



**USAID**  
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# National Programs for the Prevention and Management of Postpartum Hemorrhage and Pre-Eclampsia/Eclampsia

A Global Survey, 2012



photo by Kate Holt/Jhpiego

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Maternal and Child Health  
Integrated Program

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# ABBREVIATIONS AND ACRONYMS

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AMTSL	Active management of third stage of labor
BEmONC	Basic emergency obstetric and newborn care
CCT	Controlled cord traction
DRC	Democratic Republic of Congo
EML	Essential medicines list
HCI	Health Care Improvement Project
HMIS	Health management information system
ICM	International Confederation of Midwives
IM	Intramuscular
IV	Intravenous
LAC	Latin America and the Caribbean
M&E	Monitoring and evaluation
MCHIP	Maternal and Child Health Integrated Program
MCPC	Managing Complications in Pregnancy and Childbirth: A Guide for Midwives and Doctors
MgSO <sub>4</sub>	Magnesium sulfate
MMR	Maternal mortality ratio
MNCH	Maternal, neonatal and child health
MOH	Ministry of Health
PE/E	Pre-eclampsia/eclampsia
PHC	Primary health center
PPH	Postpartum hemorrhage
SBA	Skilled birth attendant
SDG	Service delivery guideline
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WHO	World Health Organization

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We would like to give a special thanks to the national Ministries of Health, and related departments, committees and working groups of maternal and reproductive health in the countries that completed the surveys. These groups met and answered the survey questions as a collective exercise to provide the requested data for this global survey and to analyze and further understand their national programs and efforts.

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- Africa: Angola, Democratic Republic of Congo, Equatorial Guinea, Ethiopia, Ghana, Guinea, Kenya, Liberia, Madagascar, Malawi, Mali, Mozambique, Nigeria, Rwanda, Senegal, South Sudan, Tanzania, Zanzibar and Zimbabwe.
- Asia: Afghanistan, Bangladesh, Cambodia, India, Indonesia, Nepal, Pakistan, Philippines, Timor Leste and Yemen.
- Latin America: Bolivia, Ecuador, El Salvador, Guatemala, Honduras, Nicaragua and Paraguay.

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MCHIP is the USAID Bureau for Global Health's flagship maternal, neonatal and child health (MNCH) program. MCHIP supports programming in maternal, newborn and child health, immunization, family planning, malaria, nutrition and HIV/AIDS, and strongly encourages opportunities for integration. Cross-cutting technical areas include water, sanitation, hygiene, urban health and health systems strengthening. Visit [www.mchip.net](http://www.mchip.net) to learn more.

# INTRODUCTION

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Programs to reduce mortality from postpartum hemorrhage (PPH) and pre-eclampsia/eclampsia (PE/E) are in place in many countries worldwide. The United States Agency for International Development (USAID), with the support of the Maternal and Child Health Integrated Program (MCHIP) and through its multiple partners, tracks the implementation and progress of these country programs. In support of this effort to understand global progress in reduction of maternal mortality, in 2010 MCHIP developed and continues to maintain a database of PPH and PE/E country-level information worldwide. A further update and analysis of this database are presented here for 37 countries worldwide. This exercise is a continuation of the MCHIP mandate to support the scale-up and expansion of proven public health program activities in the USAID priority countries. The database will continue to track ongoing progress of programs that target PPH and PE/E in multiple countries worldwide and provide that information for a global audience. More complete understanding of these data will better serve existing and new projects, and will be useful as a reference for USAID and partners as they advance program progress and scale-up.

Maternal mortality ratios (MMRs) still remain unacceptably high worldwide, but there has been progress in recent years. According to *Trends in Maternal Mortality: 1990 to 2010*,<sup>1</sup> the number of global maternal deaths has been cut in half over this 20-year period. Approximately 287,000 women died of pregnancy-related causes in 2010, a decline of 47% since 1990.

Although the global estimate of MMR in 2010 was 210 maternal deaths per 100,000 live births, wide variations still exist among countries. The MMR in sub-Saharan Africa is well above this level and is the highest of any region, with 500 maternal deaths per 100,000 live births. Though South Asia is just above the global median, at 220 maternal deaths per 100,000 live births, it still represents 29% of the global burden of maternal mortality.

Even as most countries are experiencing a decline in MMR, the pattern, pace and reasons for that decline vary. Furthermore, to maintain momentum in the reduction of maternal mortality, national programs will need to ensure both adequate coverage and sustainability.

To this end, MCHIP undertook its second annual survey of national programs for the prevention and management of PPH and PE/E from January to March 2012. This country-level program analysis included countries from Africa, Asia and Latin America, focusing on those USAID priority countries that face the highest burden of maternal morbidity. The purpose of this review was to understand the status of national programs and to monitor their progress. Previously, the same survey was conducted from January to March 2011, allowing for comparison between the reported situation in 2011 and that in 2012.

This survey offers opportunities to review and understand national programs for addressing PPH and PE/E. First, it provides a global snapshot of policy, practice, supplies and activities, and guides national and global program managers and policymakers in setting priorities. Second, it allows an understanding of where progress has been made from 2011 to 2012. Finally, for the 30 countries for which there are quantitative and scale-up map data from both years, the analysis allows for the tracking of specific, national progress on priority issues and more general tracking of evolution of national programs through the use of the scale-up maps.

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<sup>1</sup> WHO, UNICEF, UNFPA and The World Bank. 2012. *Trends in Maternal Mortality: 1990 to 2010*, <http://www.who.int/reproductivehealth/publications/monitoring/9789241503631/en/index.htm>

# METHODS

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The survey incorporates non-experimental methods, using available national data and collective discussion and information from key informants. It captures a cross-section of countries that are either priority countries within USAID’s global health strategy, or engaged in relevant maternal mortality reduction efforts. The questionnaire includes both quantitative and qualitative questions. The respondent teams in the countries aimed to answer the quantitative questions objectively, based on national policy and existent data and the current situation in-country, rather than based predominantly on opinion. The qualitative questions called for some subjective responses in order to triangulate and add depth to the quantitative responses. In addition, countries filled out conceptual “scale-up maps,” which are visual representations of national policy, rollout and scale-up of PPH and PE/E programs. Finally, the research team conducted a smaller analysis of 20 countries’ service delivery guidelines (SDGs) to delve into national-level policies with more specificity and to cross-check perceptions of policy with the actual policies. The maps and service delivery guidelines were used to gain a more comprehensive view of “policy to practice” in maternal health in 2012 in the 37 participating countries. It is anticipated that this survey will be conducted on an annual basis for the life of MCHIP.

Once received by the research team in Washington, all surveys and maps were checked for completeness and clarity. When questions arose, the MCHIP maternal health team worked with country respondents to clarify responses. The MCHIP maternal health team conducted an analysis of quantitative responses, aggregating answers and comparing them to the 2011 responses. In addition, qualitative responses were coded, aggregated, analyzed, mined for illustrative quotes and compared to quantitative responses where appropriate.

## Survey Instruments

The questionnaire that had been used for the 2011 survey was reviewed before the 2012 data collection began, and modifications were considered. In instances where the questions appeared confusing or elicited a wide variety of responses in 2011, they were made more specific. Changes were made to questions in cases where it was necessary to facilitate comparability between years. Ultimately, three questions were added, two questions were changed, 10 questions were modified slightly, eight response choices were modified and one question was removed. All survey instruments were translated from English into French and Spanish using professional translators.

The 46-item questionnaire included six core components: policy, training, drug distribution and logistics, national reporting of key maternal health indicators, programming, and challenges to and opportunities for scale-up. The full survey questionnaire for 2012 is included in Appendix 2 in the full report.

- |   |
|---|
| <p><b>Six Core Components</b></p> <ul style="list-style-type: none"><li>▪ Policy</li><li>▪ Training</li><li>▪ Drug distribution and logistics</li><li>▪ National reporting of key maternal health indicators</li><li>▪ Programming</li><li>▪ Challenges to and opportunities for scale-up</li></ul> |
|---|

Perceptions of expansion and scale-up of national efforts are also visually represented in color-coded conceptual maps (see Appendix 3 in the full report) to indicate current national program progress in scaling up PPH and PE/E prevention and management interventions. Different colors were used by national teams to represent effort related to a specific program component, including components active under USAID support (red), components active under other partner support (blue) and components previously addressed and no longer active (green). Although this exercise operates under a fundamental supposition that all program components are guided and promoted by local government efforts, some respondent teams felt it necessary to demonstrate that through

shading with a different color (yellow). Lighter shades of the specified colors were used to indicate partial coverage of a program component or a focus on a specific element of the program component, rather than the entire component. Key components of the conceptual maps include: national strategic choices, phased program implementation, and sustainability and institutionalization.

## **Data Collection Procedures**

Data collection was coordinated by the MCHIP maternal health team in Washington, D.C., during the months of January, February and March 2012.

Contact information was compiled for an identified focal person in each of the 43 targeted countries. His or her name and contact information can be found at the top of each country's survey in Appendix 2 in the full report. The contact list from 2011 was used and the individual's continuing engagement with national activities was confirmed. Additional sources were contacted in an effort to ensure that there was an appropriate coordinator for the data-gathering activities in each country.

The coordinator for each country was sent an e-mail with anticipated dates and activities six weeks in advance of receiving the survey. He or she was instructed to contact national counterparts in the government as well as leading implementing partners. The country coordinator was given a timeline of pending requests and asked to arrange meetings with national consultative groups to ensure a national participatory process for the completion of the survey instruments. In most cases this was possible.

Key stakeholders from government, ministries, MCHIP programs, other USAID bilateral programs, UN partners and other implementing agencies met to collect data and respond to the 46-item questionnaire and the scale-up map. In most cases, these consultative groups found it necessary to meet twice to ensure accuracy and completeness of responses.

The questionnaire and scale-up maps were revised from the 2011 versions, based on responses, questions and feedback from the 2011 survey administration. Surveys were sent out via e-mail in English French and Spanish, and countries received copies of their 2011 surveys, which served as a starting point. Stakeholders met in-country to collect data and respond to the survey, and contacted the MCHIP maternal health team with questions. Responses were shared via e-mail in English, French and Spanish. Professional translators translated French and Spanish survey responses into English.

## **Data Analysis**

All survey responses were entered into a Microsoft Access Database to facilitate ease of data entry and analysis. Reports aggregating quantitative survey responses and graphs by region were created in Microsoft Excel. Qualitative responses were first collected in Access and then transferred by theme into Microsoft Excel. Responses were coded, aggregated, analyzed and compared to quantitative responses where appropriate.

Country respondent teams were also asked to submit national SDGs and copies of essential medicine lists (EML). Twenty countries' SDGs were reviewed, and the findings are presented under the corresponding themes in the Findings section. SDG documents that were submitted in English were reviewed for accuracy and completeness of the following necessary components: 1) active management of the third stage of labor (AMTSL), 2) the use of misoprostol for the prevention of PPH, 3) the diagnosis and management of PE/E, and 4) the use of

antihypertensives for severe hypertension<sup>2</sup> in pregnancy. Non-English national SDG documents were reviewed through discussion with country respondents to ensure that the data were accurately presented. The research team used a standardized checklist adapted from the World Health Organization (WHO) publication *Managing Complications in Pregnancy and Childbirth: A Guide for Midwives and Doctors* (MCPC)<sup>3</sup> to review each SDG.

## FINDINGS

### Overview

The findings presented in this section are a compilation of data collected from 37 countries in Africa, Asia and Latin America (see box at right for list of countries surveyed).

These findings build upon those in last year's report and explore additional themes relevant to the prevention and management of PPH and PE/E. Such in-depth analyses each year provide countries the opportunity to recognize progress in particular areas and identify other areas for development. In addition, the comparison of national programs will guide global prevention and management efforts moving forward.

Despite initial correspondence and follow-up with in-country representatives, five countries were not able to complete the survey: Burkina Faso, Dominican Republic, Laos, Myanmar and Peru. Zambia completed the survey in 2011, but was unable to do so in 2012. The MCHIP maternal health team will continue to work with these countries and other countries not previously represented in the report to disseminate best practices in maternal health and to assist them should they be able to participate in the survey in the future.

The figures and analyses presented in this section compare country responses to three or four questions, grouped by themes across the 37 countries. When data for a given question are present from both years, responses from 2012 are compared to those from 2011.

Countries Surveyed, by Region		
Region	2011	2012
Africa	Angola Democratic Republic of Congo Equatorial Guinea Ethiopia Ghana Guinea Kenya Liberia Madagascar Malawi Mali Mozambique Nigeria Rwanda Senegal South Sudan Tanzania Zambia Zanzibar Zimbabwe	Angola Democratic Republic of Congo Equatorial Guinea Ethiopia Ghana Guinea Kenya Liberia Madagascar Malawi Mali Mozambique Nigeria Rwanda Senegal South Sudan Tanzania Uganda Zanzibar Zimbabwe
Asia	Afghanistan Bangladesh India Indonesia Nepal	Afghanistan Bangladesh Cambodia India Indonesia Nepal Pakistan Philippines Timor Leste Yemen
Latin America	Bolivia Guatemala Honduras Nicaragua Paraguay	Bolivia Ecuador El Salvador Guatemala Honduras Nicaragua Paraguay

<sup>2</sup> Diastolic blood pressure 110 mmHg or more after 20 weeks gestation and proteinuria 3+ or more are the cardinal signs of severe PE. If diastolic blood pressure remains above 110 mmHg, antihypertensive drugs should be given.

<sup>3</sup> [http://www.iawg.net/resources/RH%20Kit%2011%20-%20Complications%20of%20pregnancy%20and%20childbirth\\_midwives%20and%20doctors.pdf](http://www.iawg.net/resources/RH%20Kit%2011%20-%20Complications%20of%20pregnancy%20and%20childbirth_midwives%20and%20doctors.pdf)

The findings are presented across the eight themes presented in the box at right. Please see Appendix 2 in the full report for each country's full questionnaire and complete responses.

An analysis of national SDGs from 20 countries and an extensive qualitative analysis of all surveys on reported bottlenecks and challenges were conducted. These analyses provide a greater understanding of the quantitative answers given on the surveys and triangulate responses from country teams. Specific findings from the national SDGs and qualitative data analyses are presented throughout the report.

The purpose of the review of national SDGs was to determine the accuracy and completeness of guidelines for AMTSL and the management of severe PE/E. The following 20 reviews were conducted:

- Independent review of English SDGs: Afghanistan, Cambodia, Ethiopia, Ghana, India, Kenya, Liberia, Malawi, Nigeria, Timor Leste, Yemen and Zimbabwe.
- Joint review (with Jhpiego country representative) of non-English SDGs: Angola, Bolivia, Equatorial Guinea, Guinea, Indonesia, Madagascar, Paraguay and Rwanda.

Each respondent team from participating countries also completed a scale-up map, coded to represent the current state of progress in the national scale-up of PPH and PE/E reduction and management programs. All 37 countries participating in the survey filled out these conceptual maps for their country, and the maps are presented in Appendix 3 of the full report. The scale-up maps are useful for global tracking, and completing them was a beneficial exercise for the national program management teams. The country respondents who met to fill out the surveys and maps were able to conceptualize where national progress and gaps are, and in which technical area. Qualitatively, it can be observed that the country teams were more familiar with the format of the maps this year, and potentially were able to complete them more accurately. It is notable that the scale-up maps for 2012 reveal that the majority of countries have PPH and PE/E programs that are based on broad partnerships, most notably collaboration among USAID programs and projects and other partners, or collaboration between the local Ministry of Health (MOH) and other partners.

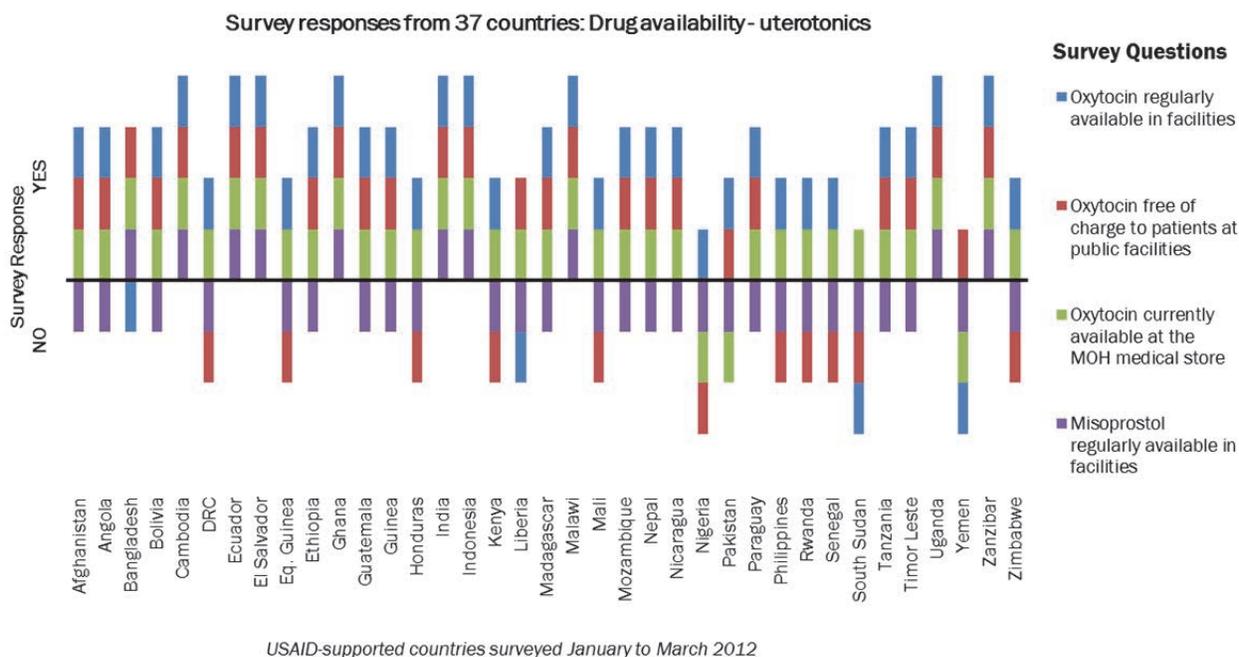
#### **Findings Grouped by Themes**

1. 1a. Availability of uterotonic medications  
1b. Availability of magnesium sulfate (MgSO<sub>4</sub>) for the management of severe PE/E
2. Lifesaving medicines approved at the national level
3. National policies regarding AMTSL
4. Expansion and scale-up of misoprostol availability and PPH-reduction programs
5. Midwife and skilled birth attendant (SBA) scope of practice
6. Education and training in AMTSL and PE/E management principles
7. National reporting on selected maternal health indicators
8. Potential for scale-up and bottlenecks



# Theme 1A: Drug Availability: Uterotonics

Figure 1: Global Summary of Uterotonics, Selected Countries, 2012



The 2012 survey results show that access and availability of oxytocin has improved globally—increasing from regular availability in 74% of countries (23 of 31) in 2011 to 89% of countries (33 of 37) responding in 2012. Eighty-nine percent of countries surveyed report regular availability of oxytocin and 92% report oxytocin availability in the MOH medical store. Seventy percent of countries report that oxytocin is free of charge, and only four countries report that oxytocin is not available more than half the time.

Qualitative data reveal that regular supply of oxytocin is still an issue. Nine countries cite that patients have to pay for oxytocin out of pocket at least some of the time. Of those nine countries, 50% exhibit a gap between national policy and practice. Their responses show that clients are paying for oxytocin out of pocket even though national policy states that it should be provided at no cost to the patient.

Smaller gains, however, have been made regarding the availability of misoprostol. Respondents state that misoprostol is regularly available (more than half the time) in only 10 countries, while 73%, or 27 countries, state that misoprostol is available less than half the time or never in public health facilities with maternity services.

Qualitative data show a correlation between national policy and availability: countries that do not support the provision of misoprostol at the national level do not have misoprostol at public health facilities. Sixteen countries provide additional qualitative comments to their answers. Three of these countries said that although misoprostol is available more than half the time, it is available at only certain types of health facilities, but not all.

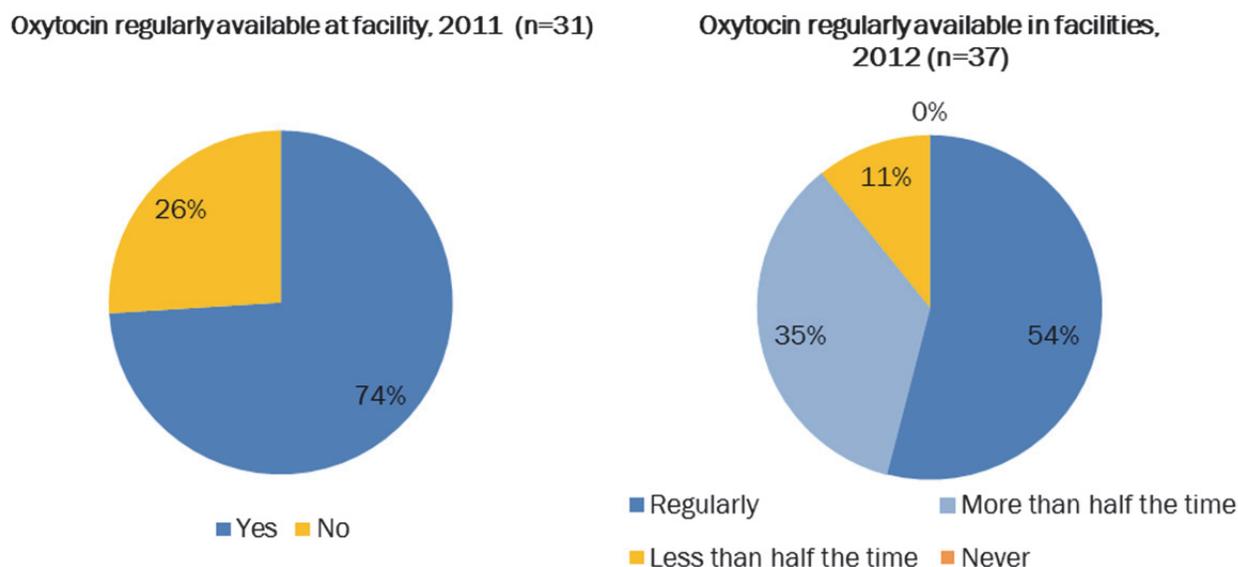
The majority of countries that provide additional qualitative comments state that they do not have misoprostol available in public health facilities. Four countries cite that patients can obtain the drug with an out-of-pocket cost, and two of those countries state that misoprostol can be purchased only in the private sector.

Oxytocin availability was a survey question in both 2011 and 2012. Regionally, mixed progress has been made regarding the availability of oxytocin in Asia. While India and Nepal now report that oxytocin is regularly available, Bangladesh considers it to be less available in 2012 than in 2011.

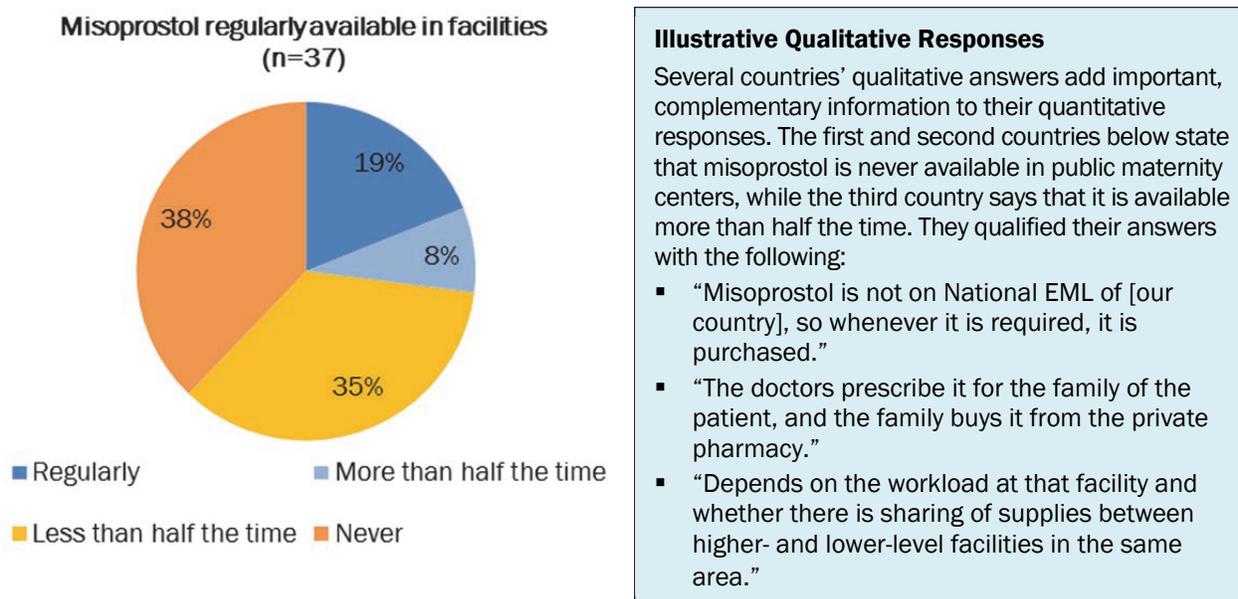
Progress has been made in Latin America in the availability of oxytocin. In 2011, four of five countries reported regular availability of oxytocin, while Guatemala reported irregular availability of the medicine. In 2012, all countries surveyed from LAC, including Guatemala, report that it is now regularly available.

Several African countries report improvements in oxytocin availability. Of the five countries that reported oxytocin as not regularly available in 2011, only South Sudan still reports oxytocin as not regularly available.

**Figure 2: Availability of Oxytocin in Health Facilities, 2011 and 2012**

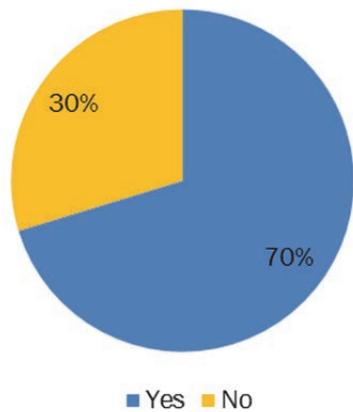


**Figure 3: Availability of Misoprostol in Maternity Centers, 2012**



**Figure 4: Oxytocin Cost to Patients in 37 Countries, 2012**

Oxytocin free of charge to patients at public facilities (n=37)



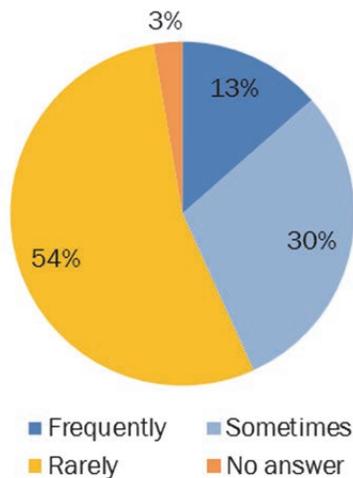
**Illustrative Qualitative Responses**

Two of the countries stating that oxytocin is free of charge to patients in public health facilities qualify their answers with the following:

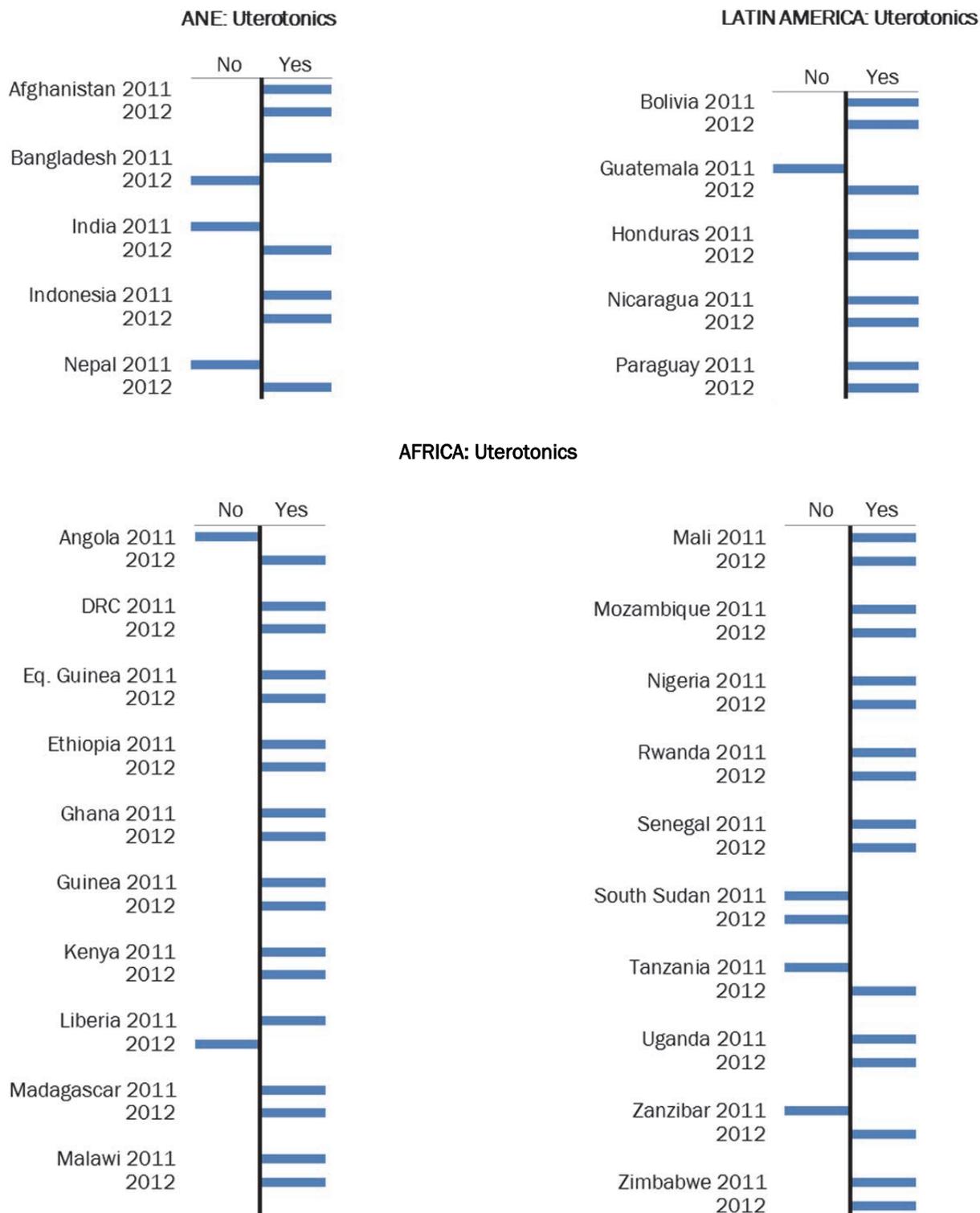
- “It is free of cost, whenever available. Most of the time it is not available and patients have to buy it or it is provided through charity/donation, but not refrigerated.”
- “If the Medical Supply at the Ministry distributes it, it will be free. But most of the time, it may not be there, as the amount distributed to health facilities is not sufficient. If it is not available, the family may buy it from the private pharmacy.”

**Figure 5: Frequency of Oxytocin Stock-Outs, 2012**

Frequency of oxytocin stock-outs at central/regional levels (n=37)



**Figure 6: Oxytocin Availability in 2011 and in 2012, by Region**

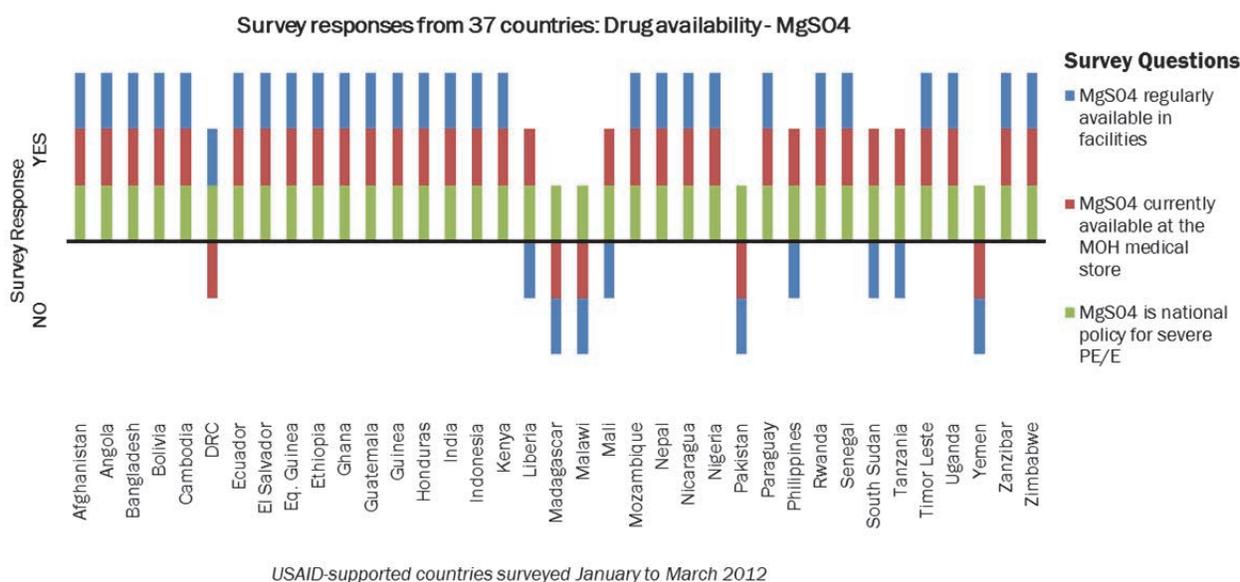


**Survey Question**

■ Oxytocin regularly available in facilities

# Theme 1B: Drug Availability: Magnesium Sulfate

Figure 7: Global Summary of Magnesium Sulfate, Selected Countries, 2012



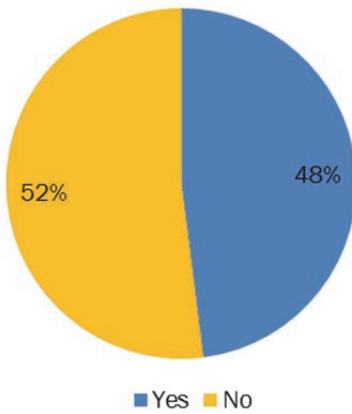
Globally, countries report that progress has been made in the availability of magnesium sulfate (MgSO<sub>4</sub>); the percentage of countries that report that it is regularly available has increased substantially from 48% (15 of 31 countries) in 2011 to 76% (28 of 37 countries) in 2012. Notably, 12 countries that did not report regular availability in 2011 now report regular availability in 2012. Despite this progress, in 2012, seven countries in Africa and two in Asia report that MgSO<sub>4</sub> is still not regularly available at least half the time.

More countries report that MgSO<sub>4</sub> is available in the MOH medical store (86%) than regularly available in the facility (76%), revealing a supply chain and distribution problem. Of the 37 countries surveyed, 46% report that stock-outs of MgSO<sub>4</sub> are rare, 30% that they occur sometimes and 16% that they are frequent (see Figure 9).

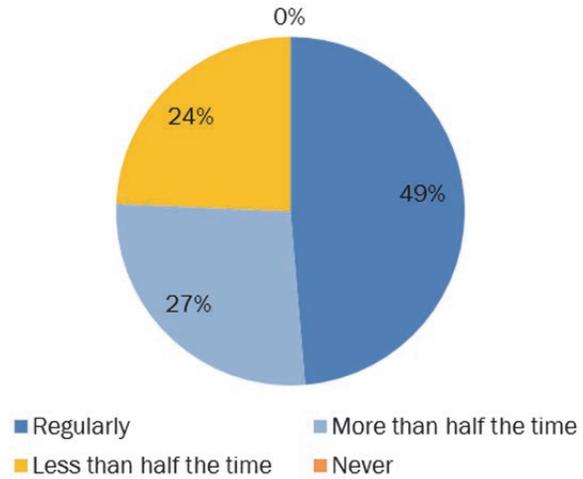
Regionally, there has been progress in availability from 2011 to 2012. In Latin America, all five countries surveyed report regular availability both in 2011 and in 2012. In Asia, of the five countries with data from both years, three note progress in regular availability of MgSO<sub>4</sub>, with all five now responding positively regarding availability and inclusion in the national policy. In Africa, overall progress has been made between 2011 and 2012. Nine African countries that did not report regular availability of MgSO<sub>4</sub> in 2011 now report regular availability. Four still do not have regular availability, and Liberia and Mali reported regular availability in 2011, but not in 2012.

**Figure 8: Availability of Magnesium Sulfate in Health Facilities, 2011 and 2012**

MgSO4 regularly available in facility, 2011 (n=31)



MgSO4 regularly available in facilities, 2012 (n=37)



**Figure 9: Magnesium Sulfate Stock-Out Frequency, 2012**

Frequency of MgSO4 stock-outs at central/regional levels (n=37)

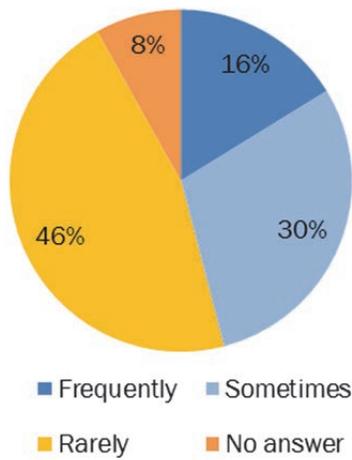


Figure 10: Magnesium Sulfate Availability in 30 Countries in 2011 and in 2012, by Region



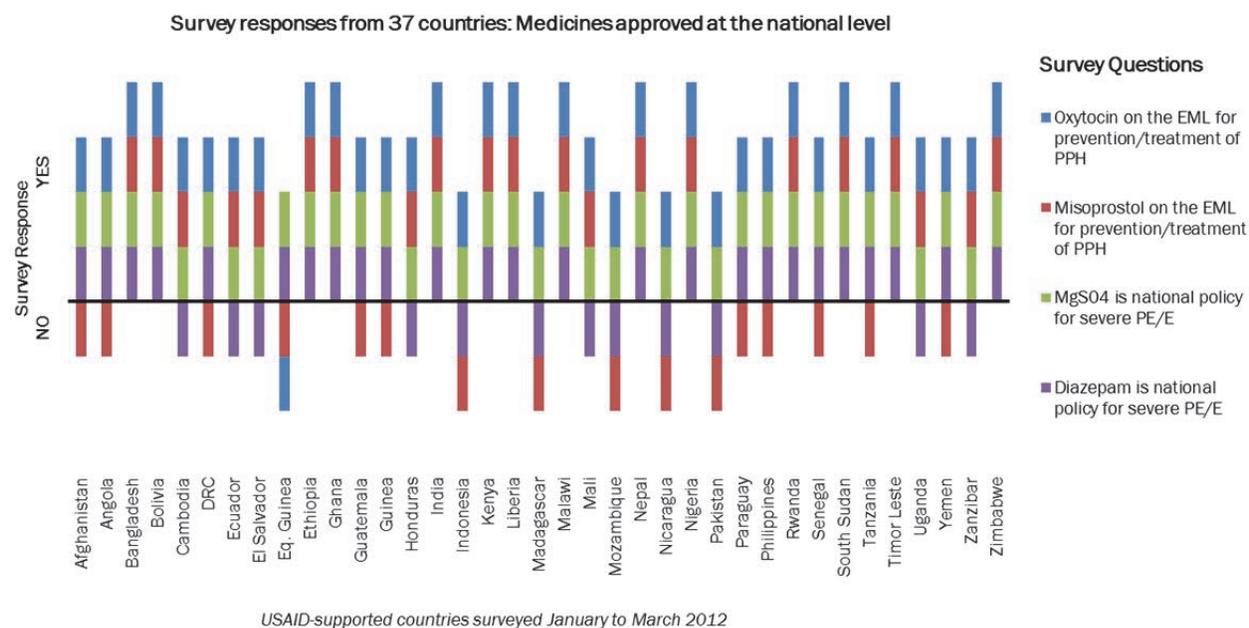
**Survey Questions**

- MgSO4 regularly available in facilities
- MgSO4 is national policy for severe PE/E



## Theme 2: Medicines Approved at the National Level

Figure 11: Global Summary of Medicines Approved at the National Level, Selected Countries, 2012



There is global approval of oxytocin to prevent and manage PPH; all of the 31 countries surveyed in 2011 responded that oxytocin was approved on the EML, and in 2012 every country except for Equatorial Guinea reports that oxytocin is approved on the EML, although Equatorial Guinea reports that AMTSL is approved and that use of oxytocin is part of SDGs. All 20 SDGs recommended the provision of oxytocin, and 18 of the 20 SDGs reviewed included the correct dose of oxytocin within their recommendation for AMTSL.

There was no progress in the inclusion of misoprostol on national EMLs for preventing/managing PPH. Only 57% of the 37 countries surveyed in 2012 report that misoprostol is on the EML for PPH, while 61% of 31 countries responded positively in 2011.

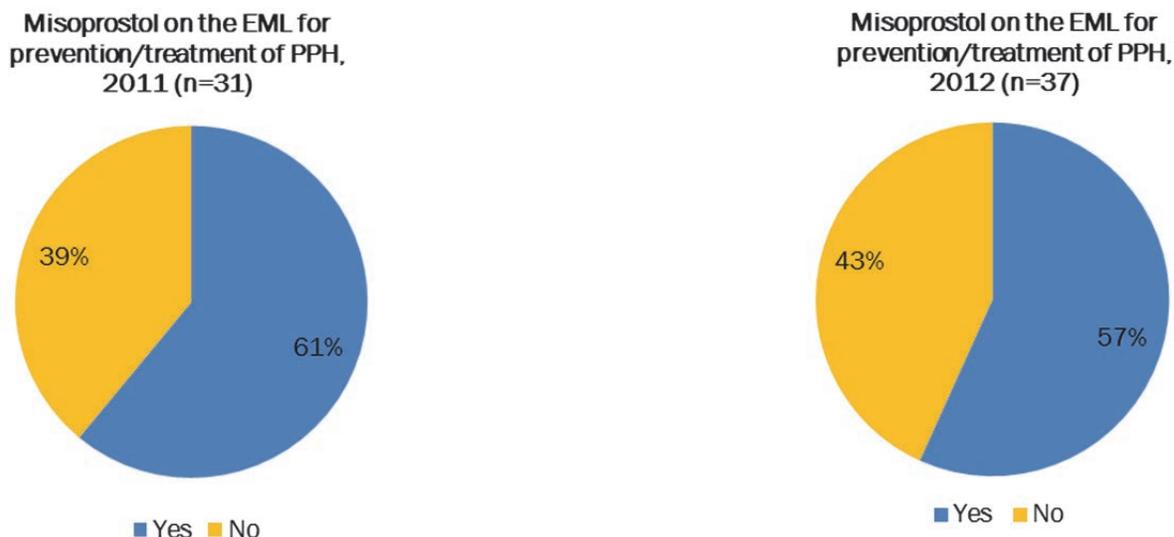
Few countries have clear national guidelines for the use of misoprostol to prevent PPH. Guidelines in India, Liberia and Nigeria indicate the use of 600 mcg of misoprostol to prevent PPH, while in Ethiopia the dose is 400–600 mcg and in Equatorial Guinea it is 400 mcg. Cambodia, Ghana, Kenya, Malawi and Rwanda state that misoprostol is on the EML for prevention and/or treatment of PPH, yet none contain guidance in their SDGs.

All regions of the world show a similar lack of progress regarding the inclusion of misoprostol on the EML. In Latin America, Guatemala and Nicaragua continue to report the absence of misoprostol from the EML, and Paraguay clarified its response from 2011 to 2012 and now indicates that misoprostol is not on the EML. In Asia, the survey shows that misoprostol is not on the EML in Afghanistan and Indonesia.

In Africa, the three countries that responded negatively in 2011, Liberia, Rwanda and South Sudan, now report that misoprostol is on the national EML in 2012. That progress is counterbalanced by three other countries, Democratic Republic of Congo (DRC), Equatorial

Guinea and Tanzania, which reported misoprostol was on the EML in 2011, but in 2012 report that it is not.

**Figure 12: Misoprostol Inclusion on EML, 2011 and 2012**

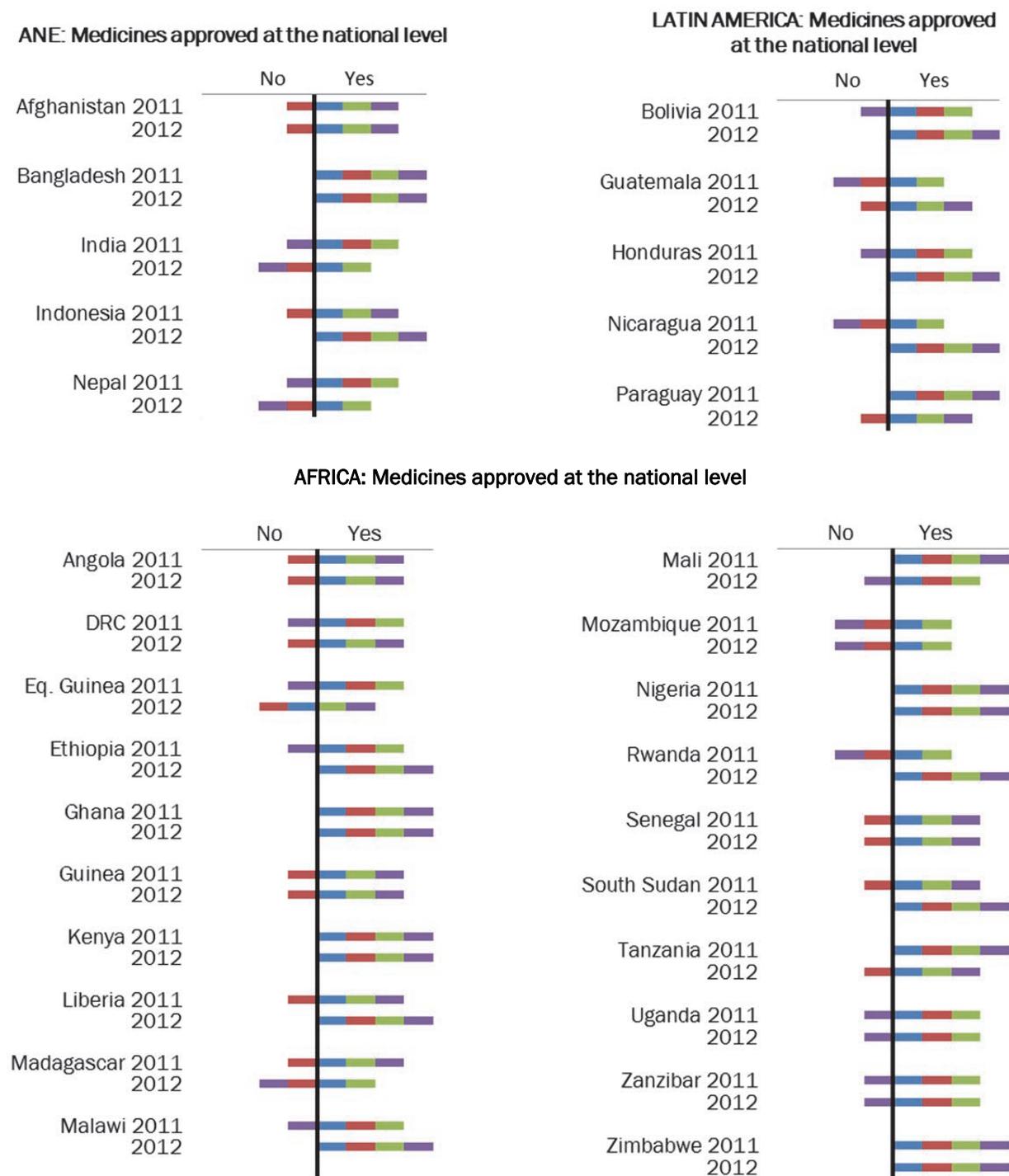


The 2012 survey results show that all 37 countries surveyed report that MgSO<sub>4</sub> is approved in national policy as the first-line treatment for severe PE/E, representing a global commitment to its use. This was also the case in 2011, when all 31 countries surveyed reported MgSO<sub>4</sub> as approved in the national policy guidelines. However, the 2012 survey shows that a majority of countries also include diazepam as a first-line anticonvulsant for severe PE/E, increasing from 19 countries in 2011 to 25 countries in 2012.

Despite wide approval of MgSO<sub>4</sub> for first-line treatment of PE/E, implementation guidance can be inconsistent. WHO documents such as the MCPC set forth a standard protocol for the use of MgSO<sub>4</sub>, including an initial loading dose by both intravenous (IV) and intramuscular (IM) routes, followed by IM maintenance doses. In the SDGs reviewed, however, some parts of the standard protocol lacked clarity or specificity. For example, SDGs from Zimbabwe and Angola did not contain guidelines for the use of MgSO<sub>4</sub> to prevent eclampsia and manage severe PE/E, and India's SDG did not provide guidelines for the IV loading dose or maintenance doses. Documents from Yemen and Indonesia did not provide guidelines for the IM loading dose, and the document from Cambodia lacked guidance for the maintenance dose. Although it is encouraging that universal approval has been achieved, additional clarity in national clinical recommendations is needed.

The majority of countries include administration of a recommended antihypertensive for diastolic BP  $\geq 110$  in severe PE/E. Most guidelines recommend the use of hydralazine (92%) or nifedipine (89%), although there is great variation in the specificity of treatment regimens.

**Figure 13: Approval of Maternal Health Medicines at the National Level in 2011 and in 2012, by Region**



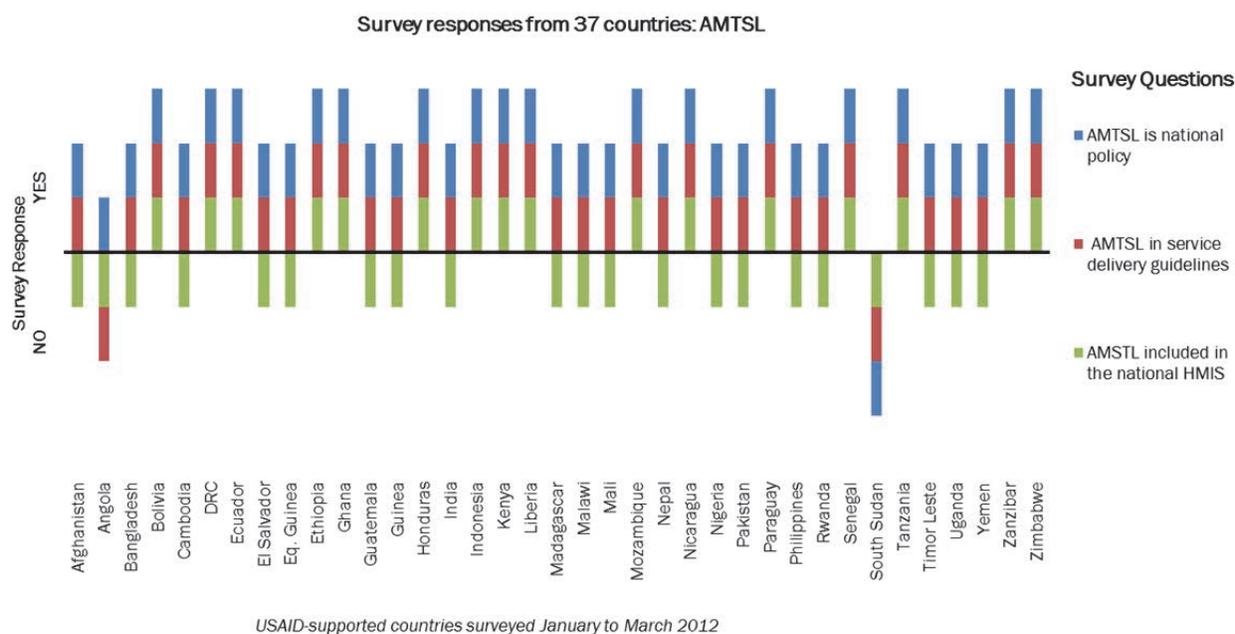
**Survey Questions**

- Oxytocin on the EML for prevention/treatment of PPH
- Misoprostol on the EML for prevention/treatment of PPH
- MgSO4 is national policy for severe PE/E
- Diazepam is national policy for severe PE/E



## Theme 3: AMTSL

Figure 14: Global Summary of AMTSL, Selected Countries, 2012



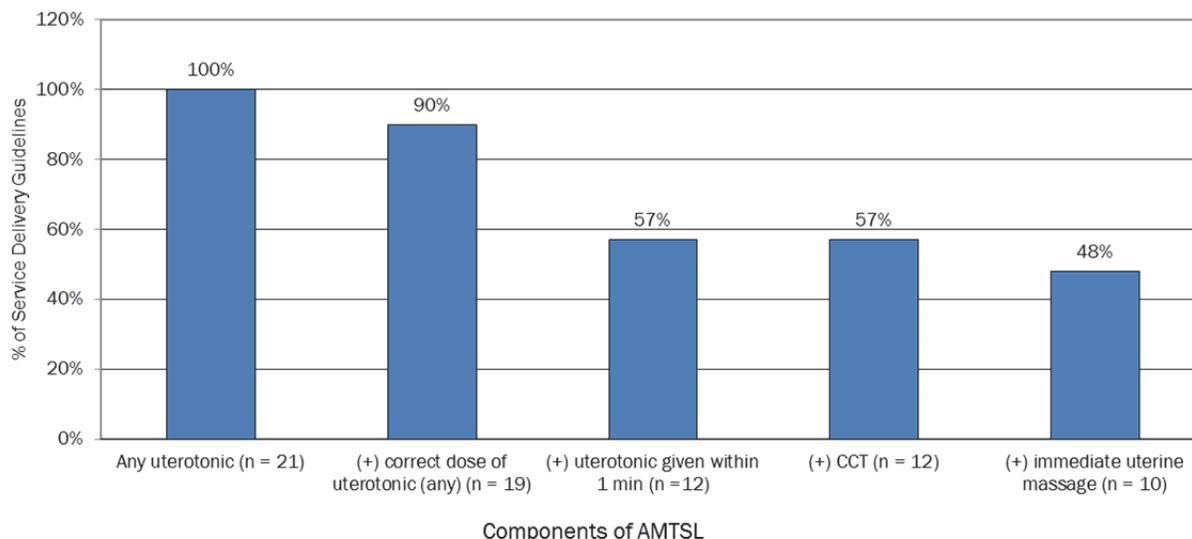
Acceptance of the use of AMTSL for the prevention of PPH is nearly universal, with 36 of 37 countries approving it as national policy, and 35 of 37 countries including it in national SDGs. The review of the 20 national SDGs, however, reveals a lack of clarity and specificity.

The analysis of SDGs found that guidelines were sometimes incomplete or outdated. While all of the countries responded in the survey that AMTSL is included in their SDGs, the review of the SDGs showed that 48% of documents reviewed<sup>4</sup> contained complete descriptions of all three components of AMTSL. Common omissions included failure to instruct administration of a uterotonic within one minute of birth (included in 48% of SDGs) and failure to instruct immediate uterine massage after delivery of the placenta (included in 24% of SDGs). Additionally, while prudent, immediate postpartum management includes ongoing assessment for uterine tone and appropriate action such as massage in the event that the uterus is found to be relaxed (soft), only 43% (six of 14 SDGs reviewed) provided this guidance. The accuracy and completeness of guidelines for AMTSL diminished with the inclusion of each additional component (Figure 14). Only the SDGs from Afghanistan, Ethiopia and Ghana correctly contained all components of AMTSL as defined by WHO.

While the precision of the steps necessary to perform AMTSL remains a concern, the lack of data on the coverage of AMTSL is an additional lingering concern. Only 43% of the 37 countries track AMTSL in their national health management information systems (HMIS). Figure 15: Percentage of Service Delivery Guidelines Correctly Containing Components of AMTSL.

<sup>4</sup> In Equatorial Guinea, Guinea, Indonesia, Paraguay and Rwanda, the first three components of AMTSL, as listed above, were reviewed. In Nigeria, Malawi and Kenya, the first four components were reviewed, and only the first three were written correctly. Palpation of the uterus is the fourth component.

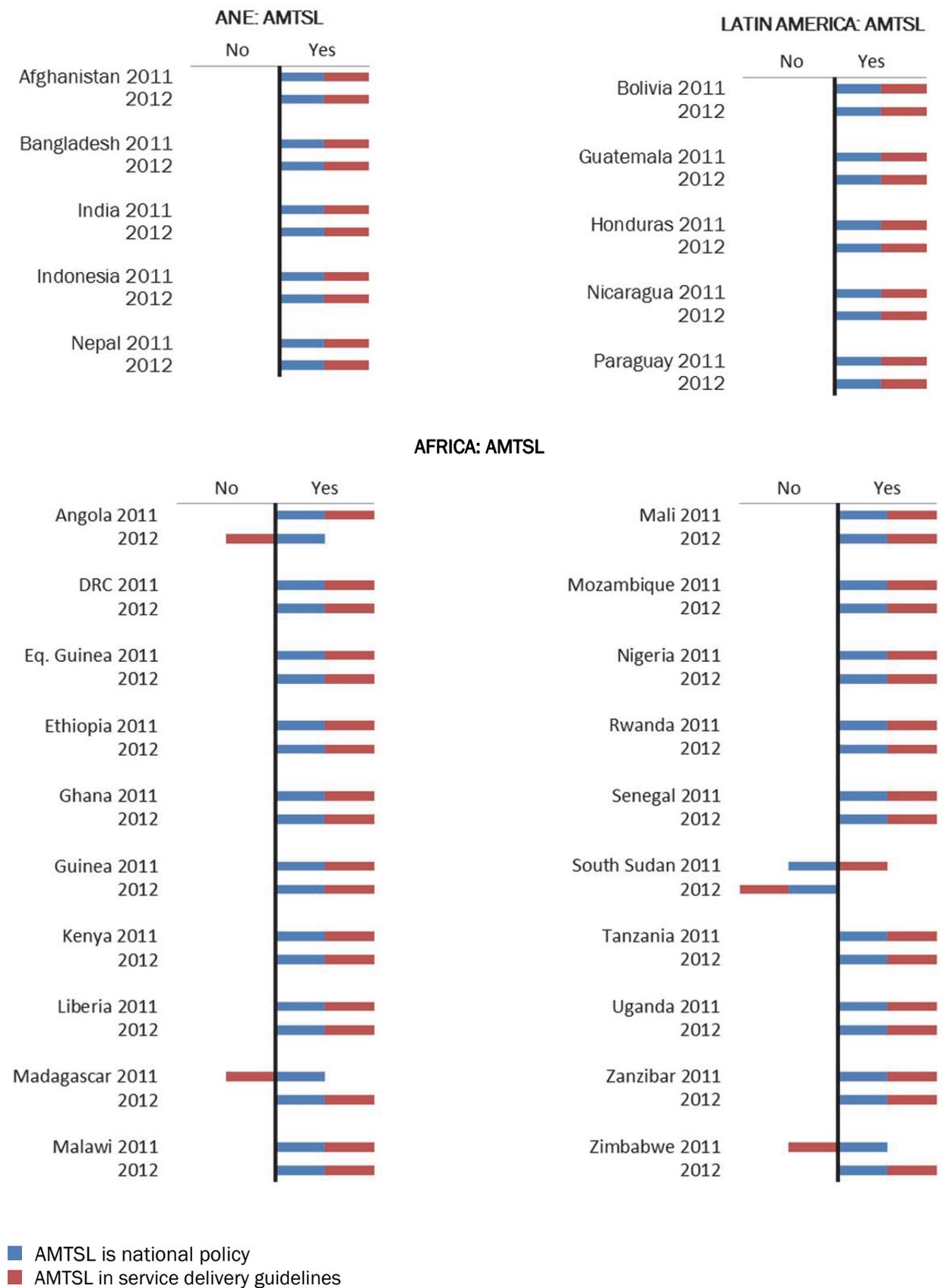
**Figure 15: Percentage of SDGs Correctly Containing Components of AMTSL (n=21\*)**



\*20 countries' SDGs were assessed. However, there are 21 documents in this chart because Malawi and Nigeria submitted two AMTSL documents each, while Angola did not submit any documents related to AMTSL.

In both the 2011 and 2012 surveys, countries were asked if AMTSL was the national policy and if it was included in the SDGs. The 10 countries with data from both years in Asia (five) and Latin America (five) responded positively for both years. Regionally, Africa made progress since 2011, with three of the four countries that responded negatively about SDGs in 2011 responding positively in 2012.

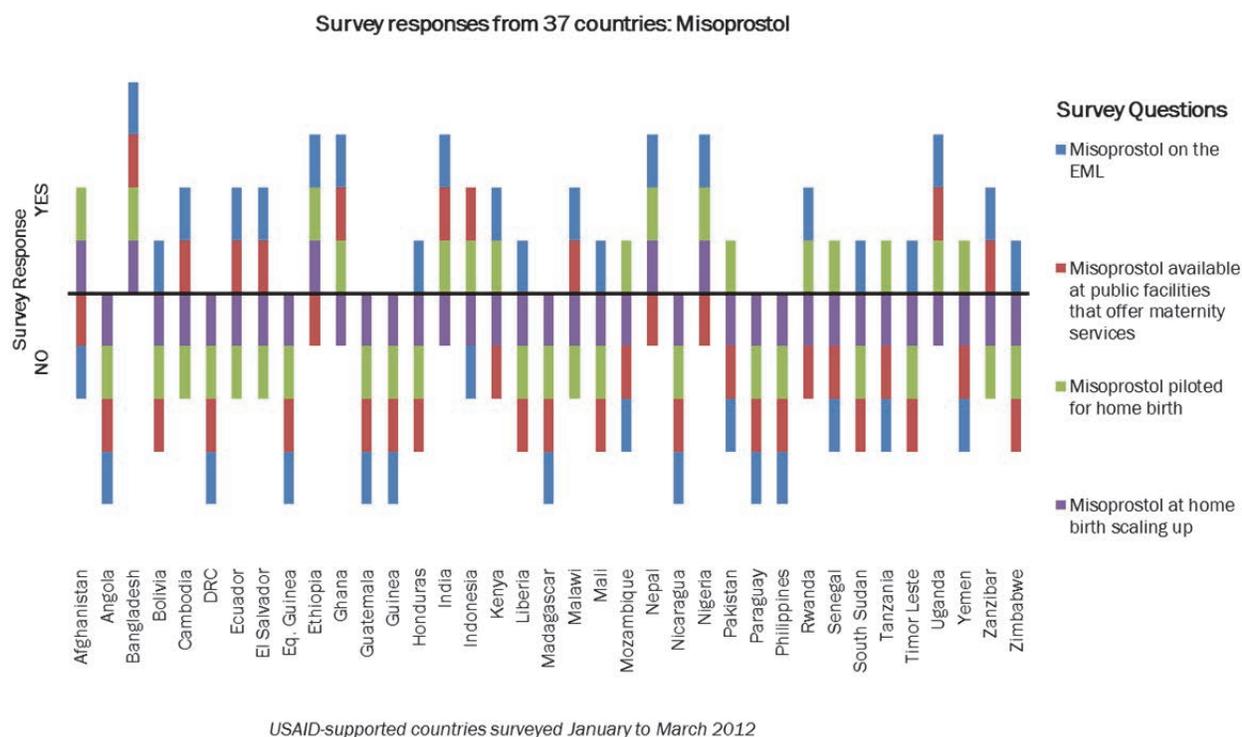
**Figure 16: AMTSL Policy and Guidelines in 2011 and in 2012, by Region**





# Theme 4: Misoprostol

Figure 19: Global Summary of Misoprostol, Selected Countries, 2012



## Lack of Progress

Globally, progress with misoprostol has been slow, with only 57% of countries surveyed in 2012 reporting that it is on the EML, and 27% reporting that it is available in facilities regularly or more than half the time. Forty-three percent of countries report they are piloting or have piloted the use of misoprostol for prevention of PPH at home birth, yet only 14% report they are scaling up this program.

Qualitative data reveal a recurrent theme—that there is a lack of government support for misoprostol use for the prevention of PPH in home births, both in piloting and in scale-up. Seven countries, of the 28 that responded with qualitative data, report that their governments do not support misoprostol for use at home births. The textbox below gives examples of written responses to the question of misoprostol for PPH piloting and scale-up.

### Illustrative Quotes from Countries on Misoprostol Policies:

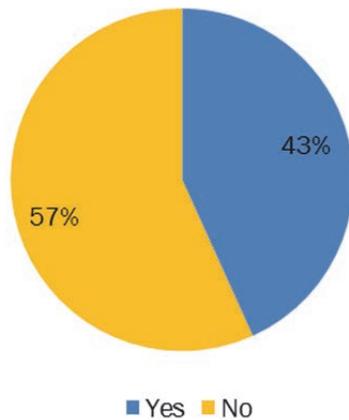
- “MOH supports primarily institutional births. In 2007, [a donor] proposed several efforts to MOH. No progress has been seen due to the fear among MOH officials that the use of misoprostol will encourage illegal abortion.”
- “Pilot is ongoing, led by the University Department of Obstetrics and Gynecology. However, current policy does not support home births; mothers are supposed to deliver at health facilities.”
- “It is implemented in some places, but not scaled up, as the misoprostol is not in the National Drug List. We are waiting for the result of the study (effect of misoprostol in preventing PPH) to convince the Supreme Board of Drugs at the Ministry to include misoprostol on the National Drug List. If we succeed, then it will be available for all midwives.”

There are inconsistencies between approval and availability of such programs. The situation in Ghana presents an example of this inconsistency. While misoprostol has been piloted for prevention of PPH at home births, it is on the national EML for this indication and respondents say that it is available more than half the time at public health facilities with maternity services, there are no guidelines on its use in the SDGs.

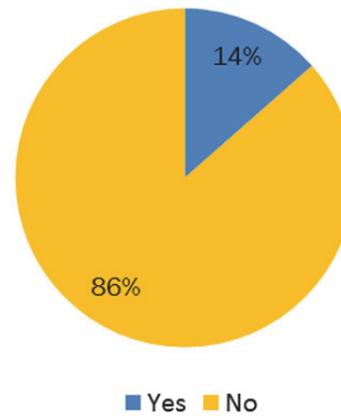
Cambodia, Ghana, Kenya, Malawi and Rwanda all state that misoprostol is on the EML for prevention and/or treatment of PPH, yet none contain guidelines in their SDGs.

**Figure 20: Misoprostol Programs, 2012**

Misoprostol piloted for home birth (n=37)



Misoprostol at home birth scaling up (n=37)



Regionally, the most progress has been made in Africa. Of the 30 countries asked these questions in 2011 and 2012, three countries that had not piloted misoprostol in 2011 (Ethiopia, Senegal, Uganda) reported piloting it in 2012, and Ethiopia now reports scale-up of misoprostol for home births. In Asia, Bangladesh now reports scaling-up of misoprostol for home birth in 2012.

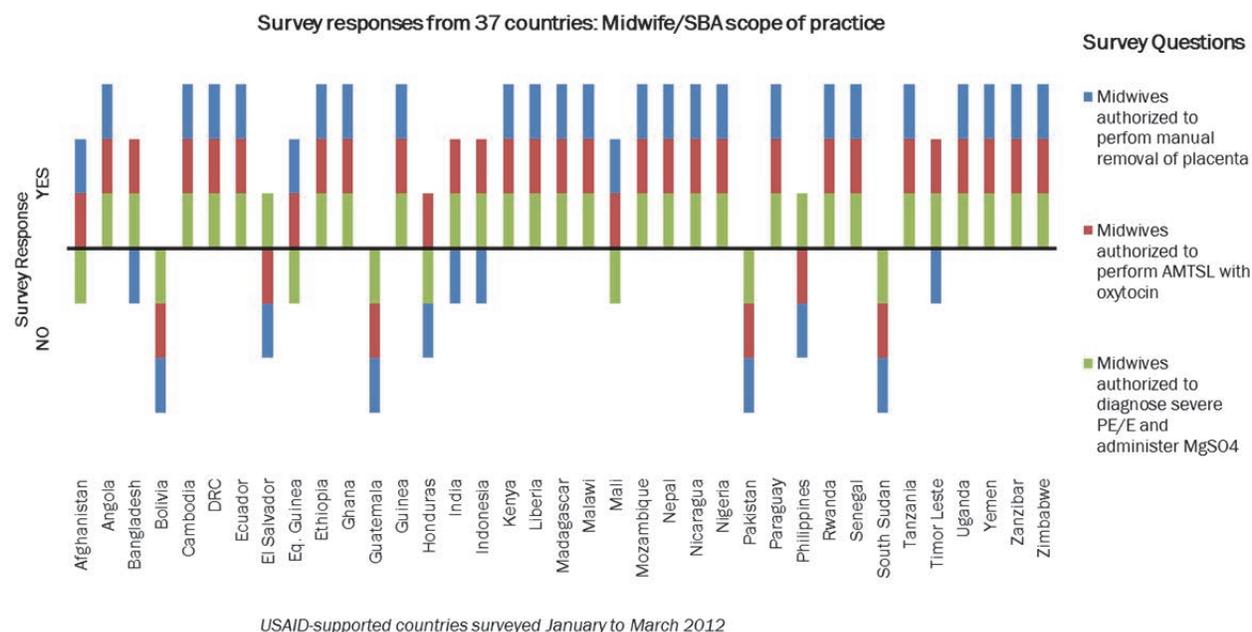
**Figure 21: Misoprostol Programs in 30 Countries in 2011 and in 2012, by Region**





# Theme 5: Midwife/Skilled Birth Attendant Scope of Practice

Figure 22: Global Summary of Midwifery Scope of Practice, Selected Countries, 2012

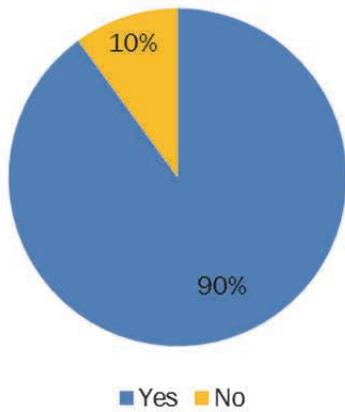


Generally, there is strong support for a scope of practice for midwives that will allow them to provide the services needed to reduce the main causes of maternal mortality, as outlined in the essential competencies for midwifery practice by the International Confederation of Midwives (ICM).<sup>5</sup> In 2012, there is more support for AMTSL (84%) and management of PE/E (78%) than there is for manual removal of the placenta (70%). Globally, there has not been much change in the percentage of midwives authorized to perform manual removal of the placenta. In 2011 (n=31), 77% of countries authorized it, while in 2012 (n=37), 70% of countries authorize it.

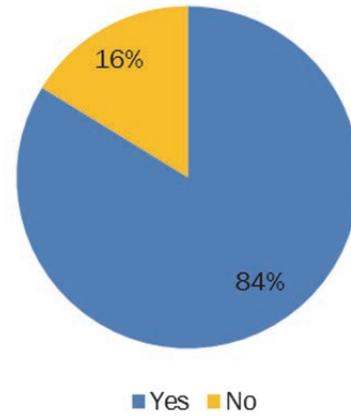
<sup>5</sup> ICM. 2010. <http://www.internationalmidwives.org/>

**Figure 23: Percentage of Countries Reporting Midwives Authorized to Perform Key Skills, 2011 and 2012**

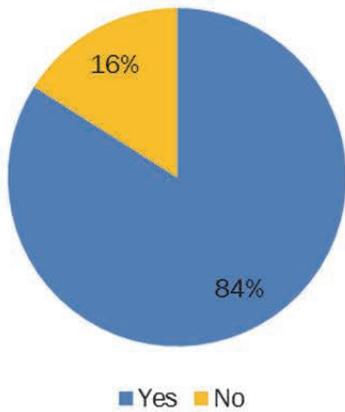
**Midwives authorized to perform AMTSL with oxytocin, 2011 (n=31)**



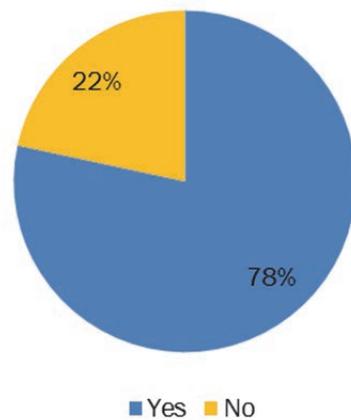
**Midwives authorized to perform AMTSL with oxytocin, 2012 (n=37)**



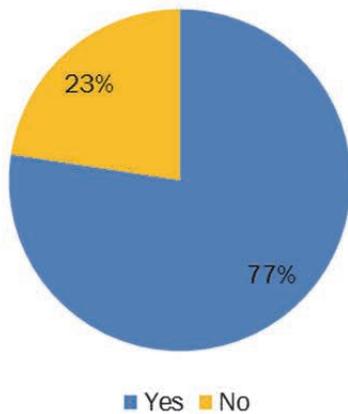
**Midwives authorized to diagnose severe PE/E and administer MgSO4, 2011 (n=31)**



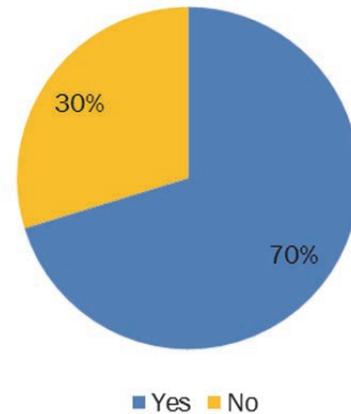
**Midwives authorized to diagnose severe PE/E and administer MgSO4, 2012 (n=37)**



**Midwives authorized to perform manual removal of placenta, 2011 (n=31)**



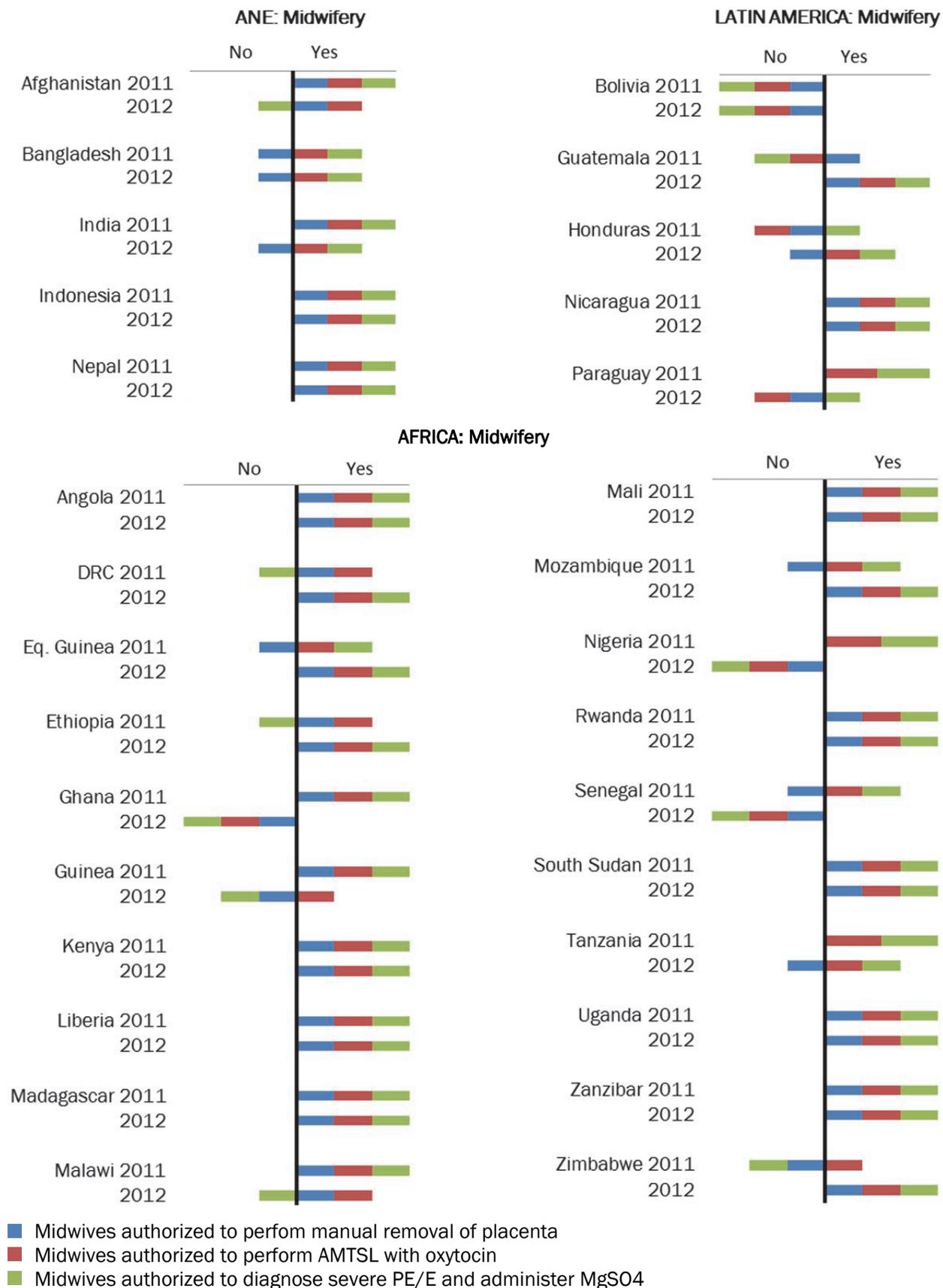
**Midwives authorized to perform manual removal of placenta, 2012 (n=37)**



The scope of practice for midwives follows a regional pattern more closely than for other themes, with Africa generally less restrictive than other regions. Midwives have a larger scope of practice in Asia and Africa compared to their scope in Latin America, where three LAC countries do not allow midwives to perform AMTSL. Only Nicaragua and Paraguay report allowing midwives to perform the three skills (AMTSL, manual removal of placenta and administration of MgSO<sub>4</sub>). Bolivia reports that it will graduate its first group of professional midwives in 2012.

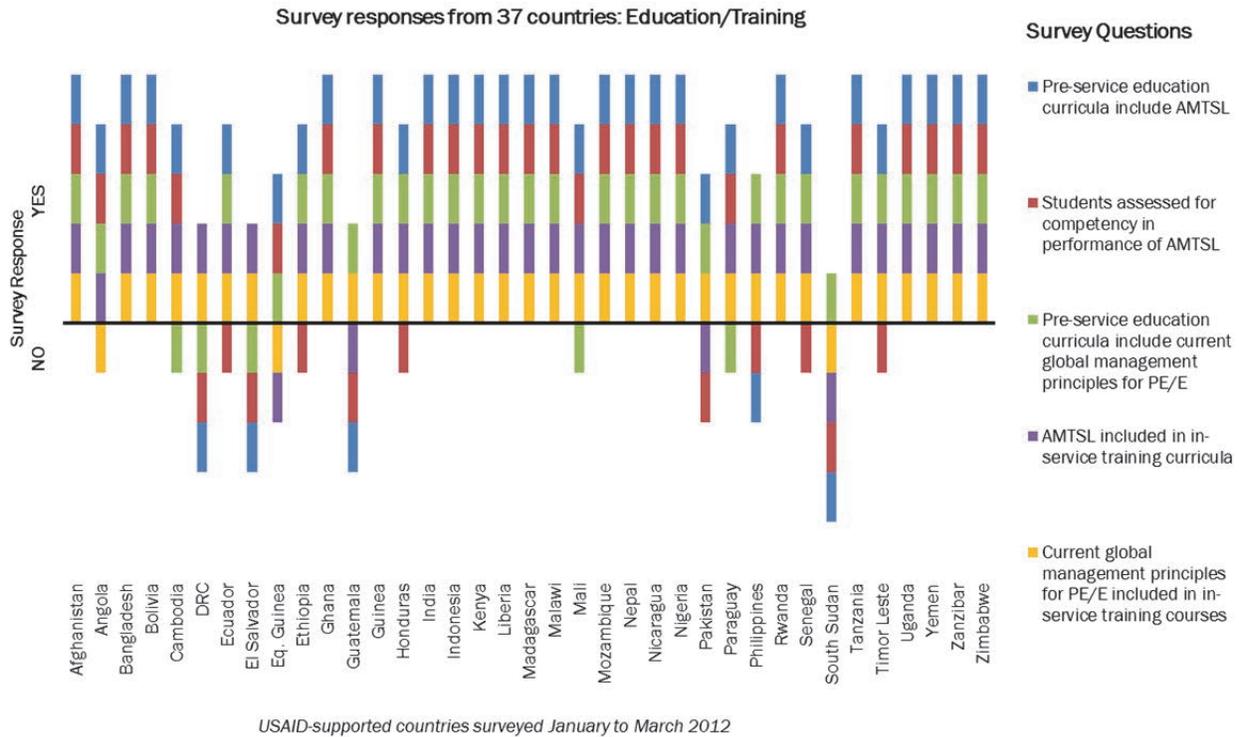
Of the 30 countries surveyed both years, in 2012 only South Sudan does not report that midwives are authorized to perform manual removal of the placenta. Ethiopia and Zimbabwe report more inclusive scope of practice in 2012 than in 2011. In Equatorial Guinea, Mali and South Sudan, in 2011, midwives were reported to be authorized to diagnose PE/E and provide MgSO<sub>4</sub>, but, in 2012, they report that they are not authorized to perform that skill. It is possible that these changes are simply the result of clarification of the responses to the questionnaire, rather than policy changes.

Figure 24: Midwifery Scope of Practice in 2011 and in 2012, by Region



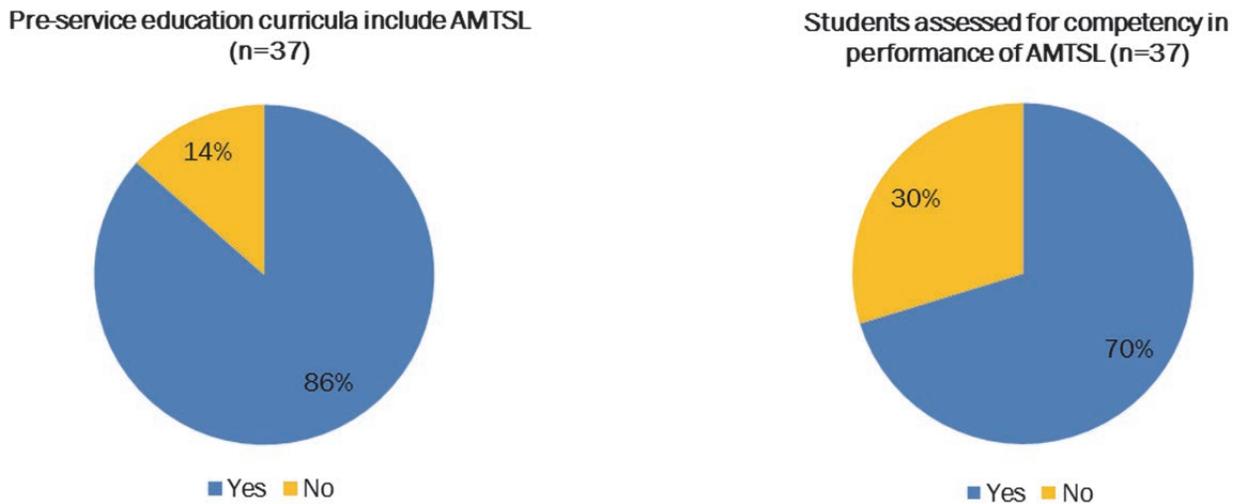
# Theme 6: Education/Training

Figure 25: Global Summary of Education and Training, Selected Countries, 2012

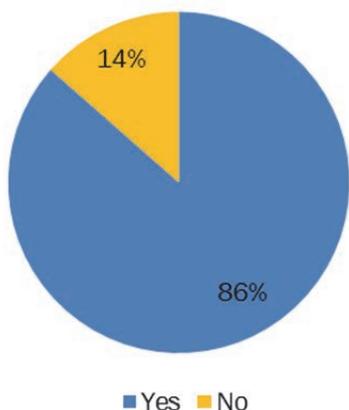


Globally, most countries’ education and training programs for SBA cadres address prevention and management of PPH and PE/E. The majority of countries, 86%, report that AMTSL and current PE/E management are included in pre-service education curricula; however, only 70% report assessing student competency in performance of AMTSL. In addition, 92% of countries report including current global management principles of PE/E and 89% report including AMTSL as part of in-service training programs.

Figure 26. Curriculum and Assessment of AMTSL, 2012

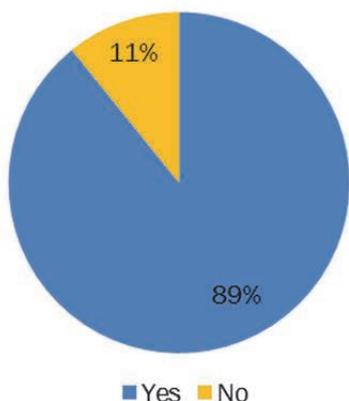


**Pre-service education curricula include current global management principles for PE/E (n=37)**

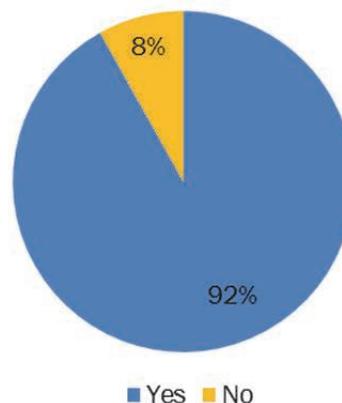


**Figure 27. Summary of Content Covered in In-Service Training Courses, 2012**

**AMTSL included in in-service training curricula (n=37)**



**Current global management principles for PE/E included in in-service training courses (n=37)**



Overall, global trends are moving in a positive direction, with progress in the inclusion of PPH and PE/E in education and in-service training programs. In Asia, India and Nepal report assessing students in AMTSL in 2012, although they had not done so in 2011. Similarly, in Latin America, Bolivia and Nicaragua report assessing students in AMTSL in 2012, though they had not in the previous year. Guatemala, however, responded positively to including AMTSL in pre-service education and in-service training, and assessing students in AMTSL in 2011, but not in 2012.

Overall, African countries have integrated important topics into pre-service education and in-service training. Angola and Ethiopia, for example, have both made significant progress in education and training. Angola did not report positively regarding pre-service education in 2011, but, in 2012, reports including and assessing AMTSL and PE/E. However, South Sudan reported positively on all components in 2011, but in 2012, responds positively only about addressing PE/E in pre-service education.

**Figure 28. Education and Training in 2011 and in 2012, by Region**

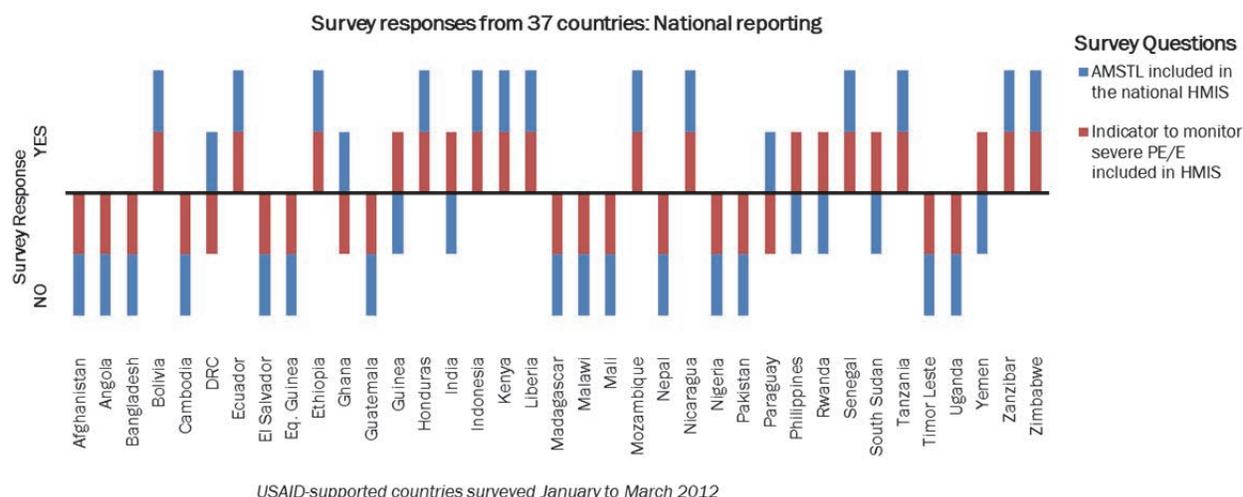


- Pre-service education curricula include AMTSL
- Students assessed for competency in performance of AMTSL
- Pre-service education curricula include current global management principles for PE/E
- AMTSL included in in-service training curricula
- Current global management principles for PE/E included in in-service training courses



# Theme 7: National Reporting on Selected Maternal Health Indicators

Figure 29: Global Summary of National Reporting, Selected Countries, 2012



Globally, improvements are needed in national monitoring of key maternal health indicators. Forty-three percent of countries report that they track AMTSL, and 51% report that they track an indicator in their HMIS (either through delivery logs, maternity charts or other HMIS forms) to monitor severe PE/E. This information was not captured in 2011 so no assessment of progress can be discussed.

In countries' qualitative responses regarding bottlenecks to care, numerous respondents mention monitoring and evaluation (M&E) and supervision. Eight countries list poor supervision, limited clinical mentoring and inadequate M&E and supervision activities as bottlenecks. Illustrative examples of these issues from two countries include: "Enough resources to cover supervision once training has been done for AMTSL [are needed]." and "[There is] Weakness in tracking progress."



## Theme 8: Potential for Scale-Up and Bottlenecks

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In an effort to provide a more comprehensive and substantive understanding of national work in PPH and PE/E, countries were asked to respond qualitatively to questions on opportunities for program scale-up and bottlenecks to scale-up. Recurring themes in relation to these two topics emerged across all countries that provided survey answers, with national policies and training and education mentioned most frequently.

### National Policy

A supportive national policy is cited as a necessary component for scale-up by the majority of countries for both interventions (PPH=22, PE/E=19), the lack of which is also identified as one of the three most significant bottlenecks for many countries (PPH=14, PE/E=10). Countries trying to scale up PE/E programs cite a gap between policy and practice as a bottleneck (n=12); countries often included anecdotes illustrating the inconsistent implementation of policies and service protocols, as well as the inability to apply such protocols because of inadequate supplies and medicines (see textbox below). Some countries report that while the national policy atmosphere supports PE/E programming, providers lack confidence and/or competence in the administration of MgSO<sub>4</sub>.

#### Illustrative Examples of Policy Challenges

##### PPH:

- “Two national, separate guidelines are published; and they are not fully consistent.”
- “Lack of political will to scale up [is a challenge].”
- “By law, the public health system and private health sub-system must apply the health care guidelines established by the MOH. The approved activities in PPH prevention and management have been communicated to the [health service institutions] and the [medical provider clinics]; these are two types of health care providers outsourced by the national social security system. Only a few...monitor compliance with the MOH guidelines by [the institutions].”

##### PE/E:

- “The MOH has developed a policy, but needs support to implement it.”
- “Policies, guidelines and protocols are being developed.”
- “The development of a national PE/E monitoring system is under way, but it needs strong political commitment.”
- “No formal program exists. Inconsistencies in supplies of magnesium sulfate.”

### Training, Education and Human Resources

Training, education and human resources are mentioned almost as often as supportive national policy in relation to program expansion and scale-up for both PPH and PE/E. Training, education and human resource themes raised in relation to PPH and PE/E are similar and focus on pre-service and in-service training, subject-specific training in curricula used at medical colleges and midwifery/nursing schools, and the need for increased numbers of SBAs. As mentioned above, a lack of provider confidence or competence with administration of MgSO<sub>4</sub> is prevalent specific to PE/E (see third textbox on the next page), along with human resources issues related to brain drain and motivation. Other challenges are retaining trained providers and addressing low morale; multiple countries mention these challenges, as illustrated by the following descriptions of bottlenecks: “Staff negative attitude. High staff turnover ratios” and “Trained staff turnover.”

### **Illustrative Examples of Training, Education and Human Resources Challenges and Opportunities**

- “Onsite training approved by the MOH can also serve to train more providers and update the national pool of trainers.”
- “Although PPH management is part of pre-service and in-service training, there is still a need for enhancing health worker knowledge and skills for better outcomes.”
- “Lack of human resources [is a bottleneck].”

Solutions to address the lack of adequately trained health personnel are mentioned for already existing cadres of health personnel by a number of countries. Eight countries report task-shifting as a strategy for scale-up of PPH, primarily focused on ensuring an expanded scope of practice for midwives. Examples of the ways in which countries are task-shifting are shown in the illustrative quotes in the box below.

### **Illustrative Examples of Task-Shifting Opportunities**

- “Policy change allowing matrons to use AMTSL.”
- “Currently, the MOH is in the process of updating the midwifery job description and curriculum.”
- “Propose that the MOH allows the use of misoprostol by associate technical nursing staff attending home deliveries under the supervision of [the NGO sector].”

### **Illustrative Examples of Issues with Provider Competence and Confidence in Administering MgSO4**

- “Lack of knowledge and skills to use MgSO4; its use depends on the ob/gyn's acceptance of it.”
- “Directors lack skills to manage PE/E cases.”
- “Reluctance to change to the use of magnesium sulfate.”
- “Lack of competence in using MgSO4.”
- “Resistance by few providers in using MgSO4 for PE/E.”
- “Although PE/E management is part of pre-service and in-service training, most health providers are unable to detail the features of severe PE/E and are also reluctant to use MgSO4, as they fear the potential side effects. There is still a need for enhancing health worker knowledge and skills for better utilization.”

## **Community versus Facility**

Other themes revealed in 10 countries’ qualitative responses include a focus on scale-up and program expansion of PPH, either at the facility or the community level. The majority of these countries are planning to focus on implementation in facilities, while only a few will focus on interventions at the community level. Misoprostol and AMTSL are cited as foci of facility-based interventions in two of the countries.

### **Illustrative Examples of Countries Focusing on Either the Community or Facility**

- “Decide if/how to promote misoprostol as a supplement to treat PPH at the hospital level.”
- “Government has been talking of increasing the number of SBAs at primary health centers (PHCs) through the Midwives Service Scheme (MSS).”
- “PPH prevention with misoprostol at community level begins this quarter.”
- “The Model Maternities Initiative is the vehicle for integrated scale-up of essential obstetric and newborn interventions as well as BEmONC [basic emergency obstetric and newborn care] interventions. It is currently in facilities covering about one-third of institutional births and will cover more than half by 2014. The MOH needs help directed through this mechanism.”

## DISCUSSION

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The data across the eight themes highlight important successes and significant gaps in expanding programs for the prevention and management of PPH and PE/E.

Globally, national approval of and access to oxytocin and MgSO<sub>4</sub> are robust and have progressed, but approval and availability of misoprostol have not. It is of concern that nine countries respond that clients are paying for oxytocin at least some of the time, so free distribution and regular supply are ongoing challenges, despite nationally reported progress in availability across the globe. It is not surprising that misoprostol is rarely available, given that there are lower levels of national approval of misoprostol as an essential drug and poor or complete lack of service delivery guidance on its use. Discrepancies between reported accuracy and completeness of guidelines and findings from this review suggest that some program directors may be unaware of the state of national SDGs or internationally recommended best practices.

Inconsistent availability of essential medications limits policy implementation and can lead to unclear treatment guidelines in the absence of alternative therapies. Qualitative data reveal that for PE/E in particular, regular MgSO<sub>4</sub> availability is one of the most critical bottlenecks to scaling up the intervention.

In addition to working toward inclusion of lifesaving medicines in national EMLs and SDGs, making certain that the specific instructions and dosages of these medicines are correct, and scaling up provider training in administration, ensuring the regular supply of these essential medicines is critical. Health personnel and programs can work with the central or regional medical store and supply chain programs to help resolve supply chain bottlenecks. Another complementary intervention is ensuring the cold chain for oxytocin.

The lack of progress in approval of misoprostol for prevention of PPH and its limited usage are notable. As seven of 28 countries explain, their governments do not support misoprostol for use at home births. This finding presents an opportunity for global action and advocacy, especially given that in 2011 WHO included misoprostol on the EML for the indication of PPH, and because of the growing support for programs to address PPH prevention using misoprostol.

While the scope of use of misoprostol has evolved with the growing evidence base, it is not apparent that national policies and programs have evolved apace. Two indicators of program progress might be inclusion of misoprostol on national EMLs and the piloting or scale-up of misoprostol for prevention of PPH. For these indicators, there has been essentially no progress from 2011 to 2012. Even in those countries where there have been pilots, there is limited movement regarding scale-up. This finding is of concern because it shows that countries may be reluctant to move forward, even after they have the results of pilot programs.

Until now, this reluctance for robust program expansion could be understood as a result of conflicting global guidance. Global experience and enthusiasm have not completely matched the recommendations and guidelines issued by global agencies. In 2011, however, WHO revised its EML, including, for the first time, misoprostol with the specific indication of use for the prevention of PPH. It is hoped that this inclusion will trigger revisions to national EMLs in the coming year. In addition, WHO is currently working on revised PPH guidelines, which expand the recommendations for use of misoprostol for PPH prevention.

The results suggest that although 2012 has shown expanded policy for and increased access to MgSO<sub>4</sub>, more support is needed regarding provider competence and confidence for its use. Providers' reluctance to administer MgSO<sub>4</sub> may be due to persistent, concurrent approval of

diazepam as a first-line anticonvulsant for severe PE/E, found in 19 countries in 2011 but 25 countries in 2012. This finding presents a potentially confusing scenario for health care providers and managers. If both drugs are noted as “first-line anticonvulsants,” does this mean that the provider can choose between them? If they are given equal weight in national policy and program documents, what impact does this have on actual patient care? These questions should be explored further when the survey is repeated in 2013.

Furthermore, qualitative responses reveal that providers still use diazepam, partly because of a lack of understanding of administration and usage of MgSO<sub>4</sub>, or fear of the medication’s perceived side effects. This concern persists, despite ongoing training and full inclusion in both education and training programs. The situation is perhaps exacerbated by incomplete, confusing and potentially conflicting EMLs, SDGs, training manuals and job aids from various sources. For example, India’s SDG did not provide guidelines for the IV loading dose or maintenance doses. This omission may be because the document reviewed for India described provision of MgSO<sub>4</sub> before referral to a higher-level facility, and other documents unavailable to the reviewers may provide broader guidance. Additionally, some countries have approved health care providers to administer only the IM component of the loading dose.

Innovative and accurate support materials and approaches are needed to help providers attain and maintain the confidence they need to administer and continue MgSO<sub>4</sub> therapy and manage women with severe PE/E. The large majority of countries respond that education and training programs include AMTSL and management of PPH and PE/E. However, qualitative data indicate that the need for training, education and sufficient human resources for supervision is one of the top two themes identified as critical for scale-up, and one of the major bottlenecks. The lack of clinical exposure to complicated cases during training and inadequate clinical practice in pre-service education have been documented as problems.<sup>6</sup> Furthermore, many in-service training programs still rely almost exclusively on ineffective teaching/learning techniques, such as lecture or reading,<sup>7</sup> although simulations and in-hospital clinical practice are preferred educational techniques for critical lifesaving skills.<sup>8</sup> Sufficient training and practice are needed for mastery of complicated skills.<sup>9</sup> There is an urgent need for pre-service education programs to address both interventions sufficiently in clinical practice with clients, through realistic simulations and in the final clinical assessment. This issue with performance is further complicated by inaccuracies in SDGs regarding AMTSL and PE/E management, thereby creating confusion for students and providers.

It is also noteworthy that in 2012, the midwifery scope of practice is not as comprehensive as is necessary to reduce maternal mortality. To save a mother’s life during childbirth when there are complications, a midwife or skilled birth attendant needs to be both empowered and competent to perform all aspects of BEmONC.<sup>10</sup> Although there has been some progress in advancing the midwifery scope of practice related to AMTSL, manual removal of the placenta

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<sup>6</sup> Fullerton JT, Johnson PG, Thompson JB, Vivio D. 2011. Quality considerations in midwifery pre-service education: Exemplars from Africa. *Midwifery* 27(3): 308–315.

<sup>7</sup> Bloom BS. 2005. Effects of continuing medical education on improving physician clinical care and patient health: A review of systematic reviews. *Int J Technol Assess Health Care* 21(3): 380–385.

<sup>8</sup> Issenberg SB, McGaghie WC, Petrusa ER, Gordon D, Scalese RJ. 2005. Features and uses of high-fidelity medical simulations that lead to effective learning: A BEME systematic review. *Med Teach* 27(1): 10–28; Daniels K, Arafeh J, Clark A, Waller S, Druzin M, Chueh J. 2010. Prospective randomized trial of simulation versus didactic teaching for obstetrical emergencies. *Simul Healthc* 5(1): 40–45.

<sup>9</sup> McGaghie WC, Siddall VJ, Mazmanian PE, Myers J, American College of Chest Physicians Health and Science Policy Committee. 2009. Lessons for continuing medical education from simulation research in undergraduate and graduate medical education: Effectiveness of continuing medical education: American College of Chest Physicians Evidence-Based Educational Guidelines. *Chest* 135(3 Suppl): 62S–68S.

<sup>10</sup> UNFPA. 2011. *The State of the World Midwifery Report 2011: Delivering Health, Saving Lives*, <http://www.unfpa.org/sowmy/report/home.html>

and management of PE/E, there are still notable gaps. Not all countries consider these skills to be part of a midwife's responsibilities. For example, only 70% of the countries in this survey allow a midwife to perform manual removal of the placenta although it has long been part of BEmONC. Furthermore, all of these skills are included in the 2011 ICM Essential Competencies for Basic Midwifery Practice and are listed as essential interventions by WHO.<sup>11</sup> Task-shifting and supportive policies are reinforced in qualitative responses as essential for program scale-up.

The variations in the scope of practice for midwives are detailed in Theme 5. The midwife's scope of practice is most limited in Latin America, where three of the countries surveyed do not allow midwives to perform AMTSL. This may be due to definitional and linguistic differences, as some countries in Latin America appear to have different clinical cadres that address specific elements of midwifery, while other countries have midwives who meet a global definition. In addition, while it may be assumed that a physician is allowed to perform all BEmONC signal functions, it cannot be assumed that a midwife is allowed to do the same. Overall, although the role of the midwife varies by country, it is vital to define cadres clearly, to expand the role of the midwife to include all BEmONC skills (as endorsed by WHO, the United Nations Population Fund [UNFPA], ICM and the United Nations Children's Fund [UNICEF]) and, further, to train midwives to competency to ensure that women who experience complications have improved access to skilled care.

Finally, another issue identified as essential is the lack of national reporting on key indicators related to maternal health outcomes. Less than half of the countries respond that AMTSL and indicators related to severe PE/E are a part of the HMIS. This finding is reinforced by qualitative data reporting that poor supervision, limited clinical mentoring and inadequate M&E are barriers to scale-up of these services. Gathering sufficient data is important to ensure that these interventions are prioritized, recognizing that "what matters gets measured and what gets measured matters." There is an urgent need to strengthen maternal health monitoring and reporting systems.

Finally, the subset review of available SDGs was an important and positive exercise in the face of evolving global guidelines. National SDGs give vital clinical guidance and are widely used in all countries to establish and perpetuate clinical norms. Such a review was done with the knowledge that national SDGs also evolve with time and advancing global evidence.

This analysis puts a priority on the accuracy of information in the SDGs related to the use of AMTSL. AMTSL is the intervention that has proven most successful in prevention of PPH.<sup>12</sup> AMTSL includes the administration of a uterotonic medication immediately after birth, with oxytocin being the drug of choice. AMTSL (according to the WHO definition) has three components:

1. Oxytocin, 10 IU IM immediately after birth
2. Controlled cord traction
3. Uterine massage to ensure uterine tone

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<sup>11</sup> The Partnership for Maternal, Newborn and Child Health, WHO and Aga Khan University. 2011. *Essential Interventions, Commodities and Guidelines for Reproductive, Maternal, Newborn and Child Health*, [http://www.who.int/pmnch/topics/part\\_publications/201112\\_essential\\_interventions/en/index.html](http://www.who.int/pmnch/topics/part_publications/201112_essential_interventions/en/index.html)

<sup>12</sup> The Partnership for Maternal, Newborn and Child Health, WHO, and Aga Khan University. 2011. *Essential Interventions, Commodities and Guidelines for Reproductive, Maternal, Newborn and Child Health*, [http://www.who.int/pmnch/topics/part\\_publications/201112\\_essential\\_interventions/en/index.html](http://www.who.int/pmnch/topics/part_publications/201112_essential_interventions/en/index.html)

The analysis of the SDGs found that although the majority of the critical information regarding AMTSL was present, there were certain gaps in guidance when compared to the WHO definition.<sup>13</sup>

The SDG review shows that there were instances of recommendations regarding dosing or timing of uterotonic that differed from internationally approved recommendations. These findings at times contradicted the answers to the survey, suggesting that some respondents may perceive their country guidelines to be more accurate than they in fact are.

Several important findings emerge from the qualitative analysis, including the need for supportive national policies, gaps in training and education, challenges regarding the availability of essential medicines, issues with motivation and human resources, and gaps between policy and practice. In prevention of PPH, there is uncertainty about the correct and appropriate use of misoprostol, and in management of severe PE/E, there are significant issues with provider competence and confidence in the correct use of MgSO<sub>4</sub>. MgSO<sub>4</sub> is the first-line drug of choice for prevention of and managing PE/E.<sup>14</sup>

## Limitations

Efforts were made to ensure that this global survey is as objective as possible, within the constraints of existing human resources and funding. Despite efforts to design an objective questionnaire and to provide clear instructions to national partners in the formation of responses, the data from this survey should be viewed in the context of certain limitations.

Although the 2012 survey asks for objective, quantitative responses to a majority of questions, country respondents may not have had complete information or full access to such information to allow for thorough responses. For example, in certain countries, some key maternal health stakeholders may not have been involved in filling out the survey, and respondents had different levels of access to data and national documents. Therefore, not all of the country responses may reflect the exact situation in the country, or some current or planned activities may have been overlooked. In addition, although efforts were made for the same focal person and country respondents to complete the survey in both years, in some cases new MOH colleagues or other respondents participated in the survey. Necessarily, this can result in different responses. By the time the data are published, they are likely to be at least somewhat out of date, because responses were collected from January through March, 2012. What is more, there are multiple SDG documents in many of the countries surveyed, and in some countries, updated SDGs are awaiting approval. Finally, qualitative responses are opinion-based, and although they provide valuable information regarding opportunities and challenges and triangulate the quantitative responses, they may not represent the majority opinion of health professionals in a particular country.

In some cases there may be a tendency for individuals to present overly encouraging or positive responses to certain questions or for the scale-up maps. As the MCHIP maternal health team tracks, compares and discusses the results objectively each year, this in turn encourages objective responses from the country teams completing the surveys. It appears that some respondents were too optimistic in 2011, and, given the more thorough review in 2012 and respondents' greater comfort with the survey process, some results may appear to be more

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<sup>13</sup> WHO. 2000. *Managing Complications in Pregnancy and Childbirth: A Guide for Midwives and Doctors*, [https://www.google.com/search?aq=f&sugexp=chrome,mod=4&sourceid=chrome&ie=UTF-8&q=WHO+\(2000\)+Managing+Complications+in+Pregnancy+and+Childbirth](https://www.google.com/search?aq=f&sugexp=chrome,mod=4&sourceid=chrome&ie=UTF-8&q=WHO+(2000)+Managing+Complications+in+Pregnancy+and+Childbirth)

<sup>14</sup> WHO. 2011. *Recommendations for Prevention and Treatment of Pre-Eclampsia and Eclampsia*, [http://www.who.int/reproductivehealth/publications/maternal\\_perinatal\\_health/9789241548335/en/index.html](http://www.who.int/reproductivehealth/publications/maternal_perinatal_health/9789241548335/en/index.html)

negative in 2012 than 2011. These results, which appear to show the opposite of progress, may in fact just indicate that the 2012 responses are simply more accurate. As the survey continues into the next year, we will continue to see true tracking of progress.

With regard to nomenclature, different countries use different terms for similar cadres. For example, in Latin America, there are several names for midwives, and distinctions to be made among skilled birth attendants, midwives and traditional midwives. The MCHIP maternal health research team attempted to clarify questions containing the term “midwife” with each Latin American country. In addition, some questions will not necessarily pertain to all countries and, therefore, responses cannot always be answered yes or no or aggregated easily. For example, some countries may have regional medical stores but the survey asked questions about national medical stores. In addition, different countries and programs have varied definitions of “scale-up.” Some might believe moving into several regions can be termed scale-up, while others might use the phrase only when talking about national-level rollout.

During data entry, grammatical and spelling changes were made to qualitative responses to facilitate ease of understanding and allow computer-aided analysis, without losing meaning or intent. It is possible some nuances were lost in translation from French or Spanish or were not always conveyed completely accurately in French or Spanish, although the questions and answers were translated by professionals well-versed in medical and public health terms. The scale-up maps show a broad range of responses and styles, given that related questions are open-ended and require creativity and subjective use of colors to represent programming. Accordingly, styles and colors are not uniform, and aggregation is difficult. In addition, the process to fill out the maps in 2011 was perhaps not as well understood as we had hoped, although countries often worked directly with the research team to fill out the maps to represent the situation as accurately as possible. In 2012, the instructions accompanying the maps were clearer and more detailed, and improvements can likely be made to further improve clarity in future surveys. Finally, while the maps do indicate that the majority of countries have PPH and PE/E programs, and represent which partners are implementing these programs, there are limitations to the comparison between the 2011 and 2012 maps. The quantitative data in this report provide a better basis for analysis of PPH and PE/E programming.

Although more than 20 countries submitted documents to serve as SDGs, only the nationally approved SDGs could be used in the analysis. The 12 approved guidelines in English were independently reviewed by the research team, and the eight nationally approved, non-English SDGs were reviewed in conjunction with an MCHIP country representative using a shorter checklist. Therefore, the questions reviewed are not exactly the same, although only questions asked of all countries are included in the analysis.

In several cases, especially with regard to the approved medicines questions for PE/E, there were gaps in answers. Where possible, the MCHIP research team worked with countries to fill in gaps and at times was able to verify the “Yes/No” response from the documentation sent by the countries.

# CONCLUSION, RECOMMENDATIONS AND OPPORTUNITIES FOR EXPANSION

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This 2012 multi-country analysis of national programs for prevention and management of PPH and PE/E provides a large amount of useful data upon which actions can be based. The varied ways in which the data are presented allow for global and national understanding of important themes, as well as identification of progress on certain topics.

While AMTSL and management of PE/E are strongly represented in the policy and education/training initiatives of national programs throughout the 37 countries surveyed, many issues remain. It is encouraging to see widespread acceptance of AMTSL for prevention of PPH in facility births; however, there is substantially less support for use of misoprostol for prevention of PPH at home births. This finding could potentially represent a strategic choice for promotion of facility-based births, but overlooks a proven intervention that allows for a greater public health impact. This is especially important in areas with high maternal mortality, high home birth rates and low numbers of births attended by a SBA.

Although approval of the use of MgSO<sub>4</sub> is universal, its actual use is far from universal. Where availability of MgSO<sub>4</sub> has expanded, those gains may not persist without regular use of the drug and, thus, awareness among clinicians and managers of the need to reorder, resupply and restock it regularly. Efforts must be made for appropriate and comprehensive management of women with PE/E, which includes the correct use of MgSO<sub>4</sub>, appropriate use of an antihypertensive, expedited termination of pregnancy and overall vigilance in patient care.

Worldwide, midwives must deal with an identity crisis unknown to doctors. Throughout the world, when someone identifies himself or herself as a doctor, a clear picture of professional responsibilities is formed. This is not the case for a midwife. In virtually every health system in the developing world, the definition, role and scope of practice of a midwife differ. Introduction of the term must be followed by clarifying questions such as, what kind of midwife do you mean, what can she or he do, what are his or her competencies? The data from this survey yield similar responses, showing approval for varied scopes of practice and an incomplete set of skills. To improve access to and quality of maternal and newborn health care, in every country of the world, the midwifery scope of practice should be clearly defined and comprehensively and uniformly applied, consistent with the ICM's recognized essential competencies<sup>15</sup> and the international definition of a midwife.<sup>16</sup>

The publication of WHO's *Recommendations for the Prevention and Treatment of Pre-Eclampsia and Eclampsia* in 2011 and the anticipated publication by WHO of new recommendations for preventing and managing PPH provide an excellent opportunity for the international community to work with Ministry of Health staff to update guidelines and expand programs.

Robust national programs exist, solving problems with creative solutions and clear determination. We must continue to be engaged with such programs, to foster communication and information-sharing and to track progress of national programs as we support greater efforts to reduce maternal morbidity and mortality.

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<sup>15</sup> ICM.2011. *Essential Competencies for Basic Midwifery Practice 2010*, [http://www.unfpa.org/sowmy/resources/docs/standards/en/R430\\_ICM\\_2011\\_Essential\\_Competencies\\_2010\\_ENG.pdf](http://www.unfpa.org/sowmy/resources/docs/standards/en/R430_ICM_2011_Essential_Competencies_2010_ENG.pdf)

<sup>16</sup> <http://www.internationalmidwives.org/Portals/5/2011/Definition%20of%20the%20Midwife%20-%202011.pdf>





photo by Daniel Antonaccio