



## Taking Stock in Zambia

Identifying Policy Pathways for Improved Access to Lifesaving Commodities for Women and Children

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455 Massachusetts Avenue NW, Suite 1000  
Washington, DC 20001

[info@path.org](mailto:info@path.org)  
[www.path.org](http://www.path.org)

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## ACRONYMS

CARMMA	Campaign on Accelerated Reduction of Maternal Mortality in Africa	MCDMCH	Ministry of Community Development, Mother and Child Health
CHA	Community Health Assistant	MNCH	maternal, newborn, and child health
CHV	Community Health Volunteer	MoH	Ministry of Health
CHW	Community Health Worker	MSL	Medical Stores Limited
CoIA	Commission on Information and Accountability for Women's and Children's Health	NHSP	National Health Strategic Plan
eLMIS	electronic logistics management information system	NMR	neonatal mortality rate
ENAP	Every Newborn Action Plan	ORS	oral rehydration solution
ENC	Essential Newborn Care	PPH	postpartum hemorrhage
EWEC	Every Woman Every Child	RMNCH	reproductive, maternal, newborn, and child health
FP	family planning	SMAG	Safe Motherhood Action Group
FP2020	Family Planning 2020	STGs	Standard Treatment Guidelines
GAPPD	Integrated Global Action Plan for the Prevention and Control of Pneumonia and Diarrhoea	SWAp	sector-wide approach
IHP	International Health Partnership	tTBA	trained Traditional Birth Attendant
IMCI	Integrated Management of Childhood Illness	UNFPA	United Nations Population Fund
		UNICEF	United Nations Children's Fund
		WHO	World Health Organization
		ZDHS	Zambia Demographic and Health Survey
		ZEML	Zambia Essential Medicines List

Clockwise from left: David Jacobs, P. PATH/Dana Terry, PPATH/Cabe Blenczycki



Access to essential reproductive, maternal, newborn, and child health commodities can be a matter of life and death for women, newborns, children, and adolescents in Zambia.

## EXECUTIVE SUMMARY

### Introduction

Over the last 25 years, Zambia has made significant progress in improving the health of its women and children. Maternal, neonatal, and child mortality rates have all declined significantly, largely due to the government's delivery on global and national commitments to reproductive, maternal, newborn, and child health (RMNCH). However, many women and children still go without basic care, including access to essential medicines and reproductive health commodities that could prevent and treat major causes of death.

In 2015, PATH conducted a rapid assessment of global initiatives and national policies affecting availability and delivery of 13 basic, cost-effective RMNCH commodities universally recommended by the United Nations Commission on Life-Saving Commodities (Commodities Commission). This initiative is one of many that have shaped Zambia's efforts to make essential medicines more widely available. PATH's assessment, which included desk research validated by interviews with experts in Zambia, examines the policy and decision-making factors influencing the country's efforts to make commodities more widely available. The report includes an analysis of key policy challenges and suggests opportunities that could help improve access to medicines and health supplies, especially at the community level.

## **RMNCH Global Commitments and National Policies**

The government of Zambia has made a number of commitments to global RMNCH initiatives and created a national policy environment that is supportive of women's and children's health, including commodity delivery. In addition to the Commodities Commission, notable global commitments include the Abuja Convention; the Global Strategy for Women's and Children's Health/Every Woman Every Child; the Commission on Information and Accountability for Women's and Children's Health; Saving Mothers, Giving Life; Family Planning 2020; and A Promise Renewed.

In addition, the government has issued a number of supportive policies that address RMNCH generally, and RMNCH commodities specifically. Government guidance is embedded in a range of sectoral health policies, integrated frameworks, and stand-alone strategies and curricula. This includes pharmaceutical and treatment guidelines, as well as broader guidance documents like the National Health Strategic Plan; The Zambia Road Map for Accelerating the Reduction of Maternal, Newborn, and Child Mortality; the Zambia Newborn Health Framework; and the Integrated Family Planning Scale-Up Plan.

## **Policy Challenges to Commodity Access**

Despite strong policies and national commitments, challenges to accessing the 13 lifesaving commodities remain, especially in rural areas. Main challenges include commodity stockouts and low availability, as well as limited knowledge among clinical and community-based staff on how to prescribe and use them. Key policy areas that present opportunities for improving access include the supply chain for commodities, health worker capacity and training, and translation of political commitments into adequate budgets and resources for medicines and supplies. Policies on several specific commodities can also be strengthened to expand access.

## **Policy Recommendations to Improve Access to Commodities**

Based on the challenges identified through desk research and stakeholder interviews, policy recommendations include:

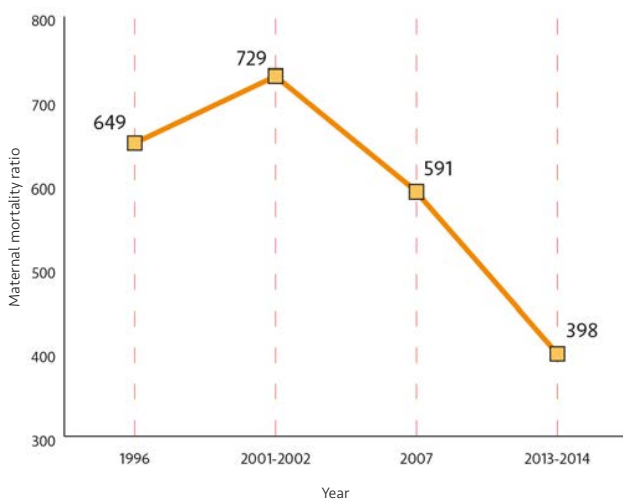
- Update and fully disseminate the Supply Chain Implementation Strategy and quantification manual, as appropriate, to reflect the impact of the new electronic logistics management information system on quantification and forecasting of commodities.
- Revise the Community Health Worker Strategy and terms of reference to clarify roles, training mechanisms, and budget for all community-based volunteers.
- Increase government contributions to line items in the National Medicines Budget for essential drugs (district and hospital levels) and reproductive health supplies.
- Fully fund and implement Zambia's Road Map for Accelerating Reduction of Maternal, Newborn, and Child Mortality and Integrated Family Planning Scale-up Plan.
- Clarify which cadres of health workers can administer misoprostol for the prevention of postpartum hemorrhage (PPH) at the community level, and widely disseminate revised clinical guidelines on PPH.
- Clarify policy guidance on chlorhexidine use for umbilical cord care at the provincial and district levels.
- Include zinc in the Zambia Essential Medicines List and Standard Treatment Guidelines as treatment for diarrhea.

To improve access to commodities, the government must now focus on implementation, financing, and dissemination of its policies. And as Zambia works toward targets under the global Sustainable Development Goals in the post-2015 era, it must focus on the enabling environment—including policies and funding—in its efforts to provide leadership and guidance to all health stakeholders in the country, each of which has a critical, lifesaving role to play.

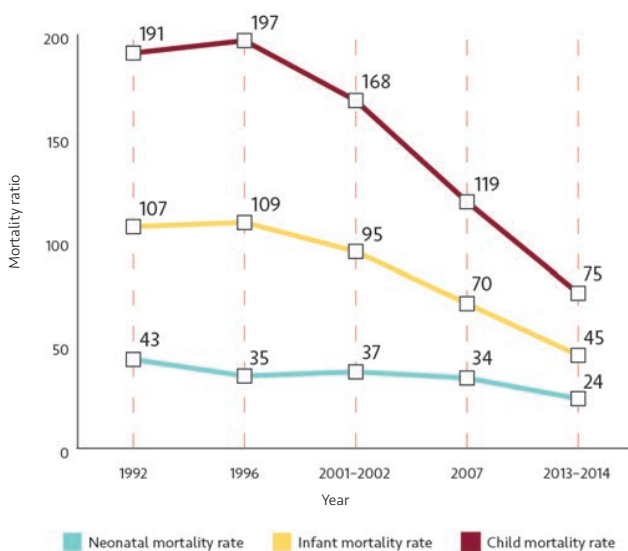
## INTRODUCTION

Around the world, the health of women, newborns, and children is improving rapidly. In line with global trends, Zambia has made significant progress in recent years to improve the health of its populations most in need. Maternal, neonatal, and child mortality rates have all declined significantly, largely due to the government and its partners delivering on commitments to increase coverage and quality of basic reproductive, maternal, newborn, and child health (RMNCH) interventions.

**GRAPHIC 1. Zambia maternal mortality ratio (maternal deaths per 100,000 live births), 1996–2014<sup>1,a</sup>**



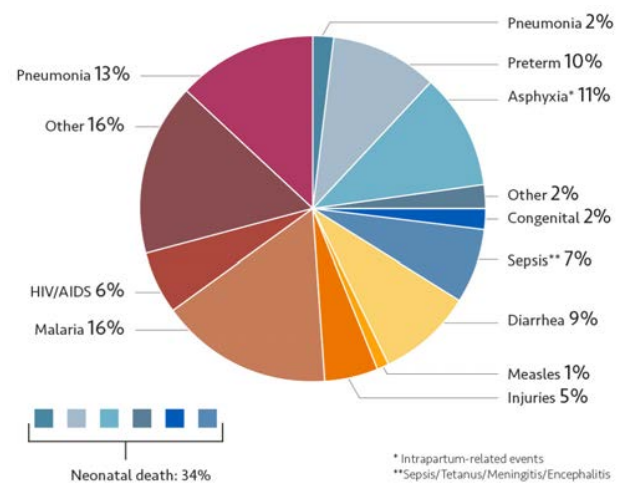
**GRAPHIC 2. Zambia's neonatal, infant, and child mortality (deaths per 1,000 live births), 1992–2014<sup>1,a</sup>**



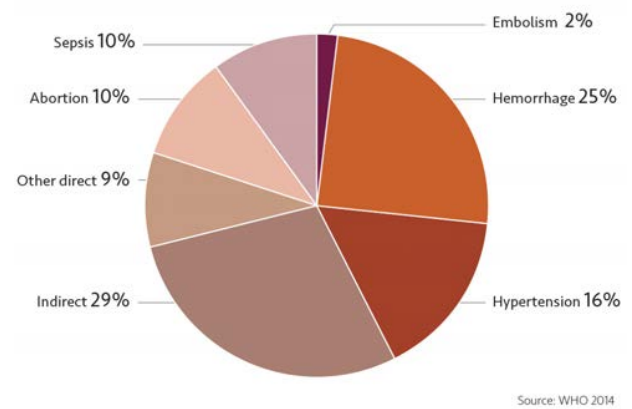
a. The Zambia Demographic and Health Survey (ZDHS) estimates for maternal mortality ratio reflect the seven years before each ZDHS reporting period. For neonatal, infant, and child mortality, estimates reflect the previous five years.

But despite recent progress in Zambia, much work remains to be done. The country has been unable to meet the 2015 targets for Millennium Development Goals 4 and 5 to reduce maternal and child mortality. The majority of these deaths result from preventable causes that could be avoided with basic medicines and simple technologies that are still not readily available to many Zambians, particularly those living in rural areas. According to Zambia's 2013–2014 Demographic and Health Survey, 40% of rural mothers—many of whom lack access to health facilities—still deliver their babies at home, which dramatically increases the risk of childbirth complications or maternal death. For infants and children, risks also remain high. One in every 22 Zambian children dies before reaching age 1, and 1 in 13 will not survive until her fifth birthday.

**GRAPHIC 3. Causes of under-five deaths, 2012<sup>2</sup>**



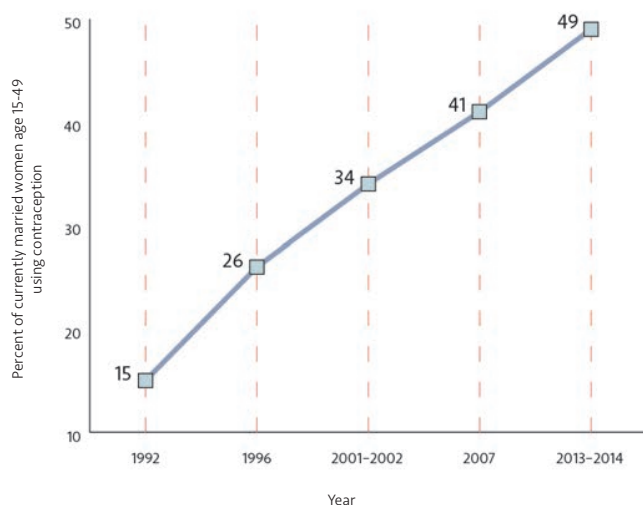
**GRAPHIC 4. Causes of maternal deaths, 2013<sup>2</sup>**



Source: WHO 2014

Improving reproductive health is one of Zambia’s key strategies for improving the overall health of women and children. Contraceptive use among currently married women has steadily increased in Zambia over the past two decades. Yet even with notable growth in Zambia’s contraceptive prevalence rate, 21% of currently married women still have an unmet need for family planning (FP) services, and this need is even higher in rural areas at 24%, or nearly one in four.<sup>1</sup>

**GRAPHIC 5. Trends in the contraceptive prevalence rate in Zambia, 1992–2014<sup>1</sup>**



To ensure continued health progress for women, newborns, and children—and, in particular, to reduce the high death rate from preventable causes—the government of Zambia must ensure that basic medicines and health care reach those who need them most. This effort will require clear policies and strategies that align with global evidence, provide support and training to health care workers, improve systems for commodities access, and ensure adequate and sustainable financing.

**GLOBAL TO LOCAL: POLICIES TO IMPROVE REPRODUCTIVE, MATERNAL, NEWBORN, AND CHILD HEALTH**

Many global policies, best practices, and initiatives currently focus on decreasing morbidity and mortality among women, newborns, and children, as well as adolescents. These efforts provide momentum and strategic guidance for country adoption and uptake of interventions, increase financing for health service delivery, disseminate evidence for decision-making, and provide a platform for community engagement.

When it comes to RMNCH commodities, among the most important of these initiatives is the United Nations Commission on Life-Saving Commodities (Commodities



PATH/Cabe Blenczycki

The Commodities Commission has cast a spotlight on ending preventable deaths among women, children, and newborns; newborns represent a growing proportion of under-five deaths in many countries.

Commission), a global effort focused on elevating the importance of affordable, effective medicines and health supplies that, in many countries, do not reach the women and children who need them most. In 2012, the Commodities Commission—comprised of public health specialists, experts, and scientists from across the RMNCH spectrum—released a report that highlighted gaps and recommendations for increasing access to 13 essential RMNCH commodities (see Graphic 6). The report was intended to galvanize global and country actions to accelerate access to these and other critical medicines and health supplies.

The report’s follow-up laid out practical guidance for countries striving to fill gaps in national systems to make these and other commodities more widely available, including actions to increase political will, develop stronger policies, and ensure more sustainable financing by governments. To help countries address widespread funding shortages for high-impact RMNCH interventions, including lifesaving commodities, United Nations Children’s Fund (UNICEF), World Health Organization (WHO), and United Nations Population Fund (UNFPA) agreed in 2013 to establish an RMNCH Fund, with UNFPA as the fiduciary agent, as a catalytic funding mechanism to fill high-priority gaps. Zambia has sought funds from the RMNCH Fund to improve its RMNCH services, including a supply-chain-focused initiative aimed at reducing facility stockouts of the essential commodities identified by the Commodities Commission.

The Commodities Commission is one of many international RMNCH initiatives under which Zambia has taken action or made country-specific commitments (see Table 1). As a signatory to these global commitments, Zambia has pledged to ensure that its national policies and strategies make RMNCH services and lifesaving medicines more equitably available to women, newborns, and children across the country. To do so, the government must align its decision-making with global commitments and best practices.

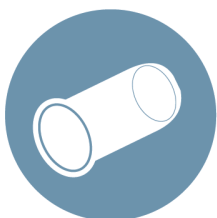


GRAPHIC 6. 13 lifesaving commodities across the continuum of care, as identified by the Commodities Commission

**Reproductive Health**

**Female Condoms**

Prevent STIs/HIV and unintended pregnancy



**Contraceptive Implants**

Prevent unintended pregnancy



**Emergency Contraception**

Prevents unintended pregnancy



**Maternal Health**

**Oxytocin**

Prevents and treats postpartum hemorrhage



**Misoprostol**

Prevents and treats postpartum hemorrhage



**Magnesium Sulfate**

Prevents and treats eclampsia



**Newborn Health**

**Injectable Antibiotics**

Treat newborn sepsis



**Antenatal Corticosteroids**

Prevent preterm respiratory distress syndrome



**Chlorhexidine**

Prevents umbilical cord infections



**Resuscitation Device**

Treats newborn asphyxia



**Child Health**

**Amoxicillin**

Treats pneumonia



**Oral Rehydration Salts**

Prevents dehydration from diarrhea



**Zinc**

Treats diarrhea



**TABLE 1: Key global RMNCH initiatives and Zambia country commitments**

Global RMNCH initiative	Zambia commitment
<p><b>Abuja Declaration (2001)</b></p>	<p>Zambia pledged to increase government spending for health to at least 15% of the national budget. Since the meeting in Abuja, Zambia’s annual health expenditures have remained stagnant or declined. The 2014 national budget allocated just 9.9% to health,<sup>3</sup> representing a decrease from 11.5% in 2008 and well below the country’s Abuja pledge.</p>
<p><b>International Health Partnership (IHP) Global Compact (2007)</b></p>	<p>The IHP focuses on improving health systems, providing better coordination among donors, and developing and supporting countries’ own health plans. Zambia was one of seven “first-wave countries” for the IHP initiative. The principles of this agreement have guided Zambia’s Health Sector-Wide Approach (SWAp) by pooling funds and resources from multiple partners and creating a common implementation framework with joint performance and monitoring reviews.</p>
<p><b>The Global Strategy for Women’s and Children’s Health and Every Woman Every Child (EWEC) (2007)</b></p>	<p>Zambia supports the EWEC movement, which in 2007 put into action the Global Strategy for Women’s and Children’s Health. Zambia was one of the Global Strategy’s “focus countries,” under which the government pledged to increase national budgetary expenditure on health from 11% to 15% by 2015 with a focus on women’s and children’s health, and to double its budgetary allocation to FP commodities, address policy barriers to universal coverage, and increase contraceptive prevalence. The country also committed to scale up implementation of integrated community case management of common diseases for women and children.</p>
<p><b>Campaign on Accelerated Reduction of Maternal Mortality in Africa (CARMMA) (2009)</b></p>	<p>Zambia supports the principles of CARMMA to trigger increased action toward improving maternal and newborn health and survival across the continent, which were built on key priority areas enshrined in the 2005 African Union Policy Framework for the Promotion of Sexual and Reproductive Health and Rights and the 2006 Maputo Plan of Action. Its objective is to expand the availability and use of universally accessible high-quality health services, including those related to sexual and reproductive health. Instead of developing new strategies and plans, its focus is to ensure coordination and effective implementation of existing ones.</p>
<p><b>United Nations Commission on Information and Accountability for Women’s and Children’s Health (CoIA) (2011)</b></p>	<p>This initiative developed a framework for global reporting, oversight, and accountability of commitments made as a part of the EWEC movement. Through ten recommendations, CoIA created a system to track whether donations for women’s and children’s health are made on time, resources are spent wisely and transparently, and whether the desired results are achieved. As of 2014, Zambia had made progress on all eight of the work streams prioritized in CoIA’s annual report, including development of a country accountability framework and a national electronic health, or e-health, strategy.</p>

<p><b>United Nations Commission on Life-Saving Commodities (2012)</b></p>	<p>In 2012, the Commodities Commission released a report that sought to make 13 priority lifesaving commodities more widely available in developing countries to avert preventable maternal, newborn, and child deaths. The report makes 10 recommendations to increase access to and use of these 13 essential commodities and related RMNCH services, which taken together, could save an estimated 6 million women and children by 2017.</p>
<p><b>Family Planning 2020 (FP2020) (2012)</b></p>	<p>An outcome of the 2012 London Summit on Family Planning, FP2020 is a global partnership that supports the rights of women and girls to gain access to contraception. Under the auspices of the initiative, Zambia pledged to increase its contraceptive prevalence rate from 33% to 58%; to strengthen the supply chain for FP commodities through expansion of the Essential Medicines Logistics Improvement Program and other channels; and to double the budget for FP and secure increased funding for FP through existing donors and new partnerships.</p>
<p><b>Saving Mothers, Giving Life (2012)</b></p>	<p>Saving Mothers, Giving Life is a global five-year initiative that addresses health care delays associated with preventable maternal and newborn deaths. Partners include the governments of Uganda, Zambia, the United States, Norway, and other private-sector and civil-society groups. In Zambia, the initiative has focused on 16 districts with an emphasis on newborn health care, including using antenatal corticosteroids, neonatal resuscitation, and essential newborn care; implementing a maternal/perinatal death surveillance and response system; improving data collection and analysis; improving the supply chain for essential medicines and supplies; testing and scaling up maternity waiting homes; and engaging the Zambian government to enhance onsite health-worker mentoring and training.</p>
<p><b>Child Survival Call to Action: A Promise Renewed (2012)</b></p>	<p>As part of this global effort to improve child survival, Zambia launched a new national agenda for equity in child survival that was informed by a national analysis to pinpoint disparities in child survival across the country, and to identify key bottlenecks impeding service delivery and the barriers obstructing demand for services among populations.</p>
<p><b>Integrated Global Action Plan for the Prevention and Control of Pneumonia and Diarrhoea (GAPPD) (2013)</b></p>	<p>The GAPPD outlines a road map for national governments and partners to plan and implement cohesive, integrated approaches to end preventable pneumonia and diarrhea deaths by 2025. The framework includes critical services and interventions to create healthy environments, protect children from disease, and ensure that all children have access to proven preventive and treatment interventions, including zinc and oral rehydration solution.</p>
<p><b>Every Newborn Action Plan (ENAP) (2014)</b></p>	<p>ENAP provides an action plan to save nearly 3 million newborn lives by achieving high-quality and equitable coverage of care for all women and newborns. Zambia was part of an advisory group to develop this plan that builds on the recommendations of the Commodities Commission, A Promise Renewed, and FP2020, with a monitoring framework led by the recommendations of the CoIA.</p>



The government of Zambia prioritizes delivery of health services at the community level to reach those most in need, including children in rural and remote areas.

### Identifying Policy Gaps and Opportunities in Zambia

In 2015, PATH conducted a rapid assessment in Zambia to identify opportunities to strengthen policies related to the availability of and access to RMNCH commodities as outlined by the Global Strategy for Women’s and Children’s Health and the Commodities Commission. These initiatives emphasize the use of 13 RMNCH commodities that can be easily and affordably distributed to prevent the most common causes of maternal, newborn, and child mortality.

The rapid assessment was carried out through a systematic desk review and validated through informal, in-depth interviews conducted with stakeholders familiar with the barriers and challenges that impede access to these essential medicines and simple technologies. Interviewees included representatives of the Ministry of Health (MoH); Ministry of Community Development, Mother and Child Health (MCDMCH); various multilateral agencies; donors; medical associations; and civil society and nongovernmental organizations. Stakeholders shared a multitude of insights and perspectives—which are reflected in this report—on how government policies and strategies can help to overcome challenges and improve access to commodities.

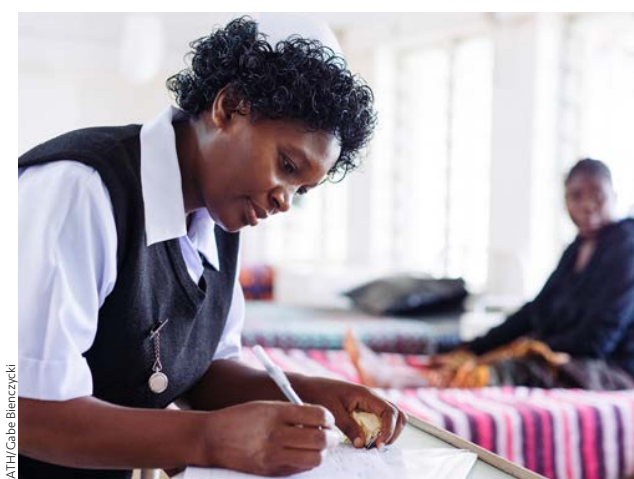
### AN OVERVIEW: ZAMBIA’S HEALTH SYSTEM

#### The Zambia Health System

The Zambia health system is organized into three broad levels of care: tertiary level, comprising teaching hospitals; secondary level, comprising provincial/general hospitals and district hospitals; and the primary level, consisting of health centers and health posts.<sup>4</sup> The government provides the vast majority of care to Zambia’s population, especially in rural areas, overseeing approximately 85% of the country’s more than 1,300 facilities.<sup>5</sup> Additional facilities are run by private entities, including mining companies and religious groups. Private health services are also available through kiosks, pharmacies, and drug shops.

The government of Zambia’s stated vision for the health sector is to achieve “equitable access to cost-effective quality health services, as close to the family as possible.” During the previous two decades, the national government has made attempts to decentralize the health system and increasingly devolve governance to provincial and district authorities as a strategy to locate services closer to communities. However, while decentralization efforts were initiated in 1995, the implementation process has been slow. Currently, policymaking and budgetary power still remain at the national level.

The MoH was established to oversee the country’s health system at the national level and was the main ministry



A nurse midwife in charge at a general hospital in Zambia completes a patient form.

responsible for national health care until 2011. Following elections that year, the Ministry of Community Development was realigned to include mother and child health in order to improve service delivery at the community level, resulting in the MCDMCH. From 2011–2015, the MCDMCH worked alongside the MoH to help guide implementation of national health programs, provide input into national health policies, and direct service delivery closer to families. Primary care, including maternal and child health services provided by some district hospitals, health centers, and health posts, also fell under the purview of MCDMCH.

In mid-2015, in order to streamline services and enhance care, the mother and child health function of MCDMCH was reintegrated into the MoH. Today, the MoH is responsible for overall health policy formulation and all facets of the public health system in the country. This includes procuring and distributing commodities, training health workers, and ensuring resources are available for essential drugs and reproductive health supplies.

### Health Staffing

Zambia's health system is staffed by a number of formal cadres, including doctors, nurses, midwives, clinical officers, and trained and paid community workers called Community Health Assistants (CHAs). However, like

many countries in sub-Saharan Africa, Zambia faces major human resource constraints, including a serious shortage of nurses and doctors. According to the National Health Strategic Plan 2011–2015, in 2009 there were 801 doctors in Zambia for a population of 13.2 million, versus a recommended cadre of 2,300 doctors and 16,732 nurses.<sup>6</sup>

This dearth of trained personnel—and staff to train them—has compelled the public health sector to rely heavily on community-based volunteers who receive limited training and provide basic health care in communities, especially those where access to facilities is limited.<sup>7</sup> In Zambia, this broad group of community health volunteers (CHVs) includes trained Traditional Birth Attendants (tTBAs), Community Health Workers (CHWs), Safe Motherhood Action Groups (SMAGs), Community-Based Family Planning Distributors, Integrated Community Case Management CHWs, and Malaria Control Agents. Once trained, these groups are authorized by the government to provide limited types of preventive and curative care, including administration of basic commodities like amoxicillin, zinc, oral rehydration solution (ORS), and some contraceptives. These cadres receive varying levels of training from government and partners, but the programs are not generally formalized or standardized by government policy, and volunteers are unpaid. In 2010, the government estimated a total of 23,500 CHVs operating in Zambia.<sup>8</sup>

### Procurement Systems for Drugs and Commodities

The MoH oversees national procurement of commodities and their subsequent distribution to provincial and district levels. Medical Stores Limited (MSL), a parastatal<sup>b</sup> that sits within the MoH, has authority over all national procurement of basic medicines for public facilities. MSL is overseen by the independent Zambia Public Procurement Authority, which regulates the procurement of goods, including pharmaceuticals, and ensures transparency and accountability in public procurement.

The MoH receives funds both from the Ministry of Finance and National Planning and from bilateral and multilateral donors using a sector-wide approach (SWAp).<sup>c</sup> The Drug Supply Budget Line coordinates these multiple drug-funding streams. Within the MoH, the Pharmacy Unit is responsible for quantification and forecasting of medicines, utilizing information it receives from MSL about how and when drugs and medical supplies are being used by facilities. The integrity of this data stream

b. A parastatal is an organization that is wholly or partially owned by the government and is granted some political authority. The Zambia MSL is run by the private entity Crown Associates in close collaboration with the government of Zambia.

c. In SWAPs, donors agree to contribute to a single basket of funds, which in turn contributes to the country's national plan. SWAPs in the health sector are a relatively new approach, though this strategy has been used in other sectors for quite some time.



PATH/Paul Libiszowski

A well-functioning supply chain for RMNCH commodities—including effective quantification, procurement, warehousing, and transport to facilities—is a critical link in ensuring medicines and supplies reach every woman, newborn, and child in Zambia.

plays a key role in access to commodities because better and more accurate supply chain data help increase efficiency of the system, reduce stockouts, and ultimately improve health outcomes.

Until the mid-2000s, commodities were delivered to facilities based on a “push” system, whereby the central government determined needs and sent drugs and commodities to the facilities via district delivery points. Today, the country has transitioned to a “pull” system, which uses a “report and request” protocol, by which clinical staff at each health facility make requisitions for medicines and supplies based on the facility’s previous three months of consumption. This process requires trained officers or managers that are knowledgeable about the ordering process and quantification systems.

In an effort to increase efficiencies and improve “last mile distribution,” especially to rural health facilities that are difficult to access, Zambia is currently refining its drug distribution and logistics information management systems. Distribution of medicines is being transferred from district offices to provincial “hubs,” which will deliver commodities directly to facilities. At the same time, the country’s current quantification and ordering mechanism is being transferred to an electronic logistics management information system (eLMIS) to streamline processes and increase data integrity. The national eLMIS has been piloted, and clinics are currently transferring from paper-based systems to an electronic system.

## THE POLICY ENVIRONMENT FOR RMNCH AND ESSENTIAL COMMODITIES IN ZAMBIA

An enabling policy environment is essential for improving the health of women, newborns, children, and adolescents. National health policies are shaped by and serve as important implementation guideposts for the health sector. In Zambia, the national government has issued a number of supportive policies that address RMNCH generally, and RMNCH commodities specifically. Government guidance is embedded in a range of sectoral health policies, integrated frameworks, and stand-alone strategies and curricula. Policy documents that address the entirety of RMNCH commodities include the Zambia Essential Medicines List (ZEML), the National Formulary, and the Standard Treatment Guidelines (STGs). These documents provide, respectively, an accounting of basic medicines that should be widely available throughout the country, information on how to use those medicines and supplies, and guidance for health professionals on basic management of common illnesses and conditions.

In addition to existing supportive policies, political commitment to RMNCH has been publicly stated. In April 2013, the Road Map for Accelerating Reduction of Maternal, Newborn and Child Mortality, 2013–2016 was launched by the former first lady, Dr. Christine Kaseba. During the launch, the Minister of Community Development, His Excellency Dr. Joseph Katema, re-iterated the government’s prioritization of proven, cost-effective, and efficient maternal, newborn, and child health (MNCH) interventions. The speech addressed current inequities in health care by bringing services closer to marginalized populations and emphasized the need to streamline the work and contributions of partners to health service delivery in order to improve efficiency.<sup>9</sup>

The RMNCH policy environment in Zambia demonstrates the government’s commitment to health-sector strengthening and commodity delivery. Table 2 outlines some of the key national policies and guidelines shaping delivery of RMNCH programs and medicines in Zambia.

## POLICY CHALLENGES AND BOTTLENECKS FOR RMNCH COMMODITIES

According to stakeholders, despite Zambia’s commitments to global and national policies to advance RMNCH commodities, many women and children—especially those in rural areas—continue to face stockouts or low availability of essential commodities at health centers and at the community level. There is also limited

knowledge by clinical and community-based staff in some areas about how to prescribe and use them.

While the complete range of solutions to this problem are multifaceted and extend beyond the policy realm, stakeholders identified a number of policy-related barriers that underpin these challenges. Some of the key areas include the supply chain for commodities, health worker capacity and training, and translation of political commitments into adequate budgets and resources for essential medicines and supplies. Additional policy gaps also exist for specific RMNCH commodities.

### Supply Chain Challenges

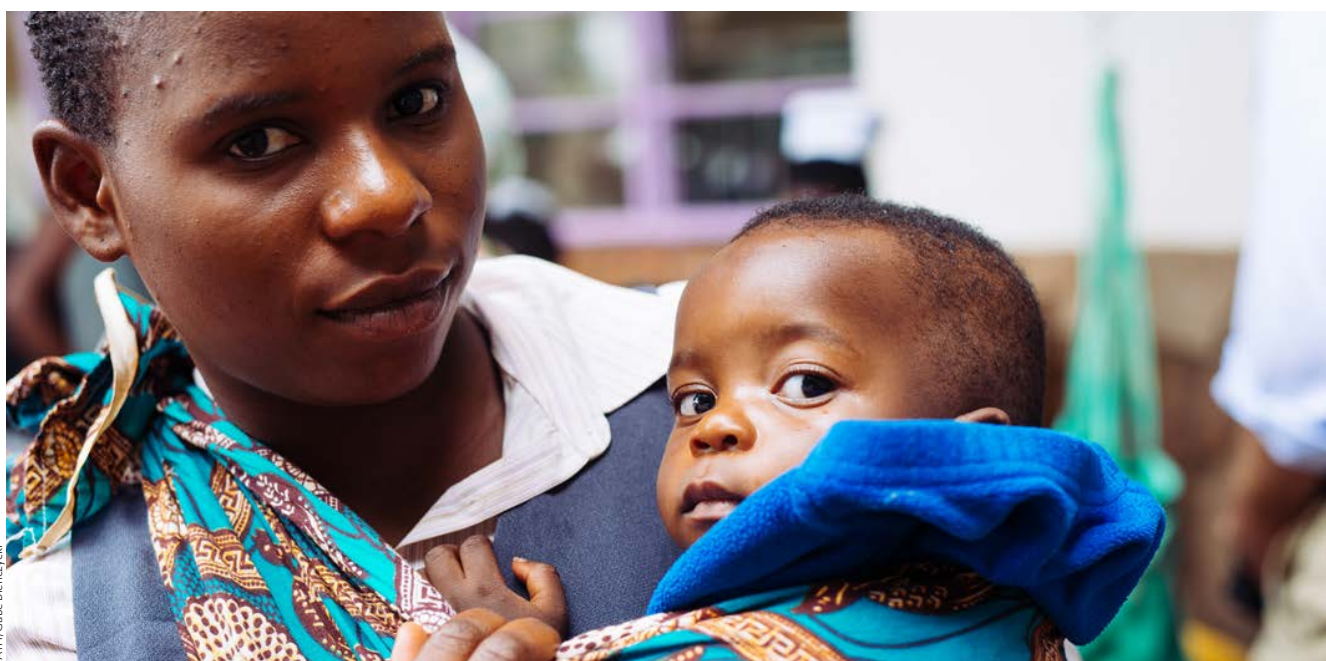
Stakeholders identified bottlenecks in the supply chain as a critical area that is impeding progress in RMNCH commodity availability. Major challenges include limited coordination and information-sharing at the national level and inadequate quantification and forecasting from local health facilities.

When MoH and MCDMCH were separate ministries, stakeholders reported that the division of RMNCH responsibilities between them resulted in limited communication and coordination for commodity supply and demand. This challenge has been addressed in part by the mother and child function rejoining the MoH, though moving forward it will remain important

**TABLE 2: Key national RMNCH policies and strategies**

National policy	Description
<b>National Health Strategic Plan (NHSP) (2011–2015)</b>	The NHSP provides a strategic framework for the health sector’s organization, coordination, and management. MNCH—including associated targets—is one of its eight public health priorities. The NHSP prioritizes integrating reproductive health with MNCH services and distribution of essential medicines. One of the plan’s six “building blocks” is “to ensure availability and access to essential health commodities for clients and service providers.” The plan also highlights the need to improve financing and equitable distribution of essential medicines.
<b>The Zambia Road Map for Accelerating the Reduction of Maternal, Newborn and Child Mortality (2013–2016)</b>	A comprehensive plan for implementation of an integrated approach to MNCH and reproductive health, it prioritizes basic packages of interventions that should be delivered to communities to significantly reduce maternal, neonatal, and child mortality. The road map focuses on funding, supply, and delivery of essential medicines and FP commodities, as well as equipping health workers to distribute those supplies in health facilities and communities. The plan is costed at US\$700million for the four-year period.
<b>The Zambia Newborn Health Framework (2013)</b>	This framework describes priority interventions and activities that require increased attention for scaling-up efforts in newborn health. The framework also describes interventions across the continuum of care, commencing at community level, and provides the policy basis for the development of guidelines, training materials, and behavior change communication materials and programming for newborn health. Key interventions addressed include hygienic cord care, administration of corticosteroids, and newborn resuscitation.
<b>The Zambia Essential Newborn Care (ENC) Guidelines (2014)</b>	These guidelines provide direction for health workers on essential and immediate care for newborns, and serve as a basis for subsequent updates to ENC training materials and protocols. They also create a foundation for key decision-makers to allocate additional staff and budgets to newborn health services, including newborn health commodities.

<p><b>The National Integrated Management of Childhood Illnesses Strategic Plan (2013–2016)</b></p>	<p>Zambia’s plan for national implementation of the integrated approach to child health includes improvement of health worker skills and supervision, strengthening effective case management (including drug availability), and improvement of household and community practices. The strategy integrates newborn care and focuses on access to key medicines, including chlorhexidine, injectable antibiotics, resuscitation equipment for asphyxia, and antenatal corticosteroids for newborn health; and ORS, zinc, and amoxicillin for children under five.</p>
<p><b>Integrated Family Planning Scale-Up Plan (2013–2020)</b></p>	<p>This eight-year plan intends to increase the contraceptive prevalence rate from 33% to 58% by 2020. Strategic priorities include strengthening demand, building capacity of providers, reaching adolescents, and increasing coverage and services in underserved areas. The plan provides strategies for improving the supply chain for FP commodities, especially long-acting reversible methods like contraceptive implants.</p>
<p><b>National Community Health Worker Strategy (2010)</b></p>	<p>This strategy established the National CHA program (called “Community Health Workers” in the strategy), which equips a cadre of community health providers to deliver essential and priority health services, including basic commodities, to communities. The strategy acknowledges other cadres of CHVs, but only formalizes the program for CHAs.</p>
<p><b>National Supply Chain Strategy (2014)</b></p>	<p>Launched in 2014, this strategy intends to be a comprehensive and coordinated strategic plan to guide investments and resources to strengthen the public health sector’s commodity supply chain with the goal of eliminating stockouts in health facilities. The eight “strategic pillars” of the strategy include procurement, logistics, information systems, and commodity security, which in turn includes financing and resource mobilization.</p>



Many of Zambia’s national policies address the health of women, newborns, and children in an integrated and comprehensive way.



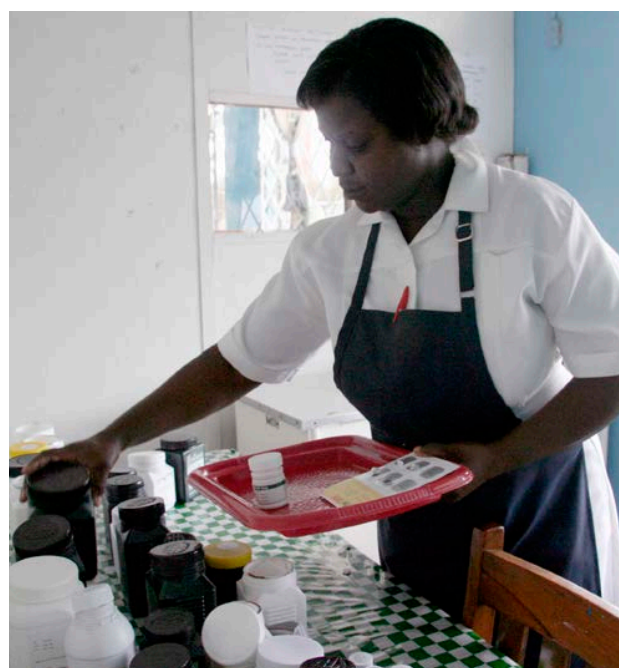
for MOH to strengthen its platforms for oversight and evaluation of commodity-specific policies and procedures.

At the health-facility level, clinics may only procure essential commodities—including reproductive health supplies like female condoms and emergency contraception—based on what they have used in the previous three months. This means that accurate quantification and timely provision of supplies to consumers is critical, as is oversight of this system. However, especially in understaffed health clinics and posts in rural areas, accurate information is often not properly reported, staff may not be well trained in quantification, and supervision is weak. In some areas, health workers are not adequately trained in how to administer certain commodities. All of these factors conspire to impair supply of commodities where they are needed most.

In its efforts to improve the supply chain, Zambia's management system for commodities and health supplies is currently moving from a paper-based system to a new eLMIS. Not all clinical staff and health care managers are oriented and trained on new electronic systems, which could exacerbate existing supervision and capacity challenges. However, this change may also provide opportunities to update and strengthen policies, training materials, and guiding documents.

### Community Health Worker Challenges

The Zambian government has indicated that building a strong community-level health cadre is a top priority for improving health equity and extending the reach of the public health system. Recent investments in health worker training have allowed Zambia to increase its health workforce, and in 2010, the government sought to standardize the training, supervision, and remuneration of the CHA cadre. This program, detailed in The National Community Health Worker Strategy, provides a one-year classroom and field training to a portion of CHWs identified by the government. The first class of CHAs was deployed in 2012, and the government has set a goal to reach a cadre of 5,000 CHAs by 2017. CHAs are authorized to administer basic commodities, including zinc, ORS, amoxicillin, and are equipped with these supplies through the health facilities. However, even at full capacity, this cadre will be inadequate to meet the needs of Zambia's population and ensure that all communities have regular and ready access to lifesaving commodities.



David Jacobs

A health worker in Zambia prepares a tray of medicine doses. Shortages of doctors and nurses have spurred the government to invest in training and support of lower-level cadres of health workers who can serve community members.

For the last several years, Zambia has been collecting evidence and considering policy revisions to accommodate “task shifting”<sup>d</sup> on various commodities, including misoprostol for PPH. However, stakeholders still report lack of awareness among health workers about who is authorized to administer basic commodities, often leading to low availability in communities. And while the Community Health Worker Strategy acknowledges the importance of other CHVs—including CHWs, tTBAs, and SMAGs—it does not provide guidance or budget for any training of volunteers aside from the CHA program. Currently, a limited number of CHVs do provide some commodities like zinc, ORS, amoxicillin and female condoms, but the lack of clear government guidance on roles, training mechanisms, and program funding means that an uninterrupted supply of the full range of essential medicines and supplies is not yet reaching many rural women, newborns, children, and adolescents.

d. According to the According to task-shifting guidance from the WHO, task shifting refers to when “specific tasks are moved, where appropriate, from highly qualified health workers to health workers with shorter training and fewer qualifications.” Task shifting can be a way to balance the demand for crowded, overburdened health facilities; improve access to services at the community level; and reduce the need for women and children to seek facility care in remote and rural areas.

## Financing Challenges

Adequate, sustainable funding poses another major challenge to effective procurement and distribution of commodities in Zambia. Despite Zambia's pledges to the Abuja Convention, the government's 2014 budget allocated less than 10% to health.<sup>3</sup> And while the health sector has created numerous and costed health policies that guide access, including the Road Map for Accelerating the Reduction of Maternal, Newborn, and Child Mortality and the Integrated Family Planning Scale-Up Plan, the government has not been able to marshal ample, long-term financing for RMNCH commodities. This is due in part to lack of political will and competing priorities, particularly outside the health sector.

Donor funding for the health sector has increased in recent years; however, at the same time, government spending on health has declined. According to the National Health Strategic Plan 2011–2015, government health spending currently accounts for only about 60% of total public health sector funds, with a full 40% coming from donor funding.

The three key budget lines for commodity funding include the Hospitals Essential Medicines, District Essential Medicines, and Reproductive Health Supplies budgets.<sup>10</sup> Government decision-makers continue to rely heavily on donor funds to provide RMNCH commodities. According to the Integrated Family Planning Scale-Up Plan, an estimated 92% of the reproductive health commodities budget is still provided by international partners, which means that the national supply can easily be interrupted if no donor funds a particular commodity.

## Commodity-Specific Challenges

In addition to systemic issues with supply chain, health worker capacity, and financing that impact access to all essential medicines, unique policy challenges are affecting the availability of a number of specific commodities in the country:

- **Misoprostol for PPH.** PPH is the leading cause of maternal mortality in Zambia, and misoprostol is an effective uterotonic in situations where use of oxytocin or other injectable uterotonics that require refrigeration and administration by a skilled provider is not feasible. In Zambia, 40% of women in rural areas deliver at home without an attending doctor or nurse, making access to misoprostol urgent in rural communities. Pilot studies in 2010 in the country demonstrated that women delivering at home could correctly use misoprostol, which prompted

the government to revise its clinical guidelines on PPH in 2012.<sup>11,12</sup> However, the current policy has not been widely disseminated and does not explicitly clarify whether trained CHAs, CHWs, or tTBAs can administer the drug, and in what circumstances. In some areas, this confusion among health workers has led to hesitation by clinical staff to equip community-based workers with misoprostol, which has in turn limited supply from MSL to health posts and rural clinics.

- **Chlorhexidine for umbilical cord care.** Chlorhexidine for newborn cord care has been recommended by the WHO to prevent infection during the first days of life in areas where neonatal mortality is high. Zambia's Essential Newborn Care Guidelines include references for its use "for all babies born in health facilities and at home"; however, chlorhexidine is not currently indicated in the ZEML, National Formulary, or STGs for umbilical cord care.<sup>13</sup> Further clarification is needed from the government on its policy stance for the use of chlorhexidine, especially in provinces and districts with high neonatal mortality rates (NMRs).
- **Zinc for childhood diarrhea.** Diarrheal disease is a major killer of children under five in Zambia. In line with global recommendations, zinc is widely recognized as a first-line treatment for diarrhea and is included in a number of child health policies, including the Integrated Management of Childhood Illness (IMCI) Strategic Plan. However, it has not yet been added to the ZEML, National Formulary, and STGs as a treatment for diarrhea. Because of this, zinc is not widely available, and many health providers, especially those based in communities, are not properly trained on providing ORS plus zinc for comprehensive diarrhea treatment.

## POLICY RECOMMENDATIONS TO INCREASE ACCESS TO RMNCH COMMODITIES

Given Zambia's global and national commitments to improving RMNCH, a number of opportunities exist to meet challenges and overcome bottlenecks currently slowing access to and availability of lifesaving commodities. Zambia's championing of RMNCH issues, strong set of partners, and overall supportive policy environment create a unique set of opportunities that can be taken forward by government officials and advocates to help Zambia achieve its targets beyond 2015.

**Update and fully disseminate the Supply Chain Implementation Strategy and quantification manual, as appropriate, to reflect the impact of the new eLMIS on quantification and forecasting of commodities.**

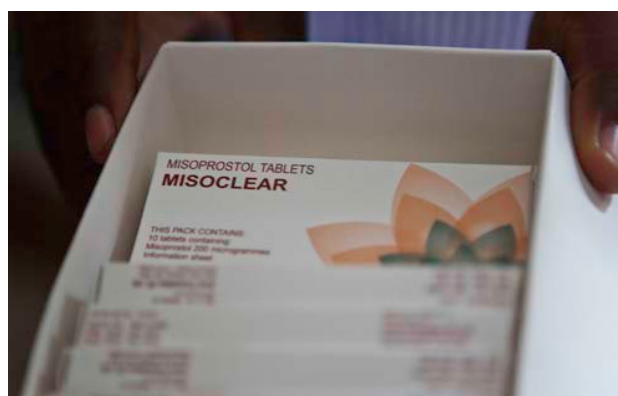
Ensuring an uninterrupted supply of lifesaving commodities to communities requires an efficient system with well-trained staff members who understand their roles and have adequate capacity in commodity forecasting and quantification. Weak training protocols and a lack of knowledge among clinical staff responsible for local procurement are contributing to shortages of commodities at health facilities, especially in rural areas. As the quantification and ordering system in Zambia transitions from paper to digital, policy updates and refresher trainings will be necessary to guide clinical staff in changing procedures.

**Revise Community Health Worker Strategy and terms of reference to clarify roles, training mechanisms, and budget for all community-based volunteers.**

Because the current CHA program is not sufficient to provide essential medicines and reproductive health supplies to all women, newborns, children, and adolescents who need them, the government has a responsibility to fill the gap by formalizing and funding a program to train lower-level health volunteers, including sufficient training in managing and administering commodities. Pilot studies by numerous groups in Zambia and other countries have demonstrated that when CHVs are appropriately trained and stocked with basic lifesaving commodities like amoxicillin, zinc, ORS, and certain FP supplies, they can provide effective community health care as well as a connection for caregivers and communities to the health system. While a current program is already in place for six-week trainings of CHWs, this program should be legitimized via the National CHW Strategy or other policy document for all community-based volunteers. It should include a strengthened training module on RMNCH commodities and be funded with a clear budget that includes a line item for commodity supply. Subsequently, the policy should be widely disseminated, including to all clinical staff and health workers.

**Increase government contributions to line items in the National Medicines Budget for essential drugs (district and hospital levels) and reproductive health supplies.**

While the national budgets for essential medicines and reproductive health supplies have increased over the past five years, they have not increased nearly enough to meet the health needs of Zambia's population. In addition, over-dependence on donor funds for basic commodities threatens supplies and stocks of contraceptives and basic medicines in community facilities. As a signatory to the Abuja Declaration and looking forward to increased health sustainability, the government must increase its own contributions to ensure flow and regular stocks of these critical medicines.



PATH/Evelyn Hockstein

Global and local authorities have recognized that administration of misoprostol for prevention of postpartum hemorrhage (PPH) at the community level is of major importance to public health. Although PPH guidelines in Zambia support misoprostol distribution at antenatal clinics for women to use during home deliveries, lack of clarity in the guidelines on which cadres of lay health workers can administer the drug has led to confusion and supply interruptions at the community level.

**Fully fund and implement Zambia's Road Map for Accelerating Reduction of Maternal, Newborn, and Child Mortality and Integrated Family Planning Scale-up Plan.**

The government has developed ambitious and comprehensive strategies with accompanying budgets that could significantly increase access to a number of lifesaving commodities, including misoprostol for PPH, newborn resuscitation devices, antibiotics for newborns, magnesium sulfate for eclampsia, ORS and zinc tablets for childhood diarrhea, and key FP methods including contraceptive implants. These strategies include the the Zambia Road Map for Accelerating the Reduction of Maternal, Newborn, and Child Mortality and the Integrated Family Planning Scale-Up Plan. The government should execute full funding as laid out by the costing and subsequent implementation of these plans. A major priority for implementation should be ensuring that the government has identified key commodities for scale-up and all health workers, in health facilities and communities, are knowledgeable about administration. This action will not only increase the supply of commodities, but will also better equip health workers in clinics and communities to administer them and strengthen procurement and supply chain systems to improve delivery.

**Clarify which cadres of health workers can administer misoprostol for the prevention of PPH at the community level, and widely disseminate revised clinical guidelines on PPH.** Government-sponsored research in Zambia demonstrated that provision of misoprostol to pregnant women during antenatal care visits for use during home deliveries to prevent PPH was feasible and effective.<sup>11,12</sup> As a result, in 2012,



PATH/Gabe Blenczycki

Government, civil society, donors, and community leaders and members must work together to advance policy recommendations so that all mothers and children can access lifesaving reproductive, maternal, newborn, and child health commodities.

the Clinical Guidelines on the Use of Misoprostol for Post-Partum Haemorrhage were revised to reflect this evidence.<sup>14</sup> The guidelines authorized administration of misoprostol by “trained birth attendants,” either at an antenatal clinic or within the community; they also authorized the woman or a “support person” who has been informed of the drug to administer it during home deliveries. In addition, the CHA curriculum was adapted to include training for CHAs in provision of misoprostol in emergency situations. The guidelines, however, do not explain what is meant by “support person” and do not explicitly address whether CHAs or other CHVs—including tTBAs and CHWs—are authorized to carry and administer misoprostol during home deliveries; the government should amend the policy to clarify its stance. Subsequently, the government should ensure that its policy position is widely disseminated to all provincial health authorities and that all training materials are updated to clearly reflect the new guidelines in order to combat confusion and free up supply and stock at the community level.

**Clarify policy guidance on chlorhexidine use for umbilical cord care at the provincial and district levels.** Clarify policy guidance on chlorhexidine use for umbilical cord care at the provincial and district levels. The current Essential Newborn Care Guidelines

recommend chlorhexidine for umbilical cord care, however the required treatment guidelines and corresponding policies do not reflect this guidance. The government should clarify its stance based on global and local evidence and best practice. The Essential Newborn Care Guidelines and any future policies or plans should be amended as necessary to identify provinces or districts with high NMRs where community use of chlorhexidine would be justified. In this case, chlorhexidine designation for umbilical cord care should also be added to the ZEML, National Formulary, and STGs.

**Include zinc in the ZEML and STGs as treatment for diarrhea.** In line with global recommendations, zinc is widely recognized as a first-line treatment for diarrhea and is included in a number of child health policies, including the IMCI Strategic Plan. However, it is still absent from the ZEML, National Formulary, and STGs. Under the auspices of the GAPPD framework, and in line with the Commodities Commission’s priority commodities for child health, updating the ZEML and STGs would align Zambia’s treatment protocols to the global best practices. In addition to improving access to communities, this would also pave the way for health providers to be trained to comprehensively treat childhood diarrhea with ORS plus zinc.

## CONCLUSION

Zambia continues to make headway in improving health care for women, newborns, and children. Ensuring that policies and programs are aligned with global standards and disseminated and implemented throughout the national and provincial health systems will increase the availability and use of critical RMNCH commodities, and save thousands of lives each year. Given the robust policy landscape of Zambia, it will be crucial for the government to focus on policy implementation, financing, and dissemination to reach the provincial levels—to ensure commodity availability in rural and remote communities and to ultimately reduce Zambia’s maternal, infant, and child mortality rates.

As a revised Global Strategy for Women’s, Children’s, and Adolescents’ Health is set to guide development and health indicators into the post-2015 era, access to RMNCH commodities will be more important than ever. As Zambia looks to achieve targets under the global Sustainable Development Goals, improving maternal, newborn, and child health must remain a top priority. To achieve this, the government and its partners must take a critical look at the enabling environment—policies and budget alike—that impacts distribution of lifesaving commodities. Comprehensively tackling the RMNCH burden in Zambia will require the cooperation of all health stakeholders in the country: government, civil society, donors, and community leaders and members.

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455 Massachusetts Avenue NW  
Suite 1000  
Washington, DC 20001

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