Zambia RMNCAH-N Investment Case

2022—2024

Republic of Zambia
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Foreword

Improvements in reproductive, maternal, neonatal, child and adolescent health and nutrition (RMNCAH-N) services are critical to reaching global and national health objectives and moving progressively toward universal health coverage (UHC). However, despite progress made in reducing maternal and child mortality rates, every year Zambia is losing more than 700 mothers and thrice the number of neonates from preventable causes. Further, the country continues to face limited fiscal space for health.

The Government of the Republic of Zambia through the Ministry of Health and stakeholders has developed an Investment Case for RMNCAH-N whose purpose is to reduce fragmentation and duplication of financing for RMNCAH-N by ensuring that RMNCAH-N Stakeholders in Zambia come together behind a defined set of priorities that can be implemented within the resources available. The objectives, activities and expected outcomes presented in this RMNCAH-N Investment case are derived from the National Health Strategic Plan 2022 – 2026 and other National documents such as the RMNCAH-N Roadmap 2022 – 2026.

Building on this, the Investment Case aims to expand critical demand and supply side health care interventions, which will generate the greatest impacts, particularly amongst the poor and vulnerable. The investments chosen were: improve the use of data in decision-making; enhance the implementation of the CRVS System; improve supply chain and logistics management; integrate quality improvement of RMNCAH-N services; ensure community responsiveness of RMNCAH-N services; improve sustainability of health care and financial

protection, achieve improved RMNCAH-N outcomes through collaboration, linkages and integration of services; achieve equitable access to RMNCAH-N services; and close the human resource gap and raise capacities of health workers.

I call upon all stakeholders; Civil Society, Development Partners as well as the private sector who have pledged to be part of this Investment Case to join hands with the Government of Zambia in implementing this Investment Plan. It is my considered view that – with appropriate levels of commitment and support from the Government, Cooperating Partners, health workers and other stakeholders – this RMNCAH-N Investment Case will significantly improve the health status of Zambians and contribute to national development.

Hon. Ms Sylvia T. Masebo. MP
Minister of Health

Aknowledgments

The Ministry of Health wishes to acknowledge all those individuals, institutions and organizations that contributed towards the development of the Reproductive, Maternal, Neonatal, Child and Adolescent Health and Nutrition (RMNCAH-N) Investment Case. In particular, the Ministry would like to appreciate efforts made by the Department of Planning and Budgeting for their tireless support to the process that finally culminated into this plan. Their efforts to bring together various Stakeholders and actors to the consultative meetings during the entire process of developing this Acceleration Plan are highly appreciated.

Special recognition also goes to the department of Public Health especially units dealing with the RMNCAH-N programs for their technical inputs in the formulation of the Investment Case. The department of Monitoring and Evaluation was also quite supportive in the development process of the Investment Case.

The Ministry of Health is also cognizant of the different Development Partners, Civil Society Organizations and other stakeholders who participated and generously contributed at the various meetings convened during the development process. The successful development of this RMNCAH-N Investment Case was made possible with financial and technical support from UNFPA, WHO, UNICEF, World Bank/Global Financing Facility, CHAI, CHRE, CSO-SUN, SAT, SSHE and PPAZ.

Furthermore, the Ministry of Health wishes to thank all individuals, institutions and organization's that helped to review the document as it evolved. Finally, I would like to extend vote of thanks to the team of Consultants and the Ministry of Health technical team.

Prof. Lackson Kasonka
Permanent Secretary – Technical Services
Ministry of Health

Acronyms

AAP	Annual Action Planning
ABB	Activity-Based Budgeting
AFRO	Africa Regional Office
AFS	Adolescent Friendly Services
AIDS	Acquired Immune Deficiency Syndrome
AMTSL	Active Management of the Third Stage of Labor
ANC	Antenatal Care
BFHI	Baby Friendly Hospital Initiative
CAG	Cluster Advisory Group
CCPPZ	Cervical Cancer Prevention Program in Zambia
CDH	Cancer Disease Hospital
CEmONC	Comprehensive Emergency Obstetrics, Neonatal Care
CHE	Current Health Expenditure
CP	Cooperating Partner
CPAP	Continuous Positive Airway Pressure
CRVS	Civil Registration and Vital Statistics System
CSE	Comprehensive Sexuality Education
CSO	Civil Society Organisation
DDCC	District Development Coordinating Committee
ECD	Early Childhood Development
ECE	Early Childhood Education
EmONC	Emergency Obstetrics, Neonatal Care
eMTCT	Elimination of Mother to Child Transmission of HIV
EPI	Expanded Programme on Immunization
FBO	Faith Based Organisation
FP	Family Planning
GBV	Gender Based Violence
GBVIMS	Gender Based Violence Information Management System
HIV	Human Immunodeficiency Virus
ICC	Inter-Agency Coordinating Committee
IGA	Income Generation Activities
IMNCI	Integrated Management of Newborn and Childhood Illness
IPC	Infection, Prevention and Control
ITN	Insecticide Treated Net
MIYCN	Maternal Infant and Young Child Nutrition

MoU	Memorandum of Understanding
MPDSR	Maternal Peri-natal Death Surveillance Response
MTEF	Medium Term Expenditure Framework
NASG	Non-Pneumatic Anti-Shock Garment
NCCSP	National Cancer Control Strategic Plan
NDP	National Development Plan
NGO	Non-Governmental Organisation
NHIMA	National Health Insurance Management Authority
NHSP	National Health Strategic Plan
OSC	One Stop Center
OSCE	Objective Structured Clinical Examination
PDCC	Provincial Development Coordinating Committee
PHC	Primary Health Care
PNC	Post-Natal Care
PPP	Public Private Partnerships
QIC	Quality Improvement collaborative
RED/C	Reaching Every District/ Child
RMNCAH-N	Reproductive, Maternal, Newborn, Child and Adolescent Health and Nutrition
SAG	Sector Advisory Groups
SBCC	Social and Behavioural Change and Communication
SCT	Social Cash Transfer
SDG	Sustainable Development Goal
SGBV	Sexual Gender Based Violence
SHI	Social Health Insurance
SQA	Service Quality Assessment
STI	Sexually Transmitted Infection
SWAp	Sector Wide Approach
TFR	Total Fertility Rate
TWG	Technical Working Group
WASH	Water, Sanitation and Hygiene
WHO	World Health Organization
YFS	Youth Friendly Services
ZAMPHIA	Zambia Population Based HIV Impact Assessment
ZDHS	Zambia Demographic Health Survey

Executive Summary 8

Insufficient progress on RMNCAH-N and traditional sources of financing do not close the gap to meet the Sustainable Development Goals (SDG) targets for mortality reduction and for the Universal Health Coverage (UHC). Globally, RMNCAH-N public and private domestic financing far exceeds external resources. An investment case is therefore a country-led innovation for mobilizing additional resources and getting greater impact from existing resources for RMNCAH-N.

The Ministry of Health does provide the population oriented health services that include reproductive, maternal, neonatal, child and adolescent health and nutrition. Consider some of the statistics and prevailing situation in these service areas.

Childbearing begins early in Zambia, with more than one-third of women giving birth by age 18 and more than half giving birth by age 20. Twenty-nine percent of adolescent women aged 15-19 years are already mothers or pregnant with their first child. The magnitude of infertility in Zambia is not known, but both primary and secondary infertility are of concern.

Under Family Planning, knowledge of contraception is nearly universal in Zambia. Use of modern methods of family planning by currently married women increased from 15 percent in 1992 to 49 percent in 2018. Among sexually active unmarried women, 43.9% are using a modern method of family planning; the corresponding percentage among married women is 49.6 percent.

The ministry is also concerned with the reproductive system cancers. The Zambia National Cancer Control Strategic Plan (NCCSP) 2016-2021 prioritises the management and control of the four most common types of cancers; cervical, breast, prostate cancers, and retinoblastoma. Cervical and prostate cancer had the highest incidence rate (24.8 percent, 10.2 percent); cervical cancer accounted for one out of every four cancer deaths in 2018, and prostate accounted for one of every 10 cancer deaths.

Zambia has in the recent past recorded an increase in the number of women experiencing Gender Based Violence (GBV). Slightly over half (54 percent) of women have suffered either physical, sexual, psychological or emotional violence from their partners. The high level of underreporting, however, means that many cases are never captured in official statistics.

The decline in maternal mortality that was first recorded in 2007 has been maintained; it declined from 398 deaths per 1000 live births in 2013/2014 to 278 deaths per 1000 live births in 2018 (ZDHS 2018). Maternal mortality is caused by both direct and indirect factors. Direct factors include hemorrhage, abortions, hypertension, sepsis and obstructed labour. Interventions have been directed at addressing these immediate causes of the mortality.

The percentage of women who had at least four ANC visits fluctuated over the years. The percentage increased from 69% in 1992 to 71% in 1996 and 72% in 2001-02 and then decreased markedly to 60% in 2007. The percentage decreased again to 56% in 2013-14 before increasing to 64% in 2018. The percentage of women who had ANC in the first trimester increased from 10% in 1992 to 37% in 2018.

According to the 2018 HIMS data, the main causes of neonatal deaths are birth asphyxia (43%), prematurity (29%), and neonatal sepsis (11%). Factors contributing to these causes can be traced along the reproductive health spectrum: prior to and during pregnancy (teenage pregnancy, maternal health, antenatal services, nutritional status); during delivery (quality of care, provider skills, referral systems); and after delivery (postnatal care for mother and baby, nutritional status). The main causes of child mortality are malaria, pneumonia, diarrhoea, measles and malnutrition.

In Zambia, the Ministry of Health has also placed adolescent health high on the agenda to ensure that adolescents are healthy and their challenges addressed as posited in the Adolescent Health Strategy, 2017 to 2021 which was aligned to the Zambia National Health Strategic Plan 2017-2021. The ZDHS, 2018 reported a slight reduction total fertility rate among adolescents aged 15 to 19 years from 146/1000 adolescents in 2007, 141 in 2014 and to 135 in 2018. Teenage pregnancy rate has not significantly changed since 2007 when it was 27.9% compared to 29.2% in 2018. The provincial picture of teenage pregnancy attests that even though the problem affects the whole country, it is more prominent in rural provinces with Southern at 42.5%, Western at 41.2% and Eastern at 39.5% than in Lusaka which recorded the rate of 14.9% (ZDHS, 2018).

According to the WHO, healthy nutrition is critical in the prevention of diet-related risk factors, such as overweight and obesity, and associated non-communicable diseases (NCDs). Currently, Zambia faces a double burden of malnutrition, exhibiting both under and over nutrition which contribute to morbidity and mortality across the lifecycle. Nutrition is a complex subject and requires a multi-sectoral response.

Despite the positive trends noted in malnutrition among under 5 children over time, the prevalence still remains high, with stunting currently at 35% and the third highest in the southern region, wasting at 4% and underweight at 12%.

In view of the current situation and associated challenges in the RMNCAH-N programme the following reforms were prioritized through the provincial and national prioritization meetings:

1. **Improving the Use of Data in Decision-Making:** In order to improve the decision-making basis for RMNCAH-N interventions, it will be imperative to enhance the use of data for decision making, especially at the local levels.

2. **Enhance the Implementation of the Civil Registration and Vital Statistics System:** Enhancing implementation of the CRVS has been identified as a key investment area; this would allow for consistent monitoring, timely interventions and evaluation of interventions.

3. **Improve Supply Chain and Logistics Management:** While suboptimal levels of health commodities and supplies may pose challenges to the effective delivery of health services, improving supply chain and logistics management would deliver improved outcomes for the same level of commodities and supplies.

4. **Integrate Quality Improvement of RMNCAH-N services:** Regarding the quality of the health services, it has been recorded that facility-based mortality has increased at the same time that institutional deliveries have risen. Thus quality improvement has been identified a key area of the investment case in order to realize the set targets.

5. **Ensure Community Responsiveness of RMNCAH-N Services:** While technical quality interventions are necessary for improving RMNCAH-N outcomes, they are not adequate; they need to be supplemented by community-based interventions that are aimed at providing community-responsive services.

6. **Improve sustainability of and access to health care:** Resources, both financial and others are usually inadequate to meet competing needs. While mobilising extra resources is desirable, improved utilisation of available resources can register positive changes.

7. **Enhance collaboration, linkages and integration of service provision:** Identification of synergies among providers and other players in service delivery can achieve better RMNCAH-N outcomes than individual programme efforts. Programmes that work in silos are not able to benefit from combination synergies.

8. **Narrowing the Human Resources Gap and Raising Capacities:** The challenge of numbers, distribution and capacities of human resources for health is a recurring issue, which has received widespread attention. A strategy for narrowing the human resource gap and raising capacities of health workers has been proposed.

In order to ensure that the chosen investments generate the intended impact on RMNCAH-N services, the IC adopted a Theory of Change, which identified pathways through which the identified health systems reforms will realise outcomes and impacts. Once appropriate and adequate investments are achieved in implementing the RMNCAH-N IC, the resultant outcomes will contribute towards ending preventable maternal, newborn, child and adolescent deaths; improving the health, nutrition and quality of life of women, children and adolescents and; ensuring sustainable financing for RMNCAH-N services.

The total cost requirements to implement the RMNCAH-N IC for all the three years is estimated at US$ 176,156,150.00 distributed by program namely Maternal and Newborn Health, Child Health, Adolescent Health and Nutrition. Maternal and Newborn Health has highest allocation per program accounting for 38% of the total costs while Child Health is the least allocated with 17%.

1 Introduction

1.1 The National Health Care Basic Package

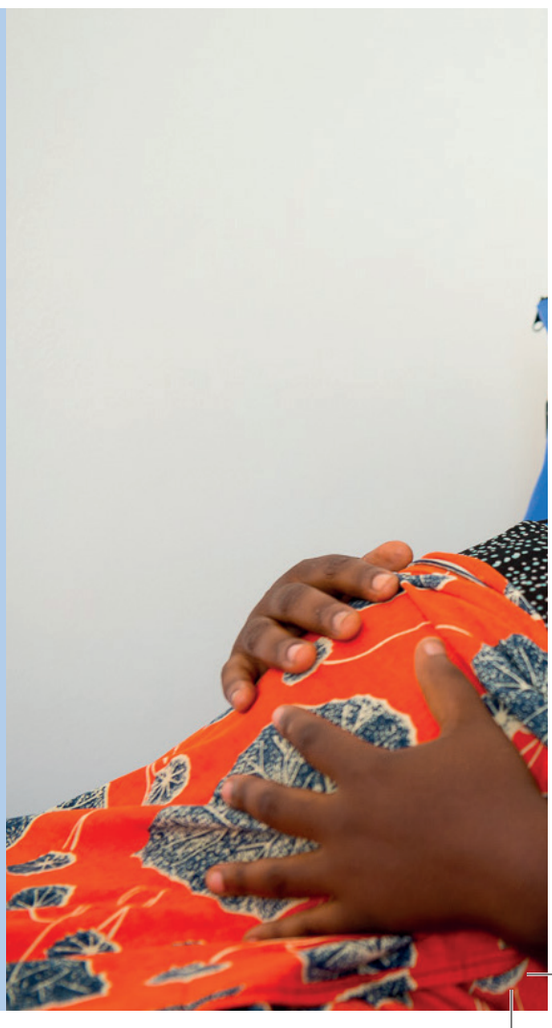
The Government recognizes the need to invest in the health of its citizens not only as a health imperative, but also an economic imperative. A healthy workforce is critical for the successful attainment of Zambia's Vision 2030 objective of becoming a prosperous middle-income nation as it enables the country to enhance its economic productivity and earn a substantial demographic dividend. To this end, health has been identified as a top priority in the National Development Plans; it is a key economic investment that will contribute to the evolution of the human capital. As a strategy to achieve this, emphasis was placed on strengthening health systems and services using the primary health care approach, to enhance the wellbeing of all Zambians. The health service model emphasized health promotion, disease prevention and curative and rehabilitative services in close-to-client settings.

The Government in 2012 developed the national health care package, which is informed by the major causes of morbidity and mortality. To this end, efforts to address the major communicable diseases such as HIV, tuberculosis and malaria have been scaled up. Further non-communicable diseases such as cancer, diabetes, hypertension, cardiovascular and mental illness have also received attention. To achieve this, investments have been made in strengthening health promotion programmes and ensuring availability of all critical health system inputs, such as adequate medical personnel, equipment, infrastructure and medical supplies. In the quest to build a healthy and productive nation, inter-sectoral actions to address determinants of health, such as water and sanitation, nutrition, education, household income, housing and road infrastructure are paramount.

Prevention of disease is a key aspect in effective public health management. During the 7NDP period, greater and more effective investments in primary health were undertaken by strengthening fundamental components of the health system. Primary health care was the approach of the health system and central to preventing epidemics; improving women's and children's health; controlling major infectious diseases, such as malaria, tuberculosis, and HIV and AIDS; and managing the rising burden of non-communicable diseases, such as diabetes, cardiovascular diseases and cancer. Public health was strengthened by implementing programmes aimed at promoting maintenance of a clean, healthy environment and good nutrition.

In addition, efforts were exerted towards reducing the incidence of non-communicable diseases. Epidemic control and preparedness programmes were also enhanced for prevention and reduction of disease.

Other areas of focus were water and sanitation and food safety regulation to ensure safe drinking water and sanitary conditions. Various programmes for raising public health were implemented: a) Health education promotion; b) School health promotion; c) Maternal child health care and family planning promotion; d) Infectious diseases immunization; e) Epidemic preparedness and control enhancement; f) Nutrition promotion; g) Physical exercise promotion; h) Legal and regulatory framework review and enhancement; and i) Public health research promotion though in inadequate amounts.



1.2 The RMNCAH-N Roadmap

The Investment case is the implementation plan for the RMNCAH-N Roadmap, developed in 2021. The RMNCAH-N Roadmap was developed in response to the need for accelerated actions for Zambia to help identified challenges of the National Health Strategic Plan 2017 – 2021 and the current NHSP 2022-2026, as well as the Sustainable Development Goals. It builds on the Zambia Roadmap for Accelerating Reduction of Maternal, Newborn, and Child Mortality in Zambia 2013-2016. The Roadmap rides on a vision of healthy well-nourished women, new-borns, children, adolescents and other key populations contributing to the development of the Zambian nation. The Goal is: to achieve universal coverage and equitable access to cost effective and high impact quality RMNCAH&N and early childhood development services as close to the family as possible, to create a healthy productive population by 2026. The identified strategies for achieving the RMNCAH-N goals are itemized below.

a. Reproductive, Maternal and Newborn Health

In order to improve reproductive, maternal and new-born health, the following strategies will be implemented: strengthening Reproductive Health Commodity Security; standardizing care of the newborn across health facilities including scaling up of Kangaroo Mother Care and infection prevention; promoting screening for and counselling on maternal depression during pregnancy, childbirth, and postnatal care and support; enhancing advocacy and resource mobilization; health systems strengthening including health sector response to Sexual and Gender Based Violence; capacity building and development (including leadership and advocacy) and strengthening the referral system including the construction of maternity waiting homes and making the services friendly and responsive to persons with disabilities. Other strategies include enhancing research and knowledge management, strengthening monitoring and evaluation as well as enhancing social and behavioural change and communication (SBCC) and community health as well as fostering partnerships and accountability.

b. Child Health and Development

Key strategies for achieving improved child health outcomes are: scaling-up and maintaining high immunization coverage of all recommended vaccines; early childhood development interventions; integration of developmental counselling and monitoring as part of routine child health services, promoting child play at community level as well as establishment of child-friendly play corners in all health facilities; managing newborn and childhood conditions and common illnesses at community and health facility levels; strengthening the health system through improved referral services at all levels particularly from community to facility level, including referrals for developmental delays and disabilities, social and behaviour change communication aimed at improving child care practices including early childhood development; strengthening the community participation in reporting vital events like birth and deaths to improve data capturing. The other strategy is to strengthen delivery of services for well children such as immunizations and growth monitoring using already existing platforms such as the “Under 5 Clinic” platform.

c. Adolescent Health

Adolescent health had emerged as an area needing special attention, and to this end, the RMNCAH-N IC will scale up strategies and interventions, aimed at reducing teenage pregnancies, maternal mortality among adolescents, HIV infection, gender-based violence, alcohol and drug use, non-communicable diseases including mental health diseases and malnutrition. The IC will focus on strengthening adolescent health service delivery systems including capacity building through pre-service and in-service training of health workers and peer educators; promoting meaningful participation of youths in planning, service delivery, monitoring and evaluation of adolescent health services; integrating counseling on responsive caregiving and parenting education into community fora (e.g. stakeholder-, church and community meetings. Other initiatives include scaling up school health programs including Comprehensive Sexuality Education (CSE) for in and out of school adolescents, other community-based programs and increasing social behavior change communication through use of adaptive leadership. The sector will also endeavor to advocate for utilization of age and sex disaggregated data to inform policy, planning and decision making.

d. Nutrition

Strategies for improving nutrition include promoting social behavior change communication around the strategic interventions such as maternal infant and Young Child Nutrition (MIYCN). This includes strengthening implementation of activities that support Baby Friendly Hospital Initiative (BFHI), Breastfeeding promotion and age appropriate complementary feeding and early childhood development measures. Other strategies include strengthening provision of nutrition education, and counselling during ANC, PNC, FP services and home visits; integrating age-appropriate sensory stimulation as an essential component for optimal child development in wellness and in the recovery phases of children being treated for severe acute malnutrition; building and strengthening capacity of staff; strengthening collaboration and exchange of information with other line ministries, private sector, NGOs and FBOs through TWGs, District Nutrition Coordinating Committees and any other platforms. Other interventions include outreach and community/ home visitations using SBCC activities, Community Based Volunteer recruitment, mentorship and motivation; as well as strengthening the supply chain of commodities for case management of various stages of malnutrition and to increase early identification of cases at community level.

1.3 Justification for the RMNCAH-N IC

Insufficient progress on RMNCAH-N and traditional sources of financing do not close the gap to meet the Sustainable Development Goals (SDG) targets for mortality reduction and for the Universal Health Coverage (UHC). Globally, RMNCAH-N public and private domestic financing far exceeds external resources. An investment case is therefore a country-led innovation for mobilizing additional resources and getting greater impact from existing resources for RMNCAH-N.

The expected results once adequate investments are done in RMNCAH-N include the following:

End preventable maternal, newborn, child and adolescent deaths

Improve the health, nutrition and quality of life of women, adolescents and children

Ensure financing for RMNCAH-N is sustainable over the long term

The Investment Case is necessary in order to:

Create shared understanding by collectively identifying bottlenecks, reforms, and financing to accelerate progress in RMNCAH-N

Increase focus by prioritizing RMNCAH-N services, 1-5 key health system reforms and Domestic Resource Mobilization and Utilization (DRUM) Strategy to be implemented with available resources

Reduce fragmentation by aligning financing to IC priorities

Increase funding for IC priorities by jointly advocating for new financing, particularly from domestic resources, and linking IC priorities to national budget and planning process

Improve accountability by setting achievable targets that will be jointly be monitored and tracked by Country Platform

2 Situation Analysis

2.1 Health Governance and Finance

Governance

Zambia runs a decentralized health structure, where the national level tier is responsible for setting the policy direction and standards, the province provides technical support to districts, which in turn are charged with providing frontline services. Ideally the apex bodies are expected to be lean, with equally limited resource allocations. Given the predominance of preventable diseases, resources should be appropriately allocated to the lower levels of the health structure, on both equity and efficiency grounds.

The strategic direction of the health sector is reflected in periodic National Health Strategic Plans (NHSP), which are tied to the National Development Plan (NDP) and Medium Term Expenditure Framework (MTEF). The NHSP is implemented through annual budgets, prepared using the Ministry of Health's Planning structure. The ministry has an elaborate network of Cooperating Partners (CPs), who it engages through Memoranda of Understanding (MoU).

The health sector has a long history of following the sector-wide approach. This is operationalized through regular policy meetings, where national health policies and strategies are regularly appraised. The meetings provide a platform to review policies and programmes, propose modifications and conceive new ideas. They also facilitate monitoring of progress made and deciding potential changes to work plans.

The health sector governance format has been impacted by recent changes at the national level. Sector Advisory Groups (SAGs) have been expanded into Cluster Advisory Groups (CAGS), which are groupings of sectors contributing towards attainment of a common objective. The decision to discard SAGs was premised on the observed need to maximize programme effectiveness given that the attainment of most development goals requires the simultaneous mobilization of inputs from multiple sectors. The integrated planning approach was used in developing the 8th National Development Plan (8NDP); the model requires timely, strategic, targeted and simultaneous investments in various sectors of the economy through integrated efforts that translate policies into equitable, cost-effective interventions. The health sector is grouped together with other sectors, which are critical to the development of human capital namely education and skills development and water and sanitation. All the three sectors are expected to work together in order to expand human freedoms to life long, healthy, creative lives and actively participate in shaping equitable and sustainable development.

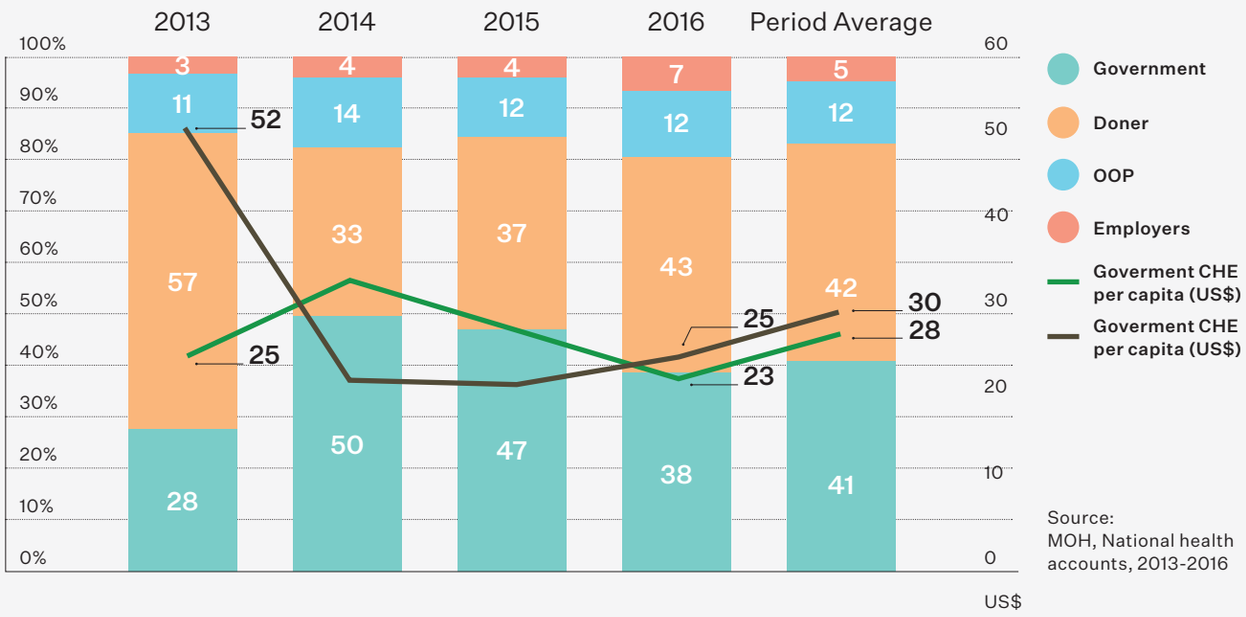
Health Care Financing

During the 2013-2016 period (National Health Accounts Survey, 2016), the Government accounted for forty-two (42) percent (US$30 per capita), donors contributed forty-one (41) percent (US$28 per capita) and other sources seventeen (17) percent of the total current health expenditure. Zambia's total nominal current health expenditure (CHE) increased over the years, and greatly benefited from international support. The nominal health expenditure increased by 36 percent between 2013 and 2016. However, in real terms, there was a decline from US$ 1,317 million in 2013 to US$ 938.3 million dollars in 2016. (*Figure 1* and *Table 1* respectively).

Government Health Expenditure as a percentage of Total Government Expenditure has hovered around 9 percent. The almost one-on-one Government-to-donor health expenditure ratios does not portent well for the sustainability of health care financing. Unfortunately, Government Health Expenditure as a percentage of Total Government Expenditure has consistently failed to reach the expected fifteen (15) percent norm; it was estimated at 8.3 percent in 2016, 9 percent in 2017 and 10 percent in 2018. Household expenditure averaged 12% between 2015 and 2016. However, OOPE does not capture indirect costs such as transport, care givers etc therefore underestimating the cost to the patient. In addition, for a country like Zambia where 76% of the population live below the poverty datum line, the expenditure however minimal raises fundamental equity, quality and access concerns which needs to be addressed.

Figure 1

Health Care Financing by Source



Source:
MOH, National health accounts, 2013-2016

Hospitals are the main recipients of total Government health expenditure.

The allocation of resources within the health sector further exposes equity concerns. For instance, during the 2013-2016 period, hospitals received a significant share total CHE.

On average, about 30 percent of the total CHE was spent on hospitals (*Table 1*). Expenditure by disease patterns renders further credence to these equity challenges (*Figure 2*); there is a skew towards HIV and AIDS and malaria.

Currently, resource allocations to RMNCAH-N services are not adequate. The Government spent about half of the total health expenditure on malaria and HIV and AIDS, with reproductive health services attracting a meager 9 percent average over the 2013-2016 period.

Table 1

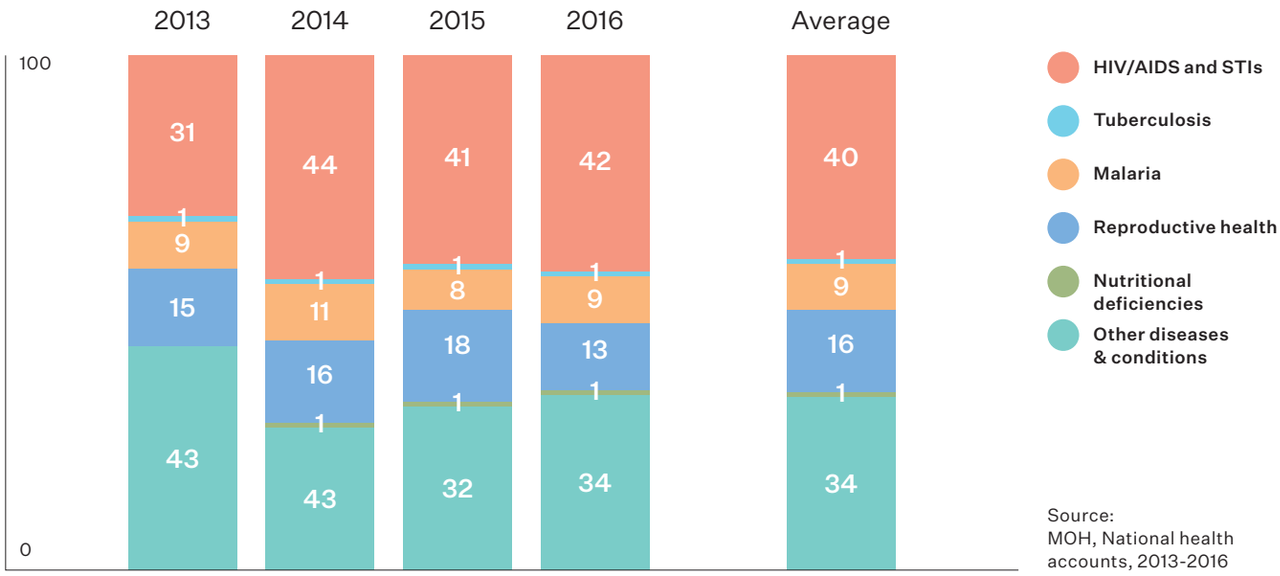
Distribution of Expenditure by Healthcare Provider: 2013–2016

Provider	2013	%	2014	%	2015	%	2016	%
Hospitals	1,721.0	24.2	2,226.6	34.8	2,664.8	32.8	3,271.9	33.8
Residential long-term care facilities	0.0	0.0	1.1	0.0	1.2	0.0	1.0	0.0
Providers of ambulatory health care	739.1	10.4	1,317.5	20.6	1,629.4	20.0	1,862.0	19.2
Providers of ancillary services	86.0	1.2	66.1	1.0	90.6	1.1	115.3	1.2
Retailers and other providers of medical goods	442.9	6.2	473.3	7.4	608.8	7.5	967.0	10.0
Providers of preventive care	1,209.5	17.0	667.2	10.4	1,895.0	23.3	1,610.8	16.6
Providers of health care system administration and financing	1,178.9	16.6	1,198.4	18.7	803.2	9.9	1,115.3	11.5
Rest of economy	16.0	0.2	1.1	0.0	1.9	0.0	554.6	5.7
Rest of the world	117.5	1.7	0.1	0.0	0.1	0.0	0.2	0.0
Unspecified health care providers	1,587.9	22.4	445.4	7.0	438.3	5.4	177.1	1.8
TOTAL	7,098.8	100.0	6,396.9	100.0	8,133.1	100.0	9,675.3	100.0

Source:
MOH, National health accounts, 2013-2016

Figure 2

Distribution of total CHE by Diseases and conditions: 2013–2016



Source:
MOH, National health accounts, 2013-2016

Priorities in Health Care Financing

The review on health care financing clearly shows that there are allocative inefficiencies and that better health outcomes can be achieved from available resources. The MoH health care financing strategy has identified priorities in health care financing, which include resource mobilization, efficiency in allocation and utilization, risk pooling, improving the purchasing function and public finance management in general. The sector has developed a resource mobilization strategy, which is aimed at increasing government domestic allocation to the health sector and attracting external support. Other proposals and measures include: identification of Public Private partnerships (PPP), Social Health Insurance, which is currently being implemented (SHI), and strategies for efficiency gains in resource allocation and utilization.

National health insurance

The health care financing challenges have been recounted, and the need for improving allocations to and expenditure on health care echoed. To this end, the Government passed the National Health Insurance Act Number 2 of 2018, under which the National Health Insurance Management Authority (NHIMA) was established. The Authority developed a benefits package of eleven services that its members can access:

1. OPD registration and consultation
2. Pharmaceuticals and blood services
3. Surgical services
4. Maternal, new-born and pediatric services
5. Inpatient care services
6. Vision care and services
7. Physiotherapy and rehabilitation services
8. Dental and oral health services
9. Mental health
10. Cancer/oncology services
11. Medical / Orthopedic Appliances and Prosthesis

The scheme is currently limited to formal sector employees and hence has very limited coverage; it is envisaged that as the informal sector is brought on board, coverage will improve. Members can access services from all public providers and accredited private sector providers

Financial Risk Protection

In Zambia, the primary health services that also include the RMNCAH-N services are offered for free. These services include but are not limited to family planning, antenatal care, maternity and postnatal care, immunizations, and growth monitoring. Since these services are provided for free, financial risk in seeking the services is quite minimal. The country has actualised the National Health Insurance Scheme and the RMNCAH-N services are part of the benefit package. Most of the clients in the formal sector have enrolled and are benefiting from the scheme. The scheme provides financial risk reduction for vulnerable groups such as women and children. There is also a specialized hospital for the mothers and newborns which is accredited to the National Health Insurance Management Authority (NHIMA).

The impact of the SHI on sustainability is yet to be ascertained. In the light of the limited purchasing power of the population, risk pooling is an imperative; the newly introduced SHI could facilitate attainment of this objective. The extent to which this is successful, however, is dependent on the contributory capacities and operational efficiencies of the delegated Agency. Infusing market elements in the purchase of health services would improve service delivery. The Essential Health Care could be so packaged as to accommodate different payment mechanisms that assure quality of health care. In the light of the financing challenges facing the health sector, potential strategies that could be considered for inclusion in the RMNCAH-N IC are:

1. Increasing government domestic allocation to the health sector and in particular to RMNCAH-N.
2. Enhance the implementation of the harmonized results based financing mechanisms; and Strengthening public finance management to track resources; and improving efficiency in human resource distribution and the supply chain.

2.2 Health Infrastructure, Medicines and Utilization

Health Infrastructure

The government has continued the expansion of health infrastructure and medical equipment development, through construction, rehabilitation and replacement of infrastructure and equipment in order to provide a conducive and sustainable environment for the provision of quality health services at all levels of the health system and secure equitable geographical and social accessibility.

Zambia's health system is marked by skewed allocation of public resources to hospital based care, and persistent regional disparities. Not only are there more health facilities in urban areas, the distribution of staff is equally inappropriate. Access could be determined by health facility density, which is primarily an indicator of reach to outpatient services. The target in Zambia was to have about 12 facilities per 100,000 population by 2018. There are currently 15 facilities per 100,000 population, which translates into one facility for about 7,000 people. Although the target was achieved and surpassed, this aggregate indicator masks vast regional disparities. Provincial differences are large, with the absolute difference between the top and bottom province being up to 22 points. Facility densities in Lusaka and Copperbelt provinces are below the national average and this is in large part due to undercounting of private facilities. A major limitation of computation of facility density is that it assumes equal access to a health facility and services for everyone, but provinces like Lusaka and Copperbelt with better roads and public transport infrastructure have better access to health facilities and services than rural areas such as Western and North-Western Provinces.

Medicines

In terms of pharmaceuticals, the goal of the Government is to ensure availability of safe, adequate, quality, efficacious, and affordable essential medicines and medical supplies at all levels of service delivery, through efficient and effective procurement, and logistics management systems. This is expected to be achieved through:

1. **strengthening** implementation, the policy and regulatory framework to facilitate efficient and effective provision of oversight on all medicines to ensure their conformity to set standards;
2. **ensuring** constant availability and accessibility of essential medicines and medical and nutrition supplies required at each level of the health system through a comprehensive, integrated and harmonized procurement, financing and logistics system;
3. **strengthening** national logistics management information system (including storage and distribution) to improve efficiency, data accuracy and visibility;
4. **improving** pharmaceutical services at all levels of care and promoting the use of safe, quality and efficacious medicines using approved treatment guidelines as well as standards of pharmacy practice; and
5. **capacity building** in order to ensure the availability of well trained and adequate pharmaceutical personnel.

Health Workforce

The total health workforce requirements in the country as per established positions at the end of 2019 was 126,389, with 60,332 being filled positions (leaving a gap of 52%). The core health workforce density (medical officers, nurses, midwives, clinical officers) increased to 16.5/10,000 in 2019 but was still below the UHC target of 44.5 (*Table 2*). There are inequities across provinces with the predominantly rural Eastern and Muchinga Provinces reporting low health workforce density of 10,000 per population, compared to the largely urban Lusaka and Copperbelt Provinces, which had the highest health workforce densities.

The number of facilities with 80% of professional staff at all levels of health care was 100%, representing significant capacity for service provision.

Further, capacity has been improved by the reduction in attrition. Information Systems have provided data for improved planning and management of human resources. The Ministry has rolled out Performance Management Systems to the provincial level on a 'training of trainers' basis and the training of staff has been conducted in most facilities.

Although there has been a substantial increase in numbers of staff deployed at health centers and hospitals over the past years, these are still inadequate for the effective delivery of the minimum health care package. This is further compounded by the unequal distribution and inappropriate skills-mix. Rural areas continue to face relatively more severe human resource shortages due to challenges in retention. Further, the low population densities of the country pose a serious challenge to the optimal distribution and utilization of health workers.

Table 2

NHSP Health Workers' Indicators and Targets

Indicator	Baseline	Target	Achievement
Health worker density (Medical officer/MO, Clinical officer/CO, nurses, and midwives)	12/10,000 population	35	16.5
Percent of approved posts filled by skilled personnel (doctors, medical licentiates, clinical officers, nurses, other) by the six levels of care	69.2 % (WHO AFRO)	73.5	47
Health facilities with at least 80% of professional staff on establishment filled (by the six levels of care) (%)	73 % (HRIS)	85	100
Health facilities with at least one qualified health worker (%)	88 %	90	79.5
Health Workers trained annually as percent of total professional workforce gap	NA	-	-
Proportion of health workers recruited annually as percent of the workforce gap	NA	NA	16

Source:
MOH. NHSP (2017-2021)
Mid-Term Review

The trends in nursing and midwifery education and practice are changing rapidly, with the evolving and emerging disease dynamics and greater client and patient expectations and service needs amidst shortage of nurses, midwives and lecturers leading to increased workload both in the clinical and training areas. Currently, the country has 21,418 (70%) nurses against the establishment of 30,595 and 3,992 (34.37%) midwives against the establishment of 11,615 as at September, 2021(MOH, 2021). This is exacerbated by inadequate equipment and supplies needed to provide quality care. In order to tackle this ever increasing demand and dynamism of nursing and midwifery, there is need for pragmatic shift towards innovation (including public private partnerships), productivity, and improved efficiency.

2.3 Reproductive Health

Fertility

The 2018 ZDHS estimated the Total Fertility Rate (TFR) to be 4.7 births per woman; it is higher (5.8 children per woman) in rural than urban areas (3.4 children per woman). Age-specific fertility rates peak at age 15-19 years (135 births per 1,0000 women) and 20-24 (203 births per 1,000 women). The TFR has declined by almost two children since 1992 (from 6.5 to 4.7 children per woman). The TFR declines have been higher in urban areas (from 5.8 children per woman in 1992 to 3.4 children per woman in 2018) than in rural areas (from 7.1 children per woman in 1992 to 5.8 children per woman in 2018).

Childbearing begins early in Zambia, with more than one-third of women giving birth by age 18 and more than half giving birth by age 20. Twenty-nine percent of adolescent women aged 15-19 years are already mothers or pregnant with their first child. The magnitude of infertility in Zambia is not known, but both primary and secondary infertility are of concern. Impaired fertility may be due to a relative or absolute inability to conceive, or to repeated pregnancy loss. Secondary infertility is preventable and could be treated with interventions that reduce reproductive tract infections and improved case management.

Family planning

Knowledge of contraception is nearly universal in Zambia. Use of modern methods of family planning by currently married women increased from 15 percent in 1992 to 49 percent in 2018. Among sexually active unmarried women, 43.9% are using a modern method of family planning; the corresponding percentage among married women is 49.6 percent while for adolescents aged between 15-19 stands at 38% according to the 2018 ZDHS. The most popular modern methods used by married women are injectable (26 percent), oral pill (8 percent), and implants (8 percent) whilst among unmarried sexually active women, the most popular methods are injectable (21percent), implants (9 percent) and male condoms (7 percent). Twenty percent of currently married women have an unmet need for family planning and 21.5% for adolescents aged 15-19.

The 2018 ZDHS results show that the public sector (89%) remains the major source of modern contraceptive methods among women aged 15-49 years. Modern contraceptive users are most likely to obtain their supply from government health centers (65%), government health posts (13%) and government hospitals (8%). The private sector distributes 9% of modern contraceptives, with other sources accounting for 2%.

There are regional inequities in contraceptive use. A regional comparison of contraceptive use unveiled a persistence rural-urban inequity, with women in rural areas reporting a lower contraceptive prevalence rate than those in urban settings. According to the data presented in *Figure 3*, Lusaka, Copperbelt and Eastern provinces had higher rates than the other provinces.

Unmet need for family planning among currently married women is higher in rural areas (21%) than in urban areas (17%).

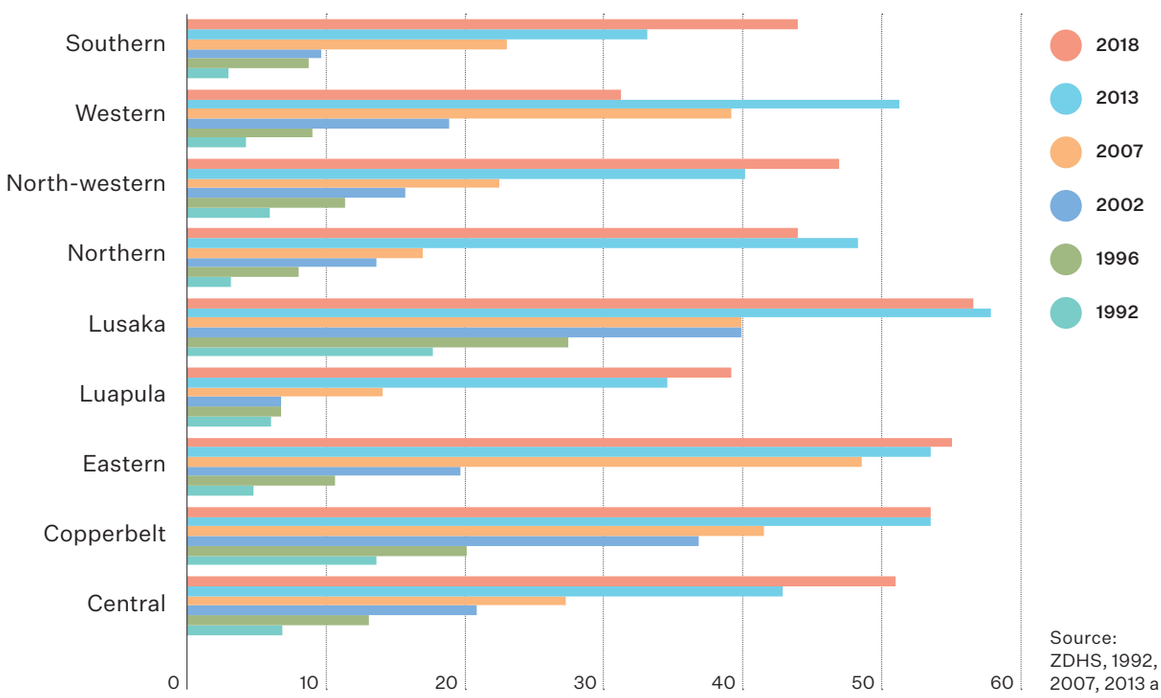
The percentages of women with unmet need for family planning was highest in Western (27%) and Luapula (26%) and lowest in Muchinga (15%) province. Unmet need for family planning among currently married women decreases with increasing education, from 24% among those with no education to 15% among those with a higher education. Similarly, unmet need decreases with increasing household wealth, from 23% among women in the lowest wealth quintile to 17% among those in the highest wealth quintile. Demand satisfied by modern methods is lowest in Western (52%) and Northern (58%) and highest in Lusaka (75%) and Central (73%).

Reproductive System Cancers

Reproductive system cancers manifest in the breast, cervix and prostate organs. The Zambia National Cancer Control Strategic Plan (NCCSP) 2016-2021 prioritises the management and control of the three most common types of cancers; cervical, breast and prostate cancers. Cervical and prostate cancer had the highest incidence rate (24.8 percent, 10.2 percent) among cancer patients; cervical cancer accounted for one out of every four cancer deaths in 2018, and prostate accounted for one of every 10 cancer deaths (*Figure 4*).

Figure 3

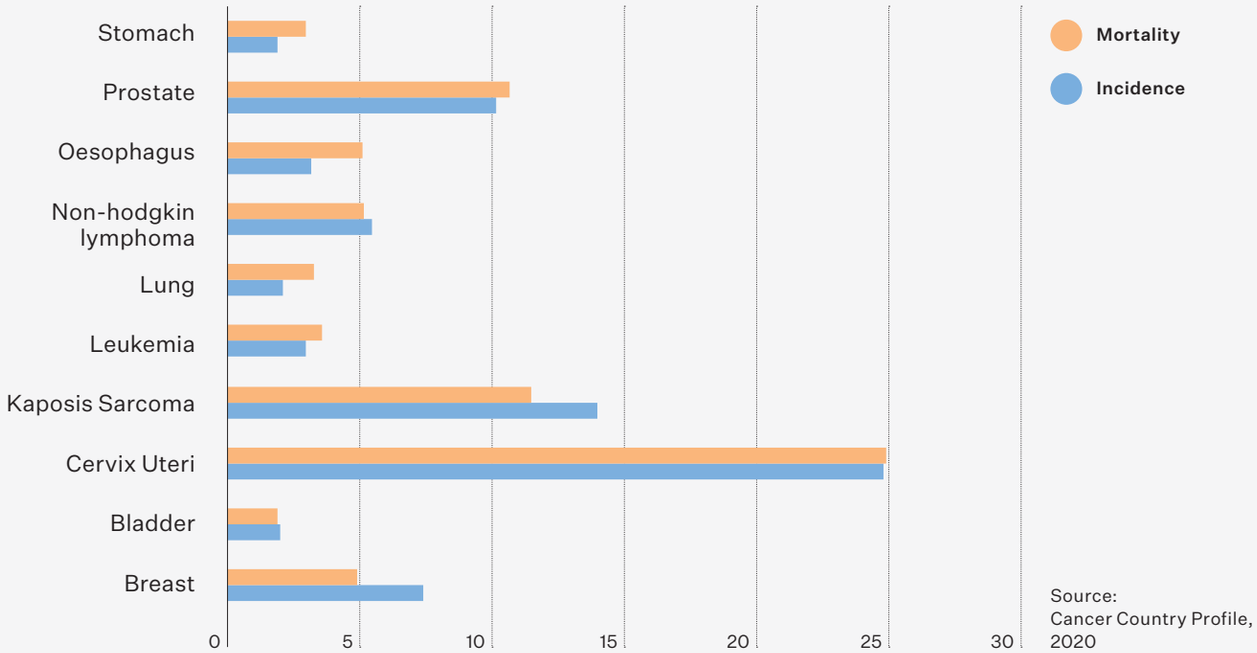
Contraceptive Prevalence by Province, 1992-2018



Source:
ZDHS, 1992, 1996, 2002, 2007, 2013 and 2018

Figure 4

Cancer Incidence and Mortality, 2018



Source:
Cancer Country Profile, 2020

Cervical Cancer

Invasive cervical cancer (ICC) is a leading cause of cancer-related morbidity and mortality among women in the developing world. Zambia has one of the highest incidence of cervical cancer globally. The estimated age standardized incidence and mortality rates from cervical cancer are 58 and 36.2 per 100,000 women respectively (*Figure 4*). The Government has implemented interventions such as the "screen and treat approach" representing low-tech innovations that could be scaled up to reach many needy women; further, testing for human papilloma virus has been implemented, with promising results. Integrating cervical cancer prevention and treatment with existing programmes such as HIV and AIDS would facilitate increased capture of women in need. These interventions notwithstanding, the country has faced challenges in the fight against cervical cancer. The 2006 initiative on Cervical Cancer Prevention Program in Zambia (CCPPZ) was heavily dependent on donor support, and therefore unsustainable. Specialized human and health system inputs for cancer interventions remain suboptimal and pose greater challenges in the wake of rising cancer cases. To address these challenges, the government is currently implementing a phased HPV vaccination programme for girls aged 14-15 years in selected districts; the current HPV vaccination coverage is estimated at 33%.Other interventions include capacity building of service providers, community awareness raising about cancer screening and improving infrastructure and equipment to facilitate early and effective treatment.

Breast Cancer

In Zambia, breast cancer is second to cervical cancer in incidence rates among women (22.4 per 100,000 women) (*Figure 4*). It is estimated that breast cancer kills approximately 400 women each year. Statistics compiled from the Cancer disease hospital (CDH) show that breast cancer cases account for 9% of cases presenting at the hospital. Treatment of patients presenting with breast cancer is compromised by the tendency of patients seeking care late; as a result, 2-year survival rate among women treated at CDH remains below 50 percent. The range of options for breast cancer in Zambia, like other developing countries are limited to surgery, chemotherapy and radiotherapy. There is an urgent need to enhance such capacities by improving laboratory diagnostics, surgical, chemotherapy, and radiotherapy capacities. Given the problem of delays in reporting for screening and high cost of treatment, more efforts should be made to increase the practice of self examination and screening for high risk groups, community awareness on breast cancer and the need for early presentation.

Prostate Cancer

Prostate cancer is the most common cancer seen amongst males presenting at CDH, and represents 5 percent of all cancer cases. The average age of men diagnosed with prostate cancer is 71 years. Zambia has a slightly above average incidence of prostate cancer, but has one of the world's highest estimated prostate-related mortality rates. The incidence and mortality rates from prostate cancer are estimated at 21.9 and 18.2 per 100,000 men respectively. Community awareness raising and screening of men above 40 are proposed strategies.

Sexually Transmitted Infections

Sexually Transmitted Infections (STIs) present a large burden of disease in Zambia, accounting for about 10% of out-patient department attendances. The actual incidence could be higher considering that many STI patients seek care with private clinics and traditional healers where they are assured of privacy and confidentiality. In addition, asymptomatic infections remain high in the population and among high-risk groups.

The 2018 ZDHS shows that overall, 5% of women and 8% of men aged 15-49 years reported having had an STI or symptoms of an STI in the 12 months prior to the survey. Sixty-two percent of women and 73% of men who had an STI or STI symptoms sought advice or treatment from a clinic, hospital, private doctor, or other health professional. However, 37% of women and 26% of men with an STI or symptoms did not seek any advice or treatment. Sexually transmitted infections (STIs) have been found to increase susceptibility to HIV infection.

In terms of HIV, thirteen percent of adults aged 15-49 were infected (15% women and 11% men) showing a decrease over time (from 16% in 2001-02). The HIV prevalence increases with age, peaking at 23 percent in the 40-44 age group and declining thereafter.

Gender Based Violence

Zambia has in the recent past recorded an increase in the number of women experiencing Gender Based Violence (GBV). Women have disproportionately borne the brunt of GBV due to their low socio-economic status and consequent vulnerability. The ZDHS (2018) shows that the common types of violence against women are emotional, physical and sexual violence. Slightly over half (54 percent) of women have suffered either physical, sexual, psychological or emotional violence from their partners. The high level of underreporting, however, means that many cases are never captured in official statistics. In order to improve the collection of statistics on GBV, a Gender Based Violence Management System (GBVIMS) has been developed and installed in thirty (30) One Stop Centers (OSCs) across the country, on a pilot basis. The strategy is to roll out GBV services to all health facilities.

The Government has implemented other interventions for addressing the scourge of GBV. To ensure quick disposal of GBV cases, six (6) GBV focused Fast Track Courts have been established in provincial Centers; legal desks at police stations, prisons and subordinate courts have also been set up. To complement the operations of the courts, simplified Rules of the Court have been promulgated to enable survivors of GBV access services.

2.4 Maternal Health

Trends and Patterns

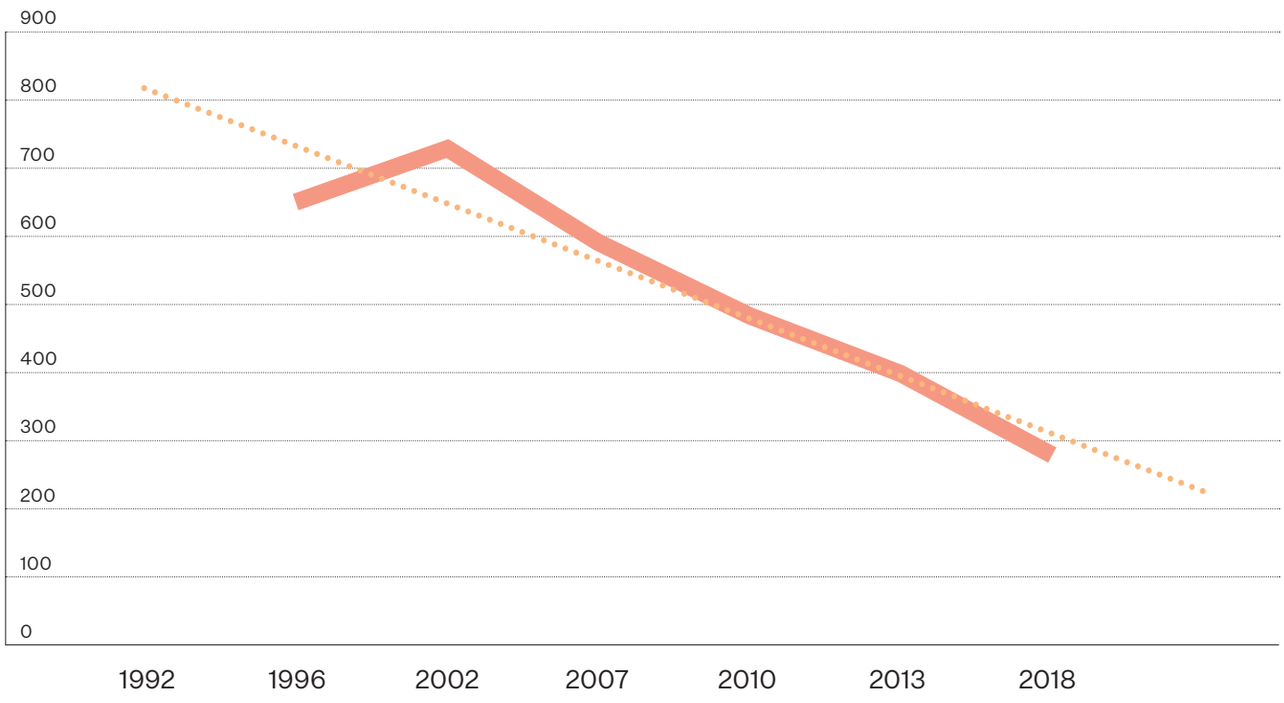
The decline in maternal mortality that was first recorded in 2007 has been maintained; it declined from 398 deaths per 100000 live births in 2013/2014 to 278 deaths per 100000 live births in 2018 (*Figure 5*). Maternal mortality is caused by both direct and indirect factors. Direct factors include hemorrhage, abortions, hypertension, sepsis and obstructed labour. Interventions have been directed at addressing these immediate causes of the mortality. Sustaining the gains in mortality reduction will require addressing underlying factors that predispose women to the risk of death; adolescent pregnancy, harmful traditional practices, low socio-economic status, high fertility, poverty and low male involvement in reproductive health.

Factors Affecting Maternal Health

Uptake of ANC services has improved, with two thirds of women having at least four ANC visits. In the 5 years preceding the 2018 ZDHS survey, 64% of women age 15-49 had at least four ANC visits during their last pregnancy resulting in a live birth, while 33% of women had two to three ANC visits and 1% had one visit. Another 1% of women had no ANC visit during their last pregnancy. Rural women were more likely to have at least four antenatal care visits (65%) than urban women (61%). Slightly over 3 in 10 women (37%) had their first ANC visit during the first trimester of their pregnancy; 48% had their first visit during the fourth or fifth month of their pregnancy, while 13% received ANC during their sixth and seventh month of pregnancy. Only 1% of women had their first ANC visit in the eighth month or later. The median gestational age at which women made their first ANC visit was 4.4 months.

Figure 5

Maternal mortality ratio, 1996-2018



Source:
CSO, ZDHS, 1996, 2002, 2007, 2013 and 2018

The percentage of women who had at least four ANC visits fluctuated over the years. The percentage increased from 69% in 1992 to 71% in 1996 and 72% in 2001-02 and then decreased markedly to 60% in 2007. The percentage decreased again to 56% in 2013-14 before increasing to 64% in 2018. The percentage of women who had ANC in the first trimester increased from 10% in 1992 to 37% in 2018.

Malaria infection during pregnancy is a major public health problem in Zambia, with substantial risks for the mother, the foetus, and the neonate.

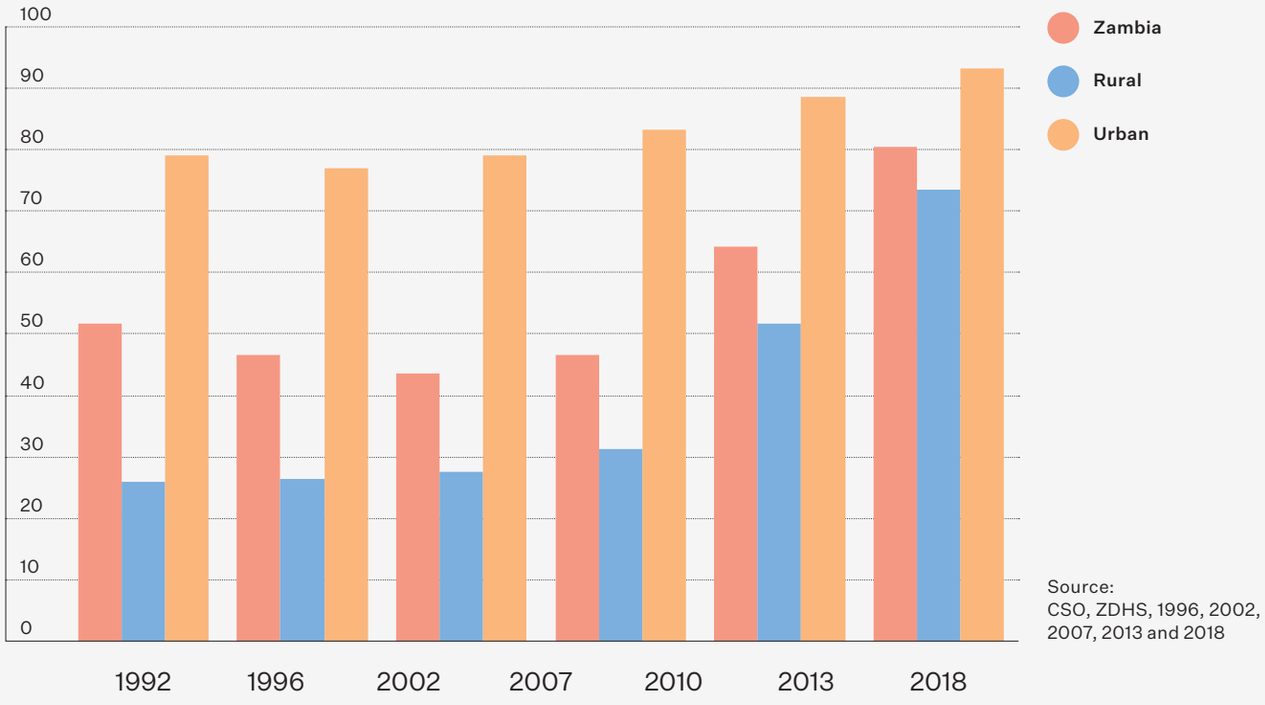
Intermittent preventive treatment of malaria in pregnancy (IPTp) is a full therapeutic course of antimalarial medicine given to pregnant women at routine antenatal care visits to prevent malaria. IPTp helps prevent maternal malaria episodes, maternal and foetal anaemia, placental parasitaemia, low birth weight, and neonatal mortality. Ninety-four percent of pregnant women received one or more doses of IPTp, 81% received two or more doses, with 59% receiving three or more doses. As regards micronutrients supplementation, the percentage of women taking iron was 48.6% and folic acid was at 43.9%. Syphilis screening was at 44.2% in 2021.

While the uptake statistics are impressive, gains in averting maternal deaths owing to malaria could be enhanced with preventative measures, such as use of ITNs by women and children. Fifty-two percent of children under the age of 5 slept under an ITN the night prior to the survey. Similarly, 49% of pregnant women aged 15-49 slept under an ITN the night before the survey. The percentage of children under age 5 who slept under an ITN the night before the survey increased from 7% in 2001-02 to 52% in 2018. There was a similar trend among pregnant women, with an increase from 9% in 2001-02 to 49% in 2018.

The extent of skilled attendants at birth is an important determinant of pregnancy outcome. There has been an appreciable increase in the proportion of deliveries from health facilities and attendance by skilled providers (*Figure 6*). Women in urban areas are more likely to be assisted by a skilled provider (93%) than women in rural areas (73%). By province, the percentage of births delivered by a skilled provider ranges from 70% in Northern to 91% in Copperbelt and Lusaka. Women in Luapula and North Western are more likely to be assisted by a traditional birth attendant (18% and 17%, respectively) than women in other provinces.

Figure 6

Proportion of Births Attended to by Skilled Providers



Source:
CSO, ZDHS, 1996, 2002, 2007, 2013 and 2018

The percentage of births attended by a skilled provider decreases with increasing mother's age at birth, from 84% among births to women aged less than age 20 years to 76% among births to women aged 35-49 years (*Figure 6*). Further, the percentage of deliveries attended by a skilled provider decreases with increasing birth order; 89% of first-order births were delivered by a skilled provider, as compared with 71% of sixth- or higher-order births. Women with no ANC visits are less likely to be assisted by a skilled provider than women with one or more visits. Births delivered somewhere other than a health facility are less likely (4%) to be attended by a skilled provider than births delivered in a health facility (95%).

The availability of human resources for maternal services is less than optimal: HRH for maternal health is limited, with only 1.1 and 1.3 doctors per 1000 population in 2018 and 2019 respectively. The corresponding ratios for nurses and midwives were 2.2 and 2.2. per 1000 population for midwives and 9.8 and 11.3 per 1000 population for nurses. The skewed distribution of staff further accentuates the difficulties; urban areas have better staffing levels compared to rural settings. Limited supervisory capacities of front line health workers by their immediate supervisors at the hospital and district level further impacted on maternal health. Less than optimal supply of requisite prenatal; complicated obstetric care and low C-section rates (7.8%) further impacted maternal services.

2.5 Infant and Child Health

Trends and Patterns

Infant mortality marginally declined from 45 deaths per 1000 livebirths in 2013/2014 to 42 deaths per 1000 live births in 2018 (*Figure 7*). Infant mortality is slightly higher in urban areas (44 deaths per 1,000 live births) than in rural areas (41 deaths per 1,000 live births). However, neo-natal mortality slightly increased from 24 deaths per 1,000 live births in 2013-14 to 27 deaths per 1,000 live births. This ties in with the observed marginal decline in maternal mortality during the same period, reflecting the close link between neonatal and maternal mortality. In 2021, macerated still births were at 8.9/1000 live births while fresh still births stood at 5.6/1000 live births. A regional comparison of neonatal mortality shows that Luapula, Muchinga and Southern provinces had the highest rates, while Northwestern and Central provinces had the lowest (*Figure 8*). The perinatal mortality rate as reported in the 2018 ZDHS is at 33 deaths per 1000 pregnancies.

Under-5 mortality declined from 75 to 61 deaths per 1000 live births. Similarly, under-5 mortality also declined from 75 deaths per 1000 live births in 2013/2014 to 61 deaths per 1000 live births in 2018. Urban areas had a lower rate (64 deaths per 1,000 live births), compared to rural areas (58 deaths per 1,000 live births).

By province, under-5 mortality was highest in Luapula (110 deaths per 1,000 live births) and lowest in North Western (26 deaths per 1,000 live births).

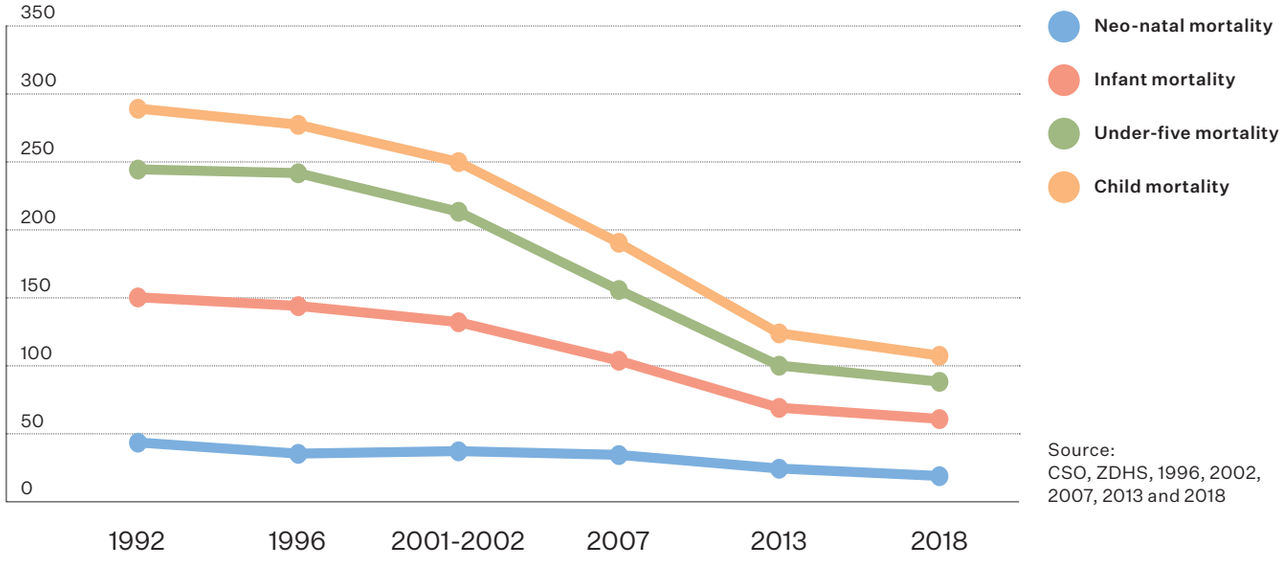
Under-5 mortality was higher among children born to women with no education (69 deaths per 1,000 live births) or a primary education (66 deaths per 1,000 live births) than among children born to women with a secondary education (62 deaths per 1,000 live births) or higher (47 deaths per 1,000 live births) education.

Causes of Neonatal and Child Mortality

According to the 2018 HIMS data, the main causes of neonatal deaths are birth asphyxia (43%), prematurity (29%), and neonatal sepsis (11%). Factors contributing to these causes can be traced along the reproductive health spectrum: prior to and during pregnancy (teenage pregnancy, maternal health, antenatal services, nutritional status); during delivery (quality of care, provider skills, referral systems); and after delivery (postnatal care for mother and baby, nutritional status). The main causes of child mortality are malaria, pneumonia, diarrhea, measles and malnutrition.

Figure 7

Neonatal, Infant, Under-5 and Child mortality, 1992-2018



Source:
CSO, ZDHS, 1996, 2002, 2007, 2013 and 2018

Expanded Program on Immunisation

Zambia has been implementing the Expanded Programme on Immunization (EPI). Currently, the routine immunisation schedule administers the following antigens: BCG, OPV, DPT-HepB-Hib, Pneumococcal, Rota, IPV MR and HPV. The level of immunisation has consistently been rising; the 2018 ZDHS results show that 75 percent of children aged 12-23 months were fully immunized, while 58 percent had received all the basic vaccinations by age of 12 months. Keeping the upward trend, the coverage for MCV, which was introduced in 2013 was estimated at 33% in 2013, 47% in 2014, 59% in 2015, 64% in 2016, 61% 2017, and 63% in 2018 (HMIS). The country is still far from reaching the elimination goals which requires that coverage at national and in all districts is above 95% for both MCV1 and MCV2.

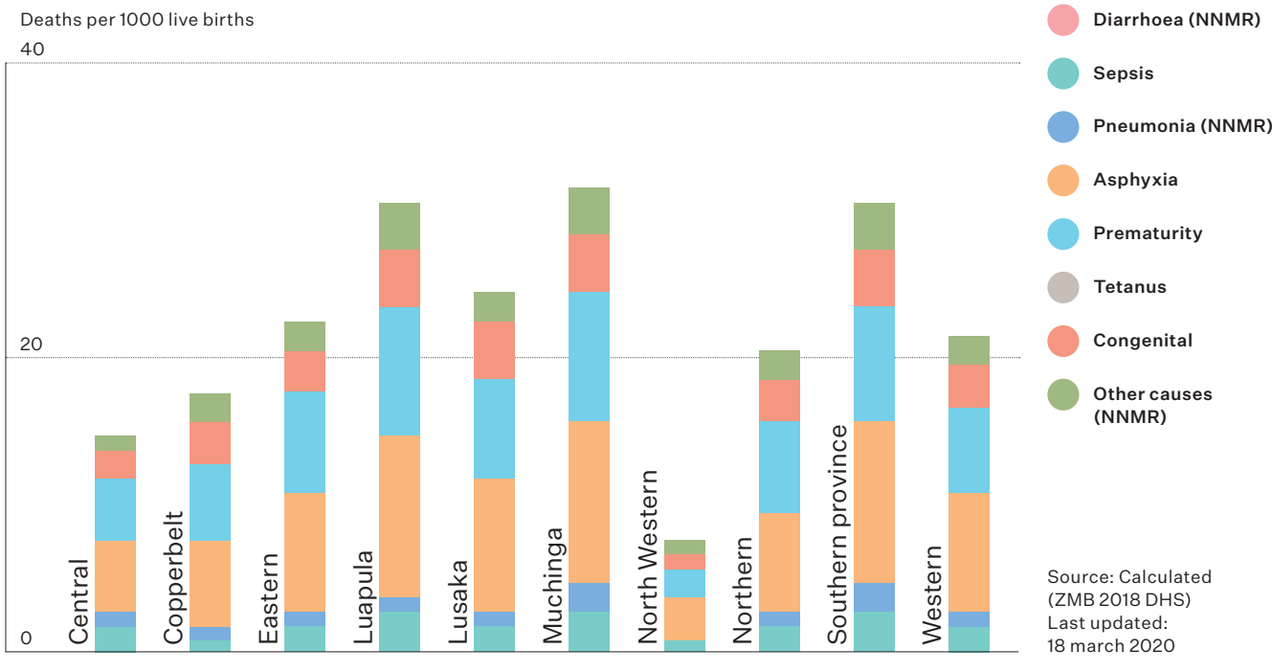
The Reaching Every District/ Child (RED/C) strategy has been a key element of the EPI programme. The five components of RED/C are; 1) planning and management of resources, 2) Reaching the target population, 3) Linking services with the community, 4) Supportive supervision and 5) Monitoring data for action. The RED/C aims to achieve the goal of at least 80% immunization coverage in all districts and 90% nationally. The RED/C interventions have been hampered by inadequate supervision of health workers, failure to develop RED/C plans at facility level, inconsistent outreach, poor data quality and inadequate monitoring.[2]

2. WHO 2018. Immunization Coverage. World Health Organization Fact Sheet.

Figure 8

Neonatal mortality by cause and province

Sub national



Source: Calculated (ZMB 2018 DHS)
Last updated: 18 march 2020

3. MOH, 2018. Zambia IMNCI Health Facility Survey.

4. MOH, 2018. Zambia IMNCI Health Facility Survey.

Integrated Management of Newborn and Childhood Illnesses

Integrated Management of Newborn and Childhood Illness (IMNCI) is a strategy that fosters a holistic approach to child health and development; it aims to achieve this through interventions that reduce death as well as the frequency and severity of illness and disability. Zambia uses the IMNCI as a national strategy that focuses on the major causes of diseases in children, such as pneumonia, diarrhoea, malaria, and malnutrition.

Implementation of the IMNCI strategy has been constrained by inadequate levels of trained staff at both facility and community levels. For example, only 45% of health facilities had at least 60% trained health workers attending to sick children[3]; 20% of children were not assessed for major illness and 53% of children needing urgent referral were not identified. In addition, only 32% of health facilities received at least one supervisory visit, none of the health centers had all the essential equipment and materials for IMNCI service delivery[4] and less than 50% of health care providers had knowledge and skills to provide quality and timely newborn health care.

The IMNCI strategy comprises three main components:

Raising case management skills of health-care staff

Boosting overall health systems

Improving family and community health practices, that is, a continuum of care approach to managing illness: C-IMCI/iCCM (Community) Community newborn (Community), IMNCI (Primary health care) and ETAT (Referral)

Paediatric HIV

The 2016 Zambia Population Based HIV Impact Assessment (ZAMPHIA) estimated the prevalence of HIV in Zambia at 12.3 percent. The prevalence of HIV in children aged less than 15 years was 1.3 per cent. Most (90%) of the children are infected through mother to child transmission during the prenatal period and when breastfeeding. The Paediatric HIV programme aims to prevent paediatric HIV, ensure early identification and management of HIV exposed and /or infected children and in the long run achieving the goal of Elimination of Mother to Child Transmission of HIV (eMTCT). The major challenges include inadequate retesting of pregnant women; low couple counselling and testing rates; inadequate identification of HIV exposed and infected children which weakens the linking of children to prophylaxis and treatment; insufficient health worker knowledge in the management of children with HIV; suboptimal ARV adherence/retention and low mother-infant pair follow-up.

Early Childhood Development

The Government passed the Education Act of 2011, which formalized the introduction of Early Childhood Education (ECE) in public schools. Early Childhood learning contributes to the improvement of children's learning achievement by focusing on cognitive, language, social and emotional development. However, these interventions miss the critical window of the prenatal period and the first three years of life, when brain development is most rapid. In the early years of life, the health system is usually the best and often, only means to consistently and regularly reach young children and their caregivers. By the time a baby is born, their brain has almost all the neurons it will ever have, and by the age of two years, massive numbers of neuronal connections are made which are later trimmed based on which are most frequently used. An optimal environment supports brain development, while an adverse environment harms development both in the short term but importantly also over the longer term. Nurturing care for ECD consists of five inter-related components: health, nutrition, safety and security, early learning and responsive care. Children need all five domains of nurturing care to meet their developmental potential.

Therefore, it is necessary that the conventional health services infuse ECD interventions. These could include counselling on age-appropriate and responsive care and stimulation activities, monitoring for child development milestones, and referrals in case of suspected developmental delays. To this end, the Ministry of Health adopted a package from WHO and UNICEF, Caring for Child's Healthy Growth and Development, aimed at enhancing health providers' capacities. In addition, the MOH has taken steps to improve the institutionalization of ECD service delivery through the health system e.g., integrating content on child development counselling and/or monitoring into the revised IMNCI chart booklet and the Maternal and Child Health Booklet.

2.6 Adolescent Health

Adolescence is a period of rapid growth and exposure to the external environment, which could pose challenges to young people. How adolescents respond their own physiological and biological changes and deal with society has a bearing on their psychosocial and health status. Some adolescents have adopted behaviors that are normalized or portrayed to be acceptable their communities such as early marriage, alcohol and tobacco use and school delinquency. Globally, there is increasing emphasis on improving adolescent access to sexual reproductive health (SRH) information and services.

In recognition of the importance of adolescent health, the Ministry of Health developed the Adolescent Health Strategy, 2017 to 2021. The Adolescent health strategy is aimed at creating safe spaces where adolescent issues can be addressed in confidentiality. This is against the backdrop of conventional health services, which are not responsive to the needs of young people. The Strategy places emphasis on strengthening service delivery, increasing awareness and demand for services and improving leadership and governance surrounding the dynamic health needs of adolescents. It is envisaged that the establishment of minimum adolescent health service platforms, where systems are available and capacities built at all levels of service delivery will contribute to the provision of quality and comprehensive adolescent friendly services: HIV/AIDs/STIs, Gender Based Violence, sexual reproductive health, non-communicable diseases including mental health and nutrition, alcohol and substance use and adolescents with special needs.

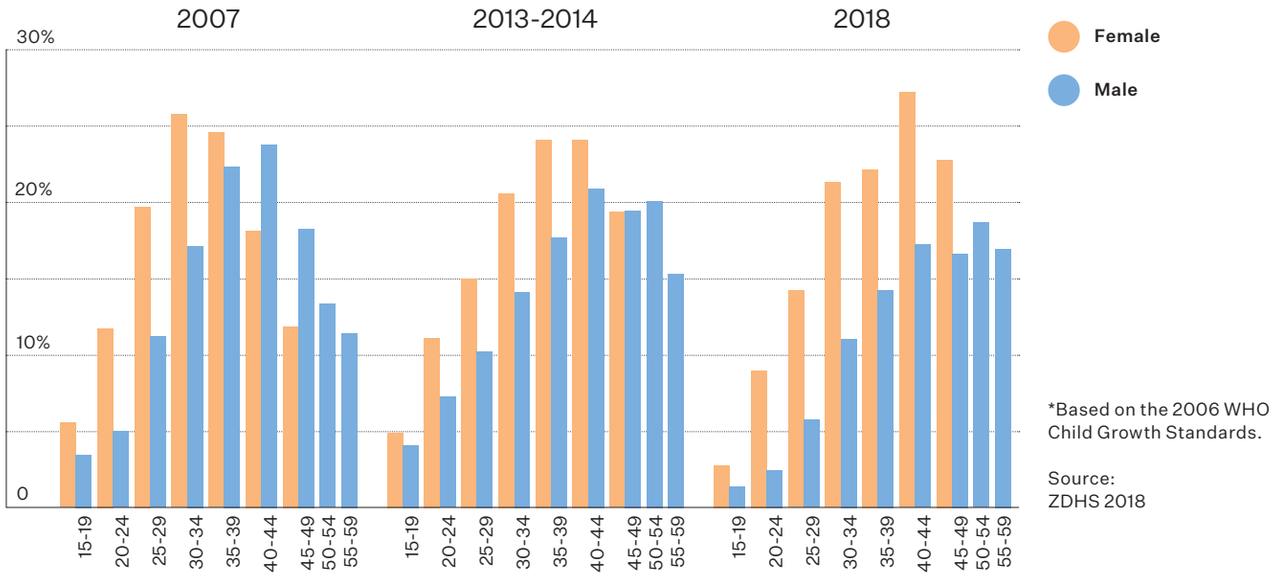
HIV and risk behavior

There has been a decline in the prevalence of HIV among adolescents aged 15 to 19 years for both gender; the level of infection was estimated 2.6% in females and 1.6% in males in 2018, from around 5% for both gender in 2007. However, the prevalence increases with age and females are more affected as noted in young women aged 20-24 at 9% compared to their male counterparts of the same age, which remains low at 2.6%.

Risky behavior in the light of HIV remains a source of concern as early sex debut is reported at 12.7% in girls and 16.3% in boys below age 15. Among 15 to 19-year old, more girls (59.9%) than boys (55.3%) reported that they had never had sexual intercourse before. The percentage of girls who reported having been tested for HIV was higher among girls (65.3 percent) than boys (40.4 percent).

Figure 10

Prevalence of HIV According to Age Groups



*Based on the 2006 WHO Child Growth Standards.

Source:
ZDHS 2018

Teenage Pregnancy

Teenage pregnancy is an area of high priority as underage pregnancies put adolescents and their offspring at risk. According to ZDHS 2018, teenage pregnancies contributed 3.5% of maternal deaths. HMIS data of 2021 reveals that 24% of 1st antenatal care visits were adolescents. On a positive note, the ZDHS, 2018 reported a slight reduction in the total fertility rate among adolescents aged 15 to 19 years from 146/1000 adolescents in 2007, 141/1000 adolescents in 2014 to 135/1000 adolescents in 2018. Teenage pregnancy rate has not significantly changed since 2007 when it was estimated at 27.9% compared to 29.2% in 2018. A provincial profile of teenage pregnancy indicates that it is more prominent in rural provinces with Southern province at 42.5%, Western province at 41.2% and Eastern province at 39.5% than in Lusaka, which recorded a lower percentage of 14.9% (ZDHS, 2018). A report on Geospatial Data Analysis on HIV/SRH Risks and Vulnerabilities of Adolescents and Young People in Zambia, indicated that focusing on contraception and condom use to prevent teenage pregnancies had not worked so far and may not work if motivating factors for engaging in unprotected sex were not addressed. These factors include strengthening parental role and effective child guidance in the home and community at large. Education enrolment, retention and easy access needed to be increased and availed especially for the rural teenagers (NAC, 2020).

Table 3

Percentage of Teenagers who have started Childbearing

Age (years)	ZDHS 2007	ZDHS 2013/14	ZDHS 2018
15	5.8	4.9	6.4
16	16.2	11.9	12.1
17	28.7	25.7	30.0
18	41.0	41.7	41.9
19	54.6	58.9	52.9
15-19	**27.9**	**28.5**	**29.2**

Source:
ZDHS 2007, 2014
and 2018

Gender Based Violence

The United Nations defines Gender based violence (GBV) as any act of violence that results in physical, sexual, or psychological harm or suffering to women, girls, men, and boys, as well as threats of such acts, coercion, or the arbitrary deprivation of liberty. The ZDHS 2018 data showed that slightly less than a quarter (23.9%) of female adolescents reported that they experienced physical (17.2 percent), sexual violence (3 percent) or both sexual and physical violence (3.7 percent). Unfortunately, majority of victims of both physical and sexual violence (58.3%) do not seek help or tell someone about their experiences (*Table 4*). As at June 2021, HMIS data indicate that 32.3% of all GBV cases were sexual GBV cases in the age group 15-19 yrs.

Table 4

Percentage of Adolescents who have Experienced Different Forms of Violence

Age	Physical violence only	Sexual violence only	Physical and sexual violence	Physical or sexual violence
15-19	17.2	3.0	3.7	23.9
15-17	16.8	3.0	3.0	22.8
18-19	17.6	2.9	4.7	25.2

Alcohol and Substance Abuse

Among the key challenges adolescents face is alcohol and substance abuse. Although most adolescents just experiment with drugs such as cannabis, marijuana, cocaine, inhalants and medicines like valium (diazepam) and artane to attain a relaxing high and a sharper focus, abuse of drugs and alcohol has the potential to change everything from the functioning of the body to social behaviour.[5] Changes can include altered brain chemistry, health complications, susceptibility to infections, which stem from weakened immune system, legal issues, financial problems, accidental injuries, and even death.

The ZDHS 2018 reports that 2.9% of adolescent boys smoke any type of tobacco. Adolescents use both cigarettes and smokeless tobacco (snuff). The 2011 Global Youth Tobacco Survey (GYTS) reported that 26.5% of youth aged 13 to 15 years used any form of tobacco (GYTS)[6] while the Zambia Global School Health Survey, 2004 revealed that the prevalence of alcohol use among students in grades 7 to 10 (i.e. drinking at least one drink containing alcohol on one or more of the past 30 days) was 42.6%.[7] The HMIS data of June 2021 illustrated that the percentage cases of substance abuse (drug and alcohol) for 10-14 years and 15-19 years of all cases were 3.8% and 34.9% respectively.

Mental Health

According to the WHO, about 10-20% of adolescents globally experience mental health conditions, most of which are underdiagnosed and under-treated. Mental health outcomes are determined by multiple factors including relationships with peers, peer pressure, influence by social media, exploration of sexual identity, quality of home life, sexual abuse and parenting styles.[8]

Anxiety disorders, depression and other mood disorders, and behavioral and cognitive disorders are among the most common mental health problems among adolescents.[9] The HMIS data of June 2021 indicated that adolescents aged 10-14 years and 15-19 years constituted 7% and 35% respectively of the total number of patients treated for depression.

There is a paucity of information and services on mental health targeting young people at both community and health facility levels. The majority of service providers do not have skills to identify, screen or treat adolescents with mental health conditions as the expertise is only available in tertiary health facilities.

5. Squeglia LM, Jacobus J, Tapert SF. The influence of substance use on adolescent brain development. Clin EEG Neurosci. 2009; 40(1):31-38. doi: 10.1177/155005940904000110

6. Global Youth Tobacco Survey, Zambia, 2011

7. Zambia global school health survey, 2004

8. https://www.who.int/news-room/fact-sheets/detail/adolescent-mental-health

9. Zambia global school health survey, 2004

2.7 Nutrition

According to the WHO, healthy nutrition is critical in the prevention of diet-related risk factors, such as overweight and obesity, and associated non-communicable diseases (NCDs).

Currently, Zambia faces a double burden of malnutrition, manifesting as both under and over nutrition, which contribute to morbidity and mortality. In 2010, Zambia joined the Scaling Up Nutrition (SUN), a global movement formed to help countries overcome malnutrition and stunting. The First 1000 Most Critical Days Programme (MCDP I) was launched as Zambia's official flagship programme for coordinated nutrition actions to reduce stunting. The MCDP II (2019-2023) followed, which uses health, WASH, agriculture and food interventions to impact the 1000 most critical days.

Nutrition in Women of Child Bearing Age

Under nutrition in women of childbearing age (WCBA) is of great concern. Ten percent of women in the reproductive age group are underweight as determined by body mass index (BMI) below 18.5 (CSO, 2014). Under nutrition results in reduced productivity, increased susceptibility to infections and slowed recovery from illness. In pregnancy, it can lead to low birth weight babies and poor maternal outcomes, including maternal mortality. Further, under nutrition during pregnancy also leads to anaemia, which is one of the leading causes of maternal morbidity and mortality (CSO, 2014; Zerfu et al., 2016). In Zambia, anaemia in WCBA is as high as one third (31%) of all WCBA (CSO, 2018). On the other hand, the prevalence of overweight among women has risen from 19% in 2007 to 23% in 2014, increasing the chances of NCDs.

Nutrition in Children

The statistics on nutrition among children show that the levels of underweight and wasting have reduced. The extent of wasting consistently declined from 6 percent in 1992, 5 percent in 2007, and reached 4 percent in 2018. Similarly, underweight declined from 21 percent in 1992, 15 percent in 2007 and 12 percent in 2018. However, stunting levels have remained high and currently estimated at 35% and the third highest in the Southern African region (*Figure 11*).

Adequate nutrition particularly during a child's first 1000 days (from conception to age 2 years of life), is critical and is a prerequisite for normal physical and intellectual development, and general well-being. The provision of adequate nutrition includes timely and age appropriate infant and young child feeding practices; early initiation (within the first hour of life) and exclusive breastfeeding in the first 6 months of life and safe, appropriate and adequate complementary feeding and continued breastfeeding up to at least 24 months of age. The 2018 ZDHS, however, revealed a slight reduction in exclusive breastfeeding from 73% in 2013-14 to 70%, and an overall prevalence of anaemia in under-fives of 58%, with the peak being between 6 to 24 months.

Nutrition in Adolescents

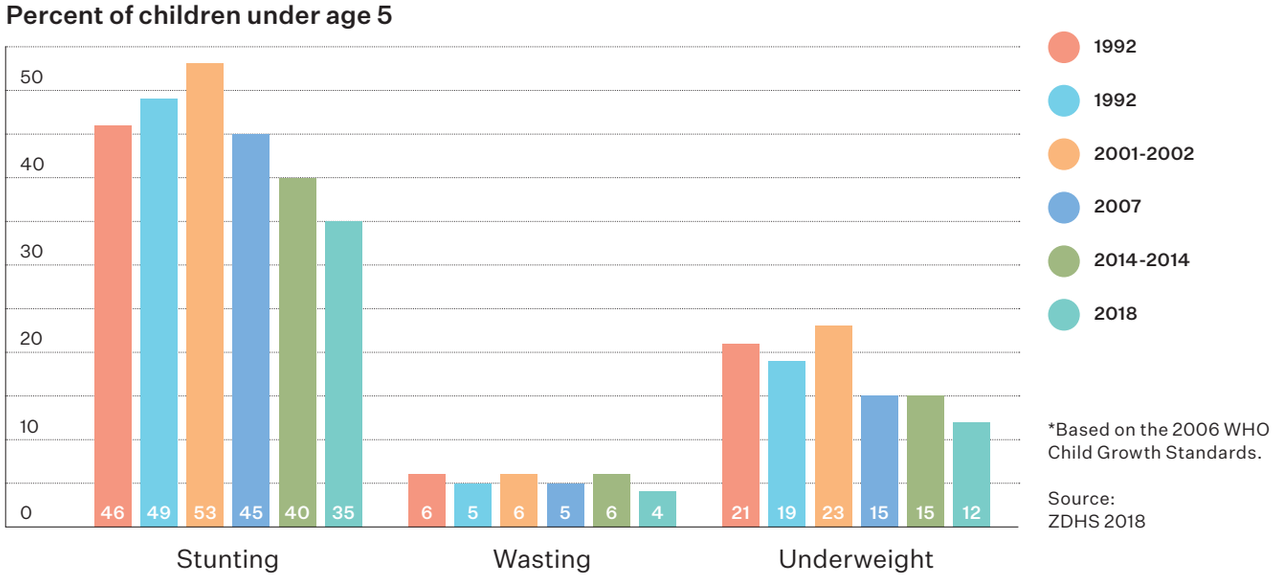
According to the World Health Organisation (WHO, 2005), adolescence is a period of rapid growth when up to 45% of skeletal growth takes place and 15 to 25% of adult height is achieved. During the growth spurt of adolescence, up to 37% of total bone mass may be accumulated. Inadequate consumption of nutrients can slow or stop linear growth as well as delay sexual maturation.

The ZDHS 2014 reported that 16% of adolescent girls aged 15 -19 years were underweight whilst 9% were obese. There are limited nutritional programs targeting adolescents to improve their health and learning outcomes. There are also limited interventions specifically for pregnant adolescents to enhance their birth outcomes despite anemia being estimated at 33.4% among 15-19-year-old adolescents. Among pregnant adolescent girls, poor nutrition could lead to increased rates of maternal mortality and a higher likelihood of giving birth to underweight and unhealthy babies (15.8% of babies born to adolescents are small for age), with increased chances of death as well as remaining stunted during infancy and beyond. Therefore, programming for nutrition in adolescents should integrate lessons in ECD to ensure that adolescents have the requisite knowledge.

Figure 11

Trends in Nutritional Status

Percent of children under age 5



*Based on the 2006 WHO Child Growth Standards.

Source:
ZDHS 2018

2.8 Quality Improvement

The combination of the right requisite and in an appropriate combination is essential for the delivery of health services, but this on its own does not guarantee quality. Achieving quality in health services requires a supportive vision, planning, investment, compassion, meticulous execution, and rigorous monitoring at all levels of the health system.

The Ministry of Health has prioritized quality and safety in the delivery of health services. To achieve this objective, the Directorate of Quality Assurance/Improvement was established in 2018 to provide national guidance and coordination on issues of quality of care. The National Strategy for Performance Improvement and Quality Assurance was developed to cover the 2019-2021 period. Several programme specific quality of care initiatives have been implemented, including strategies for averting preventable Maternal, Perinatal and Child mortality.

However, there are limitations to creating a culture of quality assurance/improvement in health delivery, sustaining and scaling up quality of care initiatives. Although the directorate is currently operational at national level, it has less than optimal staffing levels and is yet to be institutionalized at subnational and statutory institutional levels. These weaknesses are reflected in the 2020 and 2021 Service Quality Assessment (SQA) reports, which reveals that health facilities are not only not RHMNCAH-N friendly, but also fall short of set standards. Health services are not comprehensive, commodities inadequate and service providers lack the skills required to engage and counsel on key RHMNCAH-N health issues. Enhancing SQA and addressing identified gaps through quality improvement projects will be key strategies to improving quality of RHMNCAH-N services.

2.9 Health System Resilience

Zambia has experienced substantial disruptions during the COVID 19 pandemic considering pre-pandemic trends and seasonality. Analysis of HMIS data in 2020 demonstrated service disruptions in the following programs:

Outpatient consultations (-8%)
Pentavalent 1 and 3 vaccinations (-33% and -35%)
ANC initiation and fourth visits (-19% and -13%)
Delivery and PNC1 visits (-13% and -16%)
Family planning consultation (-24%)

These disruptions can erode hard-fought gains in RMNCH-N outcomes and service coverage and cause a secondary crisis. The causes are due to disruption of supply chains including insufficient personal protective equipment for health care providers, reduced hours for essential services, strain on human resources for health and reallocation of resources towards COVID-related activities. Moreover, the demand has also gone down as the community avoids health facilities for fear of COVID 19 or due to reduced ability to pay for user fees. The Health system strengthening activities have also been affected as a result of interruptions and postponements of routine program supportive supervision, review meetings and capacity building for frontline worker in RMNCH-N programs.

Strategies to be employed include increase availability of telehealth/ digital approach and innovations to enable frontline workers to provide diagnosis, therapeutics, and linkages to remote monitoring and telemedicine options; nurse triage lines and telephone-based nurse care management for individuals without smart phones and; implementation of self-care package to increase access to SRH services.

2.10 Equity of RMNCAH services

This section draws from a study on equity in the provision of RMNCAH services.[10] RMNCH indicators were computed and compared by province, education, wealth quintile, gender, and place of residence (rural and urban).

10. MoH, (2021) Tracking Progress for Reproductive, Maternal, Neonatal and Child Health (RMNCH) services in Zambia

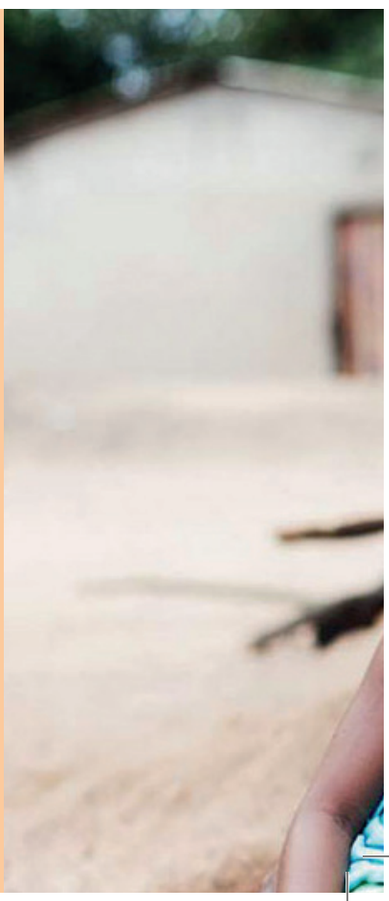
An overall measure of coverage across the continuum of care, the Composite Coverage Index (CCI)[11] measures coverage at national and provincial levels. Results from the analyses show that the equity gap in under-five mortality improved between rural and urban areas in most provinces, among the poorest 20% of the population, and less educated groups. Neonatal mortality did not decline between the last two ZDHS surveys in most provinces and in both rural and urban areas.

The CCI improved from 62% to 76% between 2001 and 2018. In terms of regions, Central, Eastern, Luapula, Muchinga, Northern and Western provinces improved most, at over 15 points. Provinces with higher baseline CCI experienced less improvement (Lusaka and Copperbelt provinces) while those with lower baselines improved most. The CCI gap between urban and rural areas narrowed from 12 to 5 percentage points between 2001/2 and 2018 respectively. By 2018, the CCI was lower in urban areas which were in the poorest compared to richest quintile (74% versus 80% respectively), and were now no better off than women in rural areas (also 74%). Equity gaps improved most for skilled birth attendance and postnatal care between wealth and education groups, and rural versus urban areas (especially since 2013/14), as well as for coverage of family planning demand satisfied (particularly between 2001-2013/14), and treatment seeking behaviour for diarrhoea.

11. The Composite Coverage Index (CCI) is a weighted average of coverage of eight essential interventions representing the RMNCAH continuum: family planning, maternal and newborn care, immunization, and case management of sick children.

The declines in U5MR and CCI were not directly correlated at provincial level. Absolute reductions in U5MR (10 years preceding) were correlated with absolute increases in CCI between wealth, education and residence groups between ZDHS 2001/2 and 2018. This suggests that the greatest improvements were experienced for the more vulnerable groups (lower two wealth quintiles, none or primary education, and women living in rural areas), and those living in Central, Northern, Western, Eastern, and North Western provinces. The improvements were greater in rural than urban areas for all provinces.

An analysis of policies, programmes and contextual factors show that since 2000, Zambia has been implementing health sector reforms at macro, health system and RMNCH specific levels.



Broader decentralization and pro-poor policies, and the focus on primary health care and retention of staff in rural areas, likely supported the increase in coverage of RMNCH interventions that could provide primary and secondary prevention of infectious diseases previously causing the most child deaths. Increased funding in health overall, and specifically for HIV/AIDS, malaria and RMNCH, from national and international sources, alongside a focus on harmonizing programmes across sectors and the continuum of RMNCAH+N care, and increasing the density of health workers and health facilities particularly in rural and hard-to-reach areas have contributed to the positive improvements in the CCI and the notably large declines in U5MR for more disadvantaged socio-economic groups and regions. Some equity disparities persisted. For example, rural-urban disparities in the proportion of married with family planning demand satisfied persisted. Equity gaps in skilled birth attendance and postnatal care reduced greatly, though gaps remained between wealth, education and regional strata. In addition, there were provincial difference in care-seeking for diarrhoea, improved in North western province and Central province, but declined in Southern and Luapula provinces. The study concluded by noting the improvements observed in historically underprivileged and hard-to-reach areas; this suggests a need to sustain health programmes and interventions through continued investments in primary health care.

3 Rationale and methodology

3.1 Justification for the RMNCAH-N IC

As was illustrated in literature review, the country has had a mixed performance record in RMNCAH-N services: maternal and infant mortality declined, early pregnancies among adolescents was low, and nutrition status improved.

Despite these positive postings, the RMNCAH-N indicators are still high compared to international standards, which necessitates intervention to hasten the improvements. The enhancement could be facilitated by ramping up the implementation of high impact interventions and raising technical and financial resources devoted to implementation of such programmes. To this end, Zambia developed a RMNCAH-N Investment Case, which is aimed at mobilising resources for the implementation of high impact interventions that will improve RMNCAH-N outcomes. The rationale for the RMNCAH-N IC is premised on the following:

- Create shared understanding by collectively identifying bottlenecks, reforms, and financing to accelerate progress in RMNCAH-N;
- Increase focus by prioritizing RMNCAH-N services, key health system reforms and Domestic Resource Mobilization and Utilization Strategy to be implemented with available resources;
- Reduce fragmentation by aligning financing to RMNCAH-N IC priorities;
- Increase funding for RMNCAH-N IC priorities by jointly advocating for new financing, particularly from domestic resources, and linking RMNCAH-N IC priorities to national budget and planning process; and
- Improve accountability by setting achievable targets that will be monitored and tracked by the Country Platform.
- The stagnation of IMR and NMR despite the scale up of skilled birth attendants and other supportive services is a cause of concern and justify the need for new approaches to achieve further reduction in mortality.

It is expected that once adequate investments are undertaken the RMNCAH-N IC, there will an end to preventable maternal, new-born, child and adolescent deaths; Improvements in. the health, nutrition and quality of life of women, adolescents and children; and assured long term financing for RMNCAH-N programmes.

Methodology for development of the Investment Case

The preparation of the RMNCAH-N Investment case followed the standard process of: Situational analyses, identification of bottlenecks and prioritisation of interventions. Following the identification of priority interventions, an implementation plan, backed by an M&E Framework and costing of interventions was developed.

To guide the preparation of the Investment Case, the Ministry of Health constituted the RMNCAH-N Country Platform Country platform (CP), which comprised pertinent Departments in the MoH, relevant line ministries, the private sector and Cooperating Partners. Further, a Government focal point (GFP) and a Liasion Officer (LO) were appointed.

A Technical Support Team was appointed, which oversaw the development of the IC. Following appointment of the Technical Committee, a selected group of Ministry of Health and Partners attended an orientation workshop where participants were acquainted with the process of IC development. The national level workshop laid the background for subsequent national and provincial workshops.

The national level team in turn facilitated provincial workshops, where staff from all districts attended and identified interventions and strategies for addressing identified bottlenecks. The workshop also enabled shared understanding among stakeholders by collectively identifying bottlenecks, reforms, and financing to accelerate progress in RMNCAH-N services.

In order to facilitate the tracking of the RMNCAH-N IC, an M&E framework based on the existing Ministry of health structures was developed. The RMNCAH-N IC Country platform will lead the monitoring and evaluation activities; monitoring will be a continuous process, supported by Quarterly reports, while a Baseline, Midterm and final evaluation are also planned.

Implementing the IC required the participation of multiple stakeholders to provide technical and financial support. The Ministry of Health mobilized partners within and outside Government to support the development of the Investment Plan. The costed IC was shared the collaborative partners, who indicated the areas they would support the process.

3.2 Stakeholder Analysis

The success of the RMNCAH-N IC will partly be determined by the extent to which broader stakeholder engagement is achieved. The identification, determination of role, expertise and areas of interest of stakeholders is cardinal.

Stakeholders include bilateral and multilateral cooperating partners, the legislature, public (line ministries and government agencies), labor (unions, societies, associations), commercial/ private for-profit organizations, not-for-profit organizations (NGOs, Civil Society, foundations), traditional leaders and users/consumers. A comprehensive stakeholder compilation enables policymakers and managers to know and engage with key actors effectively and to increase support, detect and act to prevent potential misunderstandings about and/or opposition during programme implementation. *Table 5* below presents a summary of the various stakeholders and their interests.

Table 5

Summary of the Various Stakeholders and their Interests

Name of Stakeholder	Roles and interests in Health Sector	Why they should be engaged	How they should be engaged
SIDA	Provision of Financial and Technical support to the Health Sector within the establish policy, strategic framework and priorities.	Key stakeholders in the RMNCAH-N programs	• SWAp Mechanisms • Joint monitoring visits
WHO	Provision of Financial and Technical support to the Health Sector within the establish policy, strategic framework and priorities.	Key stakeholders in the RMNCAH-N programs	• SWAp Mechanisms • Joint monitoring visits
UNFPA	Provision of Financial and Technical support to the Health Sector within the establish policy, strategic framework and priorities.	Key stakeholders in the RMNCAH-N programs	• SWAp Mechanisms • Joint monitoring visits
USAID	Provision of Financial and Technical support to the Health Sector within the establish policy, strategic framework and priorities.	Key stakeholders in the RMNCAH-N programs	• SWAp Mechanisms • Joint monitoring visits
UNICEF	Provision of Financial and Technical support to the Health Sector within the establish policy, strategic framework and priorities.	Key stakeholders in the RMNCAH-N programs	• SWAp Mechanisms • Joint monitoring visits
WORLD BANK	Provision of Financial and Technical support to the Health Sector within the establish policy, strategic framework and priorities.	Key stakeholders in the RMNCAH-N programs	• SWAp Mechanisms • Joint monitoring visits
CHAI	Provision of Technical support to the Health Sector within the establish policy, strategic framework and priorities.	Key stakeholders in the RMNCAH-N programs	• SWAp Mechanisms • Joint monitoring visits
CHAZ	Advocacy, Dissemination and Enforcement of RMNCAH-N Information	Key stakeholders in the RMNCAH-N programs	• SWAp Mechanisms • Joint monitoring visits
Private Sector	• Advocacy • Complement Government efforts in the provision of health services • Augmentation of Human Resources for Health • Provision of financial and technical support	Key stakeholders in the RMNCAH-N programs	• Complementing service provision
Line Ministries	• Collaborative efforts in the provision of support to vulnerable populations such as women, children and young girls • Provision of Social Behavioral Change and Communication through CSE curriculum • Provision of extra curriculum activities for adolescents • Technical assistance on Food and Nutrition • Provision of CRVS	Implementing partners in the Health in All Policies approach	• SWAp Mechanisms • Joint monitoring visits
Office of the President	• Provision of overall policy direction on gender issues • The allocation of resource to support implementation	Policy direction	• High level policy meetings
National Food and Nutrition Commission	Provision of regulatory framework and mechanisms for nutritional programmes	Regulation and technical assistance purposes	• Meetings and joint programming
General Population and Communities	• Sharing information on RMNCAH-N • Engaging in open dialogue to demystify the use RMNCAN-H services and reducing stigma • Utilization of the RMNCAH-N Services	Primary stakeholders in the delivery of health services	• Community engagement meetings, implementing RMNCAH-N programs collaboratively
Traditional and Community Leaders	Advocacy, Dissemination and Enforcement of RMNCAH-N Information	Gate keepers for community health programs	• Community engagement meetings

3.3 Bottlnecks to expanding RMNCAH-N coverage

The identification of prioritized investments followed the logic of problem/population identification based on epidemiology, determination of interventions, and isolation of bottlenecks that affect the interventions.

The bottlenecks were identified through facilitated workshops at both provincial and national levels. During provincial meetings, participants listed what they considered to be bottlenecks constraining the expansion of RMNCAH-services. These were collated and presented at a national workshop, where expert opinion, aided by literature were used to derive the final list of bottlenecks to service delivery. The original listing of bottlenecks was done on a programme basis. These were subsequently collated according to common themes and resulted in clusters of bottlenecks: low government expenditure on health care; inadequate and less than optimal skills mix; supply chain management challenges; less than optimal availability and use of data in decision making; low level of private sector participation in service delivery; and low quality of RMNCAH-N services.

a. Low government expenditure on health care

The last NHA estimated that the Government accounted for Forty two (42) percent (US$30 per capita), donors contributed forty one (41) percent (US$28 per capita) and other sources seventeen (17) percentage of the total current health expenditure. Government Health Expenditure as a percentage of Total Government Expenditure is estimated at 9 percent. Further, the Government does not allocate adequate funds to RMNCAH-N services; reproductive health services were allocated a meager 9 percent average over the 2013-2016 period. The inadequate Government expenditure on health in general and RNMCAH-N services specifically is further compounded by allocation inefficiencies. For instance, during the 2013-2016 period, hospitals were the main recipients of total CHE, thus limiting the funds available to implementation of the RMNCAH-N services at the primary care level.

b. Inadequate human resources and inappropriate skills mix

Scarcities of human resources for health in general and for RMNCAH-N services specifically has remained a persistent bottleneck. This manifests through inadequate numbers of key carders as well as uneven distribution across levels of care and regions. Although the core health workforce density (medical officers, nurses, midwives, clinical officers) increased to 16.5/10,000 in 2019, it was still short of the target. This is further compounded by the unequal distribution and inappropriate skills-mix of human resources. Rural areas continue to face relatively more severe human resource shortages due to challenges in retention. There are scarcities of specialized skills at the lower levels of the health care delivery system. In regards to maternal health at the district level, this has manifested in inadequate supervisory capacities for frontline workers and hence poor maternal and newborn outcomes.

c. Supply chain management challenges

Weaknesses have been observed in the supply chain, which pose constraints to expanding coverage. Shortages of drugs and other medical supplies are recurrent; ineffective coordinating among players in the sector introduces inefficiencies, where some facilities could be well stocked with drugs and other medical supplies, while others are simultaneously experiencing shortages. Capacity for forecasting and quantification of commodities are suboptimal, so too are the requisite procurement and stock management systems. Challenges in timely procurement, availability and security of infrastructure have been recounted.

d. Less than optimal availability and use of data in decision making

The extent to which RMNCAH-N services can be improved is dependent on the ready availability of data, which can be used to identify challenges, compare available options and intervention to improve outcomes. The non-availability of vital statistics and accompanying capacities to correctly record and analyze such data, and less reliable administrative data makes the decision-making efforts of frontline managers especially difficult. For instance, this has manifested in inadequate District MPDSR challenges, marked by ineffective data recording and management practices; and limited application of operations research.

e. **Low level of private sector participation in service delivery**

The provision of RMNCAH-N services can be expanded through increasing the current number of service delivery points, which are mostly public, or improving efficiencies in service provision. The private sector has potential to play an important role in this regard. However, the potential for the private sector is constrained by a host of factors: limited access to alternative sources of funding from the public sector, for instance, free maternity services; limited access to pooled funding; challenges in adhering to minimum patient safety standards; and shortage of qualified human resources.

f. **Low quality of RMNCAH-N services**

A review of indicators in the health sector shows that there have been steady improvements in coverage of RMNCAH-N interventions. Almost all the RNMCAH-N indicators have posted a positive trajectory. However, the quality of services has remained a persistent problem. As was discussed in the literature review section, quality assessment reports point to services that are not very responsive to RMNCAH-N needs, and fall short of set standards. Health services are not comprehensive, commodities inadequate and service providers lack the skills required to engage and counsel on key RHMNCAH-N health issues.

g. **Improve the Use of Data in Decision-Making**

The health sector has a relatively well-developed information management system and corresponding capacities, but challenges remain, especially at the district level namely; low capacity to use data for decision making, mismatch between what is recorded and the actual experience. To improve the decision-making basis for RMNCAH-N interventions, it will be imperative to enhance the use of data for decision making, especially at the local levels. The key investment areas identified are:

Strengthening District MPDSR and other Committees

Improving data recording, management and utilization

Strengthen RMNCAH-N scorecard result dissemination at all levels

Improve digital tools that generate dashboards and reports, presentations of data and business intelligence services

Enhance digital tools for electronic or digital data collection and mobile based surveys that include applications such as Open Data Kit (ODK), Enketo, FormHub, etc.

Develop digital tools that can have the capacity for predictive analytics, machine learning, and artificial intelligence

Implementation of operations research

The effectiveness of these interventions is dependent on the following conditions: raising health providers' awareness about the value of data; improving health providers' data management capacities, and ensuring the availability of disaggregated data.

3.4 Chosen Solutions

a. Enhance the Implementation of the Civil Registration and Vital Statistics System

The country does not have a fully developed CRVS and relies on facility based statistics and population surveys; this limits the timeliness and validity of information on vital events. Enhancing implementation of the CRVS has been identified as a key investment area; this would allow for consistent monitoring, timely interventions and evaluation of interventions. The identified key investments are:

Increase community awareness about vital events

Establish verbal autopsy processes in health facilities

Strengthen skills in the recording, analysis and dissemination of vital statistics

The successful implementation of these interventions will be enhanced by raising health providers' awareness about the value of vital statistics; and developing skills in recording and reporting vital events.

b. Improve Supply Chain and Logistics Management

While suboptimal levels of health commodities and supplies may pose challenges to the effective delivery of health services, improving supply chain and logistics management would deliver improved outcomes for the same level of commodities and supplies. Changes to management could facilitate timely and effective delivery and avoid wastage. Further, procurement and distribution up to the last mile could be improved by fostering partnerships with the private sector. The identified investments for improving supply chain and logistics are:

Build capacity in forecasting and quantification of equipment, commodities and supplies

Strengthen procurement systems and stock management

Improve the timely procurement, availability, maintenance and security of infrastructure

Improve the availability of functional equipment and supplies

The extent to which these investments will succeed is predicated on: the identification and engagement of non-state actors in the procurement, supply and distribution of medical supplies; implementation of efficient supply chain and procurement practices; and improved health/clinical management arising from the availability of commodities and supplies.

c. **Integrate Quality Improvement of RMNCAH-N services**

Zambia has performed fairly well in terms of access indicators, such as increasing institutional deliveries. The challenge, however, has been on the quality of the health services, for instance, it has been recorded that facility-based mortality has increased at the same time that institutional deliveries have risen. Thus quality improvement has been identified a key area of the investment case, with the following proposals for improving technical quality:

Improve technical competencies through pre-service and in-service training

Improve/rehabilitate health infrastructure and specialized equipment

Strengthen referrals through investment in competencies, infrastructure, transport and equipment

Improve outreach services through procuring/improving means of transport

Enhance staff motivation through promotion of qualified health workers working at lower salary scales

Improve coordination of RBF mechanisms

d. **Ensure Community Responsiveness of RMNCAH-N Services**

While technical quality interventions are necessary for improving RMNCAH-N outcomes, they are not adequate; they need to be supplemented by community-based interventions that are aimed at providing community-responsive services:

Mitigate the HRH gap by task shifting and sharing with community based agents

Re-orientation of health workers to achieve improvements in staff attitudes and responsiveness to client needs

Strengthen community ownership and enhancing the involvement of males in health programmes

Increase the number of health facilities with adequately trained health workers in key health protocols for women, children and adolescents

The success of these quality improvement investments will be contingent on: Improving the supply and management of pharmaceutical, medical supplies and staff; standardization and adoption of best practices and procedures; determination of communities needs in order to ensure need-based service; and engaging communities as co-providers and owners of services.

e. To improve sustainability of health care and financial protection

Resources, both financial and others are usually inadequate to meet competing needs. While mobilizing extra resources is desirable, improved utilization of available resources can register positive changes. The IC has identified interventions for improving sustainability of access to health care by targeting the bottom 40 percent of the lowest two quintiles through:

Ensure motivation and reinforcement of quality service provision by scaling up performance-based financing

Increase access to dietary diversity by introducing vouchers and conditional cash transfers

Improve efficiency in the utilization of health inputs in order to achieve better health/RMCAH-N services

Increase the allocation of Government expenditure on health/RMNCAH-N services

Improve efficiency in the mobilization of resources from partners by improving the sector wide approach

Leverage on NHIMA resources for procurement of commodities

Achieving these interventions is dependent on:

Improving sustainability of and access to health care

Expanding the population covered by pooled funding

Developing and implementing clear mechanisms for protecting indigents

f. Enhance collaboration, linkages and integration of service provision

Identification of synergies among providers and other players in service delivery can achieve better RMNCAH-N outcomes than individual programme efforts. Programmes that work in silos are not able to benefit from combination synergies. To address these issues, a strategy to achieve improved RMNCAH-N outcomes through collaboration and integration of services is proposed, with the following investment area:

Ensure improved working synergies among institutions addressing RMNCAH-N

Strengthen linkage between complementary services

Combine service provision of current parallel programmes

The success of integration and collaboration will be enhanced through raising awareness about the importance of collaboration and enhancing platforms for networking among program managers.

g. Narrowing the Human Resources Gap and Raising Capacities

The challenge of numbers, distribution and capacities of human resources for health is a recurring issue, which has received widespread attention. A strategy for narrowing the human resource gap and raising capacities of health workers has been proposed, with the following investments areas:

Increase the number of health facilities with adequately trained health workers in specialized protocols

Increase health worker skills in diagnosis and management of RMNCAH- N services

Raise health workers' capacities to strengthen the management of RMNCAH-N services

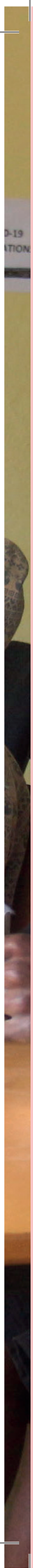
Achieving these interventions will be facilitated by:

enhanced HRH system to ensure adequate numbers and preservice curricula revision to incorporate RMNCAH-N focus areas

incentives to redeploy health workers to areas of need

in-service training involving introduction of a continuous professional development programme


Protect Others, Protect Yourself
Cover your cough or sneeze.
COVID-19
VACCINATION



4 Prioritized Systems Reforms and Investments

The review of literature showed that a significant proportion of maternal, newborn, child and adolescent deaths are avoidable and can be prevented through the implementation of proven high-impact interventions. This RMNCAH-N IC identifies prioritized investments to end preventable maternal, newborn, child and adolescent deaths and improve the health and quality of life of women, children and adolescents in Zambia. The literature review identified the challenges to improving RMNCAH-N services and the provincial and national workshops identified bottlenecks, and proposed interventions and strategies for improving RMNCAH-N outcomes.

Using national and provincial workshop outputs, the RMNCAH-N Technical Team decided to use a systems approach and grouped the programme interventions into recurring broad themes:

improve the use of data in decision-making

enhance the implementation of the CRVS System

improve supply chain and logistics management

integrate quality improvement of RMNCAH-N services

ensure community responsiveness of RMNCAH-N services

improve sustainability of health care and financial protection, especially for people in the lowest two wealth quintiles

achieve improved RMNCAH-N outcomes through collaboration, linkages and integration of services

achieve equitable access to RMNCAH-N services

close the human resource gap and raise capacities of health workers

In order to ensure that the chosen investments generate the intended impact on RMNCAH-N outcomes, a Theory of Change was developed, which identified pathways through which the identified health systems reforms will realise outcomes and impacts (*Figure 7*). The theory identifies seven health systems reforms; for instance, competent staff and improved service environment, among other reforms would lead to positively affect accessibility and quality of health services, which will Improve equitable access to quality RMNCAH-N services, and ultimately manifest in reduced morbidity and mortality.

Figure 7

Theory of change relating health systems reforms to impact

Health systems reform

1 Competent and supported health workforce

- Review of remuneration and recognition of experience
- Preservice curriculum and quality review (strengthen preservice practical and inclusion of missing components like quality improvement)
- Competency based in-service training
- Improve skills and capacity of healthcare professionals
- Coordinated HW capacity building program

2 Enabling service delivery environment

- Improve the supply and management of pharmaceuticals, medical supplies
- Standardization and adoption of best practices and procedures
- Improve availability of medical equipment, supplies and commodities
- Implement quality improvement

3 Strengthen referral system and outreach services

4 Improve community engagement in service provision and ownership

5 Revitalizing data recording, dissemination and use practices and improve health providers' data management capabilities

- Raise awareness about the importance of data in decision-making among health and other relevant stakeholders
- Strengthen role of health sector in CRVS and raise importance of CRVS among health officials
- Aligning MoH and MoHA
- Using scan mechanisms to capture births

6 Expand financial protection for vulnerable populations

7 Improve efficiency in resource utilization

Outputs

Improved accessibility and quality of health services

- Number of health workers trained (pre-service, in-service, mentorship, monitoring and supervision) in RMNCAH-N
- Expand RMNCAH-N service delivery units (NICU, intra partum care unit, space for curative & preventive child health, ECD)
- Quality improvement collaborative projects introduced at sub-district level
- Ambulances, motorbikes and communication

Improved health services for vulnerable groups

- Relevant policy guidelines
- Mobile community & facility youth friendly service delivery points
- Mother shelters with min. standards
- Friendly health services for persons with disability
- Facilities operating flexible hours (evenings, weekends)
- Training fistula surgeons and HCPs in fistula management
- Functional fistula management centers (make it general, with fistula as an example)

5 Improved community responsiveness to RMNCAH-N services

- Capacity building of community-based agents
- Health workers receiving orientation in attitude & responsiveness to client needs
- Meetings and sensitization campaigns to promote community ownership
- BCC/IEC materials for RMNCAH-N

3 Improved supply chain and logistics management

- Capacity building in forecasting, quantification of commodities
- Equipment and supplies /commodities procured for RMNCAH-N

7 Improved collaboration, linkages and integration of services

- Infection prevention committees established in health facilities
- IPC/WASH training and assessment
- Water reticulation systems installed in health facilities
- Water-borne toilets constructed in health facilities

Strengthened health information system, including CRVS

- District MPDSR committees
- RMNCAH-N scorecard disseminated
- Digital data collection tools developed
- Operations research
- Rural health facilities undertaking verbal autopsy
- Increased number of birth and death notification sites
- Officials trained in COD certification, coding, data processing and dissemination of vital statistics

Improved efficiency and financial protection of vulnerable groups

- Enhanced collaboration in the implementation of Results-based financing
- Improved utilization and accountability of resources

Outcomes

8 Improved equitable access to quality RMNCAH-N services

4 Improved integration of RMNCAH-N services

1 Improved use of data in decision-making

6 Improved sustainability of health care and financial protection

Impact

Reduce morbidity and mortality for:

- **women**
- **neonates**
- **children**
- **adolescents**

Enablers

- Alignment of partners to national priorities
- Effective multi-sectoral coordination mechanisms at national, district and community level
- Political commitment and adequate financing for RMNCAH-N

Assumptions

- Resources will be available to implement the Investment Case
- Strong leadership at national and subnational levels will guide, motivate and hold stakeholders accountable
- Relevant sectors will be committed and have adequate resources to provide integrated services

5 Strategic Objectives

The preceding chapter outlined the Systems Strengthening Reforms, Pathways, Prioritized Investments and Expected Outcomes. These system strengthening reforms were further cast into programmatic objectives, which were further broken down into activities as illustrated in *Table 8*; these in turn informed the development of the Monitoring and Evaluation Framework and Costing of the RMNCAH-N IC.

5.1 Maternal and Newborn Health

Nº	Objective(s)	Nº	Specific strategies	Nº	Activities
1.1	To increase the proportion of Health Facilities with health providers trained in Quality Improvement collaborative (QIC) projects for ANC service, Labour and Delivery including EmONC by 50% by 2024.	**1.1.1**	Enhance Quality Improvement collaborative (QIC) projects for ANC service, Labour and Delivery including EmONC	**1.1.1.1**	Conduct a national TOT for QIC project for RMNCAHN
				1.1.1.2	Print IEC materials/Pop ups with key Quality messages (SDG, UHC, Legacy goal, MNH, Client centered, Quality dimensions)
				1.1.1.3	Training HCP on QIC project for ANC and RMNCAHN-3000 facilities
				1.1.1.4	Conduct monthly follow up and monitoring visits to facilities for QIC projects for ANC/MNH
				1.1.1.5	Support the Provincial RMNCAHN to conduct QI conferences
				1.1.1.6	Support the conduct of Regional RMNCAHN QI conferences
		1.1.2	Strengthen Quality Improvement for CEmONC	**1.1.2.1**	Support the conduct of National RMNCAHN QI conferences
				1.1.2.2	Training HCP on mentorship drills and OSCEs on Partograph, Delivery and AMSTL
				1.1.2.3	Conduct CEmONC mentorship drills and OSCEs on Partograph, Delivery and AMSTL quarterly
				1.1.2.4	Develop CEmONC generic performance management tools to review and monitor performance at all levels
				1.1.2.5	Orient Managers and providers in the use of the CEmONC performance management tool
				1.1.2.6	Conduct in-house IPC/WASH training
				1.1.2.7	Conduct IPC WASH assessments
				1.1.2.8	Conduct quarterly supportive supervision on IPC for all facilities
		1.1.3	Capacity building of HCPs in PNC particularly in identifying mothers and newborns requiring special care	**1.1.3.1**	Conduct Quarterly onsite mentorship to reorient HCPs on importance of comprehensive PNC checks and prevention and management of puerperal psychosis for both mother and newborn
				1.1.3.2	Conduct training in the management and identification of fistulae by training 20 fistula surgeons and 200 HCPs
		1.1.4	Integrate Quality improvement for RMNCAHN into in-service training	**1.1.4.1**	Conduct quality Improvement meeting for preservice training (to review and update curriculum for midwives)

№	Objective(s)	№	Specific strategies	№	Activities
1.2	To increase the proportion of districts with functional MPDSR committees from 60% in 2019 to 80% by 2024	**1.2.1**	Strengthen all components of MPDSR in all health facilities (verbal autopsy, confidential inquiry)	**1.2.1.1**	Formation and orientation of District MPDSR Committees
				1.2.1.2	Introduce and Implement confidential inquiry on maternal deaths
				1.2.1.3	Conduct quarterly MPDSR meetings at District Level
				1.2.1.4	Conduct quarterly MPDSR meetings at Provincial Level
1.3	To increase the proportion of fully functional EmONC facilities from 2% in 2015 to 20% by 2024 in order to respond to community needs	**1.3.1**	Improve availability of Supplies and equipment for EmONC	**1.3.1.1**	Procure and distribute 3000 Non pneumatic anti-shock garment (NASG). per year for 3 years to health facilities
				1.3.1.2	Procure 10 auto claves and 10 shredders for health facilities
				1.3.1.3	Procure EMONC commodities including consumables for each facility annually
		1.1.2	Ensure availability of blood and blood products	**1.3.2.1**	Procure 500,000 blood packs and accessories for blood transfusion as per forecasted
		1.3.3	Establishment of units to care for mothers and newborns with special needs	**1.3.3.1**	Rehabilitate 117 labour wards to provide space for intrapartum care units
				1.3.3.2	Establish NICUs in 100 facilities across the country
				1.3.3.3	Setting up 600 KMC spaces in health facilities
				1.3.3.4	Establish and equip 10 Fistula management centres in 10 provinces

5.2 Child Health

Nº	Objective(s)	Nº	Specific strategies	Nº	Activities
2.1	To increase the proportion of HIV exposed infants who are diagnosed within the first 2 months of life from 57% in 2019 to 90% by 2024	2.1.1	Raise health workers capacities to strengthen the management of children with HIV	2.2.1.1	Conduct training of health care workers and CBVs in Pediatric HIV guidelines
		2.1.2	Strengthen linkage between paediatric HIV and other child health services	2.1.2.1	Development of health promotion materials on EID and Paediatric HIV
		2.1.3	Increase the numbers of children being tested for HIV and started on treatment	2.1.3.1	Create an HIV service point as part of the under 5 clinic services
				2.1.3.2	Conduct mass media campaign on childhood HIV
				2.1.3.3	Procure 126 diagnostics (including Point of care in strategic health facilities and PCR equipment in all provincial hospitals
				2.1.3.4	Procure ARVs and cotrimoxazole for prophylaxis as per guidelines
2.2	To increase the proportion of districts with at least 90% coverage of DPT-3 vaccine for children under one year from 50% in 2019 to 90% by 2024	2.2.1	Increase availability and accessibility of all vaccines	2.2.1.1	Annual procurement and distribution of 50 cold chain equipment
				2.2.1.2	Annual payment of Co-financing for non-traditional vaccines, and procurement of traditional vaccines Distribution of vaccines
2.3	To increase the proportion of facilities with at least 60% of health workers who are managing children capacitated in IMNCI from 45% in 2018 to 60% by 2024	2.3.1	Build capacity in health care workers in IMCI through various methods (in-person and using digital innovations	2.3.1.1	Train HWs in IMNC
				2.3.1.2	Train district supervisors annually in IMNCI
				2.3.1.3	Print and distribute CHART booklets to all service points
				2.3.1.4	Conduct quarterly supportive supervision and technical support to staff in IMNCI
2.4	To increase the proportion of districts implementing ECD services from 2% in 2019 to 60% by 2024	2.4.1	Increase quality ECD service provision and use	2.4.1.1	Conduct a biannual training of HCWs in ECD
				2.4.1.2	Conduct a biannual training of community based volunteers in ECD
				2.4.1.3	Conduct quarterly supervisory, mentorship and monitoring visits
				2.4.1.4	Procure ECD Toy boxes for Health facilities and Toy bags for CBVs home visits
				2.4.1.5	Refurbish health facilities to create space for ECD activities
2.5	To increase 'fully immunised Under-2' coverage from 68% to >90% by 2024	2.5.1	Strengthen integrated child health services including immunization, GMP, Paediatric HIV services and others in the community through outreach activities	2.5.1.1	Procurement and Distribution of the 2,760 motorbikes in all the 10 provinces
				2.5.1.2	Conduct bi-annual 6 days Child Health Week activities
				2.5.1.4	Conduct quarterly supervisory, mentorship and monitoring visits
				2.5.1.5	Conduct quarterly supervisory, mentorship and monitoring visits

Nº	Objective(s)	Nº	Specific strategies	Nº	Activities
		2.5.2	Capacity Building/ Skills Development	2.5.2.1	Conduct a HWs training in PVD surveillance annually
				2.5.2.2	Conduct a HWs Training in AEFI annually
				2.5.2.3	Conduct HWs training in logistics annually
				2.5.2.4	Conduct bi-annual MLM training
		2.5.3	Increase the availability of Under-5 Cards	2.5.3.1	Forecasting and quantification of Under-5 cards
				2.5.3.2	Procurement and Distribution of 900,000 under 5 cards/ annually
2.6	To increase the number of communities able to prevent diarrhea and reduce deaths by 50% by 2024	2.6.1	Strengthen health promotion and prevention	2.6.1.1	Train provincial teams (5 per province) TOT in Participatory Hygiene and Sanitation Transformation (PHAST)
				2.6.1.2	Train HWs in PHAST
				2.6.1.3	Train CV per facility in PHAST
				2.6.1.4	Conduct monthly community meetings on PHAST in all HFs
2.7	To increase the number of facilities able to adequately diagnose and manage sickle cell anaemia from the current levels to at least 60%	2.7.1	Increase Health worker skills in diagnosis and management of sickle cell anemia at Level 2 and lower facilities for post neonatal and child health	2.7.1.1	Procure resuscitation equipment, pulse oximeters to support strengthened quality of maternal and newborn care, including emergency care
				2.7.1.2	Conduct training for Health workers in diagnosing and management of sickle cell anaemia at level 2 and lower facilities annually
				2.7.1.3	Procurement and distribution of stock cards, under 5 registers and reporting tools to all health facilities
2.8	To Improve health providers' data management and interpretation	2.8.1	Improve data recording and management practice	2.8.1.1	Procurement and Distribution of the 2,760 motorbikes in all the 10 provinces
				2.8.1.2	Training of health workers on data collection and reporting practices on stock cards, registers & reporting tools
		2.8.2	Raise capacities for utilizing data in the decision making process, including the provision of job aids and simple data visualization tools (e.g. scorecards), especially at the districts level.	2.8.2.1	Quarterly mentorship and monitoring visits to lower levels
2.9	To increase the number of health facilities able to practice ETAT from the current levels to 50% by 2024	2.9.1	Strengthen skilled human resources for ETAT for post-neonatal and child health	2.9.1.1	Conduct training for Health workers for ETAT annually
				2.9.1.2	Procure equipment for ETAT (suction machines, infant ambubags, NG tubes, Infant giving sets, canulars, pulse oximeters, etc)
				2.9.1.3	Conduct quarterly TSS in ETAT

5.3 Adolescent Health

Nº	Objective(s)	Nº	Specific strategies	Nº	Activities
3.1	To increase the number of districts with adolescent health service minimum platform from 50% in 2019 to 85% by 2024	3.1.1	Procure commodities appropriate for adolescents	3.1.1.1	ADH commodities will be costed under RMNCAH&N commodities
		3.1.2	Improve functionality of Youth Friendly Services through the provision of equipment and IEC materials	3.1.2.1	Procure equipment and furniture for ten (10) adolescent spaces in all 116 districts
3.2	To reduce teenage pregnancies from 29% in 2018 to 24% by 2024	3.2.1	Scale-up availability of community based, facility based and mobile YFS	3.2.1.1	Identify and refurbish 10 Adolescent spaces at facility or community level in priority areas.
				3.2.1.2	Conduct monthly integrated outreach services to adolescents in communities and tertiary institutions
		3.2.2	Provide model Adolescents friendly infrastructure to support AFS	3.2.2.1	Support construction of Adolescent Health Sections/centres in 8 priority health facilities
		3.2.3	Engagement of gate keepers to promote a safe, supportive and protective environment	3.2.3.1	Hold half-day quarterly sensitization meetings with community members for each of the 3,000 health facility over a period of five years.
				3.2.3.2	Orient community leaders in adolescent health
				3.2.3.3	Procure critical enablers for adolescents
		3.2.4	Increase health literacy levels amongst adolescents	3.2.4.1	Develop, produce and broadcast (both recorded and live) multi-media messages and programmes targeting adolescents and adolescents
				3.2.4.2	Conduct monthly school/ community outreach services
				3.2.4.3	Develop, print and distribute 30,000 different Posters
				3.2.4.4	Conduct Master Trainer Trainings for 2 for provincial level peer educators trainers per province per year
				3.2.4.5	Conduct cascade Training of Trainers for 3 for district level peer educators trainers per district per year
				3.2.4.6	Train peer educators in the district
		3.2.5	Capacity building of health workers in adolescent health service provision	3.2.5.1	Train 12,000 health workers in adolescent services over a period of three years
				3.2.5.2	Train two mentors per district by end of year one
				3.2.5.3	Conduct quarterly mentorship/SQA visits at provincial, district and Health Facility
		3.2.6	Prioritize Adolescent Health across all public health interventions and social sectors	3.2.6.1	Conduct quarterly TWGs/ Integrated data review meetings

5.4 Nutrition

Nº	Objective(s)	Nº	Specific strategies	Nº	Activities
4.1	To increase the number of health facilities implementing comprehensive GMP from 50% in 2018 to 80% in 2024	4.1.1	Improve data recording and management practice	4.1.1.1	Procure under 5 cards 1,000,000 per annum
		4.1.2	Improving the means of transport at levels, with special focus on rural, hard-to-reach areas	4.1.2.1	Procure 3000 motor cycles for facilities to strengthen nutrition in outreach
		4.1.3	Improve the availability and utilization of critical equipment and infrastructure to support RMNCAH-N	4.1.3.1	Procure weighing scales for Zones
				4.1.3.2	Procure height measuring boards
		4.1.4	Community education and outreach	4.1.4.1	Conduct community focus group discussions on improved IYCF practices
				4.1.4.2	Hold Zonal meetings per facility every month
				4.1.4.3	Train 150 staff trainers in GMP package
				4.1.4.4	Hire community drama/theatre groups for community sensitization on IYCF
				4.1.4.5	Meeting 3 chiefdoms per province to sensitize traditional leaders on Breastfeeding and appoint 3 breastfeeding Champions
		4.1.5	Support task shifting to community-based agents by procuring enablers	4.1.5.1	Procure 10 sets of CBV motivational materials per facility
				4.1.5.2	Procure 3000 bicycles for CBVs supporting nutrition actions
		4.1.6	Mitigate the HRH gap by task shifting and sharing and building capacity in community based agents	4.1.6.1	Train 3 Nutrition programme CBVs in 15,000 NHCs
4.2	To increase proportion of babies 0-6 months who are exclusively breastfed from 70% in 2018 to 80% in 2024	4.2.1	Ensure quality Breastfeeding in Hospital Feeding programs	4.2.1.1	Hold 2 training meetings on revised Breastfeeding Hospital Feeding (BFHI) package
				4.2.1.2	Conduct provincial residential BFHI trainings for tutors from Training schools
				4.2.1.3	Conduct TSS and mentorship to facilities
				4.2.1.4	Hold a meeting to revise a breastfeeding module for integration in other MCH programme guidelines
4.3	To Increase the proportion of mothers reporting feeding their children 6- 23 months old children on a diversified diet	4.3.1	Non-facility service provision (Strengthen Multisectoral collaboration)	4.3.1.1	Procure resuscitation equipment, pulse oximeters to support strengthened quality of maternal and newborn care, including emergency care
				4.3.1.2	Conduct training for Health workers in diagnosing and management of sickle cell anaemia at level 2 and lower facilities annually
				4.3.1.3	Procurement and distribution of stock cards, under 5 registers and reporting tools to all health facilities
				4.3.1.4	Mount Bill Boards promoting IYCF Practices in Provincial towns
				4.3.1.5	Hold a TWG with Multisector consultative meeting to formulate effective IYCF key messages
				4.3.1.6	Engage NISIR to formulate an affordable food supplement

Nº	Objective(s)	Nº	Specific strategies	Nº	Activities
4.4	To increase number of outpatient therapeutic (OTP) sites from 34% to 50% by 2024	4.4.1	Improve data recording and management practices	4.4.1.1	Procure and distribute U5 registers
		4.4.2	Capacity building in nutrition programmes for Training schools to improve competencies of tutors and students	4.4.2.1	Hold orientation workshop for tutors from training schools in Nutrition services
				4.4.2.2	Procure Vitamin A capsules (10 % of the 3,700,000 capsules for routine to be procured through essential)
4.5	To increase the number of sites offering IMAM services from 24% in 2017 to 50% by 2024	4.5.1	Ensure timely procurement of key commodities	4.5.1.1	Procure RUTF, F75, F100, CMV and Resomal as per estimates in the IMAM Annual quantification estimates
				4.5.1.2	Procure equipment for ETAT (suction machines, infant ambubags, NG tubes, Infant giving sets, canulars, pulse oximeters, etc)
				4.5.1.3	Procure and distribute equipment for IMAM Management
		4.5.2	Capacity Building	4.5.2.1	Conduct ToT in IMAM Package per province
				4.5.2.2	Train HCW in IMAM package per Province
				4.5.2.3	Conduct training in Severe Acute Malnutrition
				4.5.2.4	Develop a nutrition in Emergency response framework /strategy to respond to SAM
				4.5.2.5	Hold ToTs of HCW in OTP package
				4.5.2.6	Conduct basic training for district staff in OTP package / management of MAM.
		4.5.3	Quality Improvement	4.5.3.1	Develop ECD/nurturing and care modules for Nutrition intervention guidelines
				4.5.3.2	Hold a five day meeting to incorporate the ECD/ nurturing and care module in GMP, IYCF and IMAM training materials and guidelines
				4.5.3.3	Engage a Consultant to develop content for flow charts /wall /look up charts with key guidance on service provision for quick reference by HCP
				4.5.3.4	Hold meeting to validate the consultants' work

6 Implementation Arrangements

Leadership

The MOH will provide leadership over the Investment Case, taking into account the importance of partnership and collaboration as embodied in the Sector Wide Approach (SWAp). The IC will be implemented by Directorate of Public Health, supported by partners, both local and international. The MOH will work closely with other line ministries and government departments, cooperating partners and non-governmental organizations. In the light of the multiple participants, the ministry will ensure effective coordination that reduces duplication and achieves efficiency in the procurement, management and utilization of inputs essential for a successful IC. Coordination of both local and international development and technical partners is essential in order to reduce duplication and achieve efficiency. This will also serve to achieve pooled procurement RMNCAH-N commodities and strengthening supply chain systems. under oversight of the country platform.

National Level

At the national level, the MOH will be responsible for developing and overseeing national policies and legislation, establishing norms and standards, providing technical assistance to provinces, raising resources from both domestic and external sources and promoting coordination and harmonization among cooperating partners. In order to ensure knowledge sharing, the MOH will also develop and disseminate knowledge products such as guidelines, protocols, and templates.

The RMNCAH-N Country Platform Inter-Agency Coordinating Committee (ICC), which is chaired by the MOH Permanent secretary will be the overall coordinating body. The Country Platform has twelve Technical Working Groups (TWGs): Safe Motherhood, Adolescent Health, Family Planning, Child Health, Newborn Care, Nutrition, Health Promotion, Quality Improvement/Assurance, Community, Health Care Financing and Monitoring and Evaluation. The TWGS have representation from multilateral, bilateral, Non-Governmental organizations, and Line Ministries.

The departments responsible for planning and budgeting will coordinate resource mobilization activities, while the public health department will oversee the implementation of interventions. The Public Health Department comprises the following units: Reproductive Health, Child Health and Nutrition, Adolescent Health, Community health, Communicable Diseases and Non Communicable Diseases. The department will collaborate with other departments responsible for clinical care, health promotion, quality assurance/ improvement, performance improvement and monitoring and evaluation.

At a ministerial level, the MOH will collaborate with Ministries of Community Development and social services, Education, Agriculture and Home Affairs among others.

Provincial and District Level

The Provinces will facilitate and foster collaboration with line Ministries, NGOs, CSOs, private sector and communities in implementing RMNCAH-N interventions. In particular, provinces and districts will be responsible for: mobilizing complementary resources; Coordinating Partners at local levels; developing and implementing RMCAH-N interventions; supervising frontline staff; and monitoring and evaluating RMNACH-N interventions.

At the provincial level, existing structures such as Provincial Development Coordinating Committee (PDCC) chaired by the provincial permanent secretary will coordinate the implementation of the investment case. The members of the PDCC are line Ministries and provincial partners. At district level the District Development Coordinating Committee (DDCC) chaired by the District Commissioner will coordinate the process.

Development Partners

Development partners will align with and support the priorities set out in the RMNCAH-N implementation plans at provincial level. As was elaborated in the stakeholder analysis above, the following partners have shown interest in supporting the IC:

SIDA
WHO
UNFPA
USAID
UNICEF
WORLD BANK
CHAI
CHAZ

Private Sector and Civil Society Organizations

The success of the IC is in part determined by how extensive a supportive network is developed, including both traditional non-for profit actors and also engaging for-profit entities. Non-for-profit organizations, such as FBOs play a key role in providing services in hard- to-reach areas while CSOs have proven competencies at advocacy for improved health services. However, for-profit-organizations' involvement in the provision of health care is low and mainly concentrated on curative care. There are key bottlenecks preventing the private sector from expanding its participation in health care provision:

1. Limited access to alternative sources of funding from the public sector;
2. Limited access to fund pooling mechanisms;
3. Challenges in adhering to minimum patient safety standards;
4. Shortage of qualified human resources.

7 Estimation of Resource Requirements

7.1 Cost of Prioritized Strategies

The cost estimations of the RMNCAH-N IC for 2022-2024 aims at supporting the operationalization of the prioritized systems strengthening reforms, evidence-based decision making as well as domestic and donor resource mobilization. The costing was based on a model used by the MoH that uses inputs and unit costs under the Medium-Term Expenditure Framework (MTEF) and Annual Action Planning (AAP) and budgeting processes. This alignment to the existing planning and budgeting approaches was considered necessary, in order to avoid multiplicity of methods/approaches, and ensure ease of implementation.

The activity-based budgeting processes entails the identification of the activities, the inputs required to carry out these activities, the unit costs of the inputs and the associated quantities. The cost is simply the summing up of the product of quantity and price of each input used in undertaking the activity. The ingredient approach was used to identify the specific inputs needed to carry out each intervention and the targets set in consultation with RMCAH-N programme managers, technical experts, and implementing and cooperating partners.

The unit costs baselines were for the year 2021 and these were the prevailing market prices of goods and services and other costs were based on the standard prices set by the Government of the Republic of Zambia (e.g., allowances). The baseline unit prices were then compounded to reflect future values at the rate of 8.5%[12] as the cost of capital. The prices were converted into US Dollars at the exchange rate of ZMW 19.7 per US$1.00.[13]

The costings were based on the following key assumptions:

1. Costing method: Activity-based Budgeting (ABB) approach was used, in line with the established MoH costing practices;
2. Duration: The costing covers a duration of three (3) years, from 2022 to 2024. This is intended to align the IC to the MTEF, RMNCAH-N Roadmap and the National Health Strategic Plan (NHSP) 2022-2026.
3. Currency: US Dollars (US$). During the costing exercise, the Zambian Kwacha was used but converted into US Dollars at an exchange rate of ZMW 19.7
4. Cost of capital: The cost of capital (interest rate) used in this plan is 8.5% as a compounding factor to reflect future values for the 2021 baseline prices.
5. Staff travel allowances: Staff travel allowances are determined by the Government from time to time.
6. Sources of funding: It is assumed that the budget will be funded from a combination of sources, including: the national budget, through annual budgetary allocations; from established/active and potential cooperating partners.

The total cost of the RMNCAH-N IC for the three years is estimated at **US$ 176,156,150**. *Figure 10* below shows the distribution of the total estimated costs by program namely Maternal and Newborn Health, Child Health, Adolescent Health and Nutrition.

12. Bank of Zambia, 2020

13. Budget Call Circular, 2021

7.2 Estimated Resource Envelope

The cost estimations were done per year by program. *Table 8* below shows the distribution of the estimated costs by program of the RMNCAH-N IC per year from 2022-2024.

The chart below shows the allocation per program with Maternal and Newborn Health receiving 38% of the total cost of the RMNCAH-N IC while Child Health is the least allocated with 17%.

Table 8

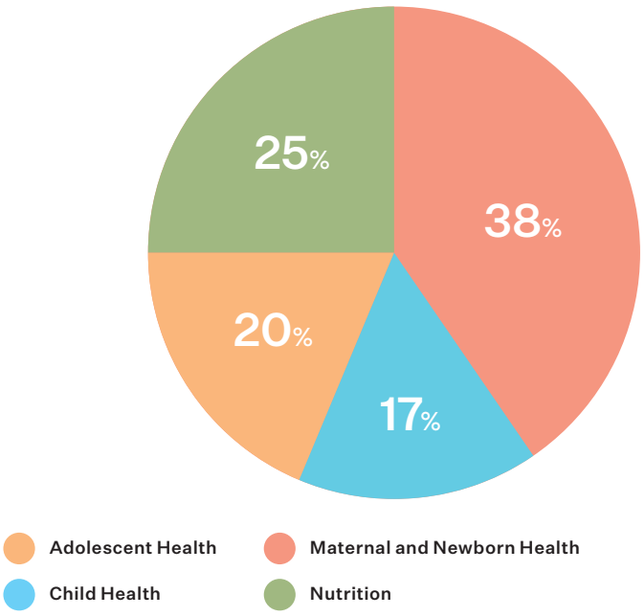
Distribution of the Estimated Costs by Program per Year

#	Program	Cost (US $)			Total (US $)
		2022	2023	2022	
1	**Maternal and Newborn Health**	17,839,797	23,688,979	24,594,902	**66,123,679**
2	**Child Health**	19,993,447	5,055,932	5,485,423	**30,534,803**
3	**Adolescent Health**	10,766,892	11,688,581	12,682,111	**35,137,584**
4	**Nutrition**	13,602,558	14,751,687	16,005,840	**44,360,084**
Total RMNCAH-N • roadmap		**62,202,695**	**55,185,180**	**58,768,276**	**176,156,150**

Figure 13

Distribution of Total Estimated Costs by Program

% Distribution of Costings Per RMNCAH Program



This budget will be implemented through the established MTEF and Annual Action Planning (AAP) and budgeting frameworks. These frameworks also involve the participation of the health sector partners, who participate in the planning, budgeting, prioritization and identification of areas to support. During these planning cycles, each thematic programme will determine the financing gaps, based on the government planning figures, available funding and pledges received from the cooperating partners.

7.3 Financing Gap for Implementing Prioritized Strategies

It is assumed that the budget will be funded from a combination of sources, including: the national budget, through annual budgetary allocations; from established/ active cooperating partners, who are currently supporting the respective thematic programmes; and from new partners and funding initiatives, through advocacy of the programme activities and solicitation for support.

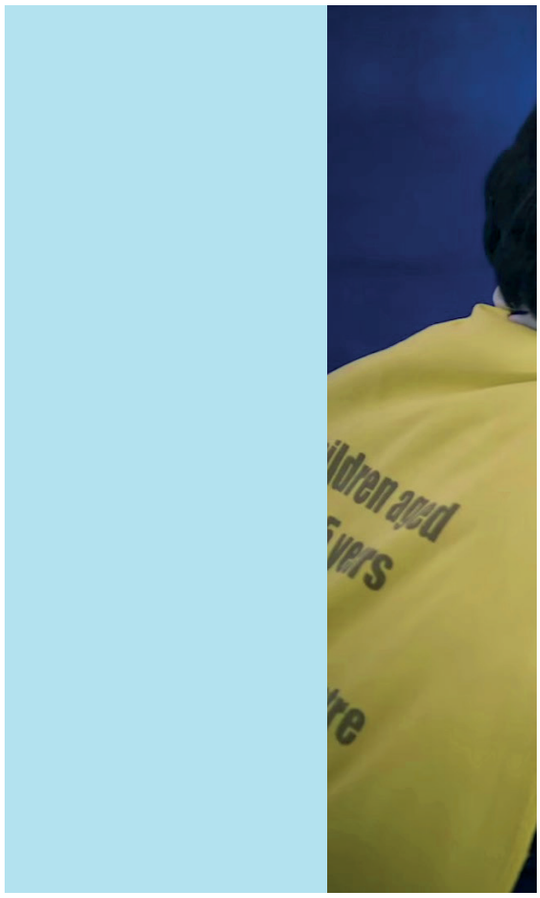


Table 9

Available Funding for RMNCAH-N IC Programs

#	Program	Estimated total (US $)
1	Maternal and Newborn Health	66,123,679
2	Child Health	30,534,803
3	Adolescent Health	35,137,584
4	Nutrition	44,360,084
Total RMNCAH-N • roadmap		176,156,150


6-11 MONTHS
(2%) -106
6-59 MONTHS
(18%) -95
12-59 MONTHS
(16%) -84


FEMALE

8 Monitoring and Evaluation Framework

8.1 Monitoring Mechanisms

Monitoring and evaluation processes are cardinal to tracking the implementation progress and assessing the effectiveness and impact of interventions contained within the investment case. This plan therefore seeks to achieve the following:

enable efficient gathering of relevant information on a timely basis.

enable the tracking of actual performance against the set targets in order to ensure that interventions are being carried out to the required standards and guidelines

enable the effective gathering of baseline and follow up data for the purpose of evaluation.

enable the timely preparation and utilisation of reports for the purposes of managing the implementation of the investment case

ensure data quality in terms of accuracy, reliability, completeness, precision, integrity, timeliness and confidentiality.

Monitoring of the IC will be conducted through discussions held within quarterly policy meetings and in the various TWG meetings. Further Key Performance Indicators will be tracked and reported through already existing mechanisms such as the Annual Reports, Annual Statistical reports and monthly Progress reports presented to senior management. These standard mechanisms will be adopted and used to report performance of the Key Indicators that will be identified to track progress of implementation of the investment case.

8.2 Sources of Data

Data to monitor the implementation of the RMNCAH-N Investment Case will be based on both routine and non-routine (survey) data sources. These data will be provided either monthly, quarterly, annually or periodically after 4-5 years depending on the survey its will be drawn from. High level impact indicators such as those at impact and outcome levels will be collected via surveys such as the Zambia Demographic and Health Survey, Service Availability Assessments and other programme related surveys. Availability of these data will be conducted at either population or at facility level on a periodical basis e.g. 4-5 years for ZDHS data. Output level indicators on the other hand, will be collected on a monthly basis using the HMIS data, training reports and other programme implementation reports. These data once collected will be available at various levels of health care with various disaggregation such as rural/urban, region and sex.

Data that is collected routinely is available at all levels of the health care system. However, timeliness of reporting and analysis will require strengthening in order to meet the needs of the investment case as well as to provide information to inform decisions in a timely fashion. Use of data at all levels to assess performance and to inform decisions will also be strengthened through the implementation of this case.

To evaluate the investment case, an evaluation plan consisting of baseline data will be used as the plan is assessed mid-way into implementation and at end-term implementation. Data that is routinely collected via administrative sources, HMIS and those collected through surveys will be used as part of the evaluation to check for performance trends at output, outcome and impact levels.

8.3 Monitoring Tools

Monitoring processes at each level have been identified with a given set of products. These will be achieved through the utilization of existing structures and coordination mechanisms.
The monitoring tools to be used will be as follows:

Data to monitor the implementation Self- assessment reports
Data from the Performance Assessments
Monthly/Quarterly and Annual progress reports

8.4 RMNCAH-N Investment Case Key Performance Indicators

A key characteristic of the RMNCAH-N IC is that the interventions implemented should be able to achieve results within the IC period.

The indicators reflected in the M&E matrix will be used to gauge the progress and impact of the interventions. While the comprehensive M&E framework contains program specific indicators for assessing performance at a micro level, a set of overarching Key Performance Indicators have been prepared which will guide assessment of performance of the Investment Case. Where baseline values are available, these are shown for the KPIs, and targets reflected for over the four-year span of the IC.

Table

RMNCAH-N Investment Case Key performance indicators

System strengthening reforms	Indicator	Baseline (source)	Targets 2022	2023	2024	2025	2026
To improve the use of data in decision-making	# of officers utilizing RMNCAH-N scorecard to make decisions at all levels	ND	200	400	600	800	1000
To enhance the implementation of the CRVS System.	Birth Registration Coverage	18.3% (2019 CRVS)	25%	31%	37%	43%	50%
	Death Registration Coverage	19% (2019) CRVS	28%	36%	44%	52%	60%
To improve supply chain and logistics management	% of health facilities reporting no stock outs of tracer health products	60% (2021 eLMIS)	70%	80%	90%	100%	100%
To integrate quality improvement of RMNCAH-N services	Percentage of RMNCAH-N services integrating QI	40%	60%	80%	90%	100%	100%
To ensure community responsiveness of RMNCAH-N services	Index of clients satisfied with RMNCAH-N services	0.47 (2015 WHO GHO)	0.50	0.60	0.80	0.90	1
To improve sustainability of health care and financial protection, especially for people in the bottom 40 percent of lowest wealth quintiles	Household Health Expenditure as % of Total Health Expenditure	12.2% (2016 NHA)	10%	11%	9%	8%	7%
To improve RMNCAH-N outcomes through collaboration, linkages and integration of services	Proportion of functional coordination and partnership mechanism from community to national level	ND	TBD	TBD	TBD	TBD	TBD
	% of districts with at least 50% functional Neighbourhood Health Committees	86% (Programme Reports)	86%	90%	100%	100%	100%
To achieve equitable access to RMNCAH-N services	Proportion of lowest wealth quantile accessing RMNCAH-N services	70% (2018 ZDHS)	70%	80%	90%	100%	100%
To achieve equitable access to RMNCAH-N services	Proportion of lowest wealth quantile accessing RMNCAH-N services	70% (2018 ZDHS)	70%	80%	90%	100%	100%

8.5 RMNCAH-N Investment Case Indicator Matrix

The main performance indicators across the results chain are listed in the table below with the targets from 2022 to 2024. Data collection will be done monthly while review of the IC will be quarterly.

CODE	Indicators	Baseline			Target			Data source	Reporting frequency	Level of reporting	Disaggre-gation
		Data	Year	Source	2022	2023	2024				
RESULTS LEVEL • OUTCOME											
Attribute **Maternal and Newborn Health**											
OC1.1	Proportion of health/ Districts facilities submitting monthly reports on availability of reproductive health commodities in a timely manner	116	2021	DHIS2	100	100	100	Admin-istrative Sources	Monthly	District and Health facility	Residence (Rural/Urban) Facility type
Attribute **Child Health**											
OC2.1	Proportion of HIV positive infants started on ART	99%	2020	DHIS2	100%	100%	100%	DHIS2	Monthly	National, Province, District and Health facility	Age, Sex, Residence (Rural/Urban) Facility type
OC2.2	Percent of Children receiving DPT3	83.7%	2020	DHIS2	84.5%	87%	90%	DHIS2	Monthly	National, Province, District and Health facility	Age, Sex, Residence (Rural/Urban) Facility type
	Percent of children under 1 who are fully immunized	88.2%	2020	DHIS2	90	90	90	DHIS2	Monthly	National, Province, District and Health facility	Age, Sex, Residence (Rural/Urban) Facility type
OC2.3	Pneumonia Case fatality Rate	61.6/ 1,000	2020	DHIS2	54	54	54	DHIS2	Monthly	National, Province, District and Health facility	Age, Sex, Residence (Rural/Urban) Facility type
OC2.4	Diarrhea Case fatality Rate	24.4/ 1,000	2020	DHIS2	24	24	24	DHIS2	Monthly	National, Province, District and Health facility	Age, Sex, Residence (Rural/Urban) Facility type
OC2.5	Malaria Case fatality Rate	23.3/ 1,000	2020	DHIS2	20	18	15	DHIS2	Monthly	National, Province, District and Health facility	Age, Sex, Residence (Rural/Urban) Facility type
OC2.6	Proportion of children under 5 dying in the first 24 hours of admission	#	2020	DHIS2	<5	<5	<5	Admin-istrative Sources	Monthly	National, Province, District and Health facility	Age, Sex, Residence (Rural/Urban) Facility type
OC2.7	Percentage of facilities displaying updated analytical tools on their notice boards	#	2021	DHIS2	60	70	90	Admin-istrative Sources	Monthly	National, Province, District and Health facility	Facility type Residence (Rural/Urban)

CODE	Indicators	Baseline			Target			Data source	Reporting frequency	Level of reporting	Disaggregation
		Data	Year	Source	2022	2023	2024				
RESULTS LEVEL • OUTCOME											
Attribute **Nutrition**											
OC3.1	Percentage of facilities implementing comprehensive GMP (Weight and L/H taken)	50%	2018	HMIS/ NIS admin reports	56	62	68	DHIS2 programme reports	Monthly	District and Health facility	Facility type Residence (Rural/Urban)
OC3.2	Percentage children with Obesity at health facilities	6%	2018	ZDHS	5	5	4	HMIS	Monthly	National, Province, District and Health facility	Sex, Age, Facility type Residence (Rural/Urban)
OC3.3	Proportion of children under 5 years old with anaemia	58%	2018	ZDHS	50	45	39	HMIS	Monthly	National, Province, District and Health facility	Sex, Age, Facility type Residence (Rural/Urban)
OC3.4	Percentage of health facilities implementing Baby Friendly Health Facility Initiative (BFHFI) guidelines	64%	2020	ZDHS Proxy BF within 1 hour	65	70	80	HMIS	Biannually	Province, District and Health facility	Facility type Residence (Rural/Urban)
RESULTS LEVEL • OUTPUT											
Attribute **Maternal and Newborn Health**											
OP1.1	Proportion of Health Facilities with trained HCPs in Quality Improvement collaborative projects for ANC service, Labour and delivery including EmONC	0%	2021	Programme/ Training reports	≥20	≥40	≥50	Programme/ Training reports	Quarterly	National, Province, District and Health facility	Facility type Residence (Rural/Urban)
OP1.2	Number of functional MPDSR committees in the districts	80	2021	Programme reports	100	110	116	Programme reports	Quarterly	Province, District and Health facility	Facility type Residence (Rural/Urban)
OP1.3	Proportion of fully functional EmONC facilities in the districts assessed annually	67%	2020	Programme reports	≥70	≥80	≥90	Programme reports	Annually	Province, District and Health facility	Facility type Residence (Rural/Urban)
OP1.4	Number of NICUS established in the second and third level hospitals	20	2020	Programme reports	60	80	100	Programme reports	Annually	Province, District and Health facility	Facility type Residence (Rural/Urban)

CODE	Indicators	Baseline			Target			Data source	Reporting frequency	Level of reporting	Disaggre-gation
		Data	Year	Source	2022	2023	2024				
RESULTS LEVEL • OUTPUT											
Attribute **Child Health**											
OP2.1	Proportion of HIV exposed infants tested for HIV within the first 2 months of life	98.8%	2020	DHIS2	99%	99.4%	99.8%	DHIS2	Monthly	National, Province, District and Health facility	Age, Sex, Residence (Rural/Urban) Facility type
OP2.2	Proportion of districts with at least 90% coverage of DPT-3 vaccine for children under one year	33.6%	2020	DHIS2	35%	38%	44%	DHIS2	Monthly	Province, District and Health facility	Residence (Rural/Urban) Facility type
OP2.3	Proportion of staff (HCPs, registry clerk, maids, security guards) attending to children trained/ oriented in ETAT	7%	2020	Programme data	15%	20%	25%	Programme/ Training reports	Monthly	Province, District and Health facility	Age, Sex, Facility type Residence (Rural/Urban)
OP2.4	Proportion of Districts implementing ECD services	22.4%	2020	HMIS	30%	38%	45%	Programme reports/ HMIS	Monthly	National, Province, District and Health facility	Residence (Rural/Urban) Facility type
OP2.5	Percentage of facilities providing IMNCI services with at least 60% of health workers managing children trained in IMNCI	48%	2020	Programme data	50%	55%	60%	Programme reports	Annually	National, Province, District and Health facility	Residence (Rural/Urban) Facility type
OP2.6	Percentage of active iCCM trained CHWs	71%	2020	Programme data	80%	83%	85%	Programme/ Training reports	Annually	National, Province, District and Health facility	Residence (Rural/Urban) Facility type
OP2.7	Percentage of children under 5 with danger signs referred from community to HF	92%	2018	DHIS2	93%	94%	96%	HMIS	Monthly	National, Province, District and Health facility	Age, Sex, Residence (Rural/Urban) Facility type
OP2.8	Proportion of Districts trained in ECD services	26%	2020	Programme Report, Administrative Source	30	35	40	Programme/ Performance assessment reports	Monthly	National, Province, District and Health facility	Residence (Rural/Urban) Facility type
OP2.9	Proportion of care givers with children < 3 attending MNCH services counselled on ECD	0	2020	Programme Report, Administrative Source	25	30	35	Programme survey or assessment	Monthly	National, Province, District and Health facility	Residence (Rural/Urban) Facility type

CODE	Indicators	Baseline			Target			Data source	Reporting frequency	Level of reporting	Disaggre-gation
		Data	Year	Source	2022	2023	2024				
RESULTS LEVEL • OUTPUT											
Attribute **Child Health**											
OP2.10	Percent of exposed children within two months collecting drugs.	88%	2018	DHIS2	100%	100%	100%	Programme survey or assessment	Quarterly	Province, District and Health facility	Age, Sex, Residence (Rural/Urban) Facility type
OP2.11	Proportion of children assessed for developmental milestones	0	2020	Programme Report, Administrative Source	25	30	35	Programme reports	Quarterly	Province, District and Health facility	Age, Sex, Residence (Rural/Urban) Facility type
OP2.12	Proportion of children identified with developmental delays	0	2020	Programme Report, Administrative Source	0	0	0	Programme reports	Quarterly	Province, District and Health facility	Age, Sex, Residence (Rural/Urban) Facility type
OP2.13	Number of data management and interpretation trainings conducted per district	0	2020	Programme Report, Administrative Source	1	2	2	Programme/ Training reports	Quarterly	Province, District and Health facility	Residence (Rural/Urban) Facility type
OP2.14	Proportion of districts with at least 60% of health providers trained in data management and interpretation	0	2020	Programme Report, Administrative Source	30	45	55	Training reports	Quarterly	Province, District and Health facility	Residence (Rural/Urban) Facility type
OP2.15	Percentage of facilities displaying analytical tools on their notice boards assessed	0	2020	Programme Report, Administrative Source	60	70	80	Performance assessment reports	Bi-annually	Province, District and Health facility	Age, Sex, Residence (Rural/Urban) Facility type

CODE	Indicators	Baseline			Target			Data source	Reporting frequency	Level of reporting	Disaggre-gation
		Data	Year	Source	2022	2023	2024				
RESULTS LEVEL • OUTPUT											
Attribute **Adolescent Health**											
OP3.1	% of health workers trained in adolescent health per facility/District	<10%	2020	Programme/ Training reports	10%	15%	20%	Programme/ Training reports	Quarterly	Province, District and Health facility	Residence (Rural/Urban) Facility type
OP3.2	% of standard youth friendly spaces established per district according to the action plans	<20%	2020	Programme Reports	20%	30%	50%	Programme/ Training reports	Quarterly	Province, District and Health facility	Residence (Rural/Urban) Facility type
OP3.3	% of peer educators trained in adolescent health per facility/District	<10%	2020	Programme/ Training reports	10%	20%	30%	Programme/ Training reports	Quarterly	Province, District and Health facility	Residence (Rural/Urban) Facility type
OP3.4	% of provincial and district development coordinating committee meetings that discuss adolescent health issues	<5%	2020	Programme Reports	10%	20%	30%	Programme/ Training reports	Quarterly	Province, District and Health facility	Residence (Rural/Urban) Facility type
OP3.5	Proportion of health facilities (both static and outreach) with comprehensive adolescent health service access points according to standards	<5%	2020	Programme Reports	5%	20%	40%	Programme/ Training reports	Quarterly	Province, District and Health facility	Residence (Rural/Urban) Facility type
OP3.6	Proportion of adolescents accessing any modern family planning method	97%	2018	ZDHS 21018	98%	98.5%	99%	Programme survey or assessment	Every 5 years	National	Residence (Rural/Urban) Facility type
OP3.7	Number of activities conducted towards formulation of policy on Age of Consent	70%	2021	Programme Reports	80%	90%	100%	Programme Reports	Bi-annually	National	Residence (Rural/Urban) Facility type
OP3.8	Percent of health workers trained in adolescent health per facility/district	<10%	-	Programme/ Training reports	40%	60%	80%	Programme/ Training reports	Bi-annually	Province, District and Health facility	Residence (Rural/Urban) Facility type

CODE	Indicators	Baseline			Target			Data source	Reporting frequency	Level of reporting	Disaggregation
		Data	Year	Source	2022	2023	2024				
RESULTS LEVEL • OUTPUT											
Attribute **Nutrition**											
OP4.1	Percent of health facilities with available anthropometric equipment according to GMP standards	50%	2018	Programme Report	72%	78%	80%	Programme/ Performance assessment reports	Bi-annually	National, Province, District and Health facility	Residence (Rural/Urban) Facility type
OP4.2	Proportion of health facilities with functional anthropometric equipment	64%	-	Programme Reports	70%	78%	80%	Programme/ Performance assessment reports	Bi-annually	Province, District and Health facility	Residence (Rural/Urban) Facility type
OP4.3	Percent of Mothers attending GMP receiving counselling on comprehensive GMP	64%	2018	Programme Report IEC registers	70%	80%	82%	Programme/ Performance assessment reports	Bi-annually	Province, District and Health facility	Residence (Rural/Urban) Facility type
OP4.4	Percent of health facilities providing GMP counselling to mothers during GMP	75%	2018	Programme Report IEC registers	78%	80%	80%	Programme/ Performance assessment reports	Bi-annually	National, Province, District and Health facility	Residence (Rural/Urban) Facility type
OP4.5	Percentage of health facilities with trained staff in GMP counselling	75%	2018	Programme Reports	78%	85%	87%	Programme/ Performance assessment/ Training reports	Annually	National, Province, District and Health facility	Residence (Rural/Urban) Facility type
OP4.6	Percentage of under five children attending GMP at health facility	93.4%	2020	DHIS2	94%	95%	96%	HMIS	Monthly	National, Province, District and Health facility	Age, Sex, Residence (Rural/Urban) Facility type
OP4.7	Percentage of under five children with weight taken during GMP at health facility	93.4%	2020	DHIS2	94%	95%	96%	DHIS2	Monthly	National, Province, District and Health facility	Age, Sex, Residence (Rural/Urban) Facility type
OP4.8	Percentage of under five children with Height/length taken during GMP at health facility	47.7%	2020	DHIS2	50%	55%	60%	DHIS2	Monthly	National, Province, District and Health facility	Age, Sex, Residence (Rural/Urban) Facility type
OP4.9	Percentage of under five children with both weight and height/length taken during GMP	46.5%	2020	DHIS2	50%	55%	60%	HMIS	Monthly	National, Province, District and Health facility	Age, Sex, Residence (Rural/Urban) Facility type

CODE	Indicators	Baseline			Target			Data source	Reporting frequency	Level of reporting	Disaggre-gation
		Data	Year	Source	2022	2023	2024				
RESULTS LEVEL —											
Attribute **Nutrition**											
OP4.10	Percentage of children underweight	12%	2018	ZDHS	11	10.5	9.5	HMIS	Monthly	National, Province, District and Health facility	Age, Sex, Residence (Rural/Urban) Facility type
OP4.11	Percentage of children stunting	35%	2018	ZDHS	30	28	26.5	HMIS	Monthly	National, Province, District and Health facility	Age, Sex, Residence (Rural/Urban) Facility type
OP4.12	Percentage of children wasting	4%	2018	ZDHS	4	4	4	HMIS	Monthly	National, Province, District and Health facility	Age, Sex, Residence (Rural/Urban) Facility type
OP4.10	Proportion of children breastfed within an hour after birth	68%	2018	ZDHS	77	79	82	HMIS	Monthly	National, Province, District and Health facility	Age, Residence (Rural/Urban) Facility type
OP4.11	Percentage of babies 0-6 months exclusively breastfed	70%	2018	ZDHS	70	75	80	HMIS	Monthly	National, Province, District and Health facility	Age, Residence (Rural/Urban) Facility type
OP4.12	Proportion of mothers reporting feeding their children 6-23 months on minimum diversified diet	23%	2018	ZDHS	33	43	53	ZDHS	Next ZDHS	National	Age, Residence (Rural/Urban) Facility type
OP4.13	Percentage of health facilities providing outpatient therapeutic services per year	34%	2018	DHIS2 IMAM data base	35	40	45	Performance assessment	Bi-annually	Province, District and Health facility	Residence (Rural/Urban) Facility type
OP4.14	Percentage of health facilities with staff trained in outpatient therapeutic programmes.	6%	2018	IMAM BNA Report	50%	55%	65%	Performance assessment, Training reports	Bi-annually	Province, District and Health facility	Residence (Rural/Urban) Facility type
OP4.15	Number of health facilities reporting no RUTF stock out	40	2018	Nutrition Statistics Bulletin	50	55	60	Programme reports, Stock Control Cards	Quarterly	Natia Province, District and Health facility	Residence (Rural/Urban) Facility type

CODE	Indicators	Baseline			Target			Data source	Reporting frequency	Level of reporting	Disaggre-gation
		Data	Year	Source	2022	2023	2024				
RESULTS LEVEL —											
Attribute **Nutrition**											
OP4.16	Percentage of health facilities admitting Severe Acute Malnutrition (SAM) cases	24	2017	IMAM Data base	38%	45%	48%	HMIS	Monthly	Province, District and Health facility	Residence (Rural/Urban) Facility type
OP4.17	Percentage of health facilities with staff trained in IMAM	24%	2018	IMAM BNA report	50%	52%	55%	Programme/ Training reports	Quarterly	Province, District and Health facility	Residence (Rural/Urban) Facility type
OP4.18	Number of health facilities reporting reduced stock out of Supplies for management of SAM	55%	2018	IMAM BNA Report	50	52	55	Programme reports, Stock Control Cards	Quarterly	Province, District and Health facility	Residence (Rural/Urban) Facility type

MALE
EXIT
ABLUTION BLOCK
ISOLATION
FIRE EXTINGUISHER

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CSO (Central Statistical Office) et.al	1992	Zambia Demographic and Health Survey Report	1993	Lusaka, Zambia
GRZ	2006	"Vision 2030: A Prosperous Middle-Income Nation by 2030"		Cabinet Office Lusaka, Zambia
MNDP (Ministry of National Development Planning)	2018	7NDP Mid-term Review		Lusaka, Zambia
MNDP (Ministry of National Development Planning)	2022	8NDP Mid-term Review	2022-2026	Lusaka, Zambia
MNDP (Ministry of National Development Planning)	2017	Seventh National Development Plan	2017-2021	Lusaka, Zambia
MOH (Ministry of Health)	2020	Mid Term Review of the National AIDS Strategic Plan		
MOH (Ministry of Health)	2020	Mid Term Review of the National Health Strategic Plan		
MOH (Ministry of Health)	2021	Reproductive, maternal, new-born, child and adolescent health-nutrition services Road Map		
MOH (Ministry of Health)	2021	Tracking progress for reproductive, maternal and child health services in Zambia		
Population Council, UNFPA, Government of the Republic of Zambia	2017	"Adolescent Pregnancy in Zambia"		Lusaka, Zambia
World Bank (GFF)	2020	Impact of COVID19 on reproductive, maternal, newborn, child and adolescent health in Zambia		

10 Appendices

10.1 Appendix 1: Systems Strengthening Reforms, Pathways, Prioritized Investments and Expected Outcomes

Pathways	Prioritized Investments	Expected Outcomes
System Strengthening Reforms **To improve the use of data in decision-making**		
• Raise health providers' awareness about the value of data in decision-making • Improve health providers' data management capacities • Ensure utilization of disaggregated data	Strengthen RMNCAH-N scorecard result dissemination at all levels	Improved RMNCAH-N outcomes arising from the Implementation of proven interventions
	Establish and orientation of District MPDSR Committees	
	Improve data recording and management practices by: • procurement of under-5 cards • stock cards and under-5 registers and reporting tools	
	Improve the implementation of operations research in order to generate evidence for decision-making	
	Raise capacities for utilizing data in the decision making process, especially at the districts level	
	Strengthen data review meetings	
System Strengthening Reforms **Enhance the implementation of the CRVS System**		
• Raise health providers' awareness about the value of vital statistics • Develop skills in recording and reporting vital events	Increase community awareness on birth and death registration at both facility and community levels	Timely implementation of interventions facilitated by improved continuous recording of vital events
	Increase notification sites for birth and death registration	
	Establish verbal autopsy processes in rural health facilities	
	Strengthen skills in the certification and coding of causes of death	
	Digitalization of RMNCAH-N indicators	
System Strengthening Reforms **To Improve supply chain and logistics management**		
• Ensure commodity security • Improve availability of appropriate medical equipment	Build capacity in forecasting and quantification of commodities	Improved health/clinical management arising from the ready availability of effective commodities and supplies
	Strengthening procurement systems and stock management	
	Prioritize procurement of commodities appropriate for Adolescents	
	Improve functionality of RMNCAH-N through the provision of equipment and BCC/IEC materials for RMNCAH-N	
	Improve the timely procurement, availability and security of infrastructure and equipment for the management of pneumonia: • Resuscitation equipment and pulse oximeters, and • Pediatric formulations, timers, injectables and IV fluids	
	Improve the availability of medical equipment and supplies (resuscitation equipment, pulse oximeters) for infants and children	
	Equipment and infrastructure improvement for EmONC services	
	Improve the availability of nutrition commodities and supplies	

Pathways	Prioritized Investments	Expected Outcomes
System Strengthening Reforms **To integrate quality improvement in RMNCAH-N Services**		
• Improving the supply and management of pharmaceutical, medical supplies and staff • Standardization and adoption of best practices and procedures	Technical quality of health care	RMNCAH-N service that are not only accessible and of good quality, but also meet the expectations of clients
	Capacity building in RMNCAHN programmes: • Competency-focused pre-service training • In-service training for selected programmes • Mentorship in RMNCAH-N	
	Ensure quality service delivery for children by establishing adequate space for curative and preventive child health activities	
	Establishment of special intrapartum care units	
	Integrate quality improvement for RMNCAHN into in-service training	
	Establish NICUs in 100 facilities across the country	
	Support management pregnancy complications by procuring equipment for EmONC services and infrastructure improvement	
	Ensure availability of blood and blood products	
	Enhancing monitoring and supervision by: • Holding on-site and reversed mentorship in RMNCAHN programs • Scaling up Service Quality Assessment intervention	
	Introducing Quality Improvement collaborative (QIC) projects at sub district level in all programs with poor performance indicators	
	Strengthen Referral services by: • Building competences of HCPs in the use of Partographs • Procuring ambulances for zonal facilities and district hospitals and motorbike ambulances for hard-to-reach areas • Procuring and mounting 3,000 communication VHF - High Frequency radios and masts	
	Reduce MDs due to PPH by strengthening the HCP's skills in Active Management of the Third Stage of Labor (AMTSL)	
	Reduce macerated still births by procuring Syphilis commodities	
	Reduce perinatal deaths by: • Procuring Antenatal corticosteroids for pre-term labor • Procuring oxygen cylinders and oxygen concentrators • setting up KMC spaces in 600 health facilities	
	Reduce newborn deaths by procuring CPAPs and resuscitation equipment	
	Improve the quality of ANC by procuring portable ultra sounds for facilities	
	Reduce unmet need for family planning by procuring contraceptives	
	Prevent and manage malnutrition by procuring supplements and therapeutic feeds	
	Improve outreach services by procuring motorbikes and utility vehicles	
	Utilize digital innovations to train HCP in IMNCI by procuring computers for provincial training schools for ICATT	
	Increase the numbers of children being tested for HIV by Procuring diagnostics (including Point of care; PCR equipment) in all provincial hospitals	
	Increase availability and accessibility of all vaccines by: • procurement of cold chain equipment • operationalisation of the urban immunisation strategy	
	Ensure quality Breastfeeding Hospital Feeding programs by conduct accreditation of facilities	
	Improving the means of transport at levels, with special focus on rural, hard-to-reach areas	
	Increase quality ECD service provision and use by refurbishing health facilities to create space for ECD activities and raise community awareness about child-play	

Pathways	Prioritized Investments	Expected Outcomes
System Strengthening Reforms **Ensure community responsiveness of RMNCAH-N services**		
• Improving the supply and management of phamaceutical, medical supplies and staff • Standardization and adoption of best practices and procedures • Determination of communities needs in order to ensure need based service • Engaging communities as co-providers and owners of services	Reduce Anemia, prematurity and abortion due to malaria by employing health promotion on correct and consistent use of ITNs Mitigate the HRH gap by task shifting and sharing and building capacity in community based agents Reorientation of health workers to achieve improvements in staff attitudes and responsiveness to client needs Support task shifting to community based agents by procuring enablers Strengthen community ownership of programs including male involvement by: • Holding meetings with gate keepers and communities • Conducting sensitisation campaigns Reducing on defaulters by using patient's reminders	Improved RMNCAH-N outcomes arising from the Implementation of proven interventions
System Strengthening Reforms **To narrow the human resources gap and raise capacities for health service delivery**		
• Develop HRH system to ensure adequate numbers and preservice curriculum development • Incentives to redeploy health workers to areas of need • In-service training involving introduction of a continuous professional development programme • Motivation of HRH	Increase the number of health facilities with adequately trained health workers in RMNCAH-N Strengthen skilled human resources for specialized services under RMNCAH-N	Improved RMNCAH-N outcomes arising from the Implementation of proven interventions
System Strengthening Reforms **To achieve improved RMNCAH-N outcomes through collaboration, linkages and integration of services**		
• Raise awareness about the importance of collaboration, linkages and integration among program managers • Enhance platforms for networking among programme managers	Ensure improved working synergies among institutions addressing RMNCAH-N aspects Advocate for inclusion of Fistula Survivors on SCT benefits and IGA activities as part of a Social reintegration process Strengthen linkage between paediatric HIV and other child health services Strengthen the implementation of WASH/IPC in all health facilities by: • Establishing and revamping infection prevention committees in all facilities • Conducting IPC/WASH training and assessments for all priority areas Promote wash by: • Installation of Water reticulation systems • Construction of water borne toilets in urban areas Combine WASH and Nutrition Education programmes	Lasting impacts on RMNCAH-N outcomes that are based on the combination of resources of resources within and external to the health sector

Pathways	Prioritized Investments	Expected Outcomes
System Strengthening Reforms **Improve financing of the RMNCAH-N services and pooled funding, which protect the vulnerable**		
• Improving sustainability of and access to health care • Expanding the population covered by pooled funding • Developing and implementing clear mechanisms for protecting indigents	Ensure motivation and reinforcement of quality service provision by scaling up results -based financing	Sustainability of and access to health care
	Increase access to dietary diversity by introducing vouchers and conditional cash transfers	
	• Leverage on NHIMA resources and other sources of funding for procurement of commodities • Increase proportion of Government Health Expenditure including NHIMA towards RNMCAH services	
	Increase the number of RMNCAH-N services paid for by NHIMA	
System Strengthening Reforms **Achieve equitable access to services and financial protection, especially for people in the bottom 40 percent of income**		
• Streamline mechanisms for identifying and addressing the needs of the vulnerable • Clear mechanisms for affirmative action for vulnerable populations	Develop a policy to guide on the age of consent for adolescents access to health services	Sustained improved health of women, children and adolescents, especially the bottom 40 percent
	Promote enforcement of by-laws which deter adolescents from substance abuse and intergenerational sex	
	Scale-up availability of community based, facility based and mobile YFS	
	Provide model Adolescents friendly infrastructure to support AFS	
	Engagement of gate keepers to promote a safe, supportive and protective environment	
	Increase health literacy levels amongst the vulnerable	
	Increasing access to supplements by introducing community level and in-school literacy on the supplements	
	Provide for flexible hours in facilities for outpatient services service by introducing evening and weekend outlets	
	Increasing access to SGBV services by refurbishing one SGBV One Stop Centre per district	
	Strengthen Obstetric fistula management by: • Training 20 fistula surgeons and 200 HCPs in Fistula management • Establish and equip 10 Fistula management centres in 10 provinces	
	Provision of services that are friendly to persons with disabilities	
	Establish mothers shelters with minimum standards	

10.2 Appendix 1: Summary Costings for Strategies

Nº	Objective	Nº	Strategy	Target			Total
				2022	2023	2024	
1	**Maternal and Newborn Health**						
1.1	To increase the proportion of Health Facilities with health providers trained in Quality Improvement collaborative (QIC) projects for ANC service, Labour and Delivery including EmONC by 50% by 2024	**1.1.1**	Enhance Quality Improvement collaborative (QIC) projects for ANC service, Labour and Delivery including EmONC	605,093	1,692,687	691,229	**2,989,009**
		1.1.2	Strengthen Quality Improvement for CEmONC	788,806	785,231	888,032	**2,462,070**
		1.1.3	Capacity building of HCPs in PNC particularly in identifying mothers and newborns requiring special care	71,758	77,857	84,475	**234,089**
		1.1.4	Integrate Quality improvement for RMNCAHN into in-service training	69,458	-	-	**69,458**
			SUB-TOTAL	**1,535,115**	**2,555,776**	**1,663,736**	**5,754,626**
1.2	To increase the proportion of districts with functional MPDSR committees from 60% in 2019 to 80% by 2024	**1.2.1**	Strengthen all components of MPDSR in all health facilities (verbal autopsy, confidential inquiry)	3,718,806	4,012,145	4,340,262	**12,071,213**
			SUB-TOTAL	**3,718,806**	**4,012,145**	**4,340,262**	**12,071,213**
1.3	To increase the proportion of fully functional EmONC facilities from 2% in 2015 to 20% by 2024 in order to respond to community needs	**1.3.1**	Improve availability of Supplies and equipment for EmONC	11,804,666	16,273,445	17,671,243	**45,749,354**
		1.3.2	Ensure availability of blood and blood products	-	-	-	-
		1.3.3	Establishment of units to care for mothers and newborns with special needs	781,211	847,614	919,661	**2,548,486**
			SUB-TOTAL	**12,585,877**	**17,121,059**	**18,590,904**	**48,297,840**
	Maternal and Newborn Health		**TOTAL**	**12,585,877**	**17,121,059**	**18,590,904**	**48,297,840**
2	**Child Health**						
2.1	To increase the proportion of HIV exposed infants who are diagnosed within the first 2 months of life from 57% in 2019 to 90% by 2024	**2.1.1**	Raise health workers capacities to strengthen the management of children with HIV	84,036	91,179	98,929	**274,143**
		2.1.2	Strengthen linkage between paediatric HIV and other child health services	18,766	20,361	22,092	**61,220**
		2.1.3	Increase the numbers of children being tested for HIV and started on treatment	6,461,415	1,266,254	1,373,885	**9,101,554**
			SUB-TOTAL	**6,564,217**	**1,377,794**	**1,494,906**	**9,436,917**
2.2	To increase the proportion of districts with at least 90% coverage of DPT-3 vaccine for children under one year from 50% in 2019 to 90% by 2026	**2.2.1**	Increase availability and accessibility of all vaccines	893,252	969,178	1,051,559	**2,913,989**
			SUB-TOTAL	**893,252**	**969,178**	**1,051,559**	**2,913,989**

Nº	Objective	Nº	Strategy	Target			Total
				2022	2023	2024	
2	**Child Health**						
2.3	To increase the proportion of facilities with at least 60% of health workers who are managing children capacitated in IMNCI from 45% in 2018 to 60% by 2024	**2.3.1**	Build capacity in health care workers in IMCI through various methods (in-person and using digital innovations	677,070	737,534	800,224	**2,214,827**
			SUB-TOTAL	**677,070**	**737,534**	**800,224**	**2,214,827**
2.4	To increase the proportion of districts implementing ECD services from 2% in 2019 to 60% by 2024	**2.4.1**	Increase quality ECD service provision and use	336,118	327,309	355,130	**1,018,557**
			SUB-TOTAL	**336,118**	**327,309**	**355,130**	**1,018,557**
2.5	To increase 'fully immunised Under-2' coverage from 68% to >90% by 2024	**2.5.1**	Strengthen integrated child health services including immunization, GMP, Paediatric HIV services and others in the community through outreach activities	7,001,436	333,004	361,309	**7,695,750**
		2.5.2	Capacity Building/ Skills Development	299,459	437,341	474,515	**1,211,315**
		2.5.3	Increase the availability of Under-5 Cards	3,522,052	57,144	61,738	**3,640,935**
			SUB-TOTAL	**10,822,948**	**827,489**	**897,562**	**12,548,000**
2.6	To increase the number of communities able to prevent diarrhea and reduce deaths by 50% by 2024	**2.6.1**	Strengthen health promotion and prevention	335,809	364,353	395,323	**1,095,485**
			SUB-TOTAL	**335,809**	**364,353**	**395,323**	**1,095,485**
2.7	To increase the number of facilities able to adequately diagnose and manage sickle cell anaemia from the current levels to at least 60%	**2.7.1**	Increase Health worker skills in diagnosis and management of sickle cell anemia at Level 2 and lower facilities for post neonatal and child health	126,379	137,122	148,777	**412,278**
			SUB-TOTAL	**126,379**	**137,122**	**148,777**	**412,278**
2.8	To Improve health providers' data management and interpretation	**2.8.1**	Improve data recording and management practice	62,501	110,238	119,608	**292,347**
		2.8.2	Raise capacities for utilizing data in the decision making process, including the provision of job aids and simple data visualization tools (e.g. scorecards), especially at the districts level.	21,855	24,905	27,021	**73,781**
			SUB-TOTAL	**84,355**	**135,142**	**146,630**	**366,127**
2.9	To increase the number of health facilities able to practice ETAT from the current levels to 50% by 2024	**2.9.1**	Strengthen skilled human resources for ETAT for post-neonatal and child health	153,300	180,011	195,312	**528,623**
			SUB-TOTAL	**153,300**	**180,011**	**195,312**	**528,623**
	Child Health		**TOTAL**	**19,993,447**	**5,055,932**	**5,485,423**	**30,534,803**

Nº	Objective	Nº	Strategy	Target			Total
				2022	2023	2024	
3	**Adolescent Health**						
3.1	To increase the number of districts with adolescent health service minimum platform from 50% in 2019 to 85% by 2024	**3.1.1**	Procure commodities appropriate for adolescents	-	-	-	-
		3.1.2	Improve functionality of Youth Friendly Services through the provision of equipment and IEC materials	242,776	263,412	285,802	**791,989**
			SUB-TOTAL	**242,776**	**263,412**	**285,802**	**791,989**
3.2	To reduce teenage pregnancies from 29% in 2018 to 24% by 2024	**3.2.1**	Scale-up availability of community based, facility based and mobile YFS	199,631	216,600	235,011	**651,242**
		3.2.2	Provide model Adolescents friendly infrastructure to support AFS	2,753,807	2,987,881	3,241,851	**8,983,538**
		3.2.3	Engagement of gate keepers to promote a safe, supportive and protective environment	1,169,256	1,268,643	1,376,478	**3,814,377**
		3.2.4	Increase health literacy levels amongst adolescents	472,422	519,081	563,203	**1,554,706**
		3.2.5	Capacity building of health workers in adolescent health service provision	5,759,729	6,249,306	6,780,497	**18,789,531**
		3.2.6	Prioritize Adolescent Health across all public health interventions and social sectors	169,271	183,659	199,270	**552,200**
			SUB-TOTAL	**10,524,116**	**11,425,170**	**12,396,309**	**34,345,595**
	Adolescent Health		**TOTAL**	**10,766,892**	**11,688,581**	**12,682,111**	**35,137,584**

Nº	Objective	Nº	Strategy	Target			Total
				2022	2023	2024	
4	**Nutrition**						
4.1	To increase the number of health facilities implementing comprehensive GMP from 50% in 2018 to 80% in 2024	**4.1.1**	Improve data recording and management practice	1,266,751	1,374,425	1,491,251	**4,132,428**
		4.1.2	Improving the means of transport at levels, with special focus on rural, hard-to-reach areas	8,178,807	8,874,006	9,628,296	**26,681,109**
		4.1.3	Improve the availability and utilisation of critical equipment and infrastructure to support RMNCAH-N	396,917	430,655	467,261	**1,294,833**
		4.1.4	Community education and outreach	116,883	126,818	137,597	**381,298**
		4.1.5	Support task shifting to community-based agents by procuring enablers	1,043,845	1,132,572	1,228,841	**3,405,258**
		4.1.6	Mitigate the HRH gap by task shifting and sharing and building capacity in community based agents	2,109.31	2,288.60	2,483.13	**6,881**
			SUB-TOTAL	**11,005,313**	**11,940,765**	**12,955,730**	**35,901,807**
4.2	To increase proportion of babies 0-6 months who are exclusively breastfed from 70% in 2018 to 80% in 2024	**4.2.1**	Ensure quality Breastfeeding in Hospital Feeding programs	97,361	105,637	114,616	**317,613**
			SUB-TOTAL	**97,361**	**105,637**	**114,616**	**317,613**
4.3	To Increase the proportion of mothers reporting feeding their children 6- 23 months old children on a diversified diet	**4.3.1**	Non-facility service provision (Strengthen Multisectoral collaboration)	249,789	270,052	293,007	**812,848**
		4.3.2	Lay/CHW service delivery(Rephrase)	73,281	79,510	86,268	**239,059**
			SUB-TOTAL	**323,069**	**349,562**	**379,275**	**1,051,906**
4.4	To increase number of outpatient therapeutic (OTP sites from 34% to 50% by 2024	**4.4.1**	Improve data recording and management practices	24,052	26,096	28,314	**78,463**
		4.4.2	Capacity building in nutrition programmes for Training schools to improve competencies of tutors and students	126,005	136,715	148,336	**411,056**
			SUB-TOTAL	**150,057**	**162,811**	**176,650**	**489,518**
4.5	To reduce anaemia prevalence in under five children from 58% to 30% in 2024	**4.5.1**	Ensure timely procurement of key commodities	37,672	40,874	44,349	**122,895**
		4.5.2	Capacity building in anaemia control programmes	364,226	395,185	428,776	**1,188,186**
		4.5.3	Social and behaviour change Communication (SBCC)	54,970	59,642	64,712	**179,323**
			SUB-TOTAL	**456,867**	**495,701**	**537,836**	**1,490,404**
4.6	To increase the number of sites offering IMAM services from 24% in 2017 to 50% by 2024	**4.6.1**	Ensure timely procurement of key commodities	1,333,341	1,446,675	1,569,642	**4,349,658**
		4.6.2	Capacity Building	128,702	133,640	145,000	**407,342**
		4.6.3	Quality Improvement	107,849	116,896	127,092	**351,836**
			SUB-TOTAL	**1,569,891**	**1,697,211**	**1,841,733**	**5,108,836**
	Nutrition		**TOTAL**	**13,602,558**	**14,751,687**	**16,005,840**	**44,360,084**

10.3 Appendix 2: The M & E Table k- RMNCAH-N Investment Case

Code	Indicators	Means of verification	Assumptions
OUTCOME			
Attribute **Child Health**			
OC2.1	Proportion of HIV positive infants started on ART	HMIS	Essential health services would have been packaged for each level of care (through the health service act) and translated into services charter
OC2.2	Percent of Children receiving DPT3	HMIS	
OC2.3	Pneumonia Case fatality Rate	HMIS	
OC2.4	Diarrhea Case fatality Rate	HMIS	
OC2.5	Malaria Case fatality Rate	HMIS	
OC2.6	Proportion of children under 5 dying in the first 24 hours of admission	HMIS	
OC2.7	Percentage of facilities displaying updated analytical tools on their notice boards	Performance assessment reports	Data quality is assured
Attribute **Nutrition**			
OC3.1	Percentage of facilities implementing comprehensive GMP (Weight and L/H taken)	HMIS	Planned Programme will be funded according to plan
OC3.2	The percentage of children with Obesity at health facilities	HMIS	Planned Programme will be funded according to plan
OC3.3	Proportion of children under 5 years old with anaemia	HMIS	
OC3.4	• Percentage of health facilities implementing Baby • Friendly Health Facility Initiative (BFHFI) guidelines	Programme Reports	Planned Programme will be funded according to plan
OUTPUT			
Attribute **Maternal And Newborn Health**			
OP1.1	Number of health workers trained in QIC projects for ANC service, labour and delivery including EmONC	Programme Reports	Planned Programme will be funded according to plan
OP1.2	Proportion of health facilities with trained health care providers in QIC projects for ANC service, labour and delivery including EmONC	Programme Reports	Planned Programme will be funded according to plan
OP1.3	Number of functional MPDSR committees in the districts	Programme Reports	Planned Programme will be funded according to plan
OP1.4	Proportion of districts with functional MPDSR committees	Programme/ Training reports	Planned Programme will be funded according to plan
OP1.5	Proportion of fully functional EmONC facilities in the districts assessed annually	Programme Reports	Planned Programme will be funded according to plan
OP1.6	Proportion of NICUS established in the second and third level hospitals	Programme/ Performance assessment reports	Planned Programme will be funded according to plan

Code	Indicators	Means of verification	Assumptions
OUTPUT			
Attribute **New-born and Child Health**			
OP2.1	Proportion of HIV exposed infants tested for HIV within the first 2 months of life	HMIS	Essential health services would have been packaged for each level of care(through the health service act) and translated into services charter
OP2.2	Proportion of districts with at least 90% coverage of DPT-3 vaccine for children under one year	HMIS	
OP2.3	Proportion of staff (HCPs, registry clerk, maids, security guards) attending to children trained/oriented in ETAT	Programme/ Training reports	Training will be funded according to plan
OP2.4	Proportion of Districts implementing ECD services	Programme Reports	Planned Programme will be funded according to plan
OP2.5	Percentage of facilities providing IMNCI services with at least 60% of health workers managing children trained in IMNCI	Programme Reports	Essential health services would have been packaged for each level of care (through the health service act) and translated into services charter
OP2.6	Percentage of active iCCM trained CHWs	Programme/ Training reports	
OP2.7	Percentage of children under 5 with danger signs referred from community to HF	HMIS	A strengthened community participation in prevention of ill-health and promotion of good practices
OP2.8	Proportion of Districts trained in ECD services	Programme/ Performance assessment reports	Planned Programme will be funded according to plan
OP2.9	Proportion of care givers with children <3 attending MNCH services counselled on ECD	Programme/ Performance assessment reports	A strengthened community participation in prevention of ill-health and promotion of good practices
OP2.10	Percent of exposed children within two months collecting drugs	Programme/ Pharmacy Reports	Essential health services would have been packaged for each level of care (through the health service act) and translated into services charter Strengthened community participation in prevention of ill-health and promotion of good practices
OP2.11	Proportion of children assessed for developmental milestones	Programme Reports	
OP2.12	Proportion of children identified with developmental delays	Programme Reports	
OP2.13	Number of data management and interpretation trainings conducted per district	Programme/ Training reports	
OP2.14	Proportion of districts with at least 60% of health providers trained in data management and interpretation	Training reports	
OP2.15	Percentage of facilities displaying analytical tools on their notice boards assessed	Performance Assessment Reports	

Code	Indicators	Means of verification	Assumptions
OUTPUT			
Attribute **Adolescent Health**			
OP3.1	% of health workers trained in adolescent health per facility/District	Programme/ Trainig Reports	Essential health services would have been packaged for each level of care (through the health service act) and translated into services charter Strengthened community participation in prevention of ill-health and promotion of good practices
OP3.2	% of standard youth friendly spaces established per district according to the action plans	Performance Assessment Reports	
OP3.3	% of peer educators trained in adolescent health per facility/District	Programme/ Trainig Reports	
OP3.4	% of provincial and district development coordinating committee meetings that discuss adolescent health issues	Programme Reports	
OP3.5	Proportion of health facilities (both static and outreach) with comprehensive adolescent health service access points according to standards	Programme Reports	
OP3.6	Proportion of adolescents accessing any modern family planning method	HMIS	
OP3.7	Number of activities conducted towards formulation of policy on Age of Consent	Programme Reports	
OP3.8	Proportion of health workers trained in adolescent health practicing according to set standards	SQA reports	

Code	Indicators	Means of verification	Assumptions
OUTPUT			
Attribute **Nutrition**			
OP4.1	Percent of health facilities with available anthropometric equipment according to GMP standards	Programme/Performance Assessment Reports	Essential health services would have been packaged for each level of care (through the health service act) and translated into services charter Strengthened community participation in prevention of ill-health and promotion of good practices
OP4.2	Proportion of health facilities with functional anthropometric equipment	Programme/Performance Assessment Reports	
OP4.3	Percent of Mothers attending GMP receiving counselling on comprehensive GMP	Programme/Performance Assessment Reports	
OP4.4	Percent of health facilities providing GMP counselling to mothers during GMP	Programme/Performance Assessment Reports	
OP4.5	Percentage of health facilities with trained staff trained in GMP counselling	Performance Assessment Reports	
OP4.6	Percentage of under five children attending GMP at health facility	HMIS	
OP4.7	Percentage of under five children with weight taken during GMP at health facility	HMIS	
OP4.8	Percentage of under five children with height/ length taken during GMP at health facility	HMIS	
OP4.9	Percentage of under five children with both weight and height/length taken during GMP	HMIS	
OP4.10	Percentage of children underweight	HMIS	
OP4.11	Percentage of children with stunting	HMIS	
OP4.12	Percentage of children with wasting	HMIS	
OP4.13	Proportion of children breastfed within an hour after birth	HMIS	
OP4.14	Percentage of babies 0-6 months exclusively breastfed	HMIS	
OP4.15	Proportion of mothers of children 0-23 months who have received counselling, support or messages on optimal breastfeeding at least once in the last year	HMIS	
OP4.16	Proportion of mothers reporting feeding their children 6-23 months on minimum diversified diet	HMIS, Survey	
OP4.17	Percentage of health facilities providing outpatient therapeutic services per year	Programme Report, Survey	
OP4.18	Percentage of health facilities with staff trained in outpatient therapeutic programmes	Programme/ Trainig Reports	
OP4.19	Number of health facilities reporting no RUTF stock out	Stock Control Cards	A drug fund to ensure consistent funding is established by the end of 2024
OP4.20	Number of health facilities reporting no RUTF stock out	HMIS, Programme Data	Essential health services would have been packaged for each level of care (through the health service act) and translated into services charter
OP4.21	Percentage of health facilities with staff trained in IMAM	Programme/ Trainig Reports	
OP4.22	Number of health facilities reporting reduced stock out of Supplies for management of SAM	Stock Control Cards	
OP4.23	Proportion of staff trained in SAM management providing services	Programme/ Trainig Reports	

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Zambia RMNCAH-N Investment Case

2022–2024

October
2022

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