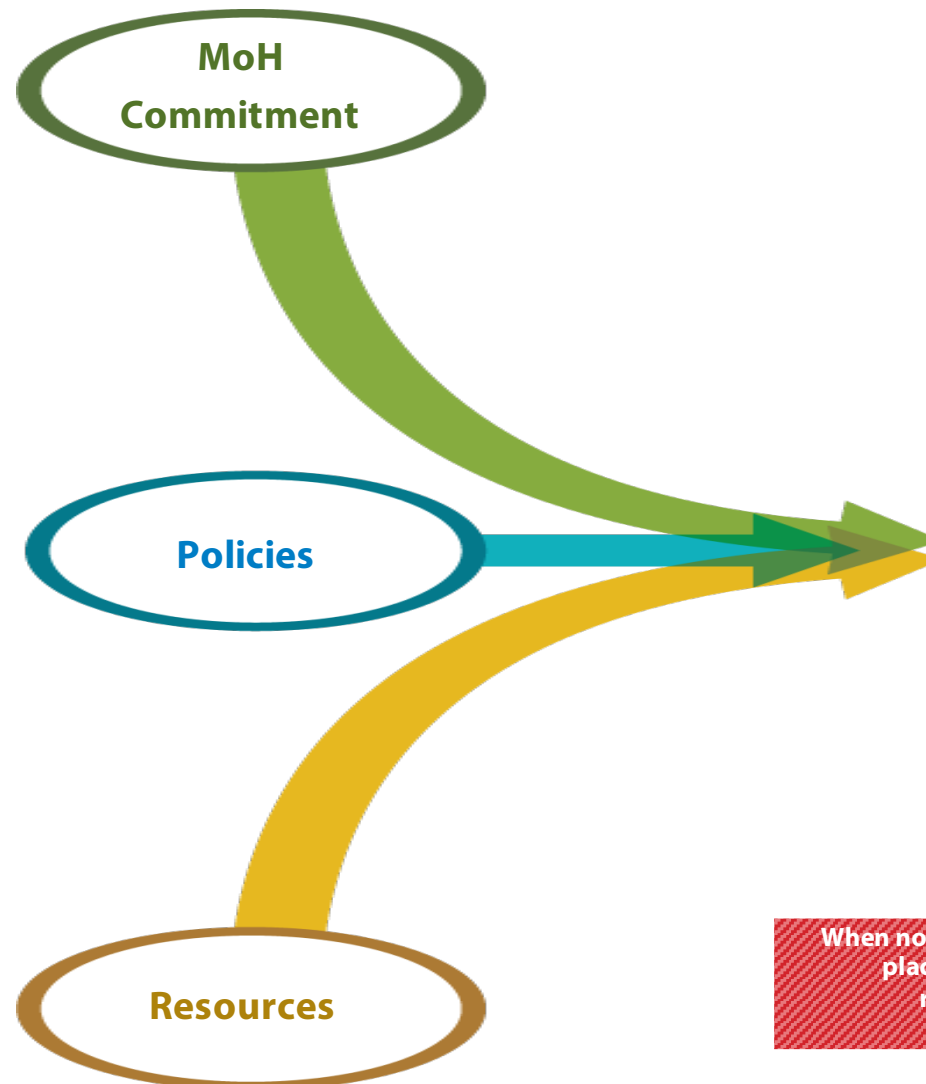
There is Ministry of Health (MOH) commitment/buy-in to:

- Address maternal health. For example PPH—ideally HMS BAB introduced as an integrated part of a comprehensive PPH strategy within the national safe motherhood program
- Implement at scale to have impact

A supportive policy environment exists.

Policies are in place to support implementation (e.g., misoprostol is on the formulary or used off label, appropriate personnel can administer uterotonic, etc.)

Resources are available (e.g., human resources, funding beyond initial training) or can be combined from various partners. Quality uterotonics exist and are in regular supply (i.e., oxytocin currently in MOH store, cold chain present, oxytocin regularly available, oxytocin free of cost, misoprostol regularly available, etc.).



When not everything is in place, consider BAB-related advocacy (see Annex E)

HMS BAB Rapid Assessment



First, it's important to understand the context so HMS can succeed.

A rapid assessment is useful to identify opportunities and barriers before designing and planning a program. Most countries with high levels of maternal mortality are addressing PPH with AMTSL or pre-eclampsia and eclampsia with anticonvulsants as part of SBA or BEmONC activities, so much of the information will be known.

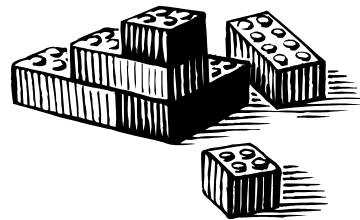
This activity should not take more than a week (excluding site visits) and should be able to be done jointly by the government (e.g., MOH, District Health Offices [DHOs]) and a mix of technical and program staff of the organization planning to support HMS implementation.

Even if the situation is well-known and a formal assessment is not believed to be necessary, do take the time to briefly document the situation. The assessment tool (Annex C) can be a guide. Documentation is helpful for comparison at the end of the program and for orientation as stakeholders change over time. If multiple partners are engaged in HMS, document jointly or share information (both can be done informally or formally through a technical advisory group [TAG]).

See Annex F for a sample
assessment tool

HMS Program Design Principles

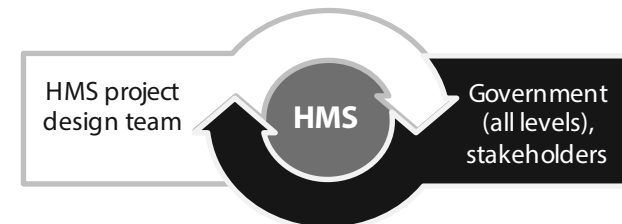
Using the rapid assessment findings and an understanding of the HMS approach to training, the next step is to design the HMS program. Before looking at specifics, this section presents some design principles, considerations, and lessons learned from HMS experience to date that shape program design.



Build on what exists and design for sustainability.

Within government health systems, HMS should be designed to build on and synergize with existing roles, programs, structures, and systems. It might make initial implementation more time-consuming, but can ultimately save time at scale-up (i.e., think about scale-up from start-up).

What is the simplest and most sustainable way to implement HMS through the existing health and clinical training systems?

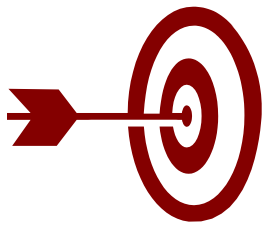


Build consensus.

During design and planning, there is an iterative process of building consensus with the government at all levels (e.g., central, regional, district) to ensure ownership from the start and with other stakeholders. Allow opportunities for interaction and sufficient time in the design and planning process. This also will build commitment to the approach—helpful if/when challenges arise or to address larger policy or systems issues (e.g., stock-outs).

Who needs to be engaged? How frequently?

HMS BAB Program Design Principles



Focus on areas of highest need.

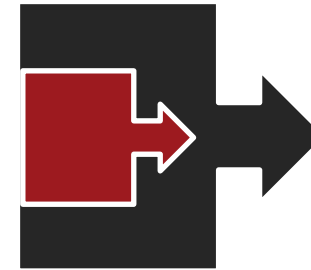
*Where can HMS contribute most significantly?
Who will benefit the most from HMS?*



Keep your end results in mind.

HMS was created to change clinical practice and improve health outcomes. It should reach all authorized providers at all health facilities in the implementation area. At the end of the day, HMS should help reduce maternal morbidity and mortality.

How much can HMS contribute to reductions in maternal deaths?



Integrate where feasible.

Often, programs look to integrate HMS into their existing programs, which may already be defined to geographic areas or selected facilities.

Are there trainings and/or QI initiatives planned or under way where HMS can be feasibly integrated (i.e., practical, cost-effective, efficient)?

Design and Planning Considerations

WHERE?

District selection

- Numbers of facilities, providers, district supervisors
- Priority areas (e.g., MOH, donor)
- Other factors that may affect implementation (e.g., rainy season)

WHO? HOW?

Identified resources in the districts

- Human resources: available trainers and master trainers (see Essentials #2), number of trainers needed
- Available transport for trainers to facilities
- Any available simulators
- Existing data recording and reporting systems for maternal health

WHO ELSE?

Ongoing maternal health efforts—particularly for PPH

- Ensure synergies of skills, approaches, and messages
- Avoid duplication of efforts
- Reinforce existing SBA training and extend the reach

WHAT ELSE?

Integration with other HMS or HBS modules and/or QI activities

- Has or will HBS be rolled out in the district/s?
- If yes, HMS can be integrated?
- Can HMS be used as part of QI activities?

See Annex B on implementing multiple modules

See Annex K on QI

Design and Planning Considerations

HOW TO PRACTICE?

Availability of clinical simulators

- Because HMS uses a simulation-based training approach, a sufficient number of clinical simulators is critical to HMS success.
- If simulators are limited, consider some alternative LDHF designs described in this section.

WHO DOES WHAT?

Defining roles and responsibilities of key district-level HMS players

- Be clear about the other roles, responsibilities, and commitments of HMS trainers, clinical mentors, and supervisor at the start.
- Unrealistic expectations and waning motivation may hinder HMS over time.
- Look for ways to strengthen existing systems and build HMS into them.

WHAT IS WORKING?

Dynamics within the district health system

- HMS often uses existing district systems (district trainers, within facilities, supervision, regular meetings, etc.).
- Supervision may be weak (due to limited staff or vehicles, poor roads, security concerns, supervisor skills, etc.).
- Recognizing what is possible within the district health system and how to strengthen it should factor into the design.

Design for Results—M&E

Early in the design process, determine your goal and build ways to measure progress into the HMS program from the start. While training is central to HMS, “training all providers” is not the end goal. The ultimate aim is to change clinical practice and improve health outcomes. Program scale and duration will vary, so program goals will be tailored to the specific context. Some examples:

When HMS is introduced as an intervention to improve quality of care—through training and practice—it is essential to measure and track progress on care and clinical outcomes.

A dashboard is available to support QI and track HMS related data in facilities.

- Reach 100% of health facilities in the district as HMS BAB-ready in nine months—meaning that all health care providers have been trained and have conducted their clinical practice sessions
- Ensure 100% uterotonic use for every facility birth—100% of women receive a prophylactic uterotonic immediately following birth (measured at each health facility)
 - Note: This may require other activities be implemented to complement HMS BAB, such as a policy that promotes 100% uterotonic use for every birth.
- Decrease the number of facility-based maternal deaths from PPH by 75% within two years*
- Decrease the PPH case fatality rate by 75% within two years*
- Halve the percentage of institutional (facility-based) maternal deaths from PPH within a year*

See the M&E Section for more detail on data sources and measurement

*Consult your M&E advisor to explore whether these are feasible within the design and available budget

HMS:

Addressing challenges to LDHF practice

HMS starts with training—but the weekly clinical practice is the “LDHF” component that makes it effective! LDHF practice may be difficult to plan, and even when planned, it may be difficult to run on a regular basis. **Having two Practice Coordinators appointed at each facility is key!** Here are practical solutions to ensure that LDHF practice occurs.

Regular practice is essential to HMS design.

Creative solutions are needed when LDHF practice sessions that follow HMS training are difficult to conduct on a weekly basis.

HMS weekly practice sessions may be difficult to plan and organize in the program design—for example, due to a limited number of clinical simulators or a large number of community midwives who practice outside of health facilities.

The LDHF component can be designed in different ways:

- Trainers can visit facilities each week with the simulator to facilitate the LDHF sessions (*plan for the increased logistical and travel costs*).
- Simulators can rotate every eight weeks to a different facility (*plan for a slower rollout to reach all facilities*).
- Practice sessions can be conducted during regular district or facility-level meetings, which may be monthly (*plan to stretch the practice sessions over eight months*).
- Identify barriers to LDHF practice and find ways to stimulate motivation to practice (e.g., small incentives for completion).

HMS BAB: *Addressing challenges to LDHF practice*

Only **42%**
of HMS BAB survey respondents
conducted LDHF practice with
providers following training
(HMS survey 2014).

With peer support for practice,
that number increased to,

60%

Getting providers to practice regularly can be a challenge at first. Consider adding activities into the design to better support and recognize health facilities running the simulations as planned, such as:

- If on-the-job training (OJT) or simulated practice at facilities is not common:
 - Ensure that providers have been oriented at each facility to serve as Peer Practice Coordinators.
 - Plan for phone calls or SMS at key points from the DHO, district trainer, or project staff to check in with practice coordinators on their progress.
 - Integrate LDHF practice sessions into other QI activities at the health facility.
 - Offer rewards/recognition from the DHO, MOH, or project to sites that run LDHF sessions on schedule or complete as planned.
- Find ways to make practice convenient. Add clinical practice sessions at the worksite onto existing events (e.g., at weekly facility meetings, begin or end with a LDHF practice session; supportive supervision visits include HMS session).
- Review and address common barriers to LDHF upfront: lack of funding; lack of equipment; lack of organizational support; lack of human resources to implement; unsure how to lead on-site practice activities; lack of government support.

HMS Planning:

Thinking through district rollout

Table 3–1 is the starting point for planning, based on the number of health facilities and the number and experience of the district trainers.

Smaller facilities will need a one-day training (≤ 6 providers). Keep separate counts of total providers at larger facilities to plan for enough training days.

Disaggregate if useful

TABLE 3–1. HMS SCOPE AND REACH		
	District: Dado	District: Moru
NUMBER OF SUB-DISTRICT UNITS	60	126
TOTAL NUMBER OF FACILITIES (highlight if facility has more than six providers to be trained):	60	129
Hospital	1 (>6 providers)	3 (>6 providers)
Health Center	3	37
Health post	56	89
TOTAL NUMBER OF PROVIDERS, BY CADRE:	224	330
SBA (doctor, midwife, nurse, auxiliary nurse-midwives)*	136	193
Other (specify)	86	137
District supervisors	2	3

* Including community-based midwives if relevant

HMS Planning:

Running the training numbers

Table 3–2 is an example of a training plan based on national and district rollout. There are a number of factors that affect the number of trainings needed; see the following pages for considerations.

TABLE 3–2. HMS TRAINING CALCULATIONS				
SCOPE		National	District: Dado	District: Moru
TOTAL NUMBER OF FACILITIES			60	129
1 trainer for every 6 participants	# of HMS Champions to be trained:	40	17	22
Both types of trainers need to be oriented and mentored (must be the same #)	Stakeholders and MNH Providers	35	11	14
	HMS master trainers	5	n/a	n/a
	HMS trainers		6	12
	# of trainers to orient on facilitation skills	5	6	12
	# of trainers to be mentored	5	6	12
Pull totals from Table 3–1	DISTRICT ROLLOUT:			
	# of district health workers to be trained	n/a	224	330
Pull total from Table 3–1; add more at larger facilities (>6 providers)	# of additional clinical simulators needed (if simulators needed)		60	133
	# of HMS on-site trainings to be conducted		62	132
2 per facility, 3 for hospitals	# of Practice Coordinators to be supported		60	261

HMS Planning:

Running the training numbers

Consider running back-to-back Champions training courses.

Candidate trainers can immediately be mentored to become qualified. It's a particularly cost-effective and practical way to prepare district training teams (See Essentials #2 for another option)

All trainers oriented and mentored before they are **qualified**.

If mentoring for trainers will occur during facility-level HMS trainings, budget for trainers' costs to mentor each candidate HMS trainer.

Remember the ratio for all Champions trainings is

1 trainer: 6 champion participants

Double-check you are preparing enough Master Trainers to support mentoring ***and*** enough trainers to roll out HMS to the facilities at the pace you'd like.

HMS Planning:

Running the training numbers

HMS Champion Training

National and district levels:

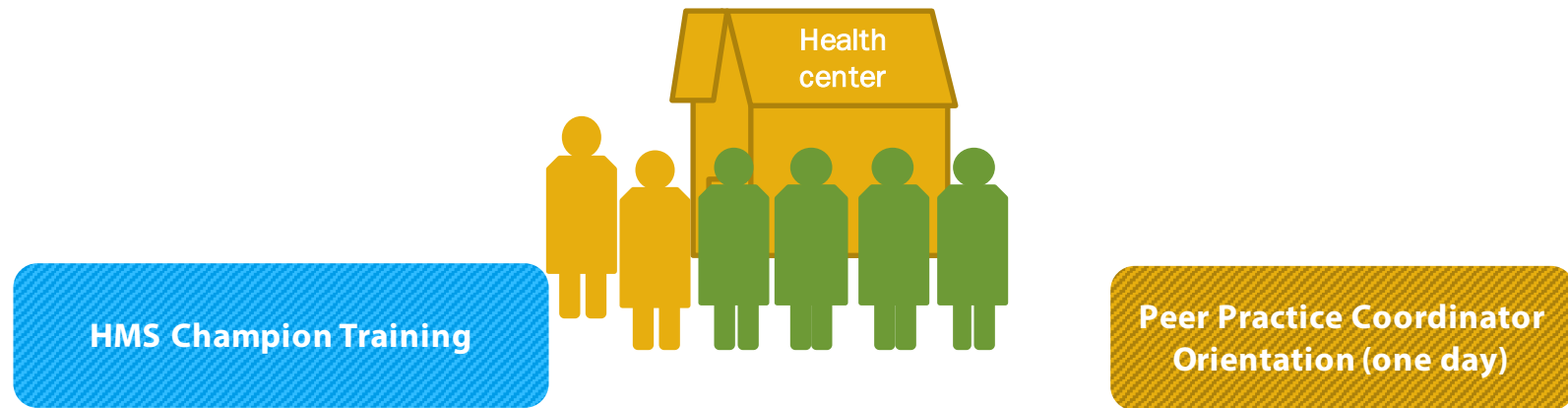
- Try and accommodate as many people as are interested—as long as there are enough Master Trainers and simulators (1:6 ratio)
- Schedule several back-to-back trainings, if needed, (e.g., train district trainers) to give candidates easy opportunities to become qualified
- Small numbers of Master Trainers should be sufficient

Facilitators Orientation (one day)

- Plan for one day after every Champion training that produces Candidate Trainers or Master Trainers

HMS Planning:

Running the training numbers



Facility level:

- From the total number of facilities, flag those with more than six authorized providers so either two trainers go or back-to-back trainings are planned (remember the 1:6 ratio).
- Divide the facilities by the number of district trainers for faster rollout, adjusting the schedule based on travel distances/times and the number of simulators.
- Plan a day at each facility after the Champion training/s.
- Even if numbers at the facility are small, orient two Practice Coordinators per facility for peer support and absences.

HMS Planning: Getting a workplan started

Before diving into detailed work planning, review the number of health facilities and providers to reach (**Table 3–1**). This is particularly useful to think through the logistics of training, mentoring, supportive supervision, M&E, etc. It also helps to double-check that there are sufficient resources (such as funding, human resources) to fully implement HMS BAB effectively at the scale proposed.

Take a quick look at the sample Gantt chart-style implementation plan (Annex G) that can be downloaded and adapted.

HMS BAB Sample Country Program Workplan – Year 1

ACTIVITY	RESPONSIBLE	BUDGET ELEMENTS	OUTPUT/ DELIVERABLE	Quarter 1			Quarter 2			Quarter 3			Quarter 4		
				1	2	3	4	5	6	7	8	9	10	11	12
1. PROGRAM DESIGN & PLANNING															
1.1 Introduction of HMS BAB in-country—in the context of the National Safe Motherhood Program				X											
• Identify and meet with key stakeholders (MoH) and key donors either formally or informally to introduce the HMS concept and BAB approach. Get initial buy-in to explore how HMS BAB will support and complement ongoing safe motherhood program activities (esp. PPH prevention and management)	• Country Director/COP with poparts /MNH Advisor	• Local transport allowances*, meeting costs, refreshments	• MoH (and ideally stakeholder) support to conduct a rapid assessment												
1.2 Focused rapid assessment				X											
• Relevant national and local policies, guidelines, standards, formulary • Mapping of stakeholders • Review of relevant MNH indicators/data • MNH services: Review of health services/service delivery (including clinical practices) and referral system; conduct site visits if necessary • MNH healthcare workforce/human resources for health: Pre-service, in-service training • Other issues: Supervision systems in place for MNH; equipment, procurement, and logistics	• poparts /MNH Advisor to lead or manage the team	• Depends on extensiveness of assessment • Possible elements: Staff LOE, travel, local consultant, per diem for assessment team	• Assessment results, possible formal report, used to inform program design												
1.3 HMS program design				X	X										
• Based on results of assessment, ideally in collaboration with MoH counterpart to ensure buy-	• poparts /MNH Advisor	• Local transport, meeting costs, local transport allowances*	• Program design												

Take a look at the
Implementation plan in
Annex G

HMS Planning:

Flagging time-consuming tasks upfront

Several activities may be time-consuming and therefore need to be planned well in advance. Invest time early in understanding the steps and process.



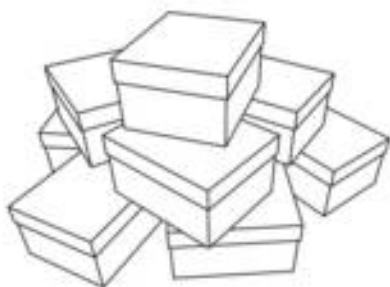
1 Ensure government buy-in and ownership



As HMS moves forward, it is critical that all key government counterparts at different levels (e.g., within the MOH, the national in-service training institution, DHOs) are engaged in the design and are briefed on the final implementation plan. This can help to clarify expectations, identify existing district mechanisms that can be used to integrate HMS (i.e., training, supervision, or reporting), confirm numbers, discuss logistics, and set basic fees and costs in line with government rates.



2 Procurement, logistics and supplies



- **Clinical simulators:** Allow two to four months to order and receive them.
- **Training materials:** Materials can be downloaded for free and printed in-country or ordered from Laerdal Global Health. Visit the HMS website to find translations for download. Plan sufficient time and resources to distribute training materials. Purchase or borrow delivery kits for Master Training.
- **Uterotonic supply:** If stock-outs or improper storage are issues, begin advocacy early with the MOH and other development partners.
- **Data collection systems:** Elements of M&E (such as creating a database, new reporting forms, SMS data collection platforms) may require time to procure and design.

HMS Planning:

Flagging time-consuming tasks upfront

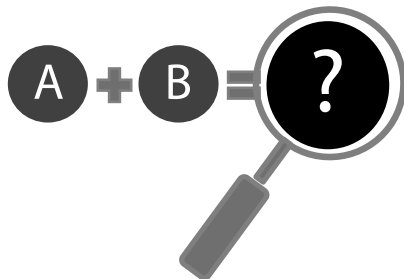
3 **Contracts and subagreements**



In some programs, partners will help implement and need to be subcontracted. Allow sufficient time for a competitive bidding process and internal contract approval process (total time estimated from two to four months).

For example, programs with a strong M&E component may hire a research agency or training and post-training supervision will be conducted by an NGO.

4 **Ethical approval for research**



If any part of the program will be studied or published, approval is needed from all relevant bodies (such as the national research council, Institutional Review Board [IRB], etc.). Total time estimated from 2 to 6 months

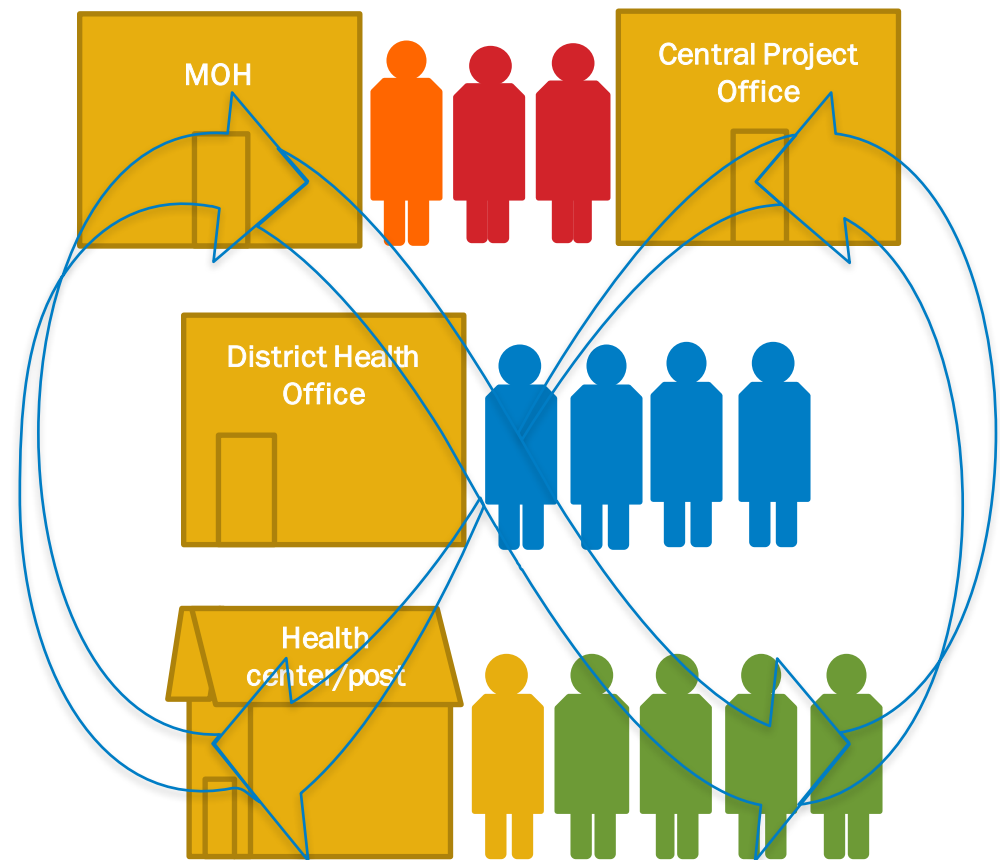
See the M&E section for more detail.

Roles and Responsibilities

Defining the key roles and responsibilities (who will do what) at all levels (national, district, sub-district) is important—across partners and with the government. Consider developing an MOU to clearly define roles at the start, especially if there are multiple implementation partners.

Key roles in HMS implementation include:

- **Advocacy** to address challenges (e.g., stock-outs, cold chain issues)
- **Procurement** (clinical simulators, training materials [translation (if needed), printing] and workshop supplies)
- **Training:** HMS Champions, Master Trainer and Trainers workshops, Clinical Mentor orientation—including documentation and coordination with national training institutions for certification
- **District rollout:** facility visits; follow-up for Clinical Mentors, supportive supervision
- **M&E:** Data from existing systems, additional data collection; data aggregation, entry and analysis, data use for decision-making



HMS Planning: M&E

“It is not possible to learn without measuring, but it is possible—and very wasteful—to measure without learning.”

—DM Berwick, 1998

There is a separate M&E section in this guide that should be reviewed in detail in the planning phase (see M&E Section). During planning, it is important to:

- **Develop the M&E plan:** Use the key HMS indicators (see Annex I), identify data sources, set targets, etc.
- **Define roles and responsibilities for M&E:** HMS programs need to build monitoring and support into existing government systems instead of developing a “vertical” monitoring and support system. Extensive recording and reporting can over-burden busy health care providers.
- **Determine if IRB approval is needed** (see M&E Section for more detail).
- **Detail costs in the budget for M&E materials, staff time, supplies and activities.**

See Annex I
for M&E plan

Workplan:

Planning phase (quarter 1)

Be realistic in your start-up planning, especially if you include research, translation, and procurement. These activities often run beyond one quarter. At the end of this phase, everything is ready to begin training.

Activity	Budget Line Items	Notes
1.1 Introductory meetings – national and district	<ul style="list-style-type: none"> Local transport, meeting costs, local transport allowances* 	Integrate into existing fora where possible; engage HMS master trainers
1.2 Focused rapid assessment	<ul style="list-style-type: none"> Staff level of effort (LOE), travel, local consultant, per diem for assessment team 	
1.3 HMS program design	<ul style="list-style-type: none"> Local transport, meeting costs, local transport allowances*, <u>Visit to implementation areas</u>: travel, per diem 	Integrate into existing fora where possible
1.4 Procurement	<ul style="list-style-type: none"> <u>Training</u>: simulators (including shipping, customs), delivery kits for Master Training, HMS training materials (ordering or printing), stationery, distribution <u>Partners</u> (e.g., research agency, NGOs) 	Be realistic in terms of time and costs for each step of procurement processes
1.5 M&E design	<ul style="list-style-type: none"> Local IRB fees[#], M&E forms printing, database development (for large-scale programs) <u>Training</u> for program staff and master trainers: venue, refreshments/meals, printing, photocopying 	Integrate into existing fora where possible
1.6 Other start-up support	<ul style="list-style-type: none"> Materials translation; project registration* 	

Need a bit of advocacy to make progress? see Annex E

* Local costs are illustrative and need to be relevant for the country context; [#] applicable if research is being conducted

Workplan:

Implementation phase (quarters 2–3)

Activity	Budget Line Items	Notes
2.1 Project kick-off	<ul style="list-style-type: none"> • Ideally conducted in donated space by local government • Printing, photocopies, other promotional materials/activities • Possibly travel costs, per diem, refreshments/food, equipment rental for presentations 	<ul style="list-style-type: none"> • Often done at the first national Champions training (in combination with Activity 2.2)
2.2 Champion trainings (national workshop)	<ul style="list-style-type: none"> • Local transport, meeting costs (including venue rental), certificates, local transport allowances* • Total number depending on scope/breadth of program • For each training: Program staff LOE, participant costs (travel, per diem) meeting space (if not done at health facility or free MOH space), trainers' fees, refreshments/meals, printing, photocopying, photographer^, training supplies/etc. 	<ul style="list-style-type: none"> • Expect one national and then facility-level trainings. The number of Champion courses will depend on the scale of rollout, # of available HMS Master Trainers, etc. • The number of participants per course will depend on the number of trainers (6:1 ratio) and simulators.
2.3 District-wide facility Champion trainings	<ul style="list-style-type: none"> • Program staff LOE, trainer fees and travel costs*, refreshments/meals, printing, photocopying, photographer^, training supplies/etc. 	<ul style="list-style-type: none"> • Depending on scope/breadth of program (e.g., # of facilities, providers, districts, simulators)
2.4 LDHF practice	<ul style="list-style-type: none"> • Program staff LOE, travel to sites (transport, per diem), phone credit (text messaging), printing/photocopies (e.g., LDHF logs) 	<ul style="list-style-type: none"> • Support during LDHF practice phase from program.

* Local costs are illustrative and need to be relevant for the country context; ^ it is encouraged to document the event

Workplan:

Implementation phase (quarters 2–4)

Activity	Budget Line Items	Notes
2.5 Performance and QI support	<ul style="list-style-type: none"> • Depends on program design • Possible costs: travel, per diem, printing/photocopying (e.g., mentoring or supervision checklists) 	<ul style="list-style-type: none"> • Could include monthly/quarterly clinical mentoring, monthly supportive supervision visits (ideally by MOH district supervisors or district trainers)
2.6 Regular stakeholder meetings	<ul style="list-style-type: none"> • Possible budget elements: staff LOE, meeting-related costs (e.g., printing, photocopying, refreshments, per diem, meeting space if not at the MOH or program office, etc.) 	<ul style="list-style-type: none"> • Quarterly suggested but determined by program needs • Build into existing safe motherhood technical advisory groups if possible
3.1 M&E implementation	<ul style="list-style-type: none"> • Program and M&E staff LOE • Site visits for data quality audits and data review meetings: meetings to share feedback/data: travel costs, per diem, meeting space, etc. 	<ul style="list-style-type: none"> • M&E monitoring visits, including data quality audits as feasible
3.2 Program communications	<ul style="list-style-type: none"> • Photographer/videographer • Graphic design, production, printing • Final dissemination event • Manuscript preparation, presentation at conferences** 	<ul style="list-style-type: none"> • Based on initial plan and budget • Plan to send regular program updates to the HMS Secretariat, including success stories and photos for the HMS website

* Local costs are illustrative and need to be relevant for the country context; ** encouraged to document the event

Implementation

Section 04

- ▶ Start-up
- ▶ Training
- ▶ Field visits
- ▶ Program management

Implementation:

Start-up

Whether integrating HMS into an existing program or conducting it as a new project, consider the following:

- Orient office staff (including hands-on exposure to materials and simulator), hire staff, etc.
- Develop a program communications plan to: collect stories from the field, including photos; prepare quarterly and/or annual reports; and capture any additional information on unique aspects of the program.
- Pay special attention to any activities or tasks that were flagged during planning as time-consuming to be sure they stay on schedule.
- Spend time early with key stakeholders to address any issues.

Implementation:

Resources for Training Activities

HMS Champion Training

Preparation

- Preparation checklist
- One-day Training Agenda

Training Day

- Knowledge Assessment Answer Key, Knowledge Pre/Post Test
- Pre/post confidence assessment
- Participant Characteristics
- OSCE Pre/Post checklist (OSCE 1)
- Participant Sign-in Sheet
- HMS Champions Participant Evaluation Form
- Training Certificate
- HMS Participant Log and Scores

Facilitators Orientation (One day)

- Candidate Trainers must pass all OSCEs There are 3-5 checklists depending on module.
- Training agenda
- HMS Trainer Participant Evaluation Form
- HMS Trainer and Master Trainer Certificate (*after qualified*)
- HMS Low Dose, High-Frequency Practice Sessions (with log)

Peer Practice Coordinator Orientation (1 day)

- One-day HMS Practice Coordinator Orientation Agenda
- HMS Low Dose, High-Frequency Practice Sessions (with log)
- Evaluation Form
- HMS Practice Coordinator Certificate

Implementation:

Field visits

Plan joint visits with government officials from the national or district levels, particularly those with supervisory responsibility. If not possible, brief and de-brief officials at the DHO and MOH on visit findings, opportunities, and challenges.

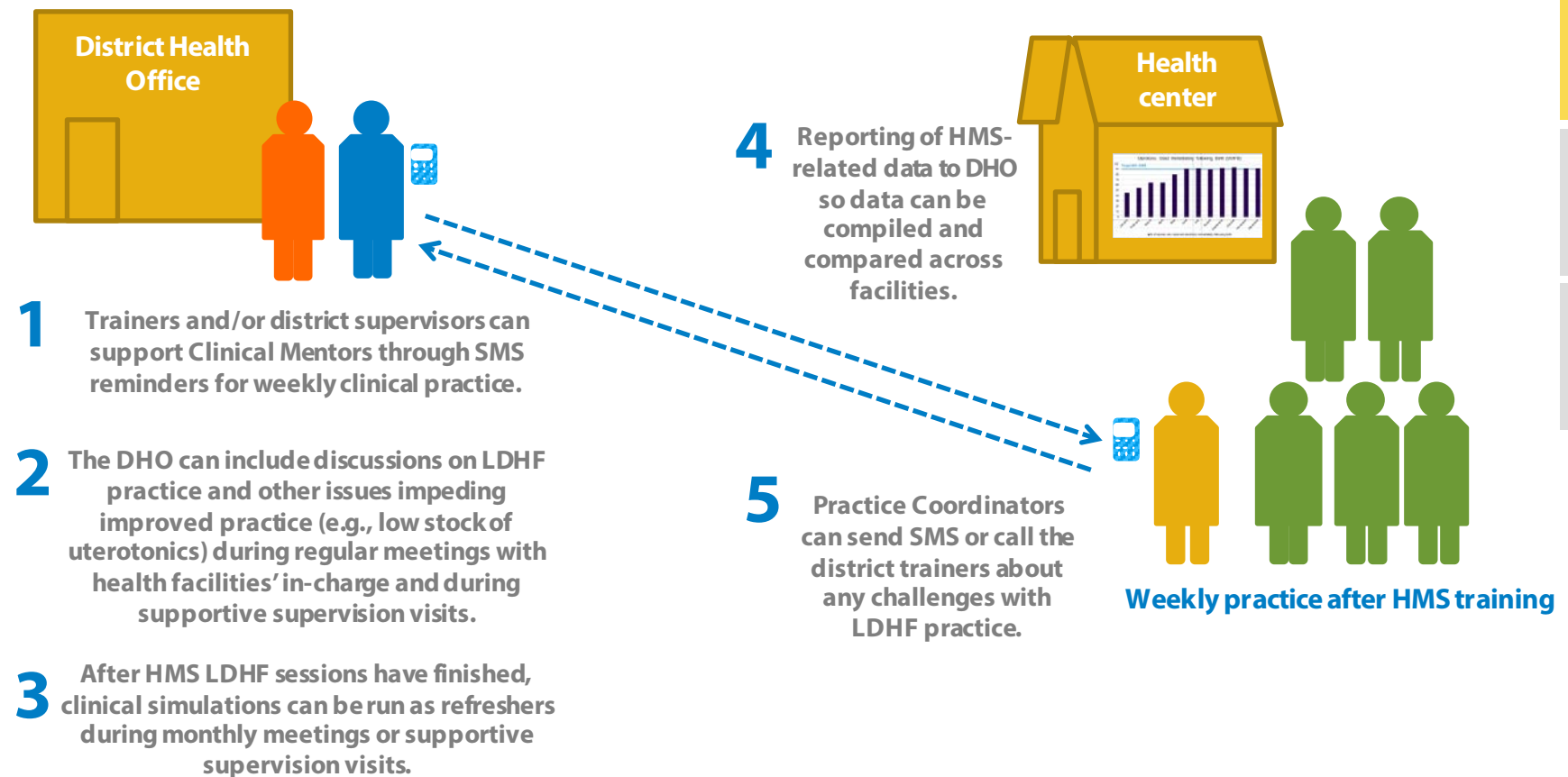
- **Program staff:** Monitoring visits to sites during training, LDHF practice, and afterwards:
 - Review of M&E process, facility challenges (e.g., stock-outs, staffing issues)
 - Collect program communications, including stories and photos
- **Technical staff:** Supportive supervision and clinical mentoring visits, including M&E:
 - Connect District Trainers with facility Clinical Mentors who are conducting practice after training with providers
- **M&E staff:** Site visits to review data recording and collection; data use support at the facility; data quality audits (as feasible)

The HMS Supportive Supervision form can be used for each facility visit to document progress and challenges.

Field visits are a good time to share available data analysis and reinforce data use for decision-making.

Implementation:

Additional ways to support HMS and improved practices



Implementation:

Program management

- **Documentation:** Program reports, HMS global trainer database
- **Program communications:** Success stories, publications, quarterly updates to HMS global, conference presentations,* manuscript*^
- **Regular stakeholder meetings** to maintain engagement, share results, get input/feedback; meet individually to orient any new stakeholders (e.g., staff changes at MOH)
- **Monthly workplan and budget review :** Timeline, expenditures in relation to budget

As your HMS program unfolds, please share your experiences from implementation—along with photographs, videos, and stories about providers and women who benefit from HMS—with the HMS global team so we can feature your work on the HMS website.

hmsglobal@jhpigo.org

Monitoring & Evaluation

Section 05

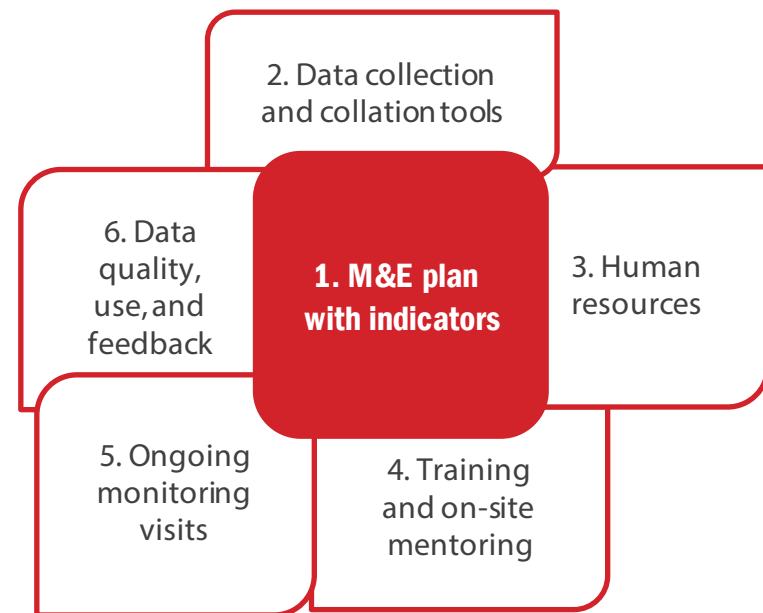
- ▶ M&E Plan
- ▶ Data Collection and Collation
- ▶ Human Resources
- ▶ Training
- ▶ Monitoring Visits
- ▶ Data Use and Feedback

M&E:

Tracking progress, measuring success

Whether HMS is implemented as a separate project or within a larger MNH program, it's essential to have all of the following in place for M&E:

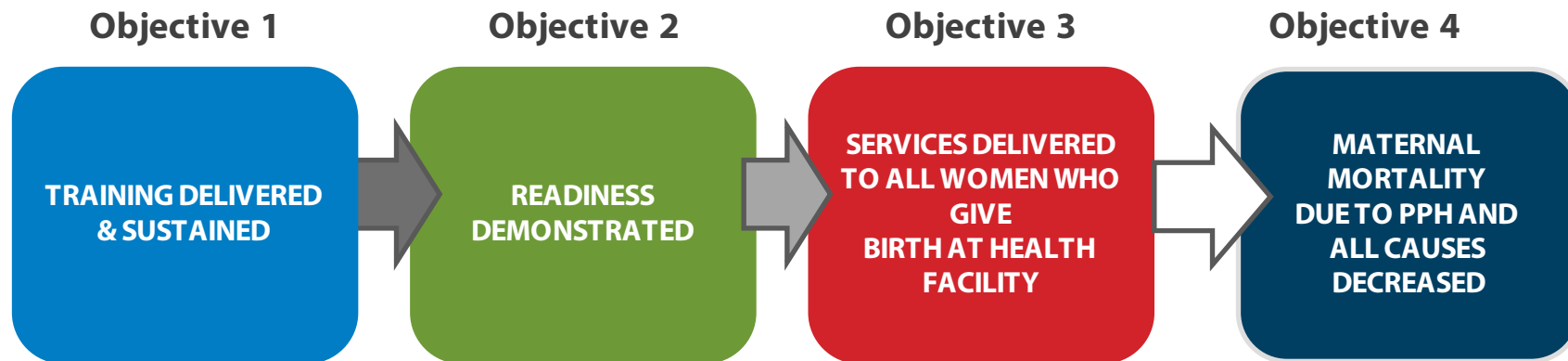
1. **M&E plan** with indicators
2. **Data collection and collation tools**—including paper forms, spreadsheets, and databases
3. **Human resources** for data entry, analysis, synthesis, and interpretation/visualization
4. **Training and on-site mentoring** for site staff and in-country staff to standardize data collection, management, reporting practices, and how to use data for decision-making
5. **Ongoing monitoring visits** to review and verify the quality of data
6. **Data quality, use and feedback** to sites on site-specific and project-specific performance



M&E Plan

The M&E plan serves as the “road map” to identify results to measure and indicate the success and/or shortfalls of your HMS program. It’s expected that HMS training and LDHF practice (Objective 1) will lead to improved readiness (Objective 2)—which should increase service provision (Objectives 3 and 4). The ultimate aim is to reduce PPH-related maternal mortality (Objective 5), but the ability to demonstrate this at a facility or across a program depends on the scale and duration. Indicators for each objective are presented next.

Program Goal: To reduce the incidence of complications and the number of deaths due to these complications



M&E Plan: HMS BAB example

Indicators

Program Goal: To reduce the incidence of PPH and the number of deaths due to PPH

Objective 1: TRAINING DELIVERED AND SUSTAINED

- 1.1 Number of **HMS Trainers** who have been certified after participating in mentored training
- 1.2 Number of **Clinical Mentors** trained
- 1.3 Number of **participants** in Champions courses
- 1.4 Percentage (number) of facilities that have **HMS-trained providers**
- 1.5 Percentage (number) of **SBA and other providers** trained in HMS per facility
- 1.6 Percentage (number) of **providers who practiced HMS**
- 1.7 Percentage (number) of **facilities that have at least 50% of the providers who have practiced after training day**

Objective 2: READINESS DEMONSTRATED

- 2.1 Percentage (number) of **birth attendants** who are observed at their job site and determined to be HMS competent
- 2.2 Percentage (number) of health facilities with at least 5 doses of un-expired **uterotonic** drugs (oxytocin and/or misoprostol) in the labor ward on the day of the visit

M&E Plan: HMS BAB example

Indicators (pre-final version)

Objective 3: SERVICES DELIVERED TO ALL WOMEN WHO GIVE BIRTH AT HEALTH FACILITY

3.1 If routinely collected, percentage (number) of women who **received a uterotonic** immediately after birth (within 1 minute) *(routine service delivery data if already captured in maternity register or on partograph)*

As part of supervisory visit and if a birth is observable, percentage (number) of women who **received a uterotonic** within 1 minute after vaginal birth (supervisory checklist or direct clinical observation during birth)

Specific drugs: oxytocin and misoprostol

3.2 **PPH incidence** in the facility (includes women who transfer into the facility)

Objective 4: MATERNAL MORTALITY DECREASED DUE TO PPH AND ALL CAUSES

4.1 **PPH case fatality rate**

4.2 **Institutional maternal death rate**

4.3 Number of all **deliveries** at the health facility

See Annex I for a detailed M&E plan

Data Collection and Collation

HMS is intended to use and strengthen the health management information system (HMIS) for routine data collection to the extent feasible. For example, recording of uterotonic for AMTSL or MgSO₄ for pre-eclampsia use varies (e.g., on a partograph, in a register), and not all national HMIS require reporting.

The following pages describe where and by whom data collection occurs.

As feasible, larger HMS projects may consider developing a database and/or SMS data collection system.












Data collection and collation tools—including paper forms

- Training Log
- Supportive Supervision Tool, with direct observation component tool
- HMS Practice Log
- Uterotonic, MgSO₄ etc, supply log

See Annex A for
M&E forms

Data Collection: HMS BAB example

At a glance

HMS BAB M&E implementation at different levels	Before facility-level intervention*	During facility-level intervention	After facility-level intervention
Project/national	 # of Champions: trainers, Clinical Mentors, participants (1.1, 1.2, 1.3)	• # of facilities (1.4)	
District (DHO)	 # of Champions: trainers, Clinical Mentors, participants (1.1, 1.2, 1.3)		
Facility		 # of Champions: Clinical Mentors, participants (1.2, 1.3)  % of providers who practiced (1.6)	
		<div>→→→→→→→→→→</div>  % of providers BAB competent (2.1)  #/% of facilities with uterotonic in laborroom (2.2)  % of women given UUFB (3.1)  PPH incidence (3.2)  PPH case fatality rate (4.1)  Institutional maternal death rate (4.2)  # of deliveries at health facility (4.3)	
* Facility-level intervention is the BAB one-day on-site training and the weekly simulated practice			

Code:

blue=project to collect data

green=data likely collected in registers and probably by HMIS (no extra data collection required, TBD)

red=data unlikely to be regularly collected in HMIS/LMIS and would require additional recording/reporting

Human Resources:

Roles & responsibilities

ENTITY	M&E ROLE / RESPONSIBILITY
HMS Trainers	Completes training log for Champions training course, facilitation skills workshop, and clinical mentors orientation. During supportive supervision visits, completes direct observation and/or practice tools.
Facility Providers	Primary data collector of uterotonic use and PPH incidence data on partograph and in registers. Facility-in-charge uses data to guide implementation at the facility level.
Peer Practice Coordinators/Clinical Mentors	Complete LDHF practice logs and submit to HMS BAB program. Complete monthly summary form. During supportive supervision visits, complete tools on uterotonic supply in the labor ward.
Facility/District Supervisors	Ensures data are checked and verified through periodic data quality assessments. Helps facility providers understand the data collected and implications for their activities. Helps facilities complete their monthly reporting and transfers this knowledge to the providers to carry out on their own.
National, Regional and District Government	DHO aggregates data from facilities and analyzing it monthly. Reviews progress and works to support low-performing facilities. Identifies lessons learned and makes strategic recommendations/decisions.
PROJECT:	
Project technical staff	Collaborates with M&E team on indicators that are useful to guide implementation. Lead analysis and synthesis of data. End-user of the information for decision-making. Participates in monitoring visits. Submits reports to DHO and MOH.
M&E point person(s)	Coordination role. Develops project database; supervises data entry (assuming there will be a data clerk to help with this). Provides training to facility providers and other project staff on standardized data collection. Develops data visualization to facilitate review and analysis of data with technical staff. Provides results against targets to donors and the MOH as well as the individual facilities generating the data. Conducts data quality audits. Builds ownership and buy-in for the overall M&E system. Develops and updates manuals, guidelines, training materials, and reports for program M&E.

Training and On-Site Mentoring for M&E

Training needs for M&E are minimal and can mostly be built into HMS BAB training events. In areas where data use and visualization are not already practiced, some additional training and support will be needed to help facility staff chart data on the dashboard/graph.

HMS Trainers

Trainers are oriented to training logs and the criteria for qualification during the facilitation workshop.
(For trainers who conduct supportive supervision visits, see Supervisors.)

Clinical Mentors

Practice Coordinators are oriented after the on-site training at their facility for a day. They are taught how to complete the training log, the uterotonic supply log and tally service statistics for the monthly summary form and dashboard.

Providers

Providers are responsible for recording service statistics.

Supervisors

District supervisors or project technical staff will be oriented on how to conduct direct observation and/or practice and complete the tools during supportive supervision visits.

See Annex A
for training materials

Data Quality, Use, and Feedback

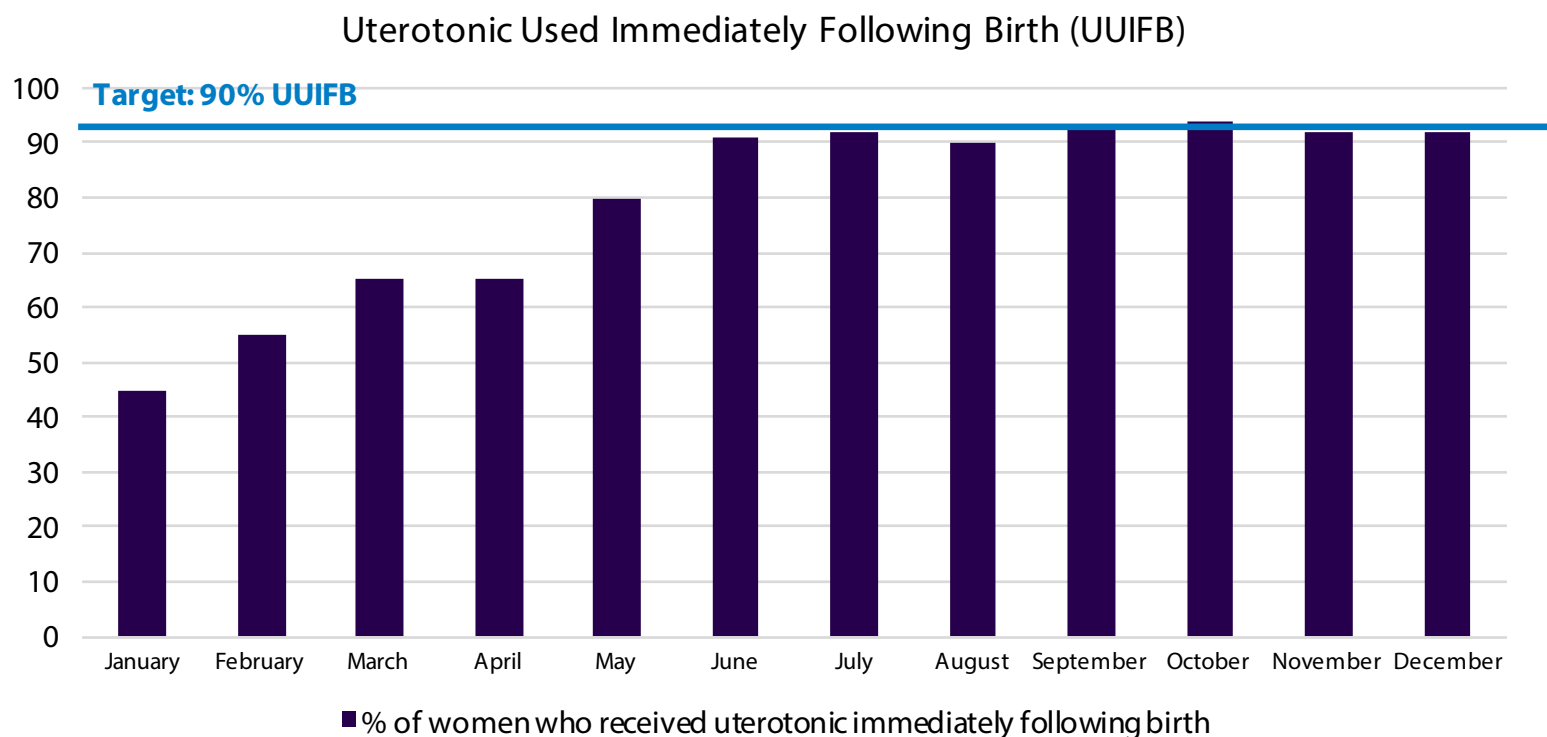
M&E is built into routine monitoring visits so data are reviewed and discussed with facility staff. Larger HMS programs (or HMS activities implemented within a larger maternal health program) would benefit from routine data quality assessments to track data from the original sources through the recording and reporting process to look closely at data quality, consistency, and completeness. Data use and feedback are important practices at health facilities, as well as at DHOs and program offices, but staff may need some additional training and mentoring to improve their capacity-building in this area.

Data visualization, such as on dashboards, can be a powerful way to help staff understand their daily practice and how well the facility performs over time. HMS will introduce two dashboards (see the next 2 pages).

Often, the combination of data quality assessments, data use, and data visualization all illustrate to providers the importance of recording complete and accurate data on time—boosting data quality over time.

HMS BAB:

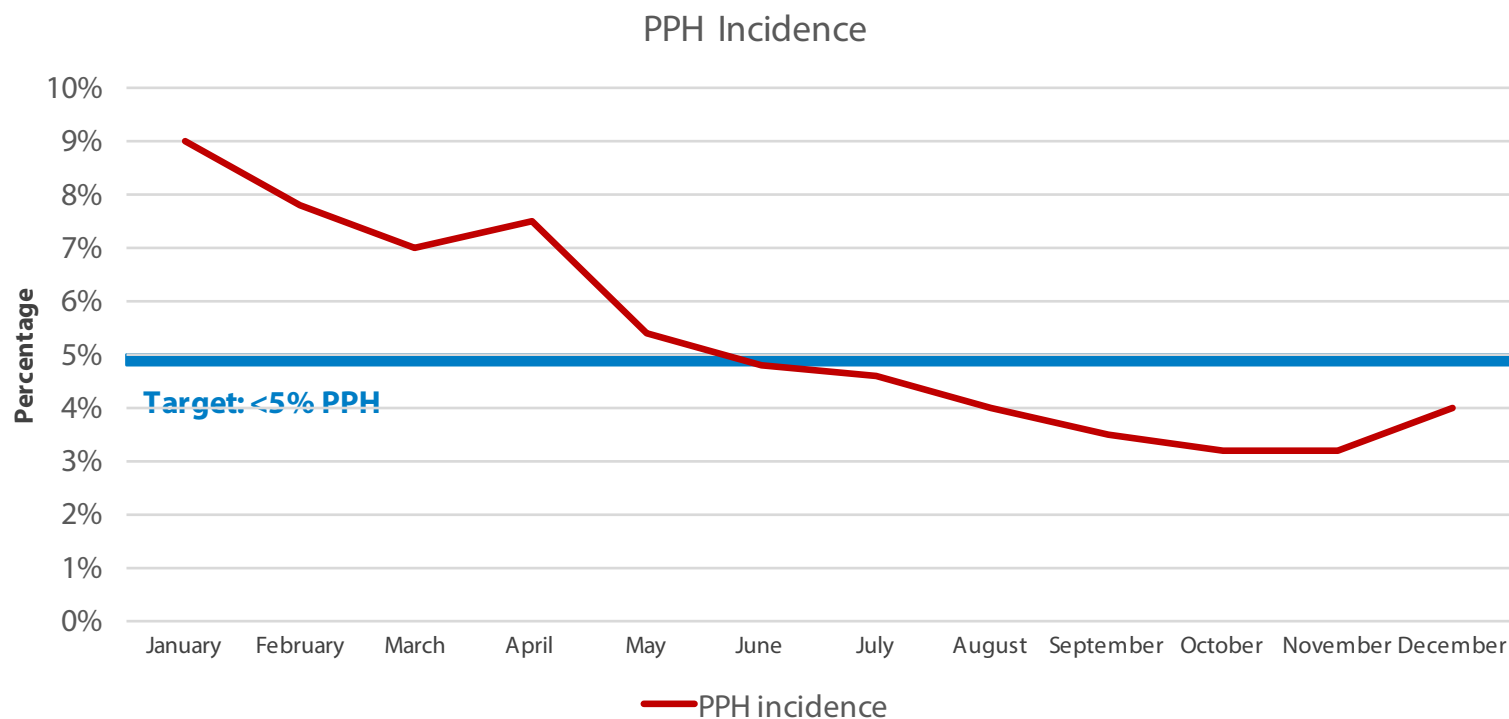
Graph for facility dashboard



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Numerator: Number of women who receive a prophylactic uterotonic after birth, before delivery of placenta												
Denominator: Number of vaginal births occurring in facility												
UUIFB (%): $\frac{\text{Numerator}}{\text{Denominator}} \times 100$												

HMS BAB:

Graph for facility dashboard



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Numerator: Number of PPH cases in the facility												
Denominator: Number of vaginal births occurring in facility												
PPH Incidence (%): <u>Numerator</u> x 100 <u>Denominator</u>												

Reasons to Invest In and Improve Data Collection and Reporting

- What gets measured, gets done.
- If you don't measure results, you can't tell success from failure and you can't identify gaps and find solutions.
- If you can't see success, you can't learn from it and share it.
- If you can't see success, you can't reward it.
- If you can't reward success, you probably are rewarding failure.
- If you can't recognize failure, you can't correct it.
- If you can demonstrate cost-effective results, you can scale up.

*Where are we now and
where do we want to be?*

*... and how do we know if
we getting there?*

M&E: *Other issues*

- **Ethical review and approval:** For research, ethical approval is always required. Increasingly, it is also required when using service statistics and routine monitoring data in peer-review publications or in presentations at international conferences. Early in project design, determine if national or organizational research ethical review approval (such as a national research council or IRB) for your activities is necessary. An application often takes 2 to 6 months to be completed, so it needs to be worked into the timeline and budget. An IRB application should be approved *prior* to any data collection activities.
- **Contracts, subagreements, etc. in place/executed** (as appropriate): Some programs with a strong M&E or research component may hire a research agency. Allow sufficient time for a competitive bidding process and internal contract approval process (total time estimated from 2 to 4 months).

Implementation Guide Conclusion

When implemented as designed, HMS can be a powerful way to change provider practices, improve care, and save lives. This guide provides practical information on how to use HMS to make a difference to more rapidly end preventable maternal deaths.

The global HMS Secretariat is available to respond to questions, provide support, disseminate your successes, and cross-pollinate lessons learned across HMS programs.

Stay in touch to learn about new materials—such as LDHF session plans—and new content modules, including HMS BAB+ and HMS Pre-eclampsia & Eclampsia.

Contact us at hms@jhpigo.org with questions or to share your experiences implementing HMS.

An in-depth understanding of HMS makes it easy to find a number of ways that it can be introduced and integrated into national programs to end preventable maternal mortality.

Annex A:

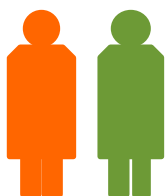
HMS BAB Tools & Resources

*The HMS website has full sets of downloadable resources that can be adapted for use in specific HMS country programs. **This annex presents BAB-specific materials.***

See [**www.helpingmotherssurvive.org**](http://www.helpingmotherssurvive.org)

Section 06

Available HMS Training Resources

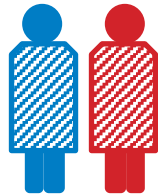


HMS Champions training

Available online in a combined PDF and in a zip file, HMS BAB Champions Sept2015

TRAINING MATERIAL	FILENAME
HMS BAB Training and Mentoring Preparation Checklist	HMS training prep checklist final.docx
Helping Mothers Survive Champion Training Facility Agenda for District Trainers	HMS Champions Facility Training Agenda final.docx
HMS BAB Knowledge Assessment Answer Key	HMS BAB Knowledge Key.docx
HMS BAB pre-test knowledge assessment	HMS BAB knowledge pre-test.docx
HMS BAB post-test knowledge assessment	HMS BAB knowledge post-test.docx
HMS BAB Pre-training Confidence Assessment	HMS BAB PRE confidence assessment final.docx
HMS BAB Post-training Confidence Assessment	HMS BAB POST confidence assessment final.docx
HMS BAB Participant Characteristics	HMS Participant Characteristics final.docx
HMS BAB Pre-test OSCE 1 AMTSL Skills Checklist	HMS BAB OSCE1 AMTSL pre test final.docx
HMS BAB Training Day Participant Sign in Sheet	HMS Participant sign in sheet final.docx
HMS BAB HMS Champions Participant Evaluation	Participant evaluation HMS Champion final.doc
HMS Champion certificate	TEMPLATE_Jhpiego HMS Champion Certificate final.docx
HMS Training Participant Log	HMS Training Participant Log and Scores.xlsx

Available HMS Training Resources



Training for HMS Trainers and Master Trainers

Available online in a combined PDF and in a zip file, HMSTrainers MasterTrnr
Sept2015

TRAINING MATERIAL	FILENAME
HMS Trainer Development Workshop	HMS Master Trainer Workshop Agenda template final.docx
HMS BAB OSCE 1: AMTSL Skills Checklist	HMS OSCE 1 AMTSL post test final.docx
HMS BAB OSCE 2: Retained Placenta Checklist	HMS BAB OSCE 2 Retained final.docx
HMS BAB OSCE 3: Severe Post-partum Hemorrhage (PPH)	HMS BAB OSCE 3 Severe PPH final.docx
HMS BAB: HMS Trainer Participant Evaluation	Participant evaluation HMS Trainer final.docx
Master Trainer certificate	TEMPLATE_Jhpiego HMS Master Trainer certificate final.docx
HMS BAB low-dose, high-frequency practice sessions	HMS BAB LDHF session plans no log final.docx HMS BAB LDHF session plans with log final.docx

Available HMS Resources



Clinical Mentor Orientation

Available online in a zip file

TRAINING MATERIAL	FILENAME
Orientation Session Plan for HMS/HBB	HMS HBB Clinical Mentor Orient Session Plan.docx
HMS BAB Low Dose, High-Frequency Practice Sessions	HMS BAB LDHF session plans no log final.docx HMS BAB LDHF session plans with log final.docx
Clinical Mentor Orientation Evaluation	Clinical mentor evaluation final.docx

Other tools and resources

Available online in a zip file


RESOURCE	FILENAME
HMS BAB Sample One-Year Workplan	HMSBAB Workplan Sept2015.docx
HMS BAB Rapid Assessment Guide	HMSBAB_rapid assessment_Sept2015.docx

Annex B:
HMS BAB Integration with the
Helping Babies Survive Suite and
Helping Babies Breathe

Section 06

Integration:

BAB and HBB



Mother and newborn are a unit

In reality, health care providers need to be able to manage complex emergency situations when they occur—often around the time of birth. As described earlier, HMS is designed to address the needs of a mother and newborn as a unit.

HMS therefore provides guidance on integration where there are natural synergies in terms of how care is provided, such as HMS BAB and HBS HBB. In those first minutes after birth, a provider may need to help an asphyxiated baby at the same time the mother experiences PPH.

This section describes:

- Similarities and differences in HMS and HBS design
- Suggestions for reinforcing HBB within BAB training and LDHF practice

HMS BAB & HBS HBB:

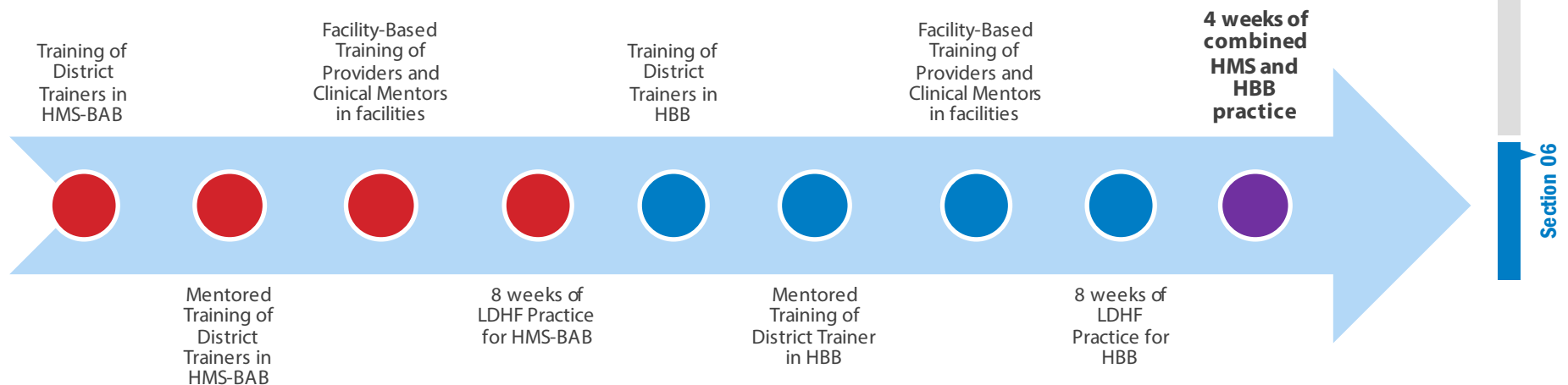
At a glance



DESIGN ELEMENT	SIMILARITIES	DIFFERENCES	
		BAB	HBB
Approach	<ul style="list-style-type: none"> 1-day training followed by LDHF practice Focused on basic lifesaving skills, complemented by advanced care skills 		
Participants	<ul style="list-style-type: none"> Health care providers at labor and childbirth in resource-limited settings Same ratio of 1 trainer to 6 participants 		
Training materials	<ul style="list-style-type: none"> Flipchart, guide, action plan wall chart 		
Equipment and supplies	<ul style="list-style-type: none"> Simulators used for training Basic supplies, delivery kits, towels for newborn, uterotonic, syringe, bag and mask, gloves, etc. 	<ul style="list-style-type: none"> Birth simulator 	<ul style="list-style-type: none"> Newborn resuscitation simulator
Training cascade	<ul style="list-style-type: none"> Focus of training is at the district and facility levels 	<ul style="list-style-type: none"> Shorter training cascade: begins at the district 	<ul style="list-style-type: none"> National master trainers, regional trainers, district trainers
On-site design	<ul style="list-style-type: none"> 1 day On-site 	<ul style="list-style-type: none"> Team approach 	<ul style="list-style-type: none"> Pairs providers for training and clinical practice
Post-training clinical simulation design	<ul style="list-style-type: none"> Emphasis on clinical simulation and practice after the short 1-day course 	<ul style="list-style-type: none"> 8 weekly clinical simulations (6 guides provided) Simulator remains at the facility for the 8 weeks (longer if sufficient models) 	<ul style="list-style-type: none"> All staff should run the clinical simulation before beginning their shift Simulator remains at each facility HBB corner set up in each facility

HMS BAB & HBS HBB

The synergy is in the approach. Integration for these modules occurs after both have been rolled out. For example, in Uganda, BAB was conducted in its original design and following the 8 weeks of LDHF practice, HBB was conducted as designed. At its conclusion, 4 additional weeks of clinical practice were supported using scripted, combined scenarios for both mother and newborn. Read Annex F for more detail on the process and findings from Uganda.



See Annex J
About HMS in Uganda

Annex C: Glossary of Terms

Section 06



HMS BAB Glossary of Terms

TERM

DEFINITION

Active management of the third stage of labor (AMTSL)

AMTSL is an intervention that requires the use of uterotonic, preferably oxytocin within one-minute after birth, optional controlled cord traction (CCT), and checking uterine tone and giving massage if needed to prevent PPH.

Clinical simulation

A learning practice that allows students or service providers to practice a skill with real instruments on anatomical models. This provides the learner an opportunity to practice in a life-like situation and achieve competence prior to working with a real client.

Health care provider

Traditionally, a health care provider for Helping Mothers Survive (HMS) is anyone who attends to a woman and her child on the day of birth. This can include community health workers and unskilled clinic staff. For HMS, health care providers are most often skilled birth attendants (**SBAs**) (midwives, nurses, medical doctors), but include clinical officers, assistant medical officers, health extension workers, or nurses aides.

HMS Champion

An HMS Champion is anyone who is interested in improving the care of women and babies on the day of birth. A champion is an advocate for LDHF practice of essential skills by health workers who provide care on the frontline. HMS Champions educate policymakers, educators, clinicians, and associations.

HMS Peer Practice Coordinator OR Clinical Mentor

An HMS Clinical Mentor is a qualified trainer (by either the Jhpiego trainer pathway or other pathway recognized by their country) and has undergone the HMS Master Training. They have experience in mentoring other providers or trainers in HMS. Of course, they are proficient in providing clinical services in their respective area and experienced in training learners in those skills.

HMS Trainer

An HMS Trainer is a qualified trainer (by either Jhpiego trainer pathway or other pathway recognized by their country) and is proficient in providing clinical services in their respective area and experienced in training other providers in those skills. In addition to these minimum qualifications, an HMS Trainer is trained in an HMS Champion training, completed an HMS facilitators training, and has been mentored as s/he conducts an HMS Champion training.

HMS BAB Glossary of Terms

TERM

DEFINITION

HMS Master Trainer

An HMS Master Trainer is recognized (by either the Jhpiego trainer pathway or other pathway recognized by their country) as a Master Trainer (i.e., a Trainer of Trainers). S/he is proficient in providing clinical services in their respective area and experienced in training learners in those skills. In addition to these minimum qualifications, an HMS Master Trainer has sufficient experience and skills in developing clinical training and coaching skills in HMS Trainers.

Low-dose, high frequency (LDHF)

Refers to a training approach where a learner receives small “doses” of hands-on training spread over time and preferably at the jobsite and also practices new or refreshed skills for a short period of time, but repeated on a frequent basis.

Objective Structured Clinical Examination (OSCE)

A tool used by teachers or trainers to test the clinical skill performance and competence. Learners are assessed on a one-to-one basis where they perform different skills.

Postpartum hemorrhage (PPH)

Blood loss of 500 ml or more within 24 hours after birth and the leading cause of maternal mortality in low-income countries. A majority of deaths due to PPH could be avoided with the use of prophylactic uterotonics during the third stage of labor.

Annex D: About PPH

Section 06



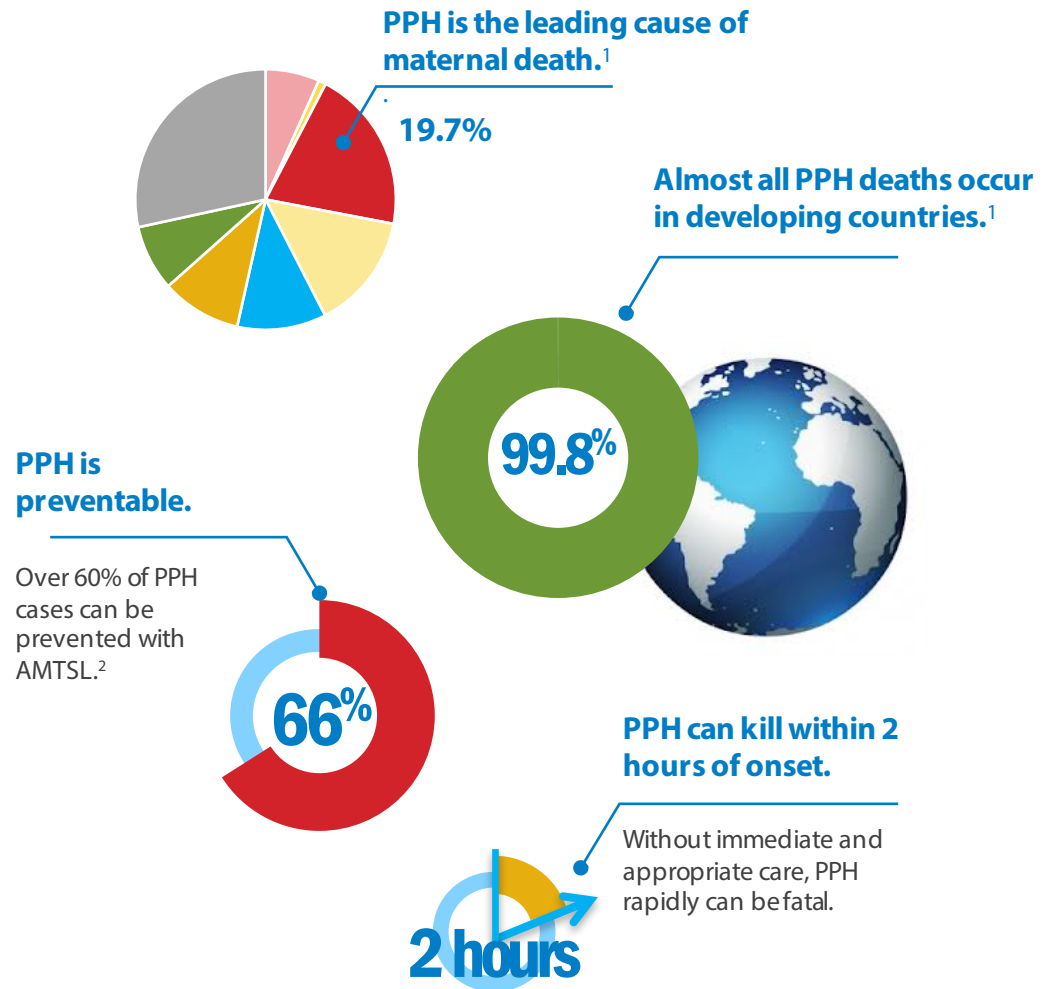
PPH by the Numbers

Ending Preventable Maternal Deaths from PPH

We know where women are dying from PPH—in developing countries. Just 1,200 women in developed countries died from PPH from 2003–2009, compared to 479,000 in the developing world.¹

PPH is the leading direct cause of maternal death in northern Africa, Eastern Asia, Southern Asia, Western Asia, Southeastern Asia, and Oceania.¹

It is estimated that worldwide PPH kills 188 women every day—that's 8 women dying from a preventable cause every hour.²



The Basics of PPH Prevention and Management

Most deaths resulting from PPH occur during the first 24 hours after birth: the majority of these could be avoided through the use of prophylactic uterotonics during the third stage of labour and by timely and appropriate management.

—[*WHO Recommendations for the prevention and treatment of postpartum haemorrhage*](#)

We know a lot about PPH and how to prevent and manage it. Here are some of the basic facts.

There is no way to predict who will experience PPH. When bleeding does occur, it can be difficult to measure and can go undiagnosed. PPH may occur slowly, over several hours. It may not be recognized until the woman goes into shock.

When blood loss is 500 cc or more in the first 24 hours after childbirth, bleeding after birth is called postpartum hemorrhage. Most PPH (70–90%) is caused by uterine atony—when the uterus doesn't contract.

Because all women are at risk for PPH, the WHO recommends that all women giving birth be offered uterotonics during the third stage of labor (immediately after birth within the first minute) for the prevention of PPH.

Oxytocin (IM/IV, 10 IU) is the uterotonic drug of choice. Misoprostol can be used where oxytocin is not available or injection is not available.

For women with PPH due to atony, immediate treatment involves uterine massage and additional uterotonics (preferably oxytocin). Retained placenta requires additional oxytocin and potentially manual removal and referral. HMS BAB focuses on the elements of PPH prevention and treatment that can be performed by most health workers and in any facility conducting births.

When bleeding is difficult to control, there are additional interventions (i.e., advanced care) that can be provided by a SBA. Other more complex interventions require a specialist or surgical expertise in a comprehensive emergency obstetric care facility (i.e., hospital).

PPH Prevention and Management: Opportunity

There are a number of reasons HMS BAB makes sense to implement now. HMS BAB has the potential to make a difference in maternal survival in low-resource settings with limited human resources for health (HRH).



Over half of women in developing countries are delivering in a health facility.¹

Facility-based births have steadily increased over the past 10 years; thus, interventions to improve quality of care at facilities have the potential to reach greater numbers of women and have a larger public health impact. At the same time, facilities need to be ready to respond quickly with lifesaving care when women arrive with PPH (e.g., after a home birth).



The best clinical practices for PPH prevention and management are known, and most are feasible in low-resource settings.²

WHO updated global recommendations for PPH in 2012. Emphasis is placed on uterotonic immediately after birth for prevention, which can be provided by frontline health workers. In the case of hemorrhage, initial interventions for management can be performed by frontline health workers.



All frontline health workers can respond and save lives.

Because PPH is the leading cause of maternal death, all health workers—especially in peripheral health facilities—need to be able to manage bleeding after birth. This includes SBAs, but is especially important where SBAs and doctors are in short supply. Strategies are needed to enable task-sharing and empower health care workers to deliver maternal health services.

¹ United Nations. Millennium Development Goals Report 2010. Note: in 24 USAID priority countries, institutional delivery rate in 2013 is 34% and expected to increase to 60% by 2020 (Ending Preventable Maternal Mortality: USAID Maternal Health Vision for Action, June 2014), p15.

Annex E: HMS BAB-Related Advocacy

Section 06



Design:

When advocacy is needed

Be resourceful in thinking about advocacy, and collaborate with other partners.

There may be issues identified in the rapid assessment that need considerable attention to ensure HMS can be most effective. For example, you may find regular stock-outs of oxytocin limit frontline health workers' ability to respond in PPH emergencies.

During the design process, you will need to decide which issues can be addressed in the design, and others during HMS implementation. Some may require more concentrated advocacy or policy-level work to ensure HMS has maximum impact.

Design:

When advocacy is needed

When faced with issues much larger than the scope of HMS, focused advocacy can be useful and very effective.

Consider how available data can be visualized and used. For example, uterotonic stock-outs may get more attention when facility or district statistics are graphed—and the drop in monthly AMTSL use is more obvious.

Here are some common issues that affect HMS implementation that can be addressed through advocacy. HMS BAB is the example here.

POLICY ISSUES:

- Some providers who attend births are not authorized to give injections
- Private sector or NGO providers (SBAs) are not eligible for government-supported BEmONC and therefore have outdated PPH knowledge and skills
- Misoprostol is not on the Essential List of Medicines for the country

HEALTH SYSTEMS ISSUES:

- Stock-outs of oxytocin, cold chain issues for oxytocin storage
- No data on PPH are available because this information is not reported in HMIS.

HRH ISSUES:

- Severe shortages of SBAs in peripheral facilities

Annex F: HMS BAB Rapid Assessment

Section 06



HMS:

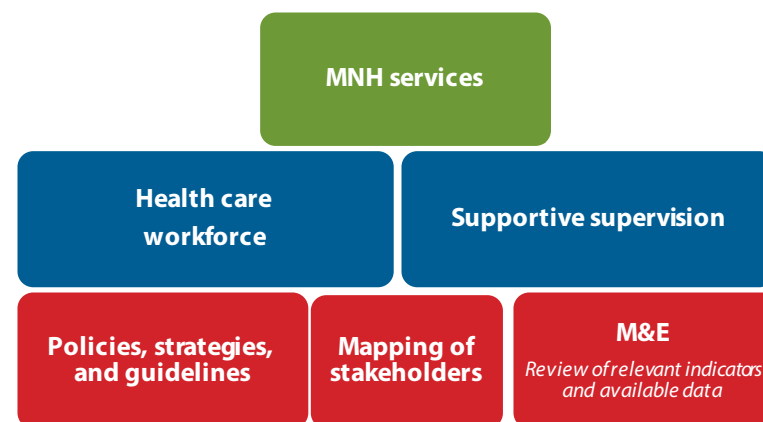
Rapid assessment – BAB example

1. Policies, strategies, and clinical guidelines

In addition to other related reports and documents, the following documents need to be collected and reviewed:

- Relevant national and local policies and strategies:
 - National PPH strategy
 - SBA policy
 - Misoprostol at home births* policy
- Clinical guidelines and standards consistent with WHO 2012: list any points that differ
- Performance and quality improvement tools/approaches in use
- Supply chain management (procurement/logistics)
 - Uterotonics on national List of Essential Medicines (or misoprostol approved for off-label use)
 - Uterotonics included in the logistics management and information system
- Planning in place to supply sufficient quantities and ensure quality (cold chain, quality control testing)
- Other barriers to policy/guideline implementation, etc.

Elements of HMS BAB rapid assessment



2. Mapping of stakeholders

In some contexts, building your relationships for HMS BAB coordination and collaboration begins at this stage. At this stage, invest the time to meet key groups or individuals, such as:

- Potential collaborators/detractors (e.g., ob/gyns at leading health facilities and medical colleges, professional associations, White Ribbon Alliance)
- Existing programs (complementary vs. duplicative)
- Existing TAGs for MNH
- Donors or sources of cost-sharing opportunities

* Misoprostol for PPH prevention at home births is provided in many low-resource settings. PPH management after prophylactic use of misoprostol should be specifically addressed in the HMS BAB training in these settings.

HMS BAB:

Rapid assessment

3. M&E: Review of relevant MNH indicators/data

Gather this type of information from the HMIS or other sources:

- Available national/provincial data on maternal mortality due to PPH
- % of births with SBA; % of births in a health facility (disaggregate by location and type of provider)
- AMTSL recorded/reported in labor and delivery (L&D) registers, facility dashboards, HMIS
- AMTSL performance (HMIS, other sources): disaggregate by type of facility; geographic region
- PPH cases in L&D registers, facility dashboards, HMIS
- Maternal death audit (or near-miss) data on PPH

4. MNH services

Clinical practices related to PPH prevention and management need to be documented as actual practice (compared to policies) at each level of the health system. A brief look at the referral system would be useful to reduce delays.

Conduct site visits if needed to better understand how PPH emergencies are managed, reported, and supported.

HMS BAB:

Rapid assessment

5. Health care workforce (i.e., HRH)

In this section, it's important to identify which cadres are “authorized providers” for PPH prevention and management, then roughly estimate numbers. Next, review basics of pre-service education and in-service training for these cadres:

- Number of trainers, training sites
- Training database/system; continuing medical education system; re-certification process
- Current in-service training approach – BEmONC, SBA, EONC
- Curricula on PPH consistent with WHO guidelines (HMS BAB)
- Data on providers trained to date on PPH, AMTSL, BEmONC
- Post-training follow-up data

Finally, explore other HRH issues including legal authorization and task-sharing opportunities.

6. Other issues (particularly opportunities and challenges)

Supervision systems in place for MNH—staff, tools, frequency, feedback, information and communication technology for development (ICT4D)—need to be understood. Both gender and equity issues also can be explored, in terms of training and services.

Before concluding the assessment, explore other tangential information that might influence or impact HMS BAB. Some examples include: traditional use of tea with uterotonic properties in Madagascar, poor quality oxytocin in India and Ghana, high levels of anemia in South Asia, and scale-up of misoprostol for PPH prevention at home births.

Use the HMS BAB rapid assessment tool to help guide the review and document findings.

Annex G: HMS BAB Sample Implementation Plan

Section 06



HMS BAB Sample Implementation Plan

Planning

A Word/PDF version is available in Annex A.

ACTIVITY	RESPONSIBLE	BUDGET ELEMENTS	DELIVERABLE	YEAR 1			
				Q1	Q2	Q3	Q4
1. PROGRAM PLANNING							
Introduction of HMS BAB in country—in the context of the National Safe Motherhood Program: Identify and meet with key stakeholders (MOH) and key donors either formally or informally to introduce the HMS concept and BAB approach. Get initial buy-in to explore how HMS BAB will support and complement ongoing safe motherhood program activities (especially PPH prevention and management).	Country Director/COP with in-country MNH Advisor						
Focused rapid assessment : <ul style="list-style-type: none">▪ Relevant national and local policies, guidelines, standards, formulary▪ Mapping of stakeholders▪ Review of relevant MNH indicators/data▪ Pre-service, in-service training, supervision systems in place for MNH▪ Review of MNH health care workforce, health services/service delivery (including clinical practices) and referral system; conduct site visits if necessary▪ Equipment, procurement, and logistics▪ M&E: What relevant MNH data/indicators are currently collected/tracked by the MOH at national/local levels?		<ul style="list-style-type: none">▪ Depends on extensiveness of assessment▪ Possible elements: program staff LOE, travel, per diem for assessment team	Assessment results, possible formal report, used to inform program design	X			
Stakeholder engagement/buy-in and advocacy: Might depend on situation analysis results to what extent this is needed (e.g., to advocate for program, for misoprostol to be added to formulary, etc., or we can make assumption that misoprostol is available in country or okay to use off label – need to agree on assumptions before developing guide); or could have this as part of planning		<ul style="list-style-type: none">▪ Depends on nature of engagement and advocacy activity▪ Possible budget elements: program staff LOE, meeting-related costs (e.g., printing, photocopying, refreshments, per diem, meeting space if not donated by MOH or program office, etc.)	Stakeholder engagement activities conducted	X			

HMS BAB Sample Implementation Plan

Planning and Implementation

ACTIVITY	RESPONSIBLE	BUDGET ELEMENTS	DELIVERABLE	YEAR 1			
				Q1	Q2	Q3	Q4
HMS Program Design: Based on results of assessment and ideally in collaboration with the MOH counterpart to ensure buy-in/involvement from the start <ul style="list-style-type: none"> Design elements to consider: Site selection and scope/breadth of program; roles and responsibilities (who will do what if shared implementation); training; LDHF; quality and performance support; M&E (M&E plan, select indicators from recommended list of key HMS indicators, identify data sources, set targets, etc.) 	Program Manager/Officer	<ul style="list-style-type: none"> Program staff LOE Possible follow-up site visits (travel, per diem) 	Workplan	X			
Procurement of supplies/equipment: Estimate and order sufficient simulators for project (e.g., for training, for LDHF, for mentoring if unable to provide MN x HF), HMS training materials (Action Plan, flipbook, provider's guide), other training materials (e.g., delivery kits, neonatal resuscitators, etc.).	Program Manager/Officer with Fin/Admin team	<ul style="list-style-type: none"> Cost for simulators, HMS training materials, other training materials, possibly oxytocin, misoprostol, and costs r/t supporting cold chain 	Correct type/number supplies and equipment, available in timely manner	X			
2. PROGRAM IMPLEMENTATION							
Preparation of training materials, supplies, and equipment: All things needed to support training are available and ready for implementation (e.g., simulators, supplies/equipment, HMS training materials, basic training supplies, etc.)	Program Manager/Officer	<ul style="list-style-type: none"> Most costs captured in program planning phase Other costs at time of implementation: photocopying, printing, program staff LOE, travel / per diem (in case we need to get supplies to site in advance of training) 	Training materials, supplies, and equipment	X			
Project kick-off: To formally introduce program, orient stakeholders to program, continued advocacy/awareness raising for program	Program Manager/Officer	<ul style="list-style-type: none"> Ideally conducted in donated space by local government Printing, photocopies, other promotional materials/activities Possibly travel costs, per diem, refreshments/food, equipment rental for presentations 	<ul style="list-style-type: none"> Project kick-off event Possible report of event, or notes 		X		

HMS BAB Sample Implementation Plan

Implementation

ACTIVITY	RESPONSIBLE	BUDGET ELEMENTS	DELIVERABLE	YEAR 1			
				Q1	Q2	Q3	Q4
Training implementation: <ul style="list-style-type: none"> Who: master trainers, HMS champions, Clinical Mentors, supervisors, include key administrative "gatekeepers" What (depending on who): HMS training, LDHF, mentoring, supportive supervision, and include M&E in trainings where appropriate 	Program Manager/Officer	<ul style="list-style-type: none"> Depending on scope/breadth of program need to provide specific guidance (e.g., for x providers being trained, 2 trainers x 4 clinical simulators, etc.) For each training (some costs already captured in program planning phase): Program staff LOE, possibly MOH LOE, travel, per diem, meeting space if not done at health facility, refreshments/meals, printing, photocopying, training supplies/etc., simulators. 	<ul style="list-style-type: none"> Trainings Report of training activities 	X	X	X	
LDHF practice: <ul style="list-style-type: none"> In terms of program staff, this means conducting activities that help to support LDHF (e.g., making calls to health facility to see how LDHF is going, possibly making site visits in the first few weeks following training to trouble-shoot any barriers to LDHF, etc.). Some programs may incorporate other ways of supporting LDHF (e.g., text messaging). In terms of MOH providers at the facility (assuming each facility has its own simulator), this refers to them actually doing LDHF, on-site practice with their peers (we know this may ultimately take on different forms depending on the program/context) 	Program Manager/Officer	<ul style="list-style-type: none"> Program staff LOE Some costs captured in program planning (e.g., simulators for each site) Other possible costs: travel to sites (fuel, per diem), text messaging, printing/photocopies (e.g., LDHF logs) 	<ul style="list-style-type: none"> Completed LDHF log sheets (and hopefully concomitant evidence of consolidation/sustained provider skills) Possible reports on LDHF practice developed by program staff that captures status of LDHF (whether it's being done, any trouble shooting, etc.) 	X	X	X	

HMS BAB Sample Implementation Plan

Implementation, M&E

ACTIVITY	RESPONSIBLE	BUDGET ELEMENTS	DELIVERABLE	YEAR 1			
				Q1	Q2	Q3	Q4
Performance and QI support (supportive supervision, clinical mentoring) <ul style="list-style-type: none"> Activities that will help to improve/maintain performance and quality of care at point of care. Could include monthly/quarterly clinical mentoring, monthly supportive supervision visits. Ideally conducted by MOH staffs who have been trained as Clinical Mentors and/or as part of their existing supportive supervision scope of work 	Program Manager/Officer	<ul style="list-style-type: none"> Depends on program design for this component of the program Possible costs: travel, per diem, printing/photocopying (e.g., mentoring or supervision checklists) 	Clinical mentoring or supportive supervision checklists and related reports (and hopefully concomitant evidence of improved performance, quality of care)	X	X	X	X
Regular stakeholder meetings: Conduct regular stakeholder meetings to maintain engagement, share results, get input/feedback – more meetings at start-up and thereafter on quarterly basis)	Program Manager/Officer	<ul style="list-style-type: none"> Depends on nature of engagement and advocacy activity Possible budget elements: staff LOE, meeting-related costs (e.g., printing, photocopying, refreshments, per diem, meeting space if not donated by MOH or program office, etc.) 	<ul style="list-style-type: none"> Regular stakeholder meetings Meeting notes/reports 	X	X	X	X
Program monitoring and evaluation: <ul style="list-style-type: none"> Implement M&E plan Ensure data quality and management Routinely analyze data and share reports Hold regular meetings with stakeholders for continual feedback Analyze, share, and use results 	M&E team	<ul style="list-style-type: none"> Program and M&E staff LOE M&E-related software or database Data collection Possibly site visits, meetings to share feedback/data: fuel, per diem, meeting space, etc. 	<ul style="list-style-type: none"> Collected M&E data Regular M&E analysis and reports Stakeholder meetings to share results + meeting notes 	X	X	X	X

Annex H: Clinical Simulators

Section 06



HMS BAB Resources:

Clinical simulators

MamaNatalie Simulator

Laerdal Global

<http://www.laerdalglobalhealth.com/doc/2545/MamaNatalie>

Zoe Model

Gaumard

<http://www.gaumard.com/s504-100>

PartoPants

Pronto International

<http://prontointernational.org/partopants-birth-simulator-2/>

Simulation is key to the success of learning. All modules require local equipment, mock drugs and local supplies for simulation. For some modules, anatomic simulators are needed. Here are some simulators that can be used.

Annex I: HMS BAB M&E Plan

Section 06



HMS BAB M&E Plan

NO.	ILLUSTRATIVE INDICATOR	DEFINITION/CLARIFICATION	TOOL	FREQUENCY OF DATA COLLECTION & REPORTING	RESPONSIBLE PARTY
1.1	Number of HMS Trainers who have been certified after participating in mentored training	To be certified equals a Champions course (1 OSCE), facilitation day (2 remaining OSCEs), and mentored training.	Training Log – to be adapted	Every training	HMS Master Trainer / Project Staff
1.2	Number of Clinical Mentors trained (by cadre)	Providers complete BAB training, are selected as Clinical Mentor to facilitate and record provider practice sessions using simulator and session plans.	Training Log	Every training	HMS Trainers
1.3	Number of participants in Champions courses (by cadre, active or not actively providing care)	Participants are those that actively participated in the 1-day BAB course and receive a certificate. Disaggregate by provider cadre (nurse, clinical officer/assistant, midwife, doctor) and actively providing care (providers) or not actively providing care (advocates, stakeholders, etc.).	Training Log	Every training	HMS Trainers
1.4	Percentage (number) of facilities that have HMS-trained providers (by district, by location of training [facility-based or workshop-based, by levels of practice])	<u>Numerator</u> : # of facilities in a district that have held a 1-day facility-based BAB training or have staff attend a workshop and practice. <u>Denominator</u> : Total number of facilities in the district that conduct birth.	Training Log	Every training	HMS Trainers

HMS BAB M&E Plan

NO.	ILLUSTRATIVE INDICATOR	DEFINITION/CLARIFICATION	TOOL	FREQUENCY OF DATA COLLECTION & REPORTING	RESPONSIBLE PARTY
1.5	Percentage (number) of providers who practiced (disaggregate by level of practice: <4 sessions and ≥4 sessions)	<u>Denominator</u> : Number of providers who have completed the HMS – BAB training. The HMS-BAB practice sessions (Duration of session: ~ 10 minutes per learner) are expected to be completed over an 8-week cycle (last 2 weeks are Clinical Mentor's choice) Session topics include: Prevention of PPH – AMTSL and review of transport plan; atony resolving with massage and medication; atony requiring bimanual uterine compression; retained placenta resolving with continued CCT; retained placenta requiring transfer; retained placenta that resolves and then becomes atony, resolving with massage and medication; and based on clinical events or Clinical Mentor's choice.	Practice log – to be adapted	Once 8 weeks after completion of HMS – BAB training (or if combined with HBB it would be collected and reported every 12 weeks)	Clinical Mentors
1.6	Percentage (number) of facilities that have at least 50% of the providers who have practiced (disaggregate by level of practice (<4 sessions and ≥4 sessions))	Related to Indicator 1.5 <u>Numerator</u> : Number of facilities that have at least 50% of the providers that have practiced. <u>Denominator</u> : Number of facilities that have gone through the HMS – BAB training.	Supportive supervision tool with direct observation component tool – to be adapted	Quarterly	Supervisors

Objective 2

READINESS
DEMONSTRATED

HMS BAB M&E Plan

NO.	ILLUSTRATIVE INDICATOR	DEFINITION/CLARIFICATION	TOOL	FREQUENCY OF DATA COLLECTION & REPORTING	RESPONSIBLE PARTY
2.1	Percentage (number) of birth attendants who are observed at their job site through simulation or through live observation to be BAB competent (disaggregate by cadre)	<p><u>Denominator:</u> All birth attendants observed and previously trained.</p> <p>Structured observation of performance with simulators or direct observation. Deemed competent if they have a 70% pass score on knowledge tests and for skills assessments— OSCE 1 = 9 out of 12, OSCE 2 = 6 out of 8, OSCE 3 = 8 out of 12 for simulation. <i>Observation of a birth needs further clarification.</i></p>	<i>Supportive supervision tool with direct observation component tool</i>	As part of supervisory visits and at 3 and 6 months	HMS Trainer (knowledge and skills testing)
2.2	<p>Percentage (number) of health facilities with at least 5 doses of un-expired uterotonic drugs (oxytocin and/or misoprostol) in the labor ward on the day of the visit.</p> <p>*Additional data may be able to be gathered from the LMIS on a routine basis related to stock-out of drug</p>	<p><u>Denominator:</u> Total number of health facilities visited during the quarter.</p> <p>Target: 90 – 100%</p>	<i>Supportive supervision tool with direct observation component tool</i>	Quarterly during supportive supervision visit	Clinical Mentors

HMS BAB M&E Plan

Objective 3

**SERVICE DELIVERED
TO ALL WOMEN WHO
GIVE
BIRTH AT HEALTH
FACILITY**

NO.	ILLUSTRATIVE INDICATOR	DEFINITION/CLARIFICATION	TOOL	FREQUENCY OF DATA COLLECTION & REPORTING	RESPONSIBLE PARTY
3.1	<p>If routinely collected, percentage (number) of women who received a uterotonic in the third stage of labor (<i>routine service delivery data if already captured in maternity register or on partograph</i>)</p> <p>As part of supervisory visit and if a birth is observable, percentage (number) of women who received a uterotonic within 1 minute after vaginal birth (<i>supervisory checklist or direct clinical observation during birth</i>)</p> <p><i>Specific drugs: oxytocin and misoprostol</i></p>	<p>If data collected routinely on maternity register or on partograph and collated into the monthly summary form: <u>Numerator:</u> Women who receive a prophylactic uterotonic (specific drug) after birth, before delivery of placenta <u>Denominator:</u> All vaginal births occurring in facility.</p> <p>If supervisory checklist / direct observation: record exact timing of birth and administration of uterotonic and specify which drug. <u>Denominator:</u> Number of births observed. Disaggregate data for uterotonic given within 1 minute and 3 minutes of birth.</p> <p>Target: 90–100%</p>	Routine data collection (HMIS where available) and / or Supportive supervision tool with direct observation component tool	Monthly for routine service delivery data or periodically through supervisory checklist / direct clinical observation checklist	Providers; external observers

HMS BAB M&E Plan

Objective 3

**SERVICE DELIVERED
TO ALL WOMEN WHO
GIVE
BIRTH AT HEALTH
FACILITY**

NO.	ILLUSTRATIVE INDICATOR	DEFINITION/CLARIFICATION	TOOL	FREQUENCY OF DATA COLLECTION & REPORTING	RESPONSIBLE PARTY
3.1	PPH incidence in the facility (includes women who transfer to the facility)	PPH is blood loss of 500 ml or more within 24 hours of birth. Disaggregated by hemorrhage of ≥ 500 ml and ≥ 1000 ml. <u>Denominator:</u> Number of vaginal births (ideal) or regular reporting norm to HMIS Benchmark: 5–10% (but may increase initially with more attention to PPH)	Routine data collection (HMIS where available)	Monthly / Quarterly (aggregated)	Providers; external observers

HMS BAB M&E Plan

Objective 4

**MATERNAL
MORTALITY
DUE TO PPH AND
ALL CAUSES
DECREASED**

NO.	ILLUSTRATIVE INDICATOR	DEFINITION/CLARIFICATION	TOOL	FREQUENCY OF DATA COLLECTION & REPORTING	RESPONSIBLE PARTY
4.1	Percentage (number) of PPH-related deaths at health facility	<u>Numerator:</u> All PPH cases that resulted in a death. <u>Denominator:</u> All PPH cases prior to discharge. Includes births that occurred at the facility or arrived with the complication.	Routine data collection (HMIS where available)	Monthly (aggregated into 8-week blocks)	Providers; external observers
4.2	Number of all-cause maternal deaths at health facility	Maternal death of a woman at the health facility. Disaggregate by place of delivery.	Routine data collection (HMIS where available)	Monthly (aggregated into 8-week blocks)	Providers; external observers
4.3	Number of all deliveries at the health facility	(Denominator for deaths to calculate rates as well as other indicators.) Disaggregate by vaginal birth and cesarean birth.	Routine data collection (HMIS where available)	Monthly (aggregated into 8-week blocks)	Providers; external observers

Annex J: HMS BAB Country Examples

Section 06



Uganda: HMS BAB with HBB

The Saving Lives at Birth: Grand Challenges for Development award presented a unique opportunity to study the implementation of the LDHF approach twinning HMS BAB with the HBS HBB. This implementation research allowed us to explore how varying amounts of support during LDHF practice affected provider performance and clinical outcomes.

With MOH participation, BAB and HBB were introduced sequentially in all 125 public facilities conducting birth in 12 remote districts. Jhpiego trained eight Master Trainers who trained and mentored 24 District Trainers. It was there District Trainers who rolled out facility-based trainings and practice to all providers on the labor ward team for BAB and HBB.

Following the 1-day training, health providers in each facility were expected to conduct practice sessions using the simulators to simulate different scenarios on a weekly basis (eight sessions).

After BAB LDHF practice concluded, HBB training was conducted by the same trainers for the same providers. At the end of the eight weeks of practice for HBB, providers practiced for an additional four weeks using scripted, combined scenarios for both mother and newborn. (see Annex B for specifics on integrated implementation).



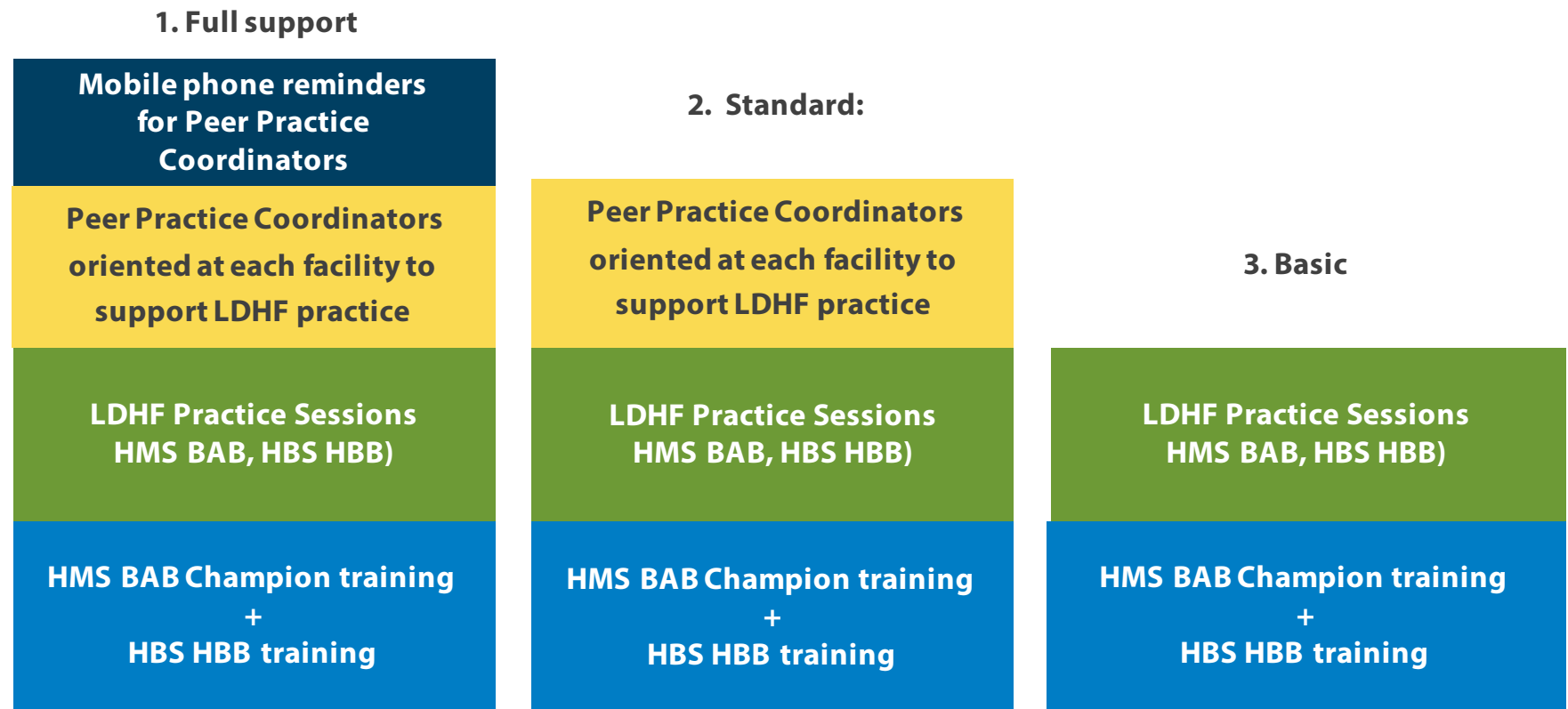
In Uganda, the maternal mortality ratio remains high at 310 maternal deaths per 100,000 live births. PPH is the leading direct cause.

The neonatal mortality rate is 27 per 1,000 live births, with the largest proportion due to asphyxia.

—WHO, 2013

HMS BAB in Uganda:

Implementation models in study



For groups 1 and 2, having two Practice Coordinators per facility will address turnover and ensure practice occurs on a routine basis

HMS BAB & HBB in Uganda:

Results and Lessons learned

Using the LDHF approach, we achieved significant success. Across study facilities we saw a decrease in PPH by 17% and in retained placenta by 47%. Fresh stillbirth decreased by 34% and newborn death in the first 24 hours by 62%.

Before implementation, health care provider knowledge on prevention and management of PPH and management of neonatal asphyxia was high—but skills were low. After both trainings, knowledge and skills increased dramatically after the one-day BAB and HBB facility-based training.

Initially, providers found it difficult to adhere to the eight-week schedule of LDHF simulated practice. After BAB training, less than half of facilities submitted their practice log, and about half of providers practiced at least one time during the eight-week LDHF period. Low reported practice was due to high workload, not having a partner to practice with, or they did not have time.

Providers found it easier to do the practice during the second round – After HBB, the majority of facilities increased practice. Anecdotal reports from the District Trainers and Practice Coordinators revealed that this concept of LDHF practice at the facility was new to them and with the second training intervention, the emphasis helped them to understand the goal and importance of LDHF practice.

HMS BAB in Malawi



Through the Jhpiego-led USAID-funded Support for Service Delivery Integration-Services (SSDI-Services) Project, HMS BAB has been implemented through facility-based mentoring. The SSDI approach is to visit to a facility each month for four hours during which providers have their performance assessed on the job and then are mentored based on their particular needs (e.g., maternal health, child health, nutrition, family planning, malaria). The maternal health mentors are HMS trainers who travel with a simulator. They visit facilities and observe births to identify gaps in performance (or run practice sessions if there are no deliveries).

As of 2013, there were 60 HMS district trainers (at least four per district), and HBB has been synchronized with the BAB roll-out. The main challenges have been the limited number of simulators (i.e., only one per district) and referrals for advanced care, when needed.

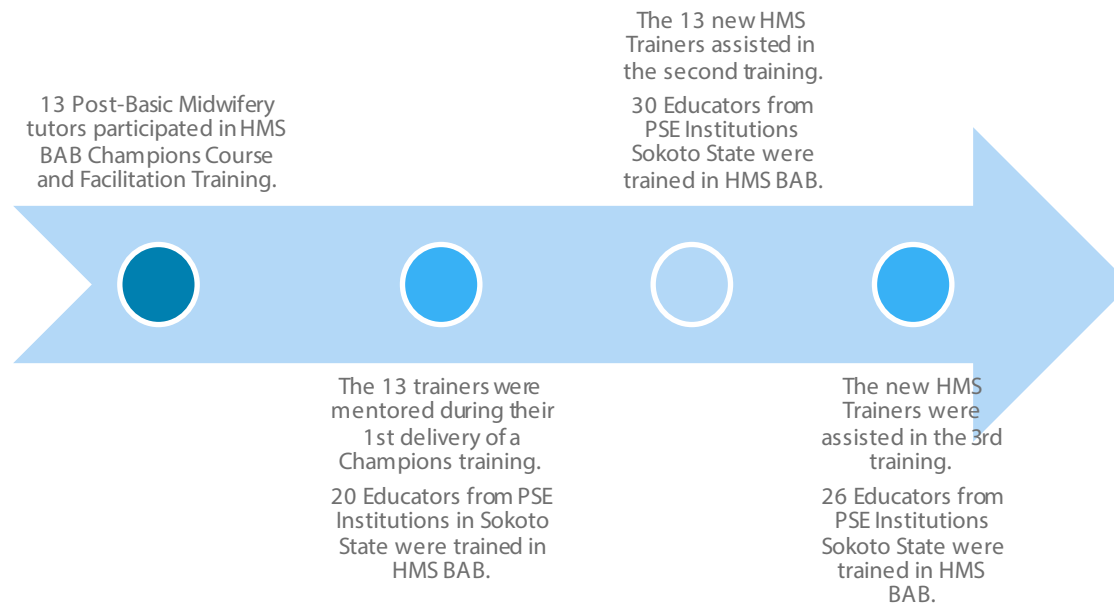
In Malawi, 675 women die in every 100,000 live births. That's 3,749 deaths each year due to pregnancy and its related complications.

PPH is the cause of one of every three of these deaths (34%).

—Malawi Demographic and Health Survey, 2010

HMS BAB in Nigeria

Nigeria has used HMS BAB in a different way—within pre-service education. Jhpiego and the USAID-funded bilateral Targeted States High Impact Project (TSHIP) worked with three higher-learning institutions to assist teaching faculty in incorporating simulated-practice and competency-based training approaches into their classes. With some minor adjustments, the on-site approach was well-received and deemed cost-effective. Faculty knowledge scores increased from 80% to 96%.



With a maternal mortality ratio of 576 in Nigeria,¹ about 40,000 mothers die each year due to pregnancy and its related complications.²

Postpartum hemorrhage (PPH) accounts for 25% of those deaths.³

¹ National Population Commission (NPC) [Nigeria] and ICF International. 2014. Nigeria Demographic and Health Survey 2013. Abuja, Nigeria, and Rockville, Maryland, USA: NPC and ICF International.

² WHO Maternal Mortality in 1990-2013 (find full citation).

³ UNICEF Nigeria Maternal and Newborn Health (find full citation).

Annex K: Additional Activities for Quality Improvement

Although HMS focuses on increasing knowledge and skills to change providers' practice, it has been designed and implemented to support other aspects of quality care (e.g., communication, evidence-based care, teamwork, and data use).

HMS Planning:

Quality and performance support

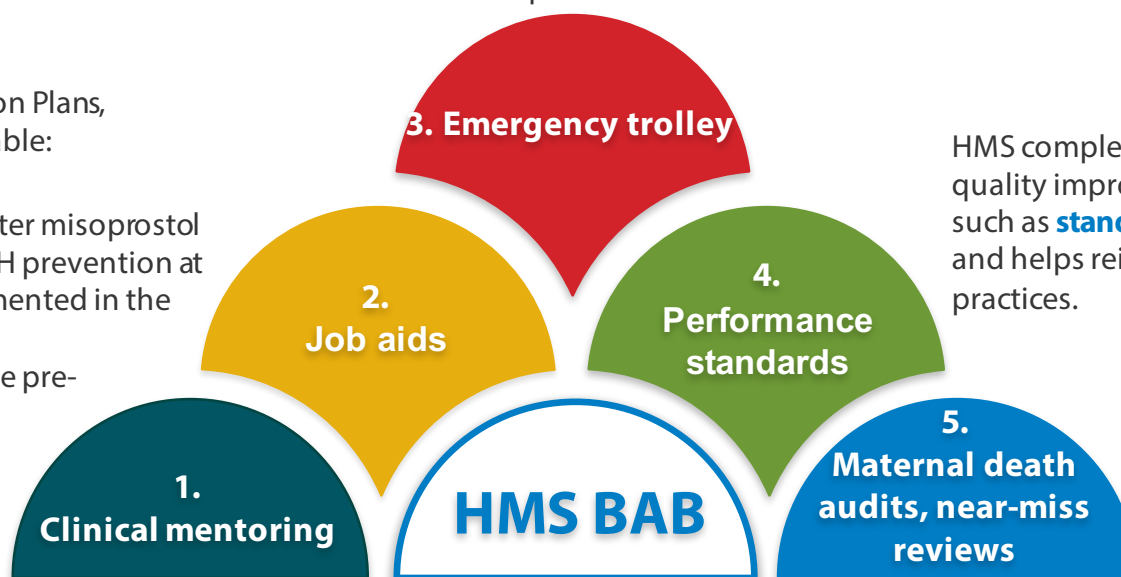
The way HMS has been designed and implemented supports other aspects of quality care (e.g., communication, evidence-based care, teamwork, and data use). There are other QI activities that can address other issues not related to learning. Here are some examples of QI activities that could complement HMS.

A well-stocked and equipped **emergency trolley** can address both maternal and newborn care emergencies. A daily checklist helps ensure the contents are complete.

In addition to HMS Action Plans, other **job aids** are available:

- PPH management after misoprostol at a home birth (if PPH prevention at home birth is implemented in the same area)
- Drug charts for severe pre-eclampsia

HMS complements ongoing quality improvement activities, such as **standards** (e.g., SBM-R), and helps reinforce key practices.



As part of HMS, existing **supportive supervision and clinical mentoring** systems within facilities and districts will be used to implement and support HMS.

Larger facilities typically conduct on-site **maternal death audits and near-miss reviews** as part of Maternal and perinatal death surveillance and response (MPDSR). In-depth reviews of complicated cases (both deaths and saves) can help identify barriers and address them.