



Republic of Zambia  
MINISTRY OF HEALTH

## National Integrated Management of Newborn and Childhood Illnesses (IMNCI)

# STRATEGIC PLAN 2019–2021

*“Towards Keeping Children Healthy  
and Thriving Countrywide”*

SYSTEMS STRENGTHENING

HEALTH WORKERS TRAINING

COMMUNITY HEALTH PRACTICES

## FOREWORD

Over the past decade Zambia has made tremendous strides in reducing neonatal, infant and child mortality. The Zambia Demographic and Health Survey (ZDHS) has recorded significant decreases in the infant mortality rate (IMR) and under-five mortality rate (U5MR). The IMR per 1,000 live births has shown a downward trend from 109, in 1996, to 45 in 2013-14 ZDHS. U5MR has dropped from 197 deaths per 1,000 live births in 1996 to 75 per 1,000 live births in 2013-14. Although the Neonatal Mortality Rate has also declined from 34 per 1,000 live births in 2007 to 24 per 1,000 live births in 2014, it remains unacceptably high and constitutes approximately half the number of all infant deaths. Further, the ZDHS data has shown that HIV prevalence has declined from 14% in 2007 to 13.3% in 2014. These positive achievements are linked to concerted efforts at scaling up high impact child health interventions, such as improved infant and young child feeding practices, de-worming activities, and massive Vitamin A distribution.

The Integrated Management of Newborn and Childhood Illnesses (IMNCI) strategy was introduced in Zambia in 1995, after it was observed that more than two-thirds of childhood deaths were due to five common conditions: respiratory tract infections, malaria, diarrhoea, malnutrition, and measles. During the past two decades, tuberculosis (TB) and HIV/AIDS extended the list to seven. Previously, the illnesses were managed through vertical programmes that were inappropriate to manage sick children presenting with signs and symptoms of more than one condition. There was also duplicated resource use. Hence IMNCI was an appropriate response in ensuring holistic care of children as well as enabling effective use of resources in managing sick children.

Although significant achievements have been made 24 years after IMNCI was introduced, many challenges remain. The most cardinal being the failure to reach the target saturation levels of 80% of health workers attending to sick children trained in IMNCI. Only about 38% of the districts currently meet this national target. Therefore, there is need to scale up all the various high impact childhood interventions that are part of this Strategy and to address the major encumbrances in our health system delivery that create immense bottlenecks to the effective delivery of these child health services.

This strategic plan was crafted within the context of the broader National Health Strategic Plan (NHSP) 2017 – 2021, which aims to reduce overall U5MR from 75 per 1000 live births, to 35 per 1000 live births by 2021. In order to accelerate the scaling up of IMNCI implementation, improve child survival, and contribute towards meeting this goal, as well as the Sustainable Development Goal (SDG) 3, this IMNCI Strategic Plan has been developed to provide the strategic framework for IMNCI implementation.



I urge all the stakeholders who are part of the implementation of this plan to dedicate themselves to this important national assignment. My Ministry will remain committed to ensuring its successful implementation.

**Dr. Chitalu Chilufya, MP**

Minister of Health

## ACKNOWLEDGMENTS

The development of this strategic plan involved a multi-stakeholder process of consultations in building consensus on the rationale, areas of focus, costing assumptions and desired roadmap for its development. Stakeholders reviewed the previous IMNCI plan of 2013-17 and drafted the 2019-23 plan. Several organisations and individuals played a critical role at every stage of developing the plan. I particularly wish to pay special tribute to the Child Health Technical Working Group for providing the necessary oversight and strategic guidance to the drafting team.

I wish to thank the United States Agency for International Development (USAID) for making the development of this second IMNCI strategic plan a reality through their financial and technical support.

The technical support rendered by the World Health Organisation (WHO) and effective financial management is much appreciated. The Ministry of Health wishes to further thank United Nations Children's Fund (UNICEF) for its participation and support in the development of the document. My thanks also go to the technical staff of the Ministry of Health at our national and provincial offices, who participated in the development and validation of this plan.

Finally, my gratitude is extended to the following partners for their participation, contributions, and support to the process of formulating this strategic plan, Save the Children; Path and Churches Health Association of Zambia (CHAZ).

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*The IMNCI strategic plan 2019-23 was developed by the Ministry of Health's national and provincial level stakeholders in IMNCI. A core team of national partners who are part of the Child Health Technical Working Group's Subcommittee on IMNCI reviewed the strategic plan of 2013-17 and developed the zero draft of the subsequent strategic plan together with assumptions for its costing. A second meeting of the core group then finalised the strategic objectives and the costing assumptions and prepared the plan for validation. The validation workshop was attended by MoH national and provincial officers and partners in IMNCI implementation. The validation meeting looked at the assumptions for costing and validated the final costs for the interventions in the plan. The meeting also validated the strategic objectives and the monitoring indicators. The core group then went on to consolidate the strategic plan based on recommendations made by the validation workshop. A final Consensus meeting comprising the MoH and its partners agreed on outstanding issues that were raised in the process of developing the plan.*

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## ABBREVIATIONS AND ACRONYMS

CAG	Cluster Advisory Group
CBV	Community Based Volunteer
CHU	Child Health Unit
CHW	Community Health Worker
C-IMNCI	Community Integrated Management of Childhood Illnesses
CP	Cooperating Partner
DHMT	District Health Management Team
DHO	District Health Office
ECD	Early Child Development
ETAT	Emergency Triage Assessment and Treatment
GMP	Growth Monitoring Promotion
HC	Health Centre
HF	Health Facility
HFS	Health Facility Survey
HMIS	Health Management Information System
ICATT	IMNCI Computerised Adaptation and Training Tool
ICCM	Integrated Community Case Management
IMNCI	Integrated Management of Newborn and Childhood Illnesses
MCH	Maternal and Child Health
MoH	Ministry of Health
NHC	Neighbourhood Health Committee
NHSP	National Health Strategic Plan
PHC	Primary Health Care
PHO	Provincial Health Office
SDGs	Sustainable Development Goals
SWAP	Sector Wide Approach programmes
UNICEF	United Nations Children's Fund
WHO	World Health Organisation
ZDHS	Zambia Demographic and Health Survey

## Executive Summary

Zambia continues to make steady progress in improving child health. According to the Zambia Demographic Health Survey (ZDHS) of 2014, under five and infant mortality reduced from 168 to 75 and from 95 to 45 per 1,000 live births, between 2007 and 2014 respectively. The ZDHS 2014 recorded a neonatal mortality rate of 24 per 1,000 live births, about half the number of all infant deaths.

The Zambian health system faces several constraints which are being addressed. The constraints include ineffective coordination of partners; low sector funding; inequities in the distribution of staff; inadequate transport and infrastructure to conduct outreach services; lack of a system and skills to forecast and timely procure child health programme supplies, commodities, and equipment; weak community level health systems (thus low community participation and engagement); weak systems to collect, collate, analyse and use data; low coverage and lack of quality new-born care and child health services; skewed emphasis on child survival and limited attention to interventions on children's right to thrive such as early child development and rehabilitation programmes.

Expanding and strengthening the use of all components of the Integrated Management of Common Newborn, Childhood Illnesses (IMNCI) approach, is among the identified strategies to meet the NHSP 2017-21 goal on child health mortality reduction. This national IMNCI Strategic Plan 2019-2023, crystallises strategies and interventions to meet the NHSP's child health goal.

The coverage for training of health workers has been below saturation levels for most districts. By the end of 2018, thirty-eight percent of health facilities had at least 60% of health workers managing sick children trained in IMNCI. The low training coverage is mostly due to inadequate funding by government and Cooperating Partners. In 2008, MOH introduced pre-service training in all institutions that train nurses and clinical officers. It was envisaged that this approach will increase the numbers of health workers trained in IMNCI at a relatively lower cost.

The 2018 IMNCI Health Facility survey (HFS) provides evidence on health worker performance at the health centre. The survey reported that 56% of health facilities did not meet the programmatic threshold of having at least 60% of health workers managing children being trained in IMNCI. The survey also found that about 20% of sick children were not assessed for cough, diarrhoea and fever and that 56% children were not correctly classified for HIV infection and 53% didn't have their weight checked against the growth chart. Further, 53% of children needing urgent referral were not identified and prescribed pre-referral treatment. The survey also reported a 61% misuse of antibiotics in children aged 2-59 months but only a 10% misuse in the sick young infant. All these challenges constitute the focus of this strategic plan.

A total of 6,213 CHWs and 1,045 health centre supervisors have been trained in 77 out of the 114 districts by the end of 2018. However, only 19 district have achieved the required saturation of 80% of trained CHWs. Scale-up of IMNCI/iCCM in the country is limited by fragmented implementation (covering limited geographical area in a district) and lack of adherence to the prescribed training

guidelines (omitting aspects of training including supervision and follow-up) by some stakeholders.

In the area of health systems strengthening, the 2018 HFS results showed that only 47% of children needing urgent referral were correctly identified and prescribed appropriate treatment. About 32% health facilities received at least one supervisory visit in the 2018. Further more, the index of availability of 18 essential oral treatments was 14.7, while and 6.7 for injectable drugs. Only 7% of health facilities had weighing scales, under five cards, syringes, and fridges to support vaccination. The strategic plan has prioritised these aspects of systems strengthening.

As far as the strategic direction is concerned, this strategic plan is an overarching framework for all MOH IMNCI activities, contributing directly towards specific IMNCI and overall MoH targets. The plan puts a strategic focus on implementing three strategic objectives, namely:

- Reduce significantly mortality and morbidity associated with the major causes of disease in children
- Contribute to healthy growth and development of children
- Strengthen and support community participation, care seeking behaviour, child nutrition and creation of safe environment for children

In addition, the plan outlines three IMNCI components through which the strategic objectives shall continue to be implemented namely, improve health worker skills in managing sick children; improve the health system to deliver IMNCI; improve key family and community practices that promote child survival, growth, and development (including paying attention to early childhood development) with the improvement of care of the sick child at community level.

The implementation of this plan will require harmonized and integrated actions by the Child Health Unit of the MOH and its Cooperating Partners (CPs), and local communities. The MOH will provide leadership in implementing the plan, but will do so based on the principles of partnership and collaboration embodied in the SectorWideApproach (SWAp).

The strategic plan was costed using the One Health Tool. There were two steps in the costing process. An estimation of the intervention impact using the Lives Saved Module (List) was followed by the costing of financial projections required to mitigate the priorities and implement the planned activities using the costing module.

The inputs that were used for costing were epidemiological data (prevalence of childhood sickness); baseline and targeted intervention coverage; health programme requirements (training, supervision and mentorship); health system requirements and targets (planned numbers of health workers to be trained; health facilities to be equipped) and prices of commodities and other inputs.

The plan was costed using two scenarios. In the first scale-up scenario, it was assumed that 30% of all children under 5 years will be sick throughout a given year and would require IMNCI interventions. The plan costed for 6% of them in the first year, and then yearly increments of 6% were added until the total was 30% coverage by the fifth year. This scenario was projected to cost K2,861,541,372 for the entire implementation period and would save 5,860 lives.



In the second scale-up scenario it was assumed that 30% of all children under 5 years would be sick throughout a given year and require treatment. 100% of the children were costed for. This scenario was projected to cost K15,124,029,316 for the entire implementation period and would save **36,753** lives, with a reduction in child mortality rate of less than 43 per 1,000 live births.

Due to limited sector funding, this plan selected scale up scenario I which permits for a modest approach to funding the strategic plan. The biggest cost will be incurred in treating a sick child aged 2 months up to 5 years (K1,409,402,900), followed by the management of sick children where referral is not possible (K1,072,039,896).

The total programme costs are K324,221,008. Training costs are the largest contributor to this cost (263,479,925). Most of this cost will go to community training. The next highest cost is equipment (54,875,189) supervision and mentorship (2,253,300).

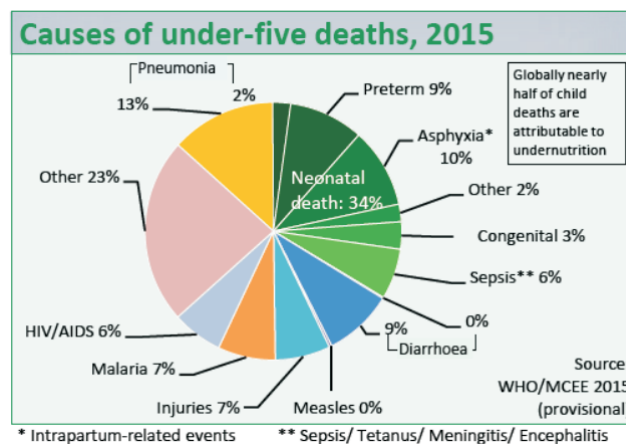
## Strategic Context

Zambia's National Health Policy has a mission of “ensuring equity of access to quality, cost-effective and affordable health services in-order to reduce maternal, newborn, child and adolescent morbidity and mortality. To meet sectoral policy intent and the Seventh National Development Plan (7NDP) aspirations, the Ministry of Health (MoH) developed the 2017-21 National Health Strategic Plan (NHSP). The NHSP 2017-21 stipulates sector principles, goals, performance benchmarks, standards and strategic areas of intervention. The NHSP identifies Primary Health Care (PHC) as the delivery platform of national health services through an integrated multi-sectoral approach across the continuum of care. The NHSP, among others aims to reduce the under-five mortality rate from 75 (ZDHS, 2014) to at least 35 deaths per 1,000 live births by 2021. Expanding and strengthening the use of all components of the Integrated Management of Newborn and Childhood Illnesses (IMNCI) approach, is among the identified strategies to meet the NHSP 2017-21 goal on child health mortality reduction. The MoH has developed other sectoral plans and strategies to compliment the NHSP. Among these are the 2018-21 Human Resource for Health (HRH) Strategic Plan; the Community Health Strategy (2017 – 2021); the Reproductive, Maternal, Neonatal, Child, Adolescent Health and Nutrition (RMNCAH&N) Roadmap. This National IMNCI Strategic Plan 2019-2023, crystallises strategies and interventions to meet the NHSP's child health goal.

The IMNCI Strategic Plan 2019-2023, contextualises Zambia's commitment and affirmation of global and regional strategies on children's right to survive and thrive. The strategy draws from the Global Strategy for Women's, Children and Adolescents Health 2016-30, the United Nations Commission's Life-Saving Commodities and the Nurturing Care Framework for Early Childhood Development (ECD), among others. The Agenda 2030 or the Sustainable Development Goals (SDGs), provides the overarching global commitment under SDG 3 that aims to ensure healthy lives and promote well-being for all ages and specifically target 3.2 that aims at ending preventable deaths of new-borns and children under 5 years of age.

Zambia continues to make steady progress in improving child health. According to the Zambia Demographic Health Survey of 2014, under five and infant mortality reduced from 168 to 75 per 1,000 live births and from 95 to 45 per per 1,000 live births between 2007 and 2014 respectively. The ZDHS 2014 recorded a neonatal mortality rate of 24 per 1,000 live births, which is approximately half the number of all infant deaths. Eastern and Luapula Provinces have the highest child mortality rates as compared to the national average 115/1000 live births and 98/1000 live births respectively. Additionally, rural areas have higher child mortality rates (85/1000) than the urban

**Figure 1: Causes of under-five deaths, 2015**



areas (72/1000 live births)<sup>1</sup>. A handful of diseases kill children in Zambia, the major killers being pneumonia (15%), diarrhoea (9%), malaria (7%), injuries (7%), HIV/AIDS (6%) and neonatal causes (34%)-see figure 1<sup>2</sup>.

The Zambian health system faces several constraints which are being addressed. The constraints include ineffective coordination of partners; low sector funding; inequities in the distribution of staff; inadequate transport and infrastructure to conduct outreach services; lack of a system and skills to forecast and timely procure child health programme supplies, commodities, and equipment; weak community level health systems (thus low community participation and engagement); weak systems to collect, collate, analyse and use data; low coverage and lack of quality new-born care and child health services; skewed emphasis on child survival and limited attention to interventions on children's right to thrive such as early child development and rehabilitation programmes.

Under the NHSP 2017-21, the MoH is undertaking an aggressive transformative agenda towards universal health coverage through strengthening the health system, increasing healthcare financing, improving the quality of healthcare services and using the primary healthcare approach as the entry point for delivery of services. As a demonstration of intent and commitment to the transformation agenda, the MoH has set 10 ambitious legacy goals. The legacy goals<sup>3</sup> span the health system building blocks and health outcomes including reducing maternal and child mortality.

### **1.1. Health Sector Vision and Mission**

The Ministry of Health's vision is to have '*A Nation of Healthy and Productive People*', and the mission is '*To provide equitable access to cost effective, quality health services as close to the family as possible.*'

The overall health sector goal, is '*To improve the health status of people in Zambia in order to contribute to increased productivity and socio-economic development.*'

### **1.2. Health Sector Governance**

Zambia has a decentralized health system structure with four levels, which are national, provincial, district and community levels. The national level is responsible for overall coordination and management, policy formulation, strategic planning, and resource mobilisation. The provincial health offices are the link between the national and district level and they support the district level to manage the health system and deliver quality health services.

The District Health Offices are responsible for coordinating service delivery in each district and supporting the community level as co-producers of health, self-carers and providers of health care. The districts deliver services that span health promotion, preventive, curative, and rehabilitative services across the continuum of care.

<sup>1</sup> Ministry of Health (2014). Zambia Demographic and Health Survey, 2013/14.

<sup>2</sup> WHO/MCEE (2015). Countdown to 2015 Report

<sup>3</sup> Ministry of Health (2017). <https://www.facebook.com/MoH Zambia/posts/873635286144463>

The health centre is the focus for health care delivery in its catchment area. It provides services under the supervision of DHOs. Health centers have Committees whose membership include the chairman of the neighbourhood health committee.

At community level, Neighbourhood Health Committees (NHCs) facilitate linkages between the communities and the health system.

## 2. BACKGROUND

### 2.1 The IMNCI Strategy

The Integrated Management of Childhood Illnesses (IMCI) strategy was introduced in Zambia in 1995. The World Health Organisation (WHO) and United Nations Children's Fund (UNICEF) jointly developed and introduced the IMCI strategy in 1990 as a response to the weaknesses manifested by the single disease vertical programmes. The strategy aims to reduce morbidity and mortality of children under five years of age through integration of the interventions required to address the major childhood health conditions. It was premised on the observation that more than two-thirds of childhood deaths in developing countries were due to five common conditions: respiratory infections, malaria, diarrhoea, malnutrition, and measles. During the past two decades, tuberculosis (TB) and HIV/AIDS have extended the list to seven. Newborn health and early childhood development (ECD) have been recognised as integral parts of the IMCI approach. Following the above inclusions, the IMCI approach is now the Integrated Management of Common Newborn and Childhood illness (IMNCI). From inception in 1995 to-date, all districts in Zambia, implement the components of IMNCI but to varying degrees.

IMNCI has three main components:

1. **Improvement of health worker skills**, involves training health workers in IMNCI case management skills (including counselling caretakers on ECD) with subsequent follow-up after training, regular supportive supervision with case observation and mentorship.
2. **Health systems strengthening** to support implementation of IMNCI includes improving availability of drugs, supplies and equipment; regular health worker supervision; improving the referral system and organisation of work at health facilities.
3. **Improvement of household and community practices** (Community IMNCI). Community IMNCI initiates, reinforces, and sustains key family and community practices including ECD that have a positive impact on children's right to survive and thrive.

These three components are complementary and they all need to be implemented as a package for IMNCI to fully benefit the child.

### 2.2 Potential Gains Towards Improving Child Health Through the IMNCI Strategy

At the community level, IMNCI adopts a broad approach through involvement of caregivers, households, and communities in the prevention, promotion, treatment, and care of childhood illnesses. The focus is on an integrated child care approach that aims at improving key family and community practices that are likely to have the greatest impact on child survival, healthy growth and development. If properly promoted and adopted by the targeted communities, these practices would potentially contribute to improving child survival, growth and development.



At the facility level, the focus is on enabling effective and quality primary health care for the sick child. A “very sick” child may be suffering from common childhood illnesses such as pneumonia, malaria, diarrhoea or a combination of these conditions with underlying malnutrition or HIV infection. An integrated approach, supported by a functional health system allows care providers to appropriately assess, classify, and treat a sick child.

## 2.3 Situation Analysis

### 2.3.1 Improvement of Health Worker Skills

Of the three components, improving the performance of health workers (case management skills) has been the main focus from the inception of the programme. However, the coverage for training of health workers has been below saturation levels for most districts. By the end of 2018, only thirty-eight percent of health facilities had at least 60% of health workers managing sick children trained in IMNCI. The low training coverage is mostly due to inadequate funding by government and Cooperating Partners. In addition, the IMNCI programme has largely used the in-service training model which has proved to be costly. To address the foregoing, in 2008, MOH introduced pre-service training in all institutions that train nurses and clinical officers. It was envisaged that this approach will increase the numbers of health workers trained in IMNCI at a relatively lower cost. Thus far, the training has been conducted in blocks with about 100-200 students per training session being taught by one tutor. Both class room and clinical sessions were not being implemented according to the IMNCI pre-service training guidelines.

The 2018 IMNCI Health Facility Survey (HFS) provides evidence on adequacy of health worker performance at the health centre. The survey reported that 56% of health facilities did not meet the programmatic threshold of having at least 60% of health workers managing children being trained in IMNCI. The survey also found that about 20% of sick children were not assessed for cough, diarrhoea and fever and that 56% children were not correctly classified for HIV infection and 53% didn't have their weight checked against the growth chart. Further, 53% of children needing urgent referral were not identified and prescribed pre-referral treatment. Additionally, 53% of caretakers with sick children did not receive a demonstration on how to administer the prescribed medication correctly. The survey also reported a 61% misuse of antibiotics in children aged 2-59 months but a 10% misuse in the sick young infant aged 0 – 2 months. All these challenges will form the focus of the IMNCI Strategic Plan.

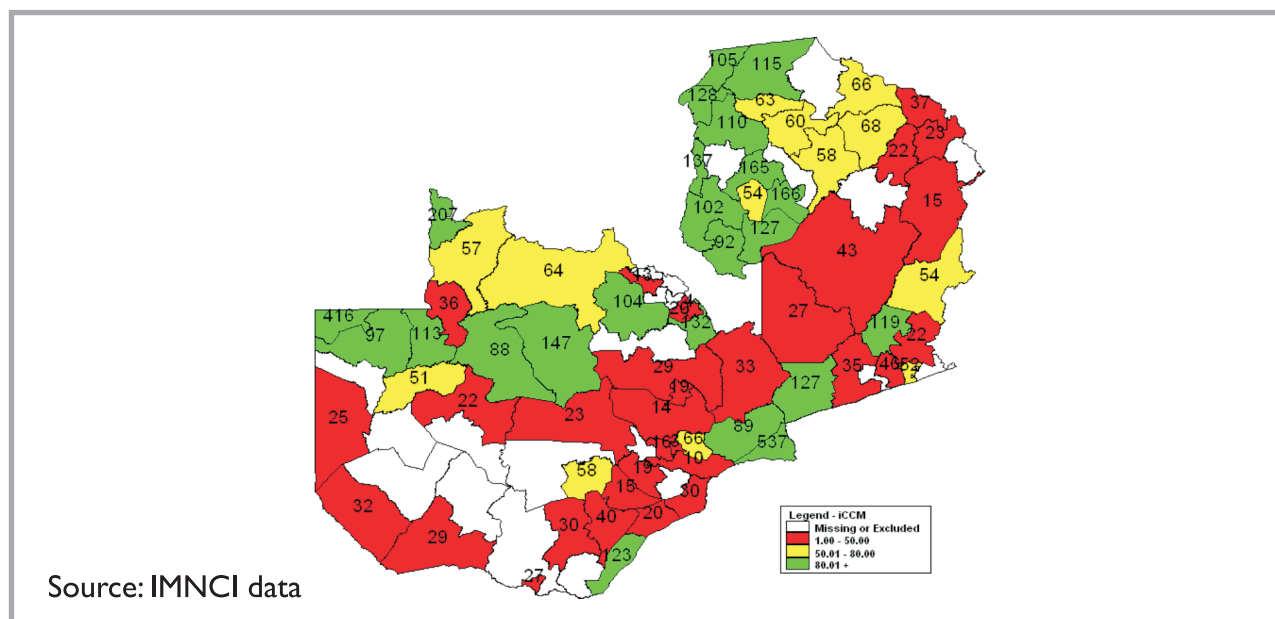
In addition, a total of 6,213 CHWs and 1,045 health centre supervisors have been trained in 77 out of the 114 districts by the end of 2018. However, only 19 districts have achieved the required saturation of 80% of trained CHWs.

Scale-up of IMNCI/iCCM in the country is limited by fragmented implementation (covering limited geographical area in a district) and lack of adherence to the prescribed training guidelines such as

leaving out selected aspects of training, supervision and follow-up by some stakeholders. The 2018 HFS results showed that only 47% of children needing urgent referral were correctly identified and prescribed appropriate treatment, the performance has reduced from 64% in 2001.

### Figure 2: iCCM saturation level by district, September 2018

The districts marked green have reached 80% or more saturation level



### 2.3.2 Strengthening of Health Systems

This component ensures that health workers have the required essential medicines, supplies and commodities including job aids, regular supervision and mentorship to facilitate the provision of quality services. The component builds capacities at all levels to plan for IMNCI interventions, forecast for drug and supplies, strengthen referral systems, and ensure equity of access to quality child health services. The IMNCI programme has made further improvements as shown in the 2018 IMNCI Health facility survey results. More (32%) health facilities received at least one supervisory visit in the 2018 (32%) than in 2001 (22%). Further more, the survey also found an increase in the availability of the Chart Booklet from 16% in 2008 to 81% in 2018; the index of availability of 18 essential oral treatments was 14.7, while 6.7 was for injectable drugs. However, only 7% of health facilities where young infants were observed during the health facility survey had weighing scales, under five cards, syringes, and fridges to support vaccination. This area requires concerted efforts to reverse high neonatal mortality in Zambia.

### 2.3.3 Improvement of Key Family and Community Practices (Community IMNCI)

IMNCI extends to the community level to bring promotive, preventive, and curative services closer to families in keeping with the principles of Universal Health Coverage using the Primary Health Care (PHC) approach. However, progress in scaling up implementation of the community aspect of IMNCI has been slower than the facility component. The following challenges have contributed to the slow uptake C-IMNCI: Underfunding and dependency upon Cooperating Partners, high attrition of

trained community health workers (CHWs), and inadequate volunteer motivation, weak logistic supply system, inadequate community-level data collection and utilisation systems, including inadequate supportive supervision and weak community referral systems.

About 60% of the Zambian population live in rural areas with inadequate access to health care. The MoH's Community Health Strategy 2017-2021, has bolstered national momentum on engaging communities, families and individuals to take responsibility of improving their own health status. It will stimulate health care seeking behaviour and knowledge, innovative models of care, network as well as optimal referral. The strategy will address coverage, access and utilisation of preventive, promotive, curative and rehabilitative services in addition to engaging individual organisations and community leaders to improve health outcomes. The neighbourhood health committee guidelines have been developed in response to the reaffirmed commitment to the PHC.

#### **2.3.4. Early Childhood Development (ECD)**

Globally the number of children dying before their fifth birthday has dropped to 5.4 million in 2017 from 12.7 million in 1990. However, over 240 million children under five years fail to reach their appropriate developmental milestones—which translates to 43 percent of all children globally in Low- and Middle-Income Countries and 66 percent of all children in sub-Saharan Africa. In Zambia, it is estimated that 78% of children are at risk of sub-optimal development.

The causes of poor development are manifold and complex and include immediate causes such as low birth weight and premature birth, HIV exposure, chronic and acute malnutrition, frequent episodes of illnesses, maternal depression, and poor caregiving practices; as well as underlying causes such as high levels of poverty, poor access to healthcare, and conflict. In Zambia, 36 percent of three- and four-year old children are estimated to not reach milestones in cognitive and/or socioemotional development. Given the high burden of stunting and poverty and other factors responsible for poor child development, it is likely that this figure is an underestimate. Studies have shown that providing responsive caregiving and opportunities for early learning—e.g., play, age-appropriate toys and learning materials, having conversations and telling stories to children—can result in both immediate and long-term health, nutrition, education, and socioeconomic benefits. Substantial gains in children's development also require improvements in parenting, stimulation and early education, reductions in stressful experiences including maternal depression and exposure to violence and increase in protective influences such as maternal education that reduce impact of risks.

Investments in early childhood can alleviate the negative effects of poverty and at the same time promote economic growth (Lancet series 2011 on ECD). According to the Lancet series on ECD (2016); “Advancing Early Childhood Development: from Science to Scale”, improving ECD is key to achieving the SDGs numbers 1,2,3,4,5,10,16,17. The Lancet series substantiates that ECD interventions in the early years: increase school grades and earnings; improve quality of home practices, increase health service use; and decrease chronic disease and mental ill-health. Such interventions promote learning, grade achievement and productivity; they increase learning motivation, especially for girls; while also improving emotional regulation and social behaviour.

The Ministry of General Education (MoGE) has historically implemented parenting education and preprimary school programmes, which are often how “ECD interventions” are traditionally defined. However, these interventions miss the critical window of opportunity of the prenatal period and the first three years of life, when brain development is most rapid and developmental delays may be reversed—or avoided altogether. In the early years, the health system is usually the best—and often, only—means to consistently and regularly reach young children and their caregivers. Therefore, it is necessary that essential services along the entire continuum of care—antenatal care, childbirth, postnatal care, routine immunizations and growth monitoring, treatment of common childhood illnesses, HIV services, and community home visits and outreaches—integrate interventions that promote ECD. These interventions may include counselling on age-appropriate and responsive care and stimulation activities, monitoring for child development milestones, screening for maternal depression, and making referrals in case of suspected developmental delays and/or maternal depression.

Thus far, health service providers have been trained in *Caring for the Child's Healthy Growth and Development* package in 14 districts, 3 districts in Eastern Province, 5 districts in Lusaka Province and 6 districts in the Copperbelt province. However, implementation of this package has largely taken place in a standalone manner, with the content of the package not linked directly to aspects of the larger health system—e.g., inclusion of pre- and in-service training, indicators, and supportive supervision norms. Currently, the MOH is integrating ECD content into key RMNCAH & N guidelines, with a view to laying the foundations of a more systems-based approach that will integrate ECD content into key services along the entire RMNCAH & N continuum of care.

The period from pregnancy to age 3 is the most critical, when the brain grows faster than at any other time; 80% of a baby's brain is formed by this age. For healthy brain development in these years, children need a safe, secure and loving environment, with the right nutrition and stimulation from their parents or caregivers. This is a window of opportunity to lay a foundation of health and wellbeing whose benefits last a lifetime – and carry into the next generation<sup>5</sup>. ECD is implemented in a multi-sectoral manner, with the Ministry of Health focusing mainly on the period 0 to 3 years<sup>6</sup>.

#### 2.4. Implementation Framework

The Ministry of Health and Cooperating Partners (CPs) manage the implementation of IMNCI programs through a Subcommittee of the National Child Health Technical Working Group (CHTWG). The National TWG reports to the Inter-agency Coordinating Committee for Reproductive, Maternal, Newborn, Child and Adolescent Health (ICC for RMNCAH&N), comprising Senior MOH officials and CPs' Heads of Agencies/missions, chaired by either the Minister of Health or the Permanent Secretary. The provincial level supervises the District while the District Health Office is mandated to supervise the implementors at Health Facility and Community levels.

<sup>5</sup> World Health Organization, United Nations Children's Fund, World Bank Group. Nurturing care for early childhood development: a framework for helping children survive and thrive to transform health and human potential. Geneva: World Health Organization; 2018. Licence: CC BY-NC-SA 3.0 IGO.

<sup>6</sup> RMNCAH Strategic Plan

## 2.5. Monitoring and Evaluation

Monitoring and evaluation of IMNCI is through the existing systems. Currently though, there are limited IMNCI indicators in the Health Management Information System (HMIS). The district offices do not adequately use available data to inform their annual planning. Furthermore, some IMNCI components, such as case management observations are not consistently considered during performance assessment (PA) and follow-on Technical Supportive Supervision conducted quarterly in all districts. The Health Facility Surveys, which are designed to be undertaken every five years, are cross-sectional, have served as an avenue to monitor the management of sick children according to IMNCI guidelines. The most recent survey was conducted in 2018.

## 2.6. IMNCI in Zambia: Strengths, Weaknesses, Opportunities and Threats

**Table 1: Strengths, Weaknesses, Opportunities and Threats**

<p><b>STRENGTHS</b></p> <ul style="list-style-type: none"> <li>• IMNCI is accepted and supported as the national strategy to meet children’s right to survive and thrive.</li> <li>• Trained staff in IMNCI</li> <li>• Presence of provincial teams facilitators, supervisors and mentors</li> <li>• IMNCI has been included in curriculum for Pre-service training for nurses &amp; clinical officers.</li> <li>• Committed work force especially in the rural areas</li> <li>• Availability of regulatory Institutions in improving the quality of IMNCI</li> <li>• Health promotion through mass media collaboration</li> </ul>	<p><b>WEAKNESSES</b></p> <ul style="list-style-type: none"> <li>• Insufficiently established systems to implement IMNCI</li> <li>• Inadequate equipment &amp; medical supplies; chart booklets, job aids, &amp; under five cards</li> <li>• Inadequate staffing levels; poor staff attitude; high staff turn over</li> <li>• Insufficient and ineffective supervision and mentorship</li> <li>• No real-time database for IMNCI trained staff</li> <li>• Data elements not all disaggregated by age</li> <li>• Weak linkages between community and facilities</li> <li>• Weak real time data management in HFs</li> </ul>
<p><b>OPPORTUNITIES</b></p> <ul style="list-style-type: none"> <li>• Leveraging funds from other programs e.g. funding to malaria; TB, or HIV/AIDS</li> <li>• Commitment by MOH to strengthen community structures as a whole</li> <li>• Global, regional and national interest in ECD has potential for new funding</li> <li>• Cooperating Partner’s support</li> <li>• Political will in Neonatal and Child Health</li> <li>• Traditional and religious leaders support</li> <li>• Evidence generated by research Institutions and academia</li> </ul>	<p><b>THREATS</b></p> <ul style="list-style-type: none"> <li>• Re-emergence of epidemic prone diseases and health in emergencies which shift focus from regular programmes</li> <li>• Shrinking sector funding with irregular disbursements to the spending units</li> <li>• Retrogressive religious and cultural beliefs</li> <li>• Porous borders with other countries</li> <li>• Inadequate sector funding</li> <li>• Poor road network to health facilities</li> </ul>



### 3. VISION, MISSION, OVERALL GOAL, STRATEGIC DIRECTION and GUIDING PRINCIPLES

#### 3.1 IMNCI Vision

To provide equity of access to cost-effective, quality child health services as close to the family as possible.

#### 3.2 IMNCI Mission

The MoH will deliver a comprehensive and sustainable IMNCI program that aims to ensure healthier, longer, and better lives for all children of Zambia.

The Ministry will achieve this by:

- Improving family and community practices that promote child survival, growth, and development.
- Improving health worker skills in managing sick children and care of the newborn.
- Strengthening system support for child health including the referral system.

#### 3.3 Overall IMNCI Goal

To keep children healthy and thriving countrywide by reducing morbidity and mortality associated with the major causes of childhood illnesses.

#### 3.4 Strategic Direction

This strategic plan is an overarching framework for all MOH IMNCI activities, contributing directly towards specific IMNCI and overall MoH targets. The plan puts a strategic focus on implementing three strategic objectives, namely:

- Significantly reduce mortality and morbidity associated with the major causes of disease in children
- Contribute to healthy growth and development of children
- Strengthen and support community participation, care seeking behaviour, child nutrition and creation of safe environment for children

In addition, the plan outlines three IMNCI components through which the strategic objectives shall continue to be implemented, namely:

- Improve health worker skills in managing sick children
- Improve the health system to deliver IMNCI
- Improve key family and community practices that promote child survival, growth, and development (including paying attention to early childhood development) and improve care of the sick child at community level

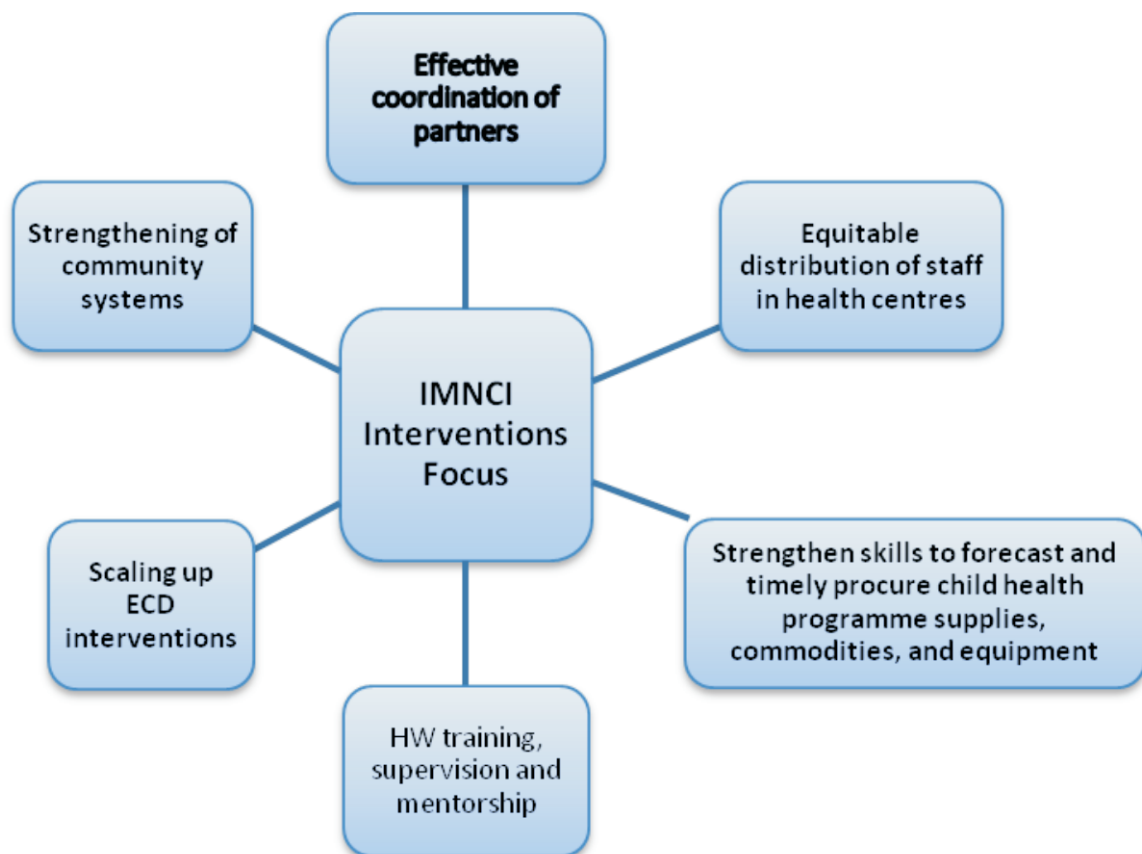
#### 3.5 Guiding Principles

Implementation of the plan will be governed by the following key principles: Equity of access; affordability; cost-effectiveness; efficiency; accountability; partnerships; decentralisation; sustainability; and leadership.

### 3.6 Priority IMNCI Interventions for 2019-2023

In order to improve child survival, growth and development and contribute towards meeting the NHSP 2017–21 and the SDG 3 targets, this IMNCI Strategic Plan will focus (among other interventions) on the following:

**Figure 3: IMNCI Intervention Focus**



## 4. STRATEGIC OBJECTIVES AND STRATEGIES

This strategic plan will contribute to the reduction of child mortality by expanding and strengthening all components of the IMNCI approach by 2023. The strategic objectives have been articulated under the three components of IMNCI approach namely:

- 1) Improvement of **health worker skills**
- 2) Strengthening of **health systems**
- 3) Improvement of **household** and **community practices** (Community IMNCI)

The table below enumerates the various strategies that will be implemented in each component.

### 4.1. Strategic Objectives

**Table 2: Components of IMNCI strategic objectives**

S/N	Component of IMNCI	Strategic Objective
1	Improvement of health worker skills	<ul style="list-style-type: none"> <li>• To increase the number of health facilities that have at least 60% of HWs managing children trained in IMNCI/ICATT from 38% to at least 80% by 2023.</li> <li>• To increase the number of health facilities that have at least 80% of HWs managing children trained in ECD To increase the number of health facilities that have staff trained in ETAT from 40% to at least 80% by 2023.</li> <li>• To increase the number of trained health workers in IMNCI that receive follow-up 6 weeks after training to 100%</li> <li>• To strengthen pre-service training using ICATT by building capacity in 12 of the tutors/clinical instructors in IMNCI facilitation in each health training institution</li> <li>• To increase the number of trained health workers in IMNCI being mentored from 60% to at least 95%</li> <li>• To increase the number of trained health workers in ETAT being mentored from 20% to at least 80%</li> <li>• To increase the percentage of community health workers trained to provide developmental counselling and monitoring as part of routine home visits from 10 % to at least 50%</li> <li>• To increase the number of trained health workers in ECD being mentored from 40% to at least 80%</li> </ul>

2	Strengthening of health systems to deliver IMNCI	<ul style="list-style-type: none"> <li>To strengthen the referral system</li> </ul>
		<ul style="list-style-type: none"> <li>To strengthen information system (HMIS) which will capture age disaggregated data for a sick child by month</li> </ul>
		<ul style="list-style-type: none"> <li>To enhance data use by program implementers to improve quality of care</li> </ul>
		<ul style="list-style-type: none"> <li>To ensure that every HF receives two supervision visits which include case management observation per year (31.5% to 100%)</li> </ul>
		<ul style="list-style-type: none"> <li>To improve on-site mentorship at facility levels from 60% to at 95%</li> </ul>
		<ul style="list-style-type: none"> <li>To improve on-site mentorship at community level from 70% to 90%</li> </ul>
		<ul style="list-style-type: none"> <li>To increase the proportion of health facilities utilizing service quality assessment tools in IMNCI from 30% to 70%</li> </ul>
		<ul style="list-style-type: none"> <li>To increase the proportion of HFs that report no stock-outs of the essential IMNCI oral drugs and supplies to at least 80%</li> </ul>
		<ul style="list-style-type: none"> <li>To increase the HFs that have dedicated space for screening sick children from 60% to 100%</li> </ul>
		<ul style="list-style-type: none"> <li>To increase the percentage of health facilities with functional play corners from 35% to 50%</li> </ul>
		<ul style="list-style-type: none"> <li>To increase the proportion of health facilities offering developmental counselling and monitoring as part of routine RMNCAH &amp; N services from current 0% to 50%</li> </ul>
		<ul style="list-style-type: none"> <li>To strengthen coordination of IMNCI at district level</li> </ul>
3	Improvement of household and community practices (Community IMNCI)	<ul style="list-style-type: none"> <li>To improve the implementation of key family and community practices that promote child survival, growth and development, and care of the sick child at the community level.</li> </ul>
		<ul style="list-style-type: none"> <li>To build capacities in the community for implementation of C-IMNCI</li> </ul>
		<ul style="list-style-type: none"> <li>To build capacities in the community for implementation of ECD from 5.8% to 50%</li> </ul>
		<ul style="list-style-type: none"> <li>To build capacities in the community for implementation of iCCM from 4.6% to 50%</li> </ul>

	<ul style="list-style-type: none"><li>• To increase the proportion of caregivers who are adhering to appropriate care seeking and compliance practices</li></ul>
	<ul style="list-style-type: none"><li>• To standardize the incentives for the CBVs</li></ul>
	<ul style="list-style-type: none"><li>• To strengthen supervision and technical support of the community CBVs providing IMNCI (100%)</li></ul>
	<ul style="list-style-type: none"><li>• To improve the availability of IMNCI data collection tools</li></ul>

## 5. IMPLEMENTATION FRAMEWORK

The implementation of this plan will require harmonized and integrated actions by the Child Health and Nutrition Unit of the MOH and its Cooperating Partners (CPs), and local communities. The MOH will provide leadership in implementing the plan, but will do so based on the principles of partnership and collaboration embodied in the SectorWideApproach (SWAp).

The IMNCI SP 2019-23 will be implemented through national annual work plans developed jointly by the MOH and its CPs within the structure of the Medium Term Expenditure Framework (MTEF). At District level, the District Health Offices (DHOs) will produce annual, costed, action plans in collaboration with the National level.

The NHSP 2017-21 recognises that there are major risks to successful implementation which have been identified as follows: the health sector's dependence on donor financing; the Government not increasing the percentage of the general budget spent on health; and CPs not committing funds in line with global declarations. However, continuous efforts will be made throughout the lifetime of the NHSP to ensure these potential challenges are overcome.

### 5.1. Decentralization of IMNCI Functions to District and Community Levels

The MoH will ensure that resources are made available for primary health care (PHC) in the districts, which shall perform these functions through democratically elected local government structures, in line with the National Decentralization Policy. The councils will be expected to raise part of their revenue and receive grants from the Ministry of Finance and National Planning as well as the MoH through the basket funding system to perform such devolved functions.

In pursuance of further implementing the health sector decentralization policy, the MoH will delegate the core functions of priority setting, planning, resource allocation, implementing, monitoring, and evaluating all aspects related to IMNCI to the District Health Office (DHO), the health centres, and communities. In that respect, the MoH will support improved efficiency in decision-making by giving the autonomy to the district managers to plan, allocate resources, and manage the delivery of IMNCI services based on local situations. The role of the national and provincial levels will primarily focus on developing IMNCI technical guidelines (by the national level), dissemination and interpretation of the guidelines (by the PHO), assessing performance, and providing technical support to the DHOs. The national and the provincial levels will also guide the DHOs on prioritizing and planning all IMNCI activities into the district action plans. The central level will endeavour to mobilise resources for IMNCI implementation.

## 5.2. Roles of the Different Levels Within the Health Sector in Managing IMNCI

### 5.2.1. Ministry of Health National Level

At national level, the IMNCI Subcommittee of the Child Health TWG, shall meet regularly and serve as technical advisor to the IMNCI program. The National TWG shall report to the Inter-agency coordinating committee for Reproductive, Maternal, Newborn, Child and Adolescent Health (ICC for RMNCAH&N), comprising Senior MOH officials and CPs' Heads of Agencies/missions, chaired by either the Minister of Health or Permanent Secretary.

### 5.2.2. Provincial Level

The provincial level will continue to be responsible for facilitating the implementation of IMNCI activities at the district. The PHO will be responsible for providing performance assessment, technical support and supervision, oversight and monitoring of the implementation of IMNCI intervention at the district level. This will ensure effective and efficient assessment of planned IMNCI activities; adherence to IMNCI standards and guidelines, validate HMIS reports and data related to IMNCI. IMNCI provincial mentorship teams (comprising previously trained facilitators and / or course directors) will be the key resource persons

### 5.2.3. District Health Office

At district level, the existence of district focal persons will be required. An IMNCI district coordinating team comprising the district focal person; health centre focal persons; the district health management information officer and Cooperating Partners will be constituted. The overall responsibility for planning, coordination, management, and implementation of IMNCI activities will continue to be vested in the DHOs. DHOs will continue to provide technical support, supervision, oversight and monitoring of the implementation of IMNCI intervention at the health centre level.

### 5.2.4. Health Centre

**Health centres** are the focal delivery points for IMNCI interventions. The health centres will continue to plan and implement facility and community IMNCI interventions based on national guidelines. The health centres will plan for improvement of skills of health staff, improvement in health system such as ordering and managing drugs and supplies, and improvement in organizing work within the facility. They will also plan for C-IMNCI including ensuring availability of essential drugs and supplies and monitoring their rational use.

### 5.2.5. Community

The NHSP of 2017-21 explicitly states that there is weak programming around community participation and engagement to increase demand for and utilisation of newborn care and child health services. The implementation of the strategic plan at community level shall feed into the existing structures at this level. The Neighbourhood Health Committee (NHC) shall continue to be the link between the health centre (HC), the resident development committee, and the rest of the community. The Health Centre Committee (HCC), which meet every month, shall continue to be the coordinating entity for the NHC and health centre. The health facilities shall continue collaborating with CBVs on community based IMNCI activities (c-IMNCI).



Zonal meetings occur monthly to review their community plans and compile Zonal report. HC staff and NHC chair persons form the HCC at the health centre meetings. The HCC is an important forum for sharing experiences, reviewing community experiences, dissemination of information and planning the way forward. The links between the health centre and the community will continue to be strengthened through the HCC for effective IMNCI programming. The NHC chairs and Health centre incharge serve as the secretariat of the HCC.

## 6. MONITORING AND EVALUATION

The National Health Strategic Plan 2017-2021 has a transformative agenda which focuses on building robust and resilient health systems. The plan focuses on delivering quality health services across the continuum of care which includes promotive, preventive, curative, rehabilitative and palliative care, provided as close to the family settings as possible. The attainment of the universal health coverage will be made possible through primary health care with a focus on community health. Monitoring and evaluation of the implementation of the IMNCI Strategic Plan will be done at three levels—national, provincial and district (facility, community). A core set of IMNCI indicators to facilitate monitoring of the strategic plan implementation has been defined (see Annex).

### 6.1. IMNCI Indicators

Indicators to be used in monitoring and evaluating implementation of this plan have been categorised according to the three strategic objectives. The indicators have further been categorised into output, outcome, process and impact indicators. Emphasis has been made on defining those indicators that pertain to C-IMNCI. Further, during the implementation of the plan, concerted efforts will be made towards strengthening capacity at community level in collecting and analysing these indicators. The Monitoring and Evaluation Department in the Ministry of Health will coordinate all efforts aimed at collecting IMNCI data elements through the routine HMIS, population-based surveys (e.g., Demographic and Health Surveys [DHS]), and performance assessments. The Monitoring and Evaluation Sub Committee, a body that comprises MOH officials, Cooperating Partners, and health sector NGOs, will provide technical advice on the collection, analysis, interpretation, and dissemination of IMNCI indicator data sets

### 6.2. Monitoring

Depending on the type of the indicators, monitoring will be undertaken on a monthly, quarterly, bi-annual, or annual basis. The HMIS and the Performance Assessment will be the main monitoring tools. There will be need to capture data not covered in the HMIS using the Health Facility Survey.

### 6.3. Joint Annual Review

Every year, the health sector and its Cooperating Partners, health sector NGOs, and other line ministries undertake a Joint Annual Review (JAR) of the sector. The JAR is an attempt by the sector to harmonise monitoring and evaluation of the sector performance within the SWAp framework through joint participation of all stakeholders in the review process. This has reduced high transaction costs associated with multiple separate reviews.

The JAR evaluates progress in reducing the under-five mortality ratio overall and in the areas of immunisation coverage and scaling up of IMNCI and C-IMNCI. The results of the JAR will be presented at the Cluster Advisory Group (CAG) for further analysis and policy decision-making.

### 6.4. Evaluation

This strategic plan has a five-year life span to allow adequate time to implement the identified

interventions. There will be two evaluations during the implementation of the plan. These will consist of a mid-term review after the first two years of implementation and a comprehensive final evaluation at the end of the fifth year of its implementation. The mid-term evaluation will permit alignment with the life of the NHSP. The final evaluation will focus on assessing the impact/outcome of the IMNCI Strategic Plan towards attainment of the Child Health Vision and Mission.

## 7. PROJECTED COST AND IMPACT

### 7.1. Costing and Assumptions of the IMNCI Activities

The MoH estimated the required resources to implement the strategic plan through a consultative process. The plan was costed using the One Health Tool. There were two steps in the costing process; an estimation of the intervention impact using the Lives Saved Module (List) was followed by the costing of financial projections required to mitigate the priorities and implement the planned activities using the costing module.

The One Health Tool forecasts the costs and health impacts associated with investments in the health system. The tool estimates the costs of service delivery under individual health programmes and the costs of cross-cutting health system components, including human resources for health, logistics and health information systems.

The OneHealth tool allows for health services to be estimated over time, taking into account population growth, reduced mortality and reduced incidence or prevalence of childhood illnesses as coverage of interventions increases.

The inputs that were used for costing were:

- Epidemiological data (prevalence of childhood sickness);
- Baseline and targeted intervention coverage;
- Health programme requirements (training, supervision and mentorship);
- Health system requirements and targets (planned numbers of health workers to be trained health facilities to be equipped);
- Prices of commodities and other inputs.

The budgeting did not take into account inflation but was alive to the increase in the population of the affected age cohort per year as projected by the demographic module for the same period.

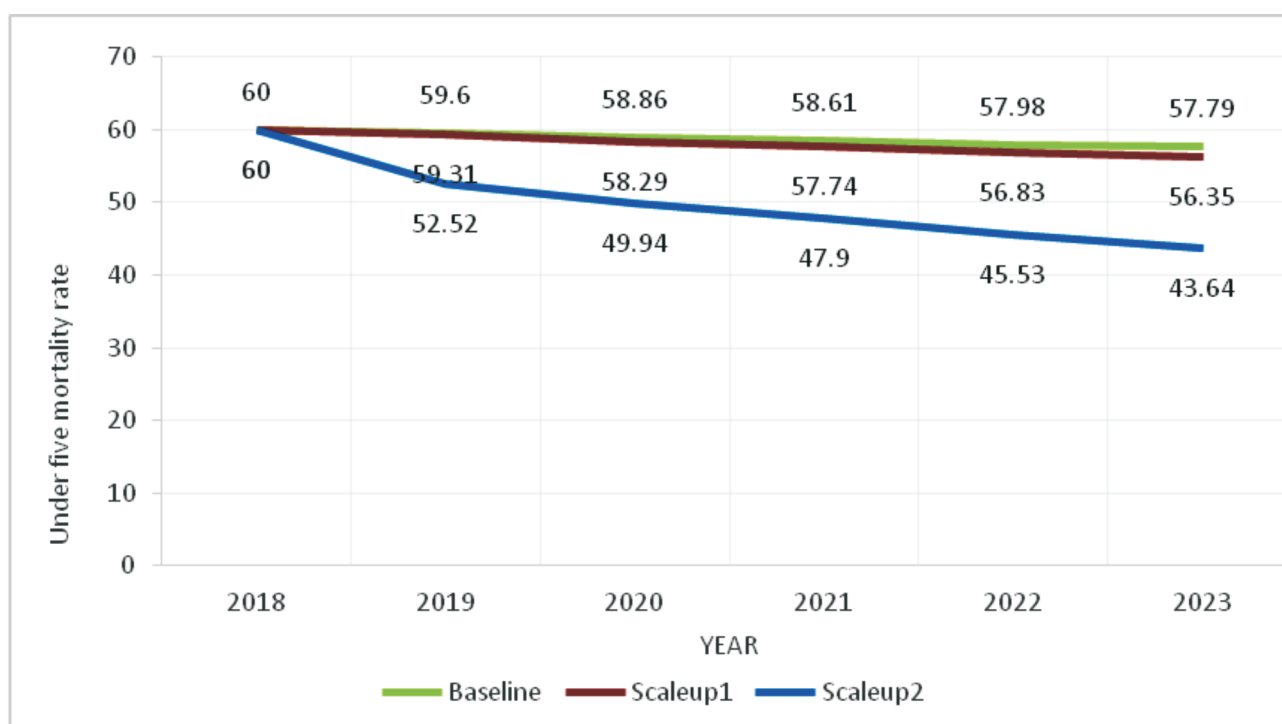
### 7.2 Projected Cost and Impact

The plan was costed using two scenarios. In the first scale-up scenario, it was assumed that 30% of all children under 5 years will be sick throughout a given year and would require IMNCI interventions. The plan costed for 6% of them in the first year, and then yearly increments of 6% were added until the total was 30% coverage by the fifth year. This scenario was projected to cost K2,861,541,372 for the entire implementation period (see annex I).

In the second scale-up scenario it was we have assumed that 30% of all children under 5 years would be sick throughout a given year and require treatment. In costing for this scenario, all of them were taken into account (100%). This scenario was projected to cost K15,124,029,316 for the entire implementation period (see annex I).

The figure below shows the impact that the two costing scenarios have on the under-five mortality rate by year, respectively.

Figure 4: Projected under five mortality rate attributable to IMNCI interventions by year



Due to limited sector funding, this plan selected scale up scenario 1 which permits for a modest approach to funding the strategic plan. Availability of funding to the level of scenario 2, would allow for the scale up of interventions and a reduction in child mortality rate of less than 43.

The table below depicts the additional lives that will be saved as a result of inputs in the two scenarios of the scale-up plan. The second scale-up scenario would save an appreciable number of lives, 36,753 while the first scenario is projected to save 5,860 lives over the 5 year period of implementation.

Table 3: Additional lives saved by year

Additional child lives saved						
	2018	2019	2020	2021	2022	2023
Baseline						
<b>Total (0-59 months)</b>	0	227	550	700	639	624
<b>&lt;1 month</b>	0	0	0	0	0	0
<b>1-59 months</b>	0	227	550	700	639	624
Scaleup1						
<b>Total (0-59 months)</b>	0	423	952	1,315	1,477	1,693
<b>&lt;1 month</b>	0	131	267	409	557	711
<b>1-59 months</b>	0	293	685	906	920	983
Scaleup2						
<b>Total (0-59 months)</b>	0	4,278	5,964	7,486	8,816	10,209
<b>&lt;1 month</b>	0	1,184	1,345	1,511	1,683	1,860
<b>1-59 months</b>	0	3,093	4,619	5,976	7,133	8,349

The table below shows the total cost of implementing the various interventions by year. The plan costed for the eventuality that some sick children will not make it to the referral hospital and will need continued care at the health centre.

**Table 4: Total budget by intervention by year**

Intervention	2018	2019	2020	2021	2022	20	Total
<b>1. Sick children aged 2-59 months</b>	-	86,428,604	177,920,919	275,277,575	379,156,133	490,619,6	<b>1,409,402,900</b>
<b>2. Sick young infants 0-2 months</b>	-	785,648	1,624,526	2,517,540	3,467,881	4,476,225	<b>12,871,820</b>
<b>3. Nutrition interventions</b>	-	333,121	691,311	1,071,901	1,477,006	1,906,5	<b>5,480,270</b>
<b>4. When referral is not possible</b>	-	65,715,302	135,329,685	209,406,944	288,433,080	373,154,885	<b>1,072,039,896</b>
<b>5. Community interventions (ICCM) for children 0-59 months</b>	-	671,513	1,382,065	2,138,174	2,945,018	3,811,1	<b>10,947,952</b>
<b>6. Early child development</b>	-	1,498,289	3,084,734	4,772,882	6,573,989	8,506,024	<b>24,435,917</b>
<b>Programme Costs</b>							
<b>7. Training</b>	-	53,415,985	52,515,985	52,515,985	52,515,985	52,515,985	<b>263,479,925</b>
<b>8. Equipment</b>	-	15,424,361	12,437,484	13,600,220	8,613,659	4,799,4	<b>57,016,797</b>
<b>9. Supervision and Mentorship</b>	-	450,660	450,660	450,660	450,660	450,660	<b>2,253,300</b>
<b>5. Monitoring and Evaluation</b>	-	-	-	-	3,600,000	-	<b>3,600,000</b>
<b>10. Programme management</b>	-	2,400	2,491	2,491	2,606	2,606	<b>12,594</b>
<b>Total</b>	-	<b>224,725,883</b>	<b>385,439,861</b>	<b>561,754,372</b>	<b>747,236,017</b>	<b>940,243,6</b>	<b>2,861,541,372</b>

For the modest scale-up, the five-year cost of the strategic plan was estimated to be K2,861,541,372. The biggest cost will be incurred in treating a sick child aged 2 months up to 5 years (K1,409,402,900), followed by the management of sick children where referral is not possible (K1,072,039,896).

The 2018 Budget and 2019-2021 Medium Term Expenditure Framework allocations project that the health sector share of the total national budget will constitute 9.5% in 2019; 12.5% in 2020 and 14.8% in 2021<sup>7</sup>. Currently, the total budget for Child Health and Nutrition for 2019 is K6,904,327. Out of this, IMNCI has been allocated a total of K2,013,072 (a proportion of about 29.1%). It is envisaged that government and donor funding jointly could be sufficient to cover the cost of this strategic plan.

The total programme costs are K324,221,008. Training costs are the largest contributor to this cost (263,479,925). Most of this cost will go to community training. The next highest cost is equipment (insert cost) supervision and mentorship (2,253,300). The plan has costed for fuel and lubricants which will supplement district transport costs for the two items.

<sup>7</sup> Republic of Zambia 2019-2021 Medium-term Expenditure Framework and 2019 budget

## Annex 1: Scale up scenario 1 and 2 for total costs of implementing the IMNCI Strategic Plan 2019-23

## Scenario 1- Scaleup1

Intervention	2018	2019	2020	2021	2022	2023	Total
1. Sick children aged 2-59 months	-	780,861,526	803,966,167	829,346,002	856,736,353	886,736,604	4,157,646,652
2. Sick young infants 0-2 months	-	11,779,782	12,178,838	12,582,424	12,999,104	13,423,048	62,963,196
3. Nutrition interventions	-	1,601,543	1,661,805	1,717,790	1,775,247	1,833,588	8,589,973
4. When referral is not possible	-	1,971,459,051	2,029,945,279	2,094,069,435	2,163,248,083	2,238,929,271	10,497,651,119
5. Community interventions (ICCM) for children 0-59 months	-	6,100,596	6,278,132	6,475,292	6,689,071	6,924,984	32,468,075
6. Early child development	-	7,203,312	7,415,225	7,648,849	7,901,429	8,178,869	38,347,684
7. Training	-	53,415,985	52,515,985	52,515,985	52,515,985	52,515,985	263,479,925
8. Equipment	-	15,424,361	12,911,293	14,118,323	9,351,972	5,210,848	57,016,797
9. Supervision and Mentorship	-	450,660	450,660	450,660	450,660	450,660	2,253,300
10. Monitoring	-	2,400	2,491	2,491	3,602,606	2,606	3,612,594
	-	2,848,299,216	2,927,325,875	3,018,927,252	3,115,270,509	3,214,206,462	15,124,029,316

## Scenario 2 - Scaleup 2

Intervention	2018	2019	2020	2021	2022	2023	Total
1. Sick children aged 2-59 months	-	86,428,604	177,920,919	275,277,575	379,156,133	490,619,669	1,409,402,900
2. Sick young infants 0-2 months	-	785,648	1,624,526	2,517,540	3,467,881	4,476,225	12,871,820
3. Nutrition interventions	-	333,121	691,311	1,071,901	1,477,006	1,906,932	5,480,270
4. When referral is not possible	-	65,715,302	135,329,685	209,406,944	288,433,080	373,154,885	1,072,039,896
5. Community interventions (ICCM) for children 0-59 months	-	671,513	1,382,065	2,138,174	2,945,018	3,811,181	10,947,952
6. Early child development	-	1,498,289	3,084,734	4,772,882	6,573,989	8,506,024	24,435,917
7. Training	-	53,415,985	52,515,985	52,515,985	52,515,985	52,515,985	263,479,925
8. Equipment	-	15,424,361	12,437,484	13,600,220	8,613,659	4,799,465	57,016,797
9. Supervision and Mentorship	-	450,660	450,660	450,660	450,660	450,660	2,253,300
10. Monitoring	-	2,400	2,491	2,491	3,602,606	2,606	3,612,594
<b>Total</b>	<b>-</b>	<b>224,725,883</b>	<b>385,439,861</b>	<b>561,754,372</b>	<b>747,236,017</b>	<b>940,243,632</b>	<b>2,861,541,372</b>



## Annex 2: Budget for IMNCI interventions

IMNCI Budget 2019-23		2018	2019	2020	2021	2022	2023	Total
<b>1. Sick children aged 2-59 months</b>								
1.1.1	Children 2-59 months very severe disease (GDS <1 yr)	-	91,798	189,849	294,210	405,270	523,109	1,504,237
1.1.2	Children 2-59 months very severe disease (GDS >1 yr)	-	720,292	1,481,867	2,292,077	3,156,979	4,086,841	11,738,057
1.2.1	Children 2-59 months severe pneumonia or very severe disease <1 yr	-	682,032	1,410,336	2,185,609	3,010,669	3,886,071	11,174,718
1.2.2	Children 2-59 months severe pneumonia or very severe disease >1 yr	-	4,030,075	8,290,539	12,823,389	17,662,270	22,864,545	65,670,819
1.3.1	Children 2-59 months severe dehydration < 1 yr	-	267,432	552,982	856,961	1,180,454	1,523,690	4,381,518
1.3.2	Children 2-59 months severe dehydration >1 yr	-	969,573	1,994,411	3,084,854	4,248,890	5,500,366	15,798,094
1.4.1	Children 2-59 months severe persistent diarrhoea <1 yr	-	246,370	509,430	789,468	1,087,484	1,403,688	4,036,441
1.4.2	Children 2-59 months severe persistent diarrhoea >1 yr	-	1,594,192	3,279,239	5,072,162	6,986,091	9,043,786	25,975,471
1.5.1	Children 2-59 months with very severe febrile disease (malaria, meningitis) <1 yr	-	499,955	1,033,789	1,602,071	2,206,844	2,848,521	8,191,180
1.5.2	Children 2-59 months with very severe febrile disease (malaria, meningitis) >1 yr	-	4,315,539	8,877,148	13,730,725	18,911,925	24,482,275	70,317,611
1.6.1	Children 2-59 months with severe complicated measles <1 yr	-	167,030	345,382	535,241	737,293	951,673	2,736,618
1.6.2	Children 2-59 months with severe complicated measles >1 yr	-	656,447	1,350,354	2,088,660	2,876,812	3,724,153	10,696,426
1.7.1	Mastoiditis < 1 yr	-	498,218	1,030,201	1,596,510	2,199,194	2,838,646	8,162,769
1.7.2	Mastoiditis >1 yr	-	1,896,704	3,901,596	6,034,792	8,312,036	10,760,277	30,905,406
1.8.1	Severe malnutrition <1 yr	-	852,230	1,762,199	2,730,894	3,761,787	4,855,589	13,962,700
1.8.2	Severe malnutrition >1 yr	-	3,147,974	6,475,400	10,015,823	13,795,228	17,858,498	51,292,923
1.9.1	Severe anaemia <1 yr							



1.19.1. Treatment of measles <1 yr	-	12,205	25,238	39,111	53,881	69,547	199,982
1.19.2. Treatment of measles >1 yr	-	56,283	115,779	179,081	246,663	319,316	917,122
1.20.1. Treatment of anaemia <1 yr	-	31,115	64,351	99,725	137,333	177,265	509,789
1.20.2. Treatment of anaemia > 1 yr	-	547,247	1,125,819	1,741,360	2,398,197	3,104,566	8,917,188
1.21.1. Treatment of acute ear infection <1 yr	-	13,628	28,178	43,668	60,155	77,646	223,276
1.21.2. Treatment of acute ear infection >1yr	-	103,123	212,111	328,083	451,870	584,965	1,680,153
1.22.1. Treatment of chronic ear infection < 1 yr	-	195,816	404,897	627,472	864,335	1,115,654	3,208,174
1.22.2. Treatment of chronic ear infection > 1 yr	-	709,929	1,460,321	2,258,750	3,111,061	4,027,398	11,567,459
1.23.1. Treatment of uncomplicated severe acute malnutrition < 1yr	-	3,556,568	7,354,044	11,396,618	15,698,752	20,263,425	58,269,407
1.23.2. Treatment of uncomplicated severe acute malnutrition > 1 yr	-	25,823,037	53,117,594	82,159,621	113,161,872	146,492,757	420,754,880
1.24.1. Treatment of uncomplicated severe moderate malnutrition < 1 yr	-	1,190,265	2,461,153	3,814,067	5,253,841	6,781,482	19,500,807
1.24.2. Treatment of uncomplicated severe moderate malnutrition > 1 yr	-	8,745,213	17,988,757	27,824,103	38,323,118	49,610,873	142,492,063
<b>2. Sick young infants 0-2 months</b>							
2.1.1. Pre-referral treatment of infants 0-2 months for very severe disease	-	210,391	435,041	674,187	928,691	1,198,723	3,447,033
2.1.2. Antibiotic for local bacterial infection	-	3,952	8,170	12,662	17,436	22,506	64,726
2.1.3. Counseling mother of infant with jaundice	-	8,561	17,701	27,432	37,787	48,774	140,255
2.1.4. Intravenous fluids for severe dehydration	-	552,788	1,143,026	1,771,356	2,440,020	3,149,497	9,056,687
2.1.5. ORS for acute diarrhoea with some and no dehydration	-	9,957	20,587	31,904	43,947	56,725	163,119
<b>3. Nutrition interventions</b>							
3.1.1. Breastfeeding counselling and support	-	166,560	345,655	535,950	738,503	953,466	2,740,135
3.1.2. Feeding problem or low birth weight							





7.1.6. Facility IMNCI (in-service)	-	10,883,230	10,883,230	10,883,230	10,883,230	10,883,230	10,883,230	54,416,150
7.1.7. Facility IMNCI (Pre-service) Cost for ICATT	-	900,000	-	-	-	-	-	900,000
7.1.8. Facility Early Child Development (ECD)	-	597,216	597,216	597,216	597,216	597,216	597,216	2,986,080
7.1.9. Facility Essential Newborn Care (F-ENBC)	-	3,267,207	3,267,207	3,267,207	3,267,207	3,267,207	3,267,207	16,336,035
7.1.10. Emergency Triage Assessment and Treatment (ETAT)	-	3,944,146	3,944,146	3,944,146	3,944,146	3,944,146	3,944,146	19,720,730
<b>8. Equipment</b>								
8.1.1. Equipment	-	15,424,361	12,437,484	13,600,220	8,613,659	4,799,465	57,016,797	
<b>9. Supervision and Mentorship</b>								
9.1.1. Supervision and Mentorship	-	450,660	450,660	450,660	450,660	450,660	2,253,300	
<b>10. Programme Management</b>								
10.1.1. National Level Meetings	-	2,400	2,491	2,491	2,491	2,606	12,594	
<b>11. Monitoring and Evaluation</b>								
11.1.1. Health Facility Survey	-	-	-	-	3,600,000	-	3,600,000	
<b>Total</b>	-	<b>224,725,883</b>	<b>385,439,861</b>	<b>561,754,372</b>	<b>747,236,017</b>	<b>940,243,632</b>	<b>2,861,541,372</b>	

## Annex 3: Quantity of medicines and supplies

No	Medicines	2018	2019	2020	2021	2022	2023	Total
1	Amoxicillin (dispersible) 125mg tab cap(PO)	-	28,649	58,931	91,152	125,547	162,526	466,806
2	Amoxicillin (dispersible) 250mg tab/cap (PO)	-	9,089,109	18,705,722	28,938,458	39,858,429	51,583,716	148,175,434
3	Artemether + Lumefantrine, tablets, 20 + 120 mg, 6 x 1 blister	-	1,587,948	3,267,394	5,054,406	6,961,664	9,010,623	25,882,034
4	Artusenate, 20 mg/ml, 1 ml ampoule	-	159,051	327,336	506,404	697,497	902,675	2,592,963
5	Ciprofloxacin 0.3% OPHT DROP (OPHT) 5ml	-	18,276	37,636	58,237	80,214	103,774	298,136
6	Ciprofloxacin, tablet, 250 mg	-	81,501	167,753	259,532	357,468	462,593	1,328,848
7	Diazepam 5mg/ml	-	38,527	79,356	122,804	169,148	218,804	628,639
8	Ferrous Salt/Folic Acid (iron=60mg) 200/0.25 mg Tab-Cap (PO)-Each	-	1,057,599	2,175,773	3,365,545	4,635,503	6,000,391	17,234,811
9	Gentamycin, injection, 40 mg/ml in 2 ml vial	-	1,219,050	2,509,598	3,882,868	5,348,107	6,920,220	19,879,843
10	Gentian violet, powder 25 mg	-	18,276	37,636	58,237	80,214	103,774	298,136
11	Inhaler spacer	-	18,276	37,636	58,237	80,214	103,774	298,136
12	Iron syrup, 20 mg/ml (per ml)	-	148,166	306,369	474,782	654,006	844,169	2,427,492
13	Mebendazole, 500 mg tab	-	35,812	73,664	113,940	156,934	203,158	583,508
14	ORS, sachet	-	6,981,404	14,376,940	22,246,758	30,642,006	39,642,202	113,889,310
15	Paracetamol (dispersible) 100mg tab-cap (PO)	-	9,305,938	19,152,992	29,630,986	40,812,329	52,816,637	151,718,882
16	Penicillin, Benzyl (600 mg, pen. G) 1M Powder (Inj)	-	533,457	1,098,249	1,699,246	2,340,476	3,028,402	8,699,830
17	Phenobarbital (I) 100mg/ml AMPOULE (INU)-2ml	-	5,136	10,621	16,459	22,672	29,265	84,153
18	Quinine Dihydrochloride 100mg/5ml syrup (PO) (1 bot-100ml)	-	345,411	711,312	1,100,678	1,516,040	1,961,333	5,634,774
19	Quinine, injection, 300 mg/ml, 2 ml ampoule	-	38,528	79,296	122,676	168,969	218,668	628,137
20	Ready-to-use therapeutic food (RUTF)	-	7,890,751	16,242,914	25,130,368	34,613,505	44,790,519	128,668,056
21	Ringer's /Hartman's Soln (Intravenous soln)(INU) 10bagsv(500ml)	-	23,906	49,248	76,215	104,977	135,785	390,130
22	Salbutamol 100mg/dose inhaler 9INHLL (200 dose)	-	219,309	451,626	698,843	962,565	1,245,291	3,577,634



23	Tetracycline eye ointment, 1 %, tube 5 mg	-	54,827	112,907	174,711	240,641	311,323	894,408
24	Vitamin A, caplet, 100,000 IU	-	581,864	1,197,910	1,853,447	2,552,866	3,303,212	9,489,299
25	Vitamin, Multi+Minerals Tab -Cap (PO)	-	255,860	526,898	815,317	1,122,993	1,452,839	4,173,906
26	Zinc, tablet, 20 mg	-	8,443,493	17,379,222	26,887,565	37,033,727	47,924,651	137,668,658
	<b>Supplies</b>							
1	Cannula, IV, 22G, sterile, disposable	-	266,234	548,193	848,232	1,168,326	1,511,591	4,342,576
2	Cotton swab	-	3,206,153	6,602,559	10,216,783	14,072,289	18,205,511	52,303,295
3	Dextrose 10% in water (intravenous) solution (INJ) (1 bottle-500ml)	-	120,937	248,934	385,134	530,466	686,452	1,971,924
4	Dextrose 5% in water (intravenous) soln(INJ) 20 bag (500ml)	-	3,260	6,710	10,381	14,299	18,504	53,154
5	Dextrose 50% in water (hypertonic, intravenous) Solution (INJ)(1 Amp(20ml))	-	98,191	202,148	312,769	430,796	557,420	1,601,324
6	Industrialised Methylated Spirit (1 ltr)	-	90,649	186,709	288,932	397,967	514,806	1,479,064
7	IV giving/infusion set	-	127,930	263,449	407,658	561,496	726,420	2,086,953
8	Malaria test kit (RDT)	-	118,792	244,631	378,540	521,389	674,532	1,937,885
9	Nasogastric tube, CH12, 125 cm, disposable	-	187,944	387,003	598,827	824,804	1,067,118	3,065,697
10	Needle (disposable) 21G	-	1,451,440	2,988,812	4,624,768	6,370,007	8,241,269	23,676,296
11	Needle (disposable) 23G	-	1,405,751	2,894,723	4,479,176	6,169,473	7,981,833	22,930,955
12	Safety box for used syringes/needles, 5 liter	-	27,937	57,533	89,027	122,623	158,637	455,756
13	Sodium Chloride in Water (normal saline, intravenous) 0.9% SOLUTION INJ(10 bott -1000ml)	-	6,199	12,764	19,750	27,203	35,195	101,111
14	Syringe single use 2ml	-	4,311,834	8,879,509	13,740,117	18,925,221	24,483,851	70,340,533
15	Syringe single use 5ml	-	4,305,412	8,866,383	13,719,863	18,897,328	24,447,610	70,236,596
16	Tape, adhesive, 2.5 cm wide, zinc oxide, 5 m roll	-	11,978	24,661	38,158	52,557	68,002	195,357
17	Water for injection, 5 ml ampoule	-	197,082	405,821	627,945	864,911	1,119,005	3,214,765



## Annex 4: Total cost of medicines and supplies

No	Description	2018	2019	2020	2021	2022	2023	Total
	<b>Medicines</b>							
1	Amoxicillin (dispersible) 125mg tab cap(PO)	-	10,813	22,238	34,394	47,375	61,334	176,154
2	Amoxicillin (dispersible) 250mg tab/cap (PO)	-	1,482,944	3,051,813	4,721,286	6,500,943	8,413,303	24,170,289
3	Artemether + Lumefantrine, tablets, 20 + 120 mg, 6 x 1 blister	-	1,080,532	2,223,020	3,438,696	4,736,435	6,130,856	17,609,540
4	Artusenate, 20 mg/ml, 1 ml ampoule	-	3,744,728	7,706,467	11,922,025	16,420,783	21,251,801	61,045,803
5	Ciprofloxacin 0.3% OPHT DROP (OPHT) 5ml	-	707,761	1,457,256	2,254,810	3,105,690	4,018,269	11,543,785
6	Ciprofloxacin, tablet, 250 mg	-	13,374	27,528	42,587	58,642	75,895	218,026
7	Diazepam 5mg/ml	-	16,464	33,955	52,570	72,403	93,593	268,984
8	Ferrous Salt/Folic Acid (iron=60mg) 200/0.25 mg Tab -Cap (PO)-Each	-	387,240	796,793	1,232,522	1,697,424	2,197,158	6,311,136
9	Gentamycin, injection, 40 mg/ml in 2 ml vial	-	3,070,415	6,320,073	9,778,099	13,468,304	17,428,393	50,065,283
10	Gentian violet, powder 25 mg	-	463,343	954,010	1,476,138	2,033,171	2,630,600	7,557,263
11	Inhaler spacer	-	2,856,176	5,880,773	9,099,307	12,533,046	16,215,770	46,585,073
12	Iron syrup, 20 mg/ml (per ml)	-	24,314	50,276	77,908	107,288	138,497	398,284
13	Mebendazole, 500 mg tab	-	24,682	50,763	78,512	108,134	139,997	402,087
14	ORS, sachet	-	4,702,461	9,681,684	14,980,448	20,633,456	26,696,413	76,694,463
15	Paracetamol (dispersible) 100mg tab-cap (PO)	-	787,633	1,620,818	2,507,446	3,454,491	4,470,767	12,841,154
16	Penicillin, Benzyl (600 mg, pen. G) 1M Powder (Inj)	-	3,859,911	7,951,442	12,302,424	16,945,122	21,926,543	62,985,443
17	Phenobarbital (I) 100mg/ml AMPOULE (INU)-2ml	-	77,393	160,002	247,941	341,535	440,882	1,267,754
18	Quinine Dihydrochloride 100mg/5ml syrup (PO) (1 bot-100ml)	-	1,349,542	2,778,662	4,299,418	5,921,844	7,661,925	22,011,392
19	Quinine, injection, 300 mg/ml, 2 ml ampoule	-	146,044	300,546	464,949	640,397	828,803	2,380,740
20	Ready-to-use therapeutic food (RUTF)	-	27,778,101	57,193,941	88,496,054	121,891,704	157,708,494	453,068,294
21	Ringer's /Hartman's Soln (Intravenous soln)(INU) 10bags(500ml)	-	3,237,740	6,667,036	10,316,252	14,209,246	18,383,515	52,813,789
22	Salbutamol 100mg/dose inhaler 9INHLL (200 dose)	-	2,621,965	5,398,552	8,353,167	11,505,377	14,886,129	42,765,190
23	Tetracycline eye ointment, 1 %, tube 5 mg	-	143,951	296,388	458,600	631,658	817,265	2,347,862
24	Vitamin A, caplet, 100,000 IU	-	100,831	207,591	321,171	442,251	572,295	1,644,140
25	Vitamin, Multi+Minerals Tab-Cap (PO)	-	99,968	205,820	318,465	438,660	567,556	1,630,471

No	Description	2018	2019	2020	2021	2022	2023	Total
26	Zinc, tablet, 20 mg	-	2,845,993	5,856,580	9,060,222	12,479,049	16,150,404	46,392,248
	<b>Sub total</b>	-	<b>61,634,321</b>	<b>126,894,030</b>	<b>196,335,414</b>	<b>270,424,427</b>	<b>349,906,458</b>	<b>1,005,194,649</b>
	<b>Supplies</b>							
1	Cannula, IV, 22G, sterile, disposable	-	454,710	936,305	1,448,766	1,995,444	2,581,724	7,416,949
2	Cotton swab	-	4,633,833	9,541,266	14,763,396	20,335,668	26,310,530	75,584,694
3	Dextrose 10% in water (intravenous) solution (INJ) (1 bottle-500ml)	-	2,008,805	4,134,160	6,395,699	8,809,135	11,400,552	32,748,351
4	Dextrose 5% in water (intravenous) soln(INJ) 20 bag (500ml)	-	217,069	446,939	691,547	952,511	1,232,398	3,540,465
5	Dextrose 50% in water (hypertonic, intravenous) Solution (INJ)(1 Amp(20ml))	-	375,378	772,734	1,195,559	1,646,735	2,130,858	6,121,265
6	Industrialised Methylated Spirit (1 ltr)	-	1,372,223	2,825,901	4,372,816	6,022,964	7,791,922	22,385,826
7	IV giving/infusion set	-	316,762	652,443	1,009,651	1,390,661	1,798,944	5,168,461
8	Malaria test kit (RDT)	-	269,909	555,738	859,892	1,184,363	1,532,376	4,402,278
9	Nasogastric tube, CH12, 125 cm, disposable	-	391,488	806,161	1,247,436	1,718,198	2,222,898	6,386,180
10	Needle (disposable) 21G	-	3,691,180	7,600,271	11,760,038	16,197,845	20,957,015	60,206,349
11	Needle (disposable) 23G	-	8,574,302	17,655,047	27,317,984	37,626,731	48,682,004	139,856,068
12	Safety box for used syringes/needles, 5 liter	-	115,203	237,257	367,138	505,676	654,177	1,879,450
13	Sodium Chloride in Water (normal saline, intravenous) 0.9% SOLUTION INJ(10 bott-1000ml)	-	1,104,149	2,273,148	3,517,090	4,844,297	6,268,150	18,006,833
14	Syringe single use 2ml	-	36,553,293	75,264,606	116,458,570	160,408,616	207,538,312	596,223,398
15	Syringe single use 5ml	-	31,415,942	64,688,081	100,093,420	137,864,822	178,370,541	512,432,807
16	Tape, adhesive, 2.5 cm wide, zinc oxide, 5 m roll	-	35,223	72,513	112,193	154,530	199,954	574,412
17	Water for injection, 5 ml ampoule	-	72,340	149,002	230,573	317,534	410,775	1,180,224
	<b>Sub total</b>	-	<b>91,601,809</b>	<b>188,611,571</b>	<b>291,841,767</b>	<b>401,975,730</b>	<b>520,083,131</b>	<b>1,494,114,010</b>
	<b>Grand Total</b>	-	<b>153,236,130</b>	<b>315,505,601</b>	<b>488,177,181</b>	<b>672,400,157</b>	<b>869,989,589</b>	<b>2,499,308,659</b>

## Annex 5: Equipment costs

#	Equipment/Supplies	Price in dollars	Price in Kwacha (*12)	2019	2020	2021	2022	2023	Total cost per training (K)
1	Watch/ timing device	1	17	168,000	168,000	168,000	168,000	168,000	840,000
2	Wall Clock	8	96	35,270	35,270	35,270	35,270	35,270	176,352
3	IMNCI Chart Booklet	4	50	296,000	296,000	296,000	296,000	296,000	1,480,000
4	ICCM Chart Booklet	1	15	61,200	61,200	61,200	61,200	61,200	306,000
5	IMNCI Wall Charts	1	15	2,700	-	2,700	-	-	5,400
6	Pre-service IMNCI handbook	3	30	180,000	-	180,000	-	180,000	540,000
7	ENBC Wall Charts	1	15	55,110	-	55,110	-	-	110,220
8	Clinical thermometer	17	203	372,544	-	372,544	-	-	745,087
9	Light source-lamp/flash light/examination light	400	4,800	2,939,200	2,939,200	2,939,200	-	-	8,817,600
10	Heat source (Heater)	50	600	367,400	367,400	367,400	-	-	1,102,200
11	Self-inflating bag and mask (250-400ml)	55	660	404,140	404,140	404,140	-	-	1,212,420
12	Oxygen concentrators	1,650	19,800	4,546,575	4,546,575	4,546,575	4,546,575	-	18,186,300
13	MUAC Tape	2	19	276,832	-	276,832	-	276,832	830,495
14	Paediatric suction tubes	3	41	113,086	113,086	113,086	-	-	339,257
15	Paediatric suction machine (Foot operated)	166	1,986	1,824,141	-	-	-	-	1,824,141
	<b>Supplies to mix ORS</b>								-
16	Spoons	0.030	0.360	6,613	6,613	6,613	6,613	6,613	33,066
17	Cups	1	6	55,110	-	55,110	-	55,110	165,330

#	Equipment/Supplies	Price in dollars	Price in Kwacha (*12)	2019	2020	2021	2022	2023	Total cost per training (K)
18	Buckets	3	40	146,960	-	146,960	-	146,960	440,880
19	Jug	2	20	73,480	-	73,480	-	73,480	220,440
	<b>Other materials</b>								-
		Price in US\$	Price per card						-
20	Mothers' counselling cards (Take home IMNCI)	0.4	5.0	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000	17,500,000
	<b>Total</b>			<b>15,424,361</b>	<b>12,437,484</b>	<b>13,600,220</b>	<b>8,613,659</b>	<b>4,799,465</b>	<b>54,875,189</b>

## ANNEX 6: IMNCI monitoring and evaluation indicator matrix

INDICATOR TYPE	INDICATOR NAME	BASELINE (2017)	TARGET					DATA SOURCE
			2019	2020	2021	2022	2023	
Impact	Child Mortality Rate	75/1000 (2014)	51	43	35	27	19	ZDHS
Impact	Infant Mortality Rate	45/1000 (2014)	25	20	15	10	5	ZDHS
Impact	Neonatal Mortality Rate	24/1000 (2014)	20	10	5	4	3	ZDHS
Outcome	% of babies exclusively breastfed	80% (2016)	88%	90%	92%	94%	96%	HMIS
Outcome	Proportion of Children Underweight	15% (2014)	13%	11%	9%	7%	5%	ZDHS
Outcome	% of children aged under five years with stunting	40%(2014)	20%	18%	16%	14%	12%	ZDHS
Outcome	% of children aged under five years with wasting	6%(2014)	3%	2%	1%	1%	1%	ZDHS
Outcome	% of health facilities utilizing IMCI case management guidelines	80.3% (2018)	40%	80%	90%	95%	100%	IMNCI HFS
Outcome	% of HF that reported stock-outs of the essential IMNCI oral drugs and supplies	TBD	0	0	0	0	0	HMIS
Outcome	Percentage of Health Facilities that have all essential equipment and Materials	59.6%	100%	100%	100%	100%	100%	IMNCI HFS
Outcome	% of HFs with dedicated screening space for children (IMNCI)	No data	60%	100%	100%	100%	100%	IMNCI HFS
Outcome	% of health facilities with functional play corners	No data	35%	37%	40%	45%	50%	IMNCI HFS
Outcome	% of family and community practices implemented to promote child survival, growth and development and care of the sick child at community level	75%	80%	85%	95%	100%	100%	IMNCI HFS

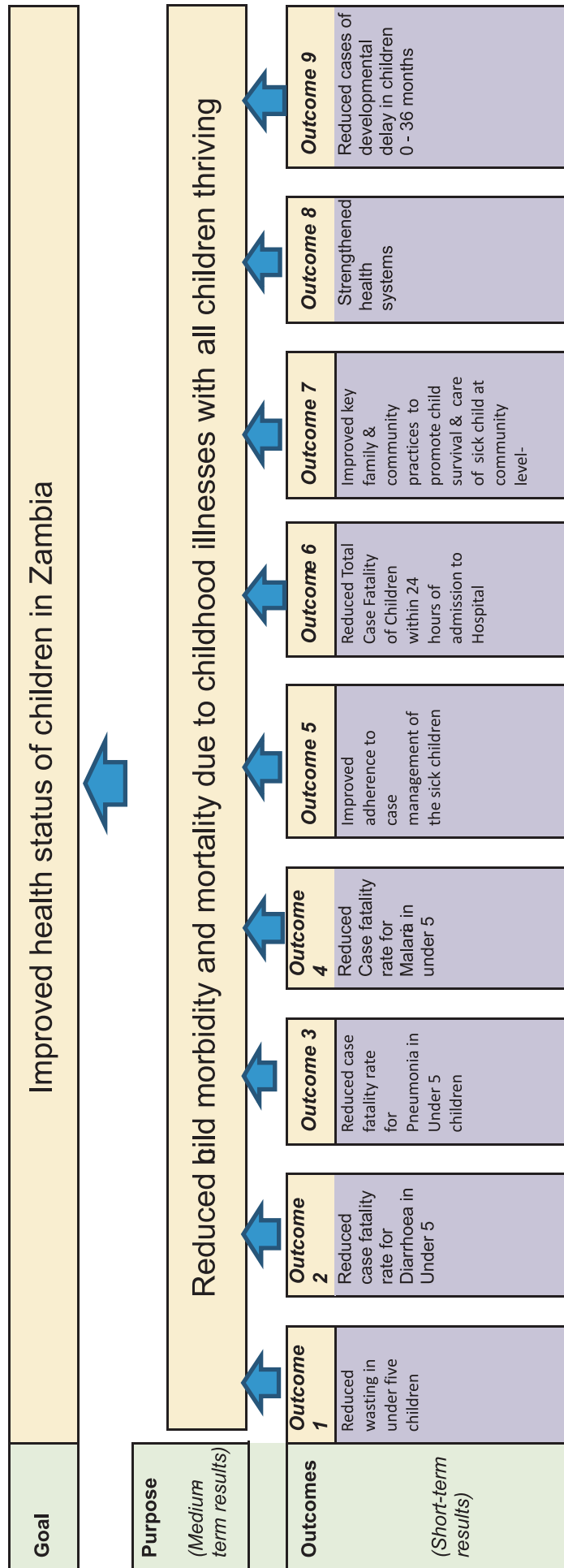
<b>Outcome</b>	% of children under the age of five years that have access to two or more playthings at home	62%				65%	67%	70%	75%	80%	To be collected from a future MICS or DHS
<b>Outcome</b>	% of caregivers of children U5 years who engage in at least 4 activities promoting early learning in 3 days	32%				33%	35%	40%	45%	50%	To be collected from a future MICS or DHS
<b>Outcome</b>	% of all children 0–3 years that are monitored for developmental milestones	5%				25%	30%	50%	55%	60%	To be collected from a future MICS or DHS

INDICATOR TYPE	INDICATOR NAME	BASELINE (2017)	TARGET					DATA SOURCE
			2019	2020	2021	2022	2023	
Outcome	% of CBVs with no stock outs C-IMCI data collection tools	TBD	0	0	0	0	0	IMNCI HFS
Outcome	% of children who have received all basic immunizations by age 24 months (fully immunized)	49%	100	100	100	100	100	HMIS
Outcome	% of children under five with fever for whom advice or treatment was sought from a health facility or provider	72% (2014)	80%	85%	90%	95%	100%	IMNCI HFS
Outcome	Proportion of children checked for three danger signs	7.8% (2018)	100	100	100	100	100	IMNCI HFS
Outcome	Proportion of children checked for the presence of cough, diarrhea and fevers	80.3% (2018)	100%	100%	100%	100%	100%	IMNCI HFS
Outcome	% of children are being managed according to IMNCI guidelines	7.8% (2018)	100%	100%	100%	100%	100%	IMNCI HFS
Output	% Health Facilities with at least 60% of workers managing children trained in IMNCI	45.30%	60%	70%	70%	90%	100%	IMNCI HFS/IMNCI Data base
Output	% Health facilities that have at least 80% of HWs managing children trained in ECD	0%	10%	20%	30%	40%	50%	IMNCI HFS
Output	% of health facilities offering developmental counselling and monitoring as part of routine RMNCAH & N services	0%	10%	20%	30%	40%	50%	IMNCI HFS
Output	% of sick children needing referral who are referred.	47.1% (2018)	60%	70%	80%	90%	95%	IMNCI HFS
Output	Proportion of health workers at referral facilities (Hospitals) that are trained in ETAT	TBD	20%	50%	60%	80%	95%	Training inventory
Output	% of CBVs trained in C-IMNCI	1.6%	5%	10%	20%	30%	50%	Training inventory



INDICATOR TYPE	INDICATOR NAME	BASELINE (2017)	TARGET					DATA SOURCE
			2019	2020	2021	2022	2023	
Output	% of CBVs trained in ECD	5.8%	10%	20%	30%	40%	50%	Training inventory
Output	% of CBVs trained in iCCM	4.6%	10%	20%	30%	40%	50%	Training inventory
Output	Proportion of sick children whose caretakers are advised to give extra fluids and continue feeding	40.6%	60%	70%	80%	90%	100%	IMNCI HFS
Output	% of Support staff working in triage areas from each province trained in ETAT	TBD	20%	50%	60%	80%	95%	Training inventory
Process	% Trained health workers in IMNCI being mentored	Data not available	20%	30%	40%	50%	60%	IMNCI HFS
Process	% Trained health workers in ETAT being mentored	TBD	40%	50%	60%	70%	80%	IMNCI HFS
Process	% Trained health workers in ECD being mentored	0	40%	50%	60%	70%	80%	IMNCI HFS
Process	Proportion of HFs that received at least 1 supervisory visit that included the case management observation during the previous 6 months	31.5% (2018)	100%	100%	100%	100%	100%	IMNCI HFS
Process	% of Health facilities that received at least 2 mentorship visits in IMNCI	TBD	60%	70%	80%	90%	95%	IMNCI HFS
Process	% of community (CBVs) that received mentorship in C-IMNCI	TBD	70%	80%	90%	95%	97%	IMNCI HFS
Process	% of health facilities that were assessed using service quality assessment tools	No data	30%	40%	50%	60%	70%	QA/QI reports & IMNCI HFS
Process	% of districts with quarterly child health & Nutrition meeting	No data	100%	100%	100%	100%	100%	IMNCI HFS
Process	% of technical supportive supervision provided to CBVs providing C-IMCI	TBD	100%	100%	100%	100%	100%	IMNCI HFS

**Annex 7: IMNCI Conceptual Framework**







<p><b>Activities</b></p> <p><i>(What do we intend to do?)</i></p>	<p>Health Education on Breast feeding and timely and adequate complementary during MCH visits; Capacity building in IMNCI; Procurement of commodities</p>	<p>Capacity building in IMNCI through training and mentorship; Procurement of commodities</p>	<p>Capacity building in IMNCI through training and mentorship; Procurement of commodities</p>	<p>Capacity building in IMNCI through training and mentorship; Procurement of commodities</p>	<p>Capacity building in IMNCI through training and mentorship; Procurement of commodities</p> <p>Strengthen pre-service IMNCI training in Nursing schools &amp; College of health Sciences</p>	<p>Capacity building of staff in ETAT through training and mentorship; Procurement of commodities</p>	<p>Capacity building in C-IMNCI</p> <p>Capacity building in ICCM</p> <p>Capacity building in ECD Supervision and mentorship of CBVs</p>	<p>Capacity building in District Integrated Logistics, self Assessment Tool (DILSAT)</p> <p>Strengthening supervision of Staff at HF's including Forecasting, ordering &amp; stock control</p>	<p>Capacity building in ECD through training and mentorship</p>
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<p><b>Inputs</b></p> <p><i>(What are we investing?)</i></p>	<p>1. <u>Staff</u>: Trained health workers and Community Health Workers coordinated by the province and district</p> <p>2. <u>Money</u>: GRZ and partner funding for trainings, production of materials, fuel etc</p> <p>3. <u>Materials</u>: Training materials, logistics and supplies for service provision (Charts booklets, handbooks, IMNCI commodities, drugs, etc)</p> <p>4. <u>Equipment</u>: Computers, weighing equipment, height boards, etc</p> <p>5. <u>Technology</u>: Data management platforms, mobile phone services</p> <p>6. <u>Partners</u>: USAID, WHO, UNICEF, CHAZ, Save the Children, Path, e.t.c.</p> <p>7. <u>Volunteers</u>: (community based health volunteers) CHWs, SMAGs</p>
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<p><b>Assumption &amp; External Factors</b></p>	<p>Activities supported by partners and being undertaken by Community volunteers will be owned by government once donor funding comes to an end</p> <p>Community leaders (traditional, religious and political) will support IMNCI health services</p> <p>Political-will shown by the current leadership in addressing factors affecting children's health will continue</p> <p>Provinces and districts will own the IMNCI strategy and implement activities to attain the set objectives</p> <p>MOH will continue putting children's health top on the agenda and respond to their needs</p>
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