



## An investment in Zambia's future

Information for partners and coalitions to advocate for increased resources for reproductive, maternal, newborn, and child health

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Clockwise from left: PATH/Cabe Blenczycki; PATH/Cabe Blenczycki; David Jacobs



## INTRODUCTION

During the past 25 years, Zambia has made tremendous progress in preventing deaths and improving health among women, newborns, and children. Maternal, newborn, and child mortality rates have declined significantly, thanks largely to the government of Zambia’s strong commitment to improving access to proven health interventions and programs.

Despite these improvements, many women, newborns, and children—especially in rural areas—still do not receive basic health services and lack access to essential medicines and health products and technologies that could prevent or treat major causes of death. For example, according to the *2013–2014 Demographic and Health Survey*, an estimated 40 percent of rural mothers still deliver their babies at home, which dramatically increases the risk of childbirth complications and maternal death. In addition, a lack of basic health services and supplies means that 1 in 22 babies in Zambia will die during the first year of life, often from preventable and treatable illnesses, and 1 in 13 children will not reach their fifth birthday.

Further health gains for women, newborns, and children will depend on making basic health services and commodities available at scale to those in need. This effort requires not only clear policies and strategies that align with global evidence but also increased prioritization and budgetary allocations to procure and deliver key health commodities, as well as recruit, train, and retain health care workers to deliver high-quality care to families and communities throughout Zambia.

This report demonstrates the potential impact of increased prioritization of reproductive, maternal, newborn, and child health (RMNCH) commodities and interventions in order to support advocates, including civil society organizations and coalitions, such as the MNCH Alliance, as they interact with decision makers to influence policy and budget changes.

## GLOBAL TO LOCAL: ZAMBIA'S COMMITMENTS TO IMPROVING HEALTH FOR WOMEN, NEWBORNS, AND CHILDREN

The government of Zambia's stated vision for the health sector is to provide equitable "access to cost effective quality health services, as close to the family as possible in a clean, caring and competent environment." The government provides the vast majority of health services, especially in rural areas, and oversees about 85 percent of Zambia's 1,300 health facilities. Despite recent efforts to decentralize health care, the Ministry of Health remains responsible for overall health policy and all facets of the public health systems, including procurement and distribution of commodities, training health workers, and ensuring that adequate resources are available for essential drugs and other health supplies.

The government of Zambia has actively participated in many international initiatives to improve health for women, newborns, and children. In 2001, Zambia committed to the Abuja Declaration, pledging to increase government spending for health to at least 15 percent of the national budget.

Furthermore, under the Every Woman Every Child movement, Zambia has endorsed the *Global Strategy for Women's, Children's and Adolescents' Health*. In 2007, Zambia was one of the initial focus countries for the first strategy (*Global Strategy for Women's and Children's Health*), under which the government pledged to increase national budgetary expenditures for health from 11 percent to 15 percent.

Additionally, the government of Zambia has issued a number of national policies that guide the implementation of health programs for women, newborns, and children. For example:

- *The National Health Strategic Plan 2011–2015*, the framework for Zambia's health sector organization, prioritizes "availability and access to essential health commodities" and commits to **improved financing** and equitable distribution of essential medicines and services.
- *The Zambia Road Map for Accelerating the Reduction of Maternal, Newborn, and Child Mortality (2013–2016)* offers a comprehensive plan to integrate reproductive health with maternal, newborn, and child health, with a **focus on funding**, supply, and delivery of essential services and medicines.
- *The Health Sector Supply Chain Strategy & Implementation Plan (2015–2017)* has key thematic areas that include **commodity security, financing, and resource mobilization for supply chain and commodity distribution**. Additionally, one of the key intervention areas includes **increased funding for essential medicines and medical supplies**.

Zambia's robust health policies have created the environment for improved health indicators. To push toward the goal of zero preventable maternal, newborn, and child deaths, resources now need to align with policies in order to scale RMNCH commodities and interventions for true impact.

Newborn mortality rate: 21/1000

Under 5 child mortality rate:  
64/1000

Maternal mortality ratio:  
280/100,000 live births<sup>1</sup>



1. Zambia demographics page. A Promised Renewed website. Available at: <http://www.apromiserenewed.org/countries/zambia/>. Accessed April 1, 2016.

## MODELING THE IMPACT OF SCALING UP INNOVATIONS TO IMPROVE HEALTH FOR WOMEN, NEWBORNS, AND CHILDREN

PATH conducted an analysis to illustrate the potential health impact and economic productivity that would result from scaling up select health interventions and innovations. Robust government investment continues to be needed to ensure that high-quality products and technologies, services, and programs reach even the most remote communities.

**TABLE 1. Coverage assumptions used to model the impact of scaling up selected interventions and innovations in Zambia.**

Intervention / innovation	Health area	Baseline coverage, (2016)	Assumed peak coverage (2021)
Facility-based births and skilled care at birth <sup>a</sup>	Multiple	64.2%	74.5%
Chlorhexidine	Umbilical cord care to prevent infection	0.0%	25.0%
“Kangaroo mother care”	Skin-to-skin contact and exclusive breastfeeding to improve survival for premature babies	0.0%	25.5%
Active management of the third stage of labor (AMTSL)	Postpartum hemorrhage	48.1%	65.2%
Pneumococcal vaccine	Pneumonia	77.0%	95.0%
Rotavirus vaccine	Diarrheal disease	73.0%	91.3%
Oral rehydration solution (ORS)	Diarrheal disease	64.1%	80.1%
Zinc	Diarrheal disease	0.0%	20.0%
Insecticide-treated nets	Malaria	74.7%	93.4%
Oral antibiotics for pneumonia	Pneumonia	69.7%	87.1%
Syphilis detection and treatment	Maternal and congenital syphilis	27.8%	84.4%
Family planning	Unintended pregnancy	41.8%	52.3%



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- a. Scaling up coverage of facility-based births and skilled care at birth results in the scale-up of a package of interventions and innovations including: clean birth practices, immediate assessment and stimulation, labor and delivery management, neonatal resuscitation, antibiotics for pPRoM (preterm premature rupture of membranes), magnesium sulfate for management of eclampsia, AMTSL, induction of labor for pregnancies lasting 41+ weeks, full supportive care for prematurity, and full supportive care for sepsis/pneumonia.

## The Lives Saved Tool (LiST)

LiST was developed by a consortium of academic and international organizations led by the Institute for International Programs at the Johns Hopkins Bloomberg School of Public Health in Baltimore, Maryland. Development of the tool has been funded by the Bill & Melinda Gates Foundation. The tool includes data from a variety of sources, including peer-reviewed journals, the United Nations Population Division, the Demographic and Health Surveys Program, and the Multiple Indicator Cluster Surveys. LiST aims to “improve the quality of information available to support public health policies and decision making” (see <http://livesavedtool.org/how-list-works>). The focus of the model is quantifying the potential number of lives saved with changes in intervention coverage rates in low- and middle-income countries.

PATH used the current version of LiST (version 5.41) to estimate the reduction in mortality that would result from scaling up selected RMNCH interventions and innovations in Zambia. The baseline data, including data from the 2013–2014 Zambia Demographic and Health Survey final report and other sources, were not adjusted.

The LiST model ensures that there is no double counting of the lives saved impact when multiple interventions are scaled up simultaneously. The model assumes that each death is due to a single cause and that each death can only be prevented once.



## METHODOLOGY

In consultation with key stakeholders in Zambia, PATH, the Ministry of Health, and the MNCH Alliance identified 12 interventions and innovations, including increased access to facility-based births and skilled care, to model for the analysis (see Table 1). The interventions and innovations were selected based on their effectiveness in addressing Zambia’s leading causes of preventable maternal, newborn, and child deaths.<sup>2</sup>

The list of interventions and innovations is not intended to be complete, but rather to serve as a representative sample for the health and economic impact that could be achieved if resources were made available to scale up coverage of the full package of RMNCH products and services. Each intervention or innovation is currently included in the package of programs and services provided by the Government of Zambia. Areas such as nutrition and water/sanitation are integral to mortality reductions but have not been included in this modeling exercise as the existing Zambia RMNCH budget does not support these costs.

Using the Lives Saved Tool (LiST), PATH modeled the impact of expanding coverage of the selected interventions and innovations between 2017 and 2021. A peak, or maximum, coverage rate was estimated for the year 2021, and a linear

2. Leading causes of newborn and child death include: malaria, pneumonia, diarrhea, birth asphyxia, prematurity, and infections. Leading causes of maternal death include: hemorrhage, sepsis, and obstructed labor.

scale-up in coverage was assumed over the forecast time frame. Peak coverage assumptions were generated based on historical coverage trends, analyzing coverage data from neighboring countries, and aligning with coverage targets in Zambia's national health policies.

## RESULTS

Our analysis estimated that scaling up the selected interventions and innovations over five years could cumulatively prevent:

- **Nearly 35,400 deaths among newborns and young children.**
- **More than 1,100 deaths among women.**

In the peak coverage year (2021) alone, more than:

- **12,100 newborns and young children could be saved, resulting in a 26.5 percent reduction in death.**
- **380 maternal lives could be saved, equaling a 23.2 percent mortality reduction.**

The interventions with the largest impact on mortality were:

- Increased access to family planning, allowing women to plan and space their pregnancies.
- Increased access to facility-based births and skilled care at delivery, based on the assumption that facilities are equipped with a package of services and medicines, including a skilled birth attendant.
- Expanded access to ORS to prevent deadly dehydration from diarrhea.
- Improved oral antibiotics to treat pneumonia.

As the intervention with the most lifesaving potential, our analysis found that by scaling up family planning interventions to reach the peak contraceptive prevalence rates from Table 1 (52.3 percent), 1,402,417 unintended pregnancies and 268,423





unsafe abortions could be averted during the five-year time frame. Furthermore, when a woman controls if and when to become pregnant, she is empowered within her family and community, and therefore better able to care for her children and contribute to the economic prosperity of her community and country.

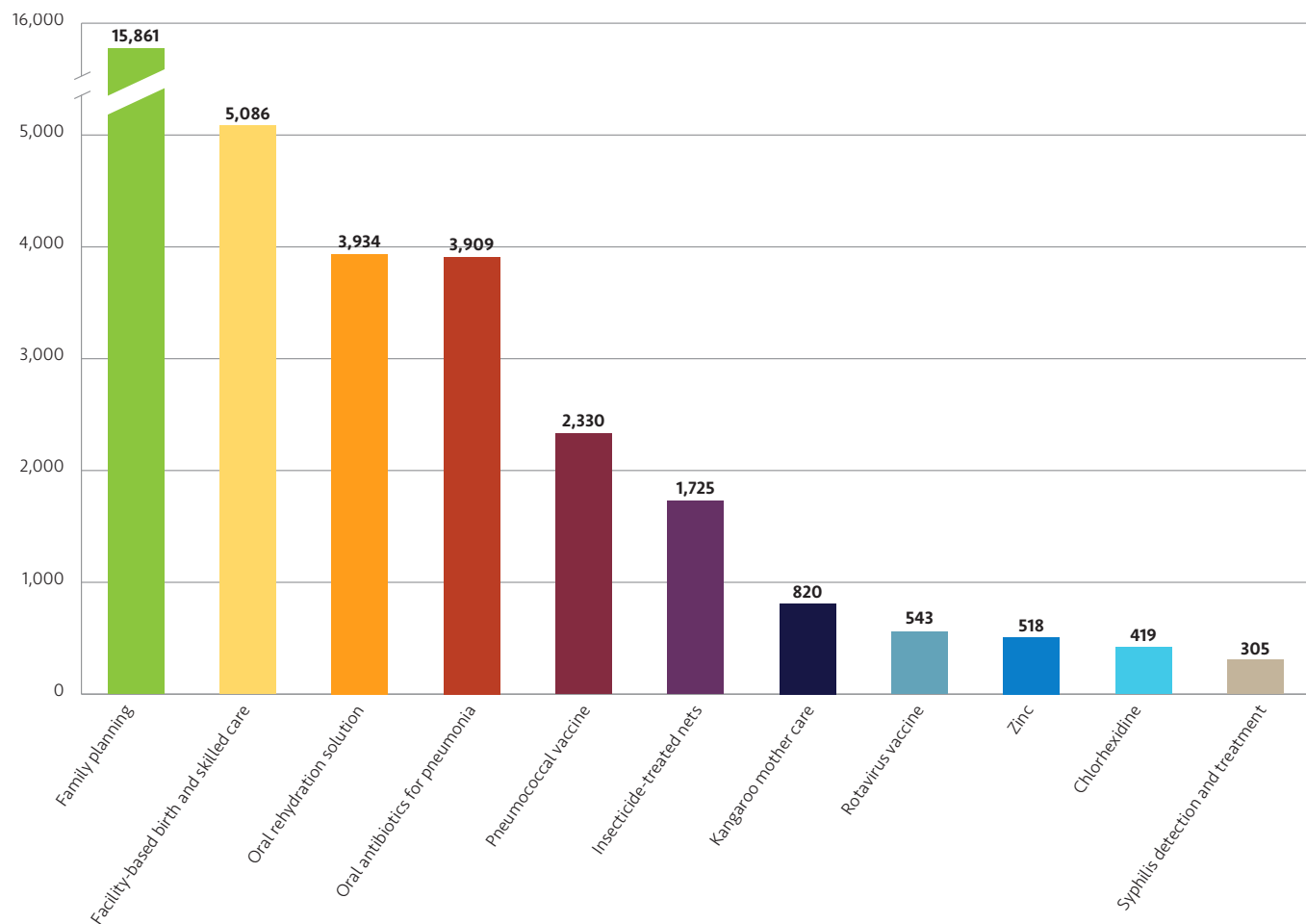
Figures 1 and 2 demonstrate the incredible lifesaving potential of these interventions and innovations and reinforces the need to improve resources for facility maintenance, health worker training and retention, and the procurement and delivery of high-quality health products, in order to bring them to scale.

### Economic Benefits

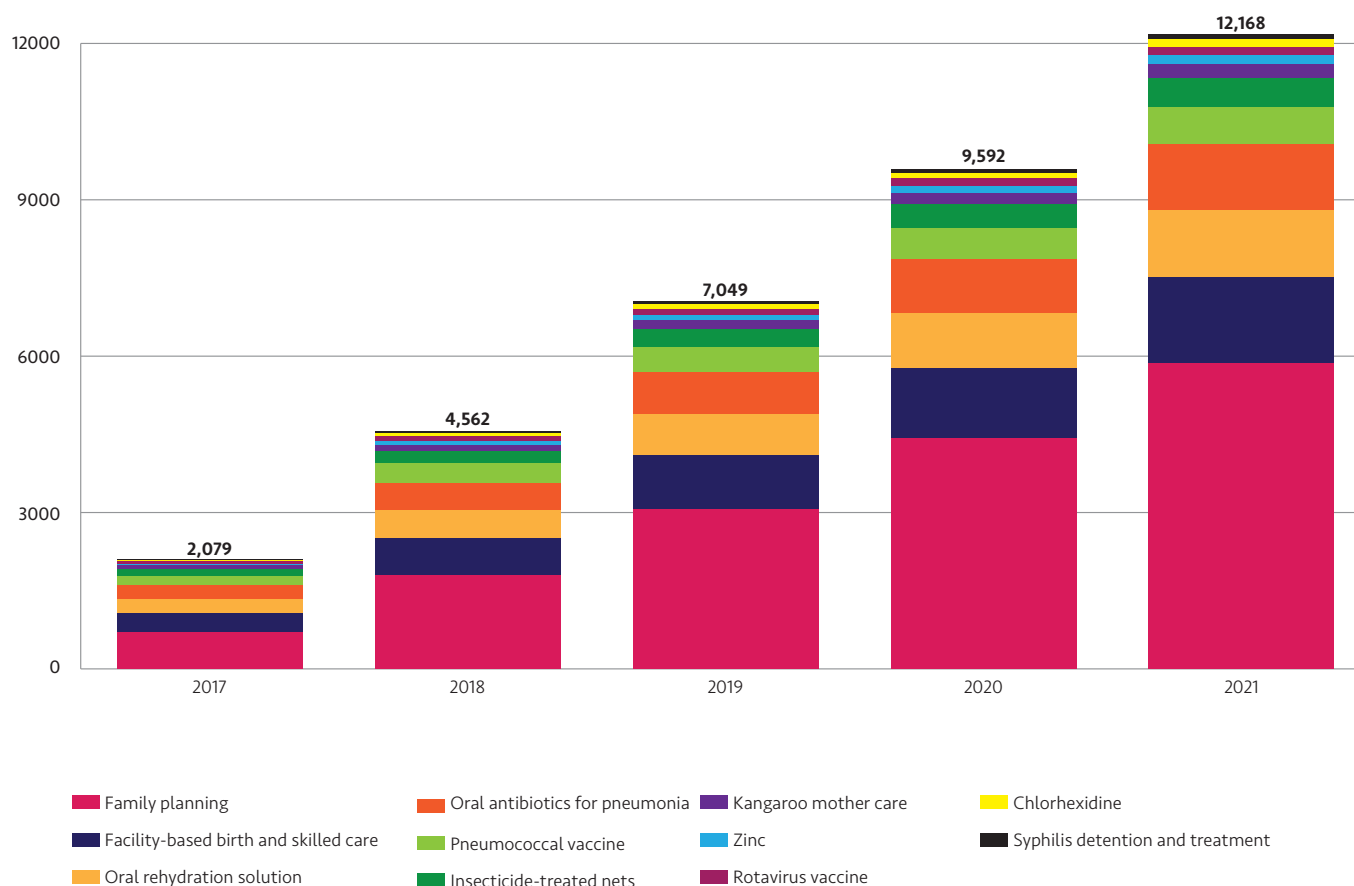
As part of this analysis, PATH also estimated the financial losses suffered when women, newborns, and children die prematurely and are not able to fully contribute to the Zambian economy. We identified the number of deaths that will occur without access to scaled-up interventions and innovations and converted that into productive life years lost, recognizing that individuals are most productive between the ages of 15 and 60 years.

Given the most recent annual per capita gross domestic product (K18,167 or US\$1,722), this means that **Zambia stands to lose K9.7 billion (US\$919.1 million) between 2017 and 2021 when women, newborns, and children die from preventable causes and are unable to contribute to economic growth and prosperity.**

FIGURE 1. Number of newborn and child deaths prevented over five years with each intervention and innovation.



**FIGURE 2. Number of newborn and child deaths prevented each year by gradually scaling up use of selected interventions and innovations.**



### THE NEED FOR ADDITIONAL FUNDING: FINANCING FOR HEALTH POLICIES

Ultimately, the annual national budget dictates the implementation of health programs and services; without adequate resources, even robust policies will have minimal impact and programs cannot be brought to scale.

The 2016 national budget has prioritized investments in health infrastructure, drugs, and the training of health personnel. However, the overall allocation for health has gone down this year. The 2015 national budget allocated 9.6 percent (K4.464 billion) to health, yet in 2016, the total amount decreased to just 8.6 percent (K4.431 billion) of the national budget.

According to the *National Health Strategic Plan 2011-2015*, donor funding covers a large portion of public sector health costs. As the donor community decreases their investments in health, there is more reason than ever for the mobilization of domestic resources, including funds for the procurement of commodities and the training and retention of trained medical staff. The current reliance on donor funds with minimal health budget allocations is not sustainable. The Zambian government must increasingly allocate more domestic funds to scale up RMNCH interventions and innovations.

While the overall health budget has decreased, there is a hint of positivity from the RMNCH allocations. Between 2014 and 2015, the allocation for RMNCH jumped from K7,706,580 to K8,401,788, representing a 9 percent improvement in resources for RMNCH. Specific allocations for 2016 are still unknown.<sup>3</sup>

3. For more than a decade, allocations have fluctuated and there is not a steady pattern of allocations or disbursements to health.



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In 2015, the government allocated only K2.2 per Zambian child and just K0.63 per Zambian woman of reproductive age. These figures remain inadequate to meet the needs of all women, newborns, and children.

Zambia’s MNCH Alliance, a group of civil society and nongovernmental organizations working together to improve health outcomes for women, newborns, children, and adolescents through increased coordination and advocacy, is recommending an additional 12 percent<sup>b</sup> increase to the 2017 RMNCH allocation. The increase will demonstrate recognition of the importance of women, and their newborns and children, to Zambia’s future. This improved investment should not be to the detriment of other sectors, including education and agriculture, but rather should increase the overall health budget and improve the proportion of Zambia’s gross domestic product going toward health. While this increase will not bring us to full scale with all innovations and interventions, this is an important first step to achieving universal health coverage for Zambia’s people.

b. This was determined by group consensus for what is feasible given political will and economic factors, recognizing that the financial commitment to fully scale up immediately would be a tremendous strain on the Zambian Government and gradual, continuous increases are a workable solution.

## INVESTING IN RMNCH IS AN INVESTMENT IN THE FUTURE: A CALL TO ACTION

Strong health policies must be supported with adequate resources and oversight to ensure the interventions on paper are met with action on the ground. As Zambia—and other countries around the world—focus on achieving the United Nations Sustainable Development Goals and ending preventable maternal, newborn, and child deaths, the time to increase budget commitments is now.

The projected economic impact of scaling up 12 interventions and innovations for RMNCH would be to add more than K9.7 billion to the Zambian economy. The resources to scale up these interventions and innovations would not only benefit individual women, newborns, and children but also yield more stable families, stronger communities, and a more productive nation while also supporting a national push toward economic growth and development.

When innovations and interventions are scaled up, more lives are saved. Saving more lives is an economic benefit that impacts all of Zambia's people. Investing in RMNCH is an investment in the future of Zambia—a healthier, happier, more sustainable future.



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## CONCLUSION

The time is now to show that Zambia cares for, prioritizes, and delivers on its commitments to women, newborns, and children. Families, communities, and nations are stronger, more resilient, and more productive when they are healthy, have access to health services when they fall ill, and trust that their government will deliver on its commitments to improving health.

Even one preventable death is too many. We have the interventions and innovations to save the lives of mothers and their newborns and children. All we need is to act.

## LIMITATIONS OF THE ANALYSIS

This analysis focused on scaling up selected RMNCH interventions and innovations in Zambia. The innovations were selected because they address the leading causes of maternal, newborn, and child death and were identified as priorities by stakeholders in Zambia. The upfront investment needed to reach these scale-up targets and the potential downstream treatment costs that could be averted were not calculated. The coverage targets were estimated based on historic trends and analogs when possible. However, there is no guarantee that the historic trends will hold or that the coverage targets could be met. The analysis on the productivity losses that could be averted due to premature death are discounted at 3 percent.

## APPENDIX A

### When to Advocate: The Process of Developing the Government Budget In Zambia

During the past three decades, the budget process in Zambia has undergone a number of reforms, moving from a top-down closed-door approach to a more transparent, consultative, and predictable process. Previously, only a limited number of government officials at the district, provincial, and national levels were engaged in setting priorities and budgets. Now, a broader group of stakeholders is engaged in the process, and there is an opportunity for public comment. The ministers of health and finance are available to be engaged and influenced to support increased investments for RMNCH.

Generally, the budget process in Zambia consists of eight main steps:

1. *Development of the macroeconomic and fiscal frameworks.* The Ministry of Finance (MOF) develops a macroeconomic framework that estimates gross domestic product (GDP) growth and other variables for the next three years; this is called the National Development Plan (NDP). The MOF also develops a fiscal framework that estimates the total resources available for central government operations during this period.
2. *Presentation and approval of the “concept paper.”* The MOF submits a concept paper to the cabinet outlining proposed strategic areas of focus for budgeting. The cabinet reviews and approves the concept paper. **During the development of the concept paper, advocates can meet with the director of budget and the director of planning within the MOF to influence the submission. This is a strategic time to influence decisions on RMNCH prioritization.**
3. *Approval of the draft medium-term expenditure framework (MTEF) and budget.* Using the macroeconomic variables, fiscal framework, and concept paper, the MOF prepares the draft MTEF (also called the “green paper”) and annual budget, which is then reviewed and approved by the cabinet. **At this time, advocates can meet with MOF officials to discuss the importance of prioritizing RMNCH and including increased budgetary allocations to improve the health and well-being of Zambia’s women, newborns, and children.**
4. *Consultation on green paper.* The MOF distributes the green paper and then holds consultative meetings with various stakeholders, including members of Parliament, civil society groups, and the general public. **During these consultations, advocates can mobilize to heavily influence the annual budget allocations. Requests for increased RMNCH funding can be vocalized during meetings and conversations with the MOF, members of Parliament, and local leaders. This is the crucial stage to communicate the importance of increased investments to improve the health of Zambia’s families and communities and strengthen the national economy.**
5. *Issuance of “call circular” and preparation of the budget for each agency.* The MOF issues budget guidelines, which are also known as the “call circular,” to ministries, provinces, and other spending departments, outlining guidelines and instructions on how to prepare annual budgets. These budgets are then prepared and finalized by each department and then submitted for approval to the budget committee chaired by the controlling officer, who for RMNCH decisions, is the permanent secretary for health. **Advocates can continue to actively engage here, encouraging district and provincial health officials to request increased resources for RMNCH interventions and innovations as well as health worker training and retention. The permanent secretary can also be approached to support increased budget allocations. Each key stakeholder influencing spending department budgets should be approached with the request to increase investments in RMNCH and improve the livelihoods of Zambian communities.**
6. *Holding budget hearings.* Each spending department presents the budget frameworks and estimates to the MOF.
7. *Approval of budget by cabinet.* After consolidating the budget, the MOF prepares the Budget Cabinet Memorandum to seek the cabinet’s approval. The memorandum shows the total estimated resource envelope (revenues, grants, and borrowing), allocations to spending departments, and other key information. The estimated resources and allocations are known as the “draft yellow book.”
8. *Budget presentation and approval by Parliament.* The minister of finance presents the national budget to Parliament on the second Friday of October, or 90 days after the president is sworn in during a presidential election year. Then various activities follow, including members of Parliament holding policy debates. During these debates, advocates can meet with the members of Parliament to encourage the prioritization of RMNCH and increased resources being made available.

The various acts (bills) passed by the House are assented to by the president to become acts or laws. After Parliament approves the budget, it goes into effect on January 1. At this point, allocations are set for the year.

## APPENDIX B

TABLE 1. In the government budget for health, expenses typically fall into two technical categories.

Reproductive and Maternal Health	Newborn and Child Health
Adolescent health	Integrated Management of Childhood Illnesses
Family planning services	Expanded Programme on Immunization
Emergency obstetric care	Pediatric HIV
Fistula repair	Under-5 cards
Prevention of mother-to-child transmission of HIV	Procurement of cold chain equipment
Focused antenatal care	
Safe motherhood	
Prevention of gender-based violence	
Cervical cancer	



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- 2 Leading causes of newborn and child death include: malaria, pneumonia, diarrhea, birth asphyxia, prematurity, and infections. Leading causes of maternal death include: hemorrhage, sepsis, and obstructed labor.
- 3 For more than a decade, allocations have fluctuated and there is not a steady pattern of allocations or disbursements to health. Further, the Zambian kwacha was revalued in 2013, making earlier data unreliable.



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