MALAWI CHILD HEALTH STRATEGY

For Survival and Health Development of Under-five Children in Malawi
2014-2020

December 18 2013

TABLE OF CONTENTS

List of Tables

List of Figures

ACRONYMS

ACTs	Artemisinin Combination Therapy
ACSD	Accelerated Child Survival and Development
AFP	Acute Flaccid Paralysis
AIP	Annual Implementation Plan
ANC	Antenatal Care
ANCS	Antenatal Corticosteroids
APR	A Promise Renewed
ARI	Acute Respiratory Infection
ART	Anti-Retroviral Therapy
ARV	Anti-Retroviral
BCC	Behaviour Change Communication
BCI	Behaviour Change Intervention
BEmOC	Basic Emergency Obstetric Care
BLM	Banja La Mtsogolo
CBCC	Community Based Childcare Centre
CBMNC	Community-based maternal and Newborn Care
CBD	Community-based Distributors
CBDA	Community-based Distribution Agent
CCM	Community Case Management
CFR	Case Fatality Rate
CHAM	Christian Health Association of Malawi
CI	Catalytic Initiative
CLH	Child Lung Health
CMAM	Community-based Management of Acute Malnutrition
CMED	Central Monitoring and Evaluation Division
CMS	Central Medical Stores
CMST	Central Medical Stores Trust
CPAP	Continuous Positive Airway Pressure
CPR	Contraceptive Prevalence Rate Community based
CSO	Civil Society Organisation
DA	District Assembly
DDA	Deputy Director Administration
DEHO	District Environmental Health Officer
DFID	Department for International Development (UK)
DHIS	District Health Information System
DHMT	District Health Management Team
DHO	District Health Officer

DIP	District Implementation Plan
DOTS	Directly Observed Therapy, Short Course
DPT	Diphtheria, Pertussis and Tetanus
EBF	Exclusive breastfeeding
EHP	Essential Health Package
EHRP	Emergency Human Resource Plan
EID	Early Infant Diagnosis
eLMIS	electronic Logistics Management Information System
EMLS	Essential Medical Laboratory Services
EmOC	Emergency Obstetric Care
EMTCT	Elimination of Mother To Child Transmission of HIV
ENC	Essential Newborn Care
EPI	Expanded Program on Immunization
ETAT	Emergency Triage Assessment and Treatment
FANC	Focused Antenatal Care
FBO	Faith Based Organisation
GAPPD	Global Action Plan for Pneumonia and Diarrhoea
GAVI	Global Vaccine Initiative
GNAP	Global Newborn Action Plan
GNI	Gross National Income
GVH	Group Village Headman
HBB	Helping Babies Breathe
HCT	HIV Counselling and Testing
HCW	Health Care Workers
HEU	Health Education Unit
HMIS	Health Management Information System
HRH	Human Resources for Health
HSA	Health Surveillance Assistant
HSSP	Health Sector Strategic Plan
HTC	HIV Testing and Counselling
HWTS	Household Water Treatment and Safety
iCCM	integrated Community Case Management
IDSR	Integrated Disease Surveillance and Response
IEC	Information, Education and Communication
IMCI	Integrated Management of Childhood Illnesses
IMR	Infant Mortality Rate
IPT	Intermittent Presumptive Treatment
ITN	Insecticide Treated Net
IRS	Indoor Residual Spraying
KMC	Kangaroo Mother Care

LA	Altemether Lumefantrine
LF	Lymphatic Filariasis
LiST	Lives Saved Tool
LLIN	Long-lasting Insecticide treated Nets
MBTS	Malawi Blood Transfusion Service
MCH	Maternal and Child Health
MDG	Millennium Development Goals
MDHS	Malawi Demographic Health Survey
MICS	Multiple Indicator cluster survey
MIS	Malaria Indicator Survey
MMR	Maternal Mortality Ratio
MoH	Ministry of Health
MoWD&I	Ministry of Water Development and Irrigation
NEP	National Evaluation Platform
NGO	Non-Governmental Organisation
NHP	National Health Plan
NLGFC	National Local Government Finance Committee
NMCP	National Malaria Control Program
NMR	Neonatal Mortality Rate
NRU	Nutrition Rehabilitation Units
OAU	Organisation of African Unity
ODF	Open Defecation Free
OPV	Oral Polio Vaccine
ORS	Oral Rehydration Solution
OTP	Out-patient Therapeutic Programme
PCV	Pneumococcal Vaccine
PHAST	Participatory Hygiene and Sanitation Transformation
PHC	Primary Health Care
PMNCH	Partnership for Maternal, Newborn and Child Health
PMTCT	Prevention of Mother to Child Transmission
POW	Program of Work
PPP	Private Public Partnership
PSC	Parallel Supply Chains
RDT	Rapid Diagnostic Test
RHU	Reproductive Health Unit
RMNCH	Reduction of Maternal Newborn and Child Health
SC4CCM	Supply Chain for Community Case Management
SFP	Supplementary Feeding Programme
SLA	Service Level Agreement
SOP	Standard Operating Procedures

SP	Sulfadoxine-Pyrimethamine
SRHP	Sexual Reproductive Health Program
STI	Sexually Transmitted Infection
SWAp	Sector Wide Approach
TA	Traditional Authority
TB	Tuberculosis
TBA	Traditional Birth Attendant
TFR	Total Fertility Rate
TOT	Training of Trainers
TT	Tetanus Toxoid
TTV	Tetanus Toxoid Vaccine
TWG	Technical Working Group
UCI	Universal Childhood Immunisation
UN	United Nations
UNCoIA	United Nations Commission on Information and Accountability
UNCoLSC	United Nations Commission on Life-Saving Commodities for Women and Children
UNFPA	United Nations Fund for Population Activities
UNICEF	United Nations Children's' Fund
VAS	Vitamin A Supplementation
VDC	Village Development Committee
VHC	Village Health Committee
WCBA	Women of Child Bearing Age
WHO	World Health Organization
ZHSO	Zonal Health Support Offices

Foreword

This Child Health Strategy is a successor of the 2008-2012 Accelerated Child Survival and Development (ACSD) Strategic Plan after its review. It has been informed by lessons learnt in the implementation of the ACSD Strategic Plan and proposes ways of achieving child health targets through health sector focussed interventions with mechanisms for enhanced coordination and accountability of child health outcomes.

Malawi is one of the countries within Africa that has achieved the Millennium Development Goal (MDG) of reducing under-five mortality by two-thirds from 1990 levels according to UN child mortality estimates (2013). Nevertheless, infant and under-five mortality rates especially neonatal mortality in Malawi remain unacceptably high. The leading causes of morbidity and mortality in children under five years of age still remain: neonatal causes, malaria, acute respiratory infections (pneumonia), diarrhoea and malnutrition.

The Government of Malawi, through the Ministry of Health, other ministries and partners in child survival and health development, is committed to further improve the situation in the country. The Government has made this commitment in various international and regional declarations to which it is signatory as well as in national policies, including the Millennium Development Goals (2000), the Abuja Declaration (2005) and the African Union 5th Ordinary Session of the Assembly that adopted in 2005 a "Decision on Accelerating Action for Child Survival and Development in Africa" to meet the MDGs at the global and regional levels, Call to Action "A promise Renewed".

Malawi also signed in 1990 the United Nations Convention on the Rights of the Child (CRC), which promotes the rights of children to life, protection, health, registration and education among other rights. The Government is much bound to honour its commitments and to regard national obligations stated in the Health Sector Strategic Plan and this Child Health Strategy as the basis for goals in child health, development and future prosperity.

The Government of Malawi, with technical and financial support from UNICEF, WHO and other key partners in child health and development, has developed this comprehensive, costed and results-based Child Health Strategic Plan to operationalise its commitment to child survival and health development.

Development of the Strategic Plan was participatory, inclusive and consultative, involving key stakeholders. The plan provides the context within which a child survives and grows in Malawi. It identifies critical factors for child survival and development and proposes selected high-impact, low-cost, programmatic interventions to address the bottlenecks. The successful implementation of the Strategic Plan relies on removing health system bottlenecks as enshrined in the Joint Programme of Work for a Health Sector Wide Approach (SWAp) 2011 – 2015. This includes: resource mobilisation, multi-sector collaboration, and greater coordination for performance (results) based management and achievement of targets. The successful implementation of the SWAp arrangement is therefore the pillar upon which this Strategic Plan has been premised in order to increase access, equity, coverage and utilisation of promotive, preventive and basic essential curative services for maternal, newborn and child health.

The plan complements related sector and departmental plans that address maternal, newborn and child health and development, and should therefore be used hand-in-hand with these other plans. The Strategic Plan should be used as a guide for developing and implementing annual action plans and cost estimates for "scaling up" of activities in the context of the EHP and sector-wide approaches. The main strategic areas that have been identified for the scale-up of child health activities include, among others: improving quality of child care services at all service delivery point by packaged interventions, improving supplies and communication facilities, and investing more at community for improving key family practices at community and household level.

I am hopeful that concerted efforts to implement this Child Health Strategy with the support of global, regional and national partners, will enable Malawi to significantly further reduce infant and childhood deaths. I invite all stakeholders to constantly refer to and use this document in the planning, implementation, monitoring and evaluation of child-centred maternal, newborn and child health interventions.

Hon. Dr Jean Kalirani, MP
Minister of Health

Acknowledgement

This Child Health Strategy is a result of a multi and intra-sectoral effort coordinated by the Ministry of Health (MoH) and its child health relevant partners. MoH would like to extend its appreciation to WHO, UNICEF, Save the Children, and USAID for their financial and technical support in the development of this Strategic Plan. The Ministry is also indebted to members of the writing team and Technical Working Group and other partners who participated in the drafting, review and provision of guidance to produce a consensus-based document. The Ministry is also specifically indebted to acknowledge efforts provided by Enock Bonongwe (Ministry of Gender) and Willie Kachaka (Independent Consultant) for volunteering to lead the writing team in the development process of this strategy.

We thank the following institutions for their valuable input: Directors and Deputy Directors from MoH, Zonal Health Offices and District Health management teams, Health training Institutions, CHAM, Civil Society Organisations and all Health workers in the Country.

The Ministry also want to thank the following for strategic and technical guidance; Storn Kabuluzi, Fannie Kachale, Ann Phoya, Kelita Kamoto, Sheila Bandazi, Frank Chimbwandira, Humphreys Masuku, Doreen Ali, Chris Moyo, Humphreys Nsona, Edwin Nkhono, Titha Dzowela, Godfrey Chirwa, Dalitso Kang'ombe, Norman Lufesi, Crispin Sambakunsi (MoH), Gabrielle Fontana, Luula Mariano, Texas Zamasiya, Elluby Maganga, Allan Macheso, Grace Mlava (Unicef), Bernadette Delmans, Leslie Mgalula, Susan Kambale, Francis Magombo, Harriet Chanza (WHO), Joby George, Tiyese Chimuna, Lydia Chimtembo (Save the Children), Lilly Banda, Ruth Madison (USAID) Dan Wendo, Evelyn Zimba, (SSDI), Cecilia Maganga (World Vision), Maridje Geldolf (D-Tree), Charles Yuma, Robert Mahala (PSI), Amos Misomali, Bonface Chimphanga (JSI), Queen Dube, Elizabeth Molyneux (College of Medicine), Martha Kwataine, Henry Kamkwamba (MHEN).

Dr Charles Mwansambo
Secretary for Health

Executive summary

The Government of Malawi (GOM) is committed to improving the health of children, as evidenced by the development of the current 5 year child health strategy. Results from the conclusion of the previous 5 year strategy (Accelerated Child Survival and Development- Scaling High Impact Interventions in the context of Essential Health Package, 2008-2012) have evidenced a reduction of under 5 mortality in Malawi. Political will, technical expertise from the Ministry of Health and donor commitments have allowed Malawi to be one of the few countries in Africa that have achieved Millennium Development Goal, #4, Reduce under 5 mortality by 2/3 by 2015 in 2012.

The recent September 2013 report, "Levels and Trends in Child Mortality", published by the UN Interagency Group for Child Mortality Estimation, or IGME, estimates that Malawi's under 5 mortality rate in 2013 is 71 per 1,000 livebirths, below the MDG #4 target of 74 deaths per 1,000 livebirths, as stated in the "Countdown to 2015" report (2012). Malawi has succeeded in reducing under 5 mortality nationwide.

The GOM is signatory to numerous international health initiatives, all with the goal of improving the health of underserved populations. One of these initiatives is entitled, "A Promise Renewed" (APR), which seeks to motivate countries to sharpen their national child health plans with a vision to reduce under 5 mortality to less than 20 per 1,000 live births by 2035. As part of APR activities, countries are asked to identify key, high impact interventions that will reduce under 5 mortality to unimaginable low rates.
As part of the research conducted in Malawi to determine the drivers of under 5 mortality, it was acknowledged that over one third of Malawi's under 5 mortality can be attributed to neonatal mortality. In addition, Malawi has the dubious honor of having the highest rate of premature births in the world- estimated to be 18% in the most recent "Born too Soon" report. As a result, the focus on this 5 year child health strategy will be on reducing rates of prematurity and conditions that disproportionately affect the neonate. The MOH in Malawi has declared the goal of neonatal mortality to be 20 per 1,000 livebirths by 2035.

The Ministry of Health (MOH) guided partners and stakeholders on a rational process to develop the child health strategy. Several analytical exercises were conducted to provide data needed to develop the new child health strategy for 2014-2020. Surveys and other quantitative sources of data were consulted to guide the identification of high impact interventions needed to "bend the curve" in reducing under 5 mortality in Malawi.

The first step in data collection was the use of the Lives Saved Tool, or LiST to determine, based on Malawi's epidemiology, the interventions that would save more lives in this new child health strategy. The tool was modeled to determined neonatal and under-five deaths averted by cause and intervention. The modeling shows that 67% of prematurity deaths, 14% of sepsis deaths and 9% of asphyxia deaths can be averted – how? By interventions, the modeling shows that 49% of neonatal deaths can be averted by use of antenatal corticosteroids to prevent preterm births, 22% by resuscitation and 21% by KMC.

For under-five deaths, the modelling shows that 34% of malaria deaths, 19% of pneumonia deaths, and 17% diarrhoea deaths can be averted. By intervention, it shows that 24% of under-five deaths can be averted by anti-malarials, pneumococcal vaccines can avert 14% of deaths and 12% can be averted by antenatal corticosteroids or pre-term labour. Details of the LiST Modelling are shown in Annex 2.

The second step in the child health strategy development was the completion of a bottleneck analysis exercise. 'Marginal Budgeting for Bottlenecks' is a result-based planning and budgeting tool that utilizes knowledge about the impact of interventions on child and maternal mortality in a country, identifies implementation constraints and estimates the marginal costs of overcoming these constraints. This tool, which has been employed in the preparation of key strategic frameworks for maternal, newborn and child health in sub-Saharan Africa, was jointly developed by UNICEF, the World Bank and WHO. It is being used to assist in setting targets for proven high-impact interventions. The Tanahashi model[1]uses a more simplified approach to Bottleneck Analysis, which includes analyzing 6 coverage determinants from both supply and demand side. These are: 1. Effective coverage-quality; 2. Adequate coverage- continuity; 3. Initial utilization-first contact of multi contact services (e.g. ANC); 4. Accessibility-physical access of services; 5. Availability- human resources; and 6. Availability-essential health commodities.

The final exercise to be completed as part of the triad, was the costing exercise. The high impact interventions identified in the LiST exercise as well as the bottlenecks and possible solutions that were identified in the Bottleneck Analysis were then costed as part of the child health strategy. The cost of the child health strategy, per year, is the following: 2013: MK 66,905,329, 766; 2014: MK 72,204,511,944; 2015: MK73,508,139,454; 2016:MK 72,691,183,310; and 2017: MK 74,551,750,377. Total cost for this strategic plan is MK 359, 860,914, 851.

This child health strategy will continue the improvements in health delivery achieved under the prior ACSD strategy. The GOM is committed to country ownership. It is our belief that the number of preventable child deaths will continue to decrease under this new strategy.

1.0 INTRODUCTION

The Ministry of Health has developed this seven year Child Health Strategy as an overarching strategy to be implemented by public and private sectors, development partners and civil society organisations. Unlike the previous plan, the child health strategy emphasises on interventions within the health sector while recognising the contribution of other sectors to child health outcomes. The plan defines strategic directions with priority conditions to be addressed, uses high-impact RMNCH interventions, sets performance targets, and establishes a monitoring and evaluation mechanism and coordination framework.

In developing this Strategy, the Government of Malawi draws inspiration from declarations to which it is signatory such as: the United Nations Convention on the Rights of the Child (1990); World Health Assembly Resolution on Universal Coverage of Maternal, Newborn and Child Health interventions; the Millennium Development Goals (2001); OAU African Charter on the Rights and Welfare of the Child; the Abuja Declaration (2005); and the African Union 5th Ordinary Session of the Assembly meeting in Sirte, Libya in 2005 that adopted a "Decision on Accelerating Action for Child Survival and Development in Africa" to meet the MDGs; The Ouagadougou Declaration on Primary Health Care (PHC) and Health Systems in Africa; the Paris Declaration on Aid Effectiveness; African Union Maputo Plan of Action on Sexual and Reproductive Health and Rights; and finally the 2012 Call to Action: A Promise Renewed. Other international commitments includes the United Nations Global Strategy for Women's and Children's Health; the United Nations Commission on Life-Saving Commodities for Women and Children (UNCoLSC and its associated RMNCH Trust Fund, the Global Action Plan for Pneumonia and Diarrhoea (GAPPD); the Draft Global Newborn Action Plan (GNAP, the United Nations Commission on Information and Accountability (UNCoIA); the outcome of Rio + 20 conference in 2012;Every Woman Every Child, Global Vaccine Action Plan; and the MDGs. Locally the strategy is formulated in the context of and aligned to the Malawi Growth and Development Strategy 2 (MGDS 2), the Health Sector Strategic Plan (HSSP), the Essential Health Package (EHP), Health SWAps and decentralization. The Government is further bound to honour its commitments and provide accountability for national obligations stated in the Child Health Strategy.

The Government is further motivated by its success in the implementation of the Health Sector Strategic Plan I (HSSP I), Road Map for Accelerating the Reduction of Maternal and Neonatal Morbidity and Mortality and Accelerated Child Survival and Development (ACSD). There is, therefore need to sustain the gains to remain on track and surpass the MDG targets and beyond. Under the banner of 'A Promise Renewed' (APR), the government of Malawi pledged to reduce preventable under-five deaths to less than 20 per 1000 live births by 2035. This requires continued and unwavering commitment by all partners to reach every woman, starting from the poor and those that are marginalised geographically and socially. This responds to the Government of Malawi's objective of equitable access but it is also yields faster results and highest returns on health investments given that morbidity and mortality are highest among poor and marginalised communities. It also requires outcome centred planning, rapid removal of bottlenecks and national resource allocation for child survival for effective results and increased efficiency in service delivery.

1.1 BACKGROUND

This section provides an overview of Malawi as a country and highlights the policies governing child health interventions. It reviews current interventions on maternal, newborn and child health in the context of the existing healthcare delivery system's capacity.

Geography, Population and the Economy

Malawi is a landlocked country in east-central Africa, bordered by Mozambique, Tanzania and Zambia. It covers an area of about 118,500 square kilometres. The climate is savannah type, having dry and rainy seasons; and the average altitude ranges from 1,000 to 2,000 meters. The country is governed under a multi-party democracy, with a devolved decentralised system. Administratively, Malawi is divided into three regions, namely the northern, central and southern regions. It has 28 districts (6 in the north, 9 in the centre and 13 in the south), which are further divided into traditional authorities (TAs) ruled by chiefs. For health administration, the country is divided into five health zones namely South West, South East, Central East, Central West and North zones. The village is the smallest administrative unit, which is under a Group Village Headman (GVH) in the TA. A Group Village Headman (GVH) oversees several villages. There is a Village Development Committee (VDC) at GVH level, which is responsible for development activities (Ministry of Health, 2011).

Malawi like many of the Sub-Saharan countries has poor economic and child health indicators. According to 2012 National Statistics Office (NSO) population projection, the total population is estimated at 14.8 million, 85% of which lives in rural areas (NSO, 2012). The annual population growth rate is estimated at 2.3%, predominantly due to the high total fertility rate (TFR), which is now estimated at 5.7, and the low contraceptive prevalence rate (CPR) of 46% among currently married women using any method (DHS, 2010). Less than 5% of the population are infants aged less than 1 year, about 17% are children under five years of age and about 46% are aged 18 years and above. The number of women of child bearing age (WCBA) is estimated at 3,387,856 with an estimated 736, 490 expected births.

Malawi is a developing country with a Gross National Income (GNI) per capita of US$330 (World Bank, 2011). Using the expenditure of one United States dollar per day as a measure of living standards, 50.7% of Malawians are poor (Government of Malawi, 2012). Malawi's economy is predominantly agro-based with tobacco as a main cash crop.

In addition to the worse socio-economic indicators, the proportion of children registered at birth as provided for in the 2010 National Registration Act is very low. This calls for a robust birth registration system taking advantage of high rates of facility deliveries and any first contact with health facilities for babies born outside health facilities.

1.2 SITUATION OF MATERNAL, NEWBORN AND CHILD HEALTH IN MALAWI

Malawi has achieved significant reduction in infant and under-five mortality from the 2000 levels and has achieved the MDG4 target three years ahead of time by achieving reduction to 71/1000 live births (UN estimates September 2013 report). Sustaining these gains entails maintaining the annual rate of reduction in under-five mortality with a special focus on newborn health where indicators are poor.

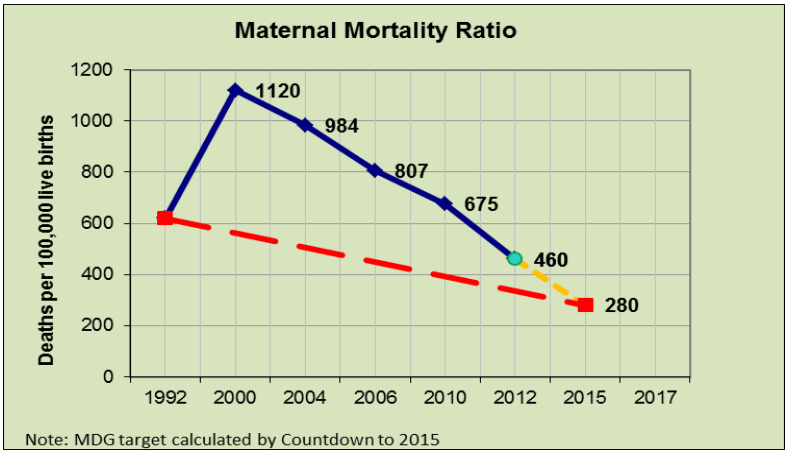
1.2.1 Status of Maternal Health

The 2012 NSO population projection estimates the number of women of reproductive age (15-49) at 3.4 million out of which 736, 490 were expected to be pregnant (HMIS 2012). According to the 2010 DHS the total fertility rate (TFR) is at 5.7 and the modern contraceptive prevalence rate (CPR) is estimated at 46%.

1.2.1.1 Maternal Mortality

The maternal mortality ratio (MMR)[2]has fluctuated over the past 15 years. The MMR doubled from 620 in 1990 to1120 in 2000. Since then it has declined to 984 in 2004. The 2010 DHS estimates the MMR at 675 per 100,000 live births. The current modelled Maternal Mortality Ratio from UN estimates is 460, versus the MDG target for 2015 of 280 (Countdown to 2015, 2012 Report).

Figure 1: Current Status and trends in maternal mortality rates

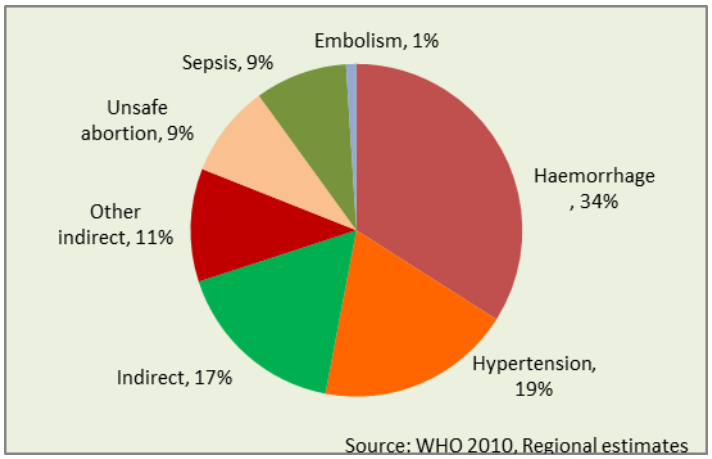


1.2.1.2 Causes of maternal deaths

The World Health Organisation (WHO) estimates that in the sub Saharan Africa region, the major causes of maternal deaths are haemorrhage (34%), hypertension (19%), indirect causes (19%), other direct causes (11%), unsafe abortions (9%), sepsis (9%) and embolism (1%). The chart below shows the regional estimates for causes of maternal deaths during the period 1997-2007.

[2]Maternal mortality ratio is the number of women who die during pregnancy and childbirth, per 100,000 live births.

Figure 2: Causes of Maternal deaths, 1997-2007[3]

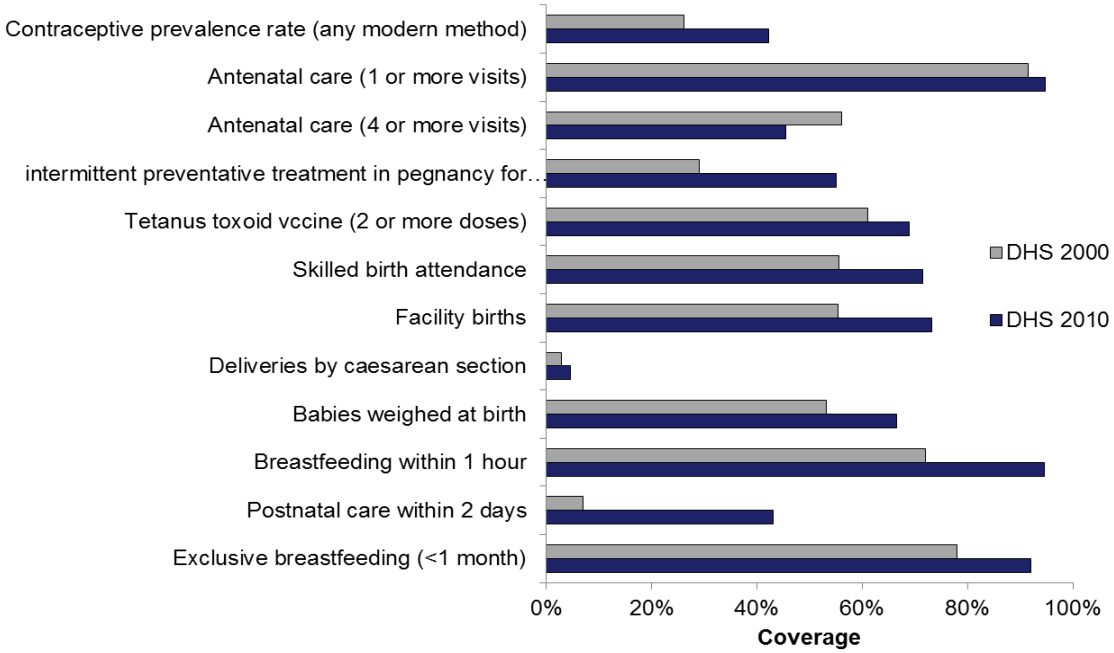


Progress in coverage of key interventions in maternal and newborn health

Progress has been made in the implementation of interventions in maternal health. For antenatal care, the proportion of women who went for the first antenatal visit (ANC1) any time during pregnancy is at 98% while only 46% of pregnant women had four ANC visits. 69% of women received at least two doses of tetanus toxoid vaccine (TTV), while the Malaria Indicator Survey (MIS, 2012) estimates that the proportion of women who received at least two doses of SP for intermittent preventive treatment (IPTp) is 54%. The HIV prevalence rate among pregnant women is 9% and of this 97% have been started on maternal antiretroviral for PMTCT (HMIS, 2012). Currently delivery by skilled birth attendants stands at 72%. Postnatal care for mothers within 48 hours is low at 43% (HMIS, 2012).

[3]Malawi Causes of Maternal Mortality, EmONC Assessment Report 2010.

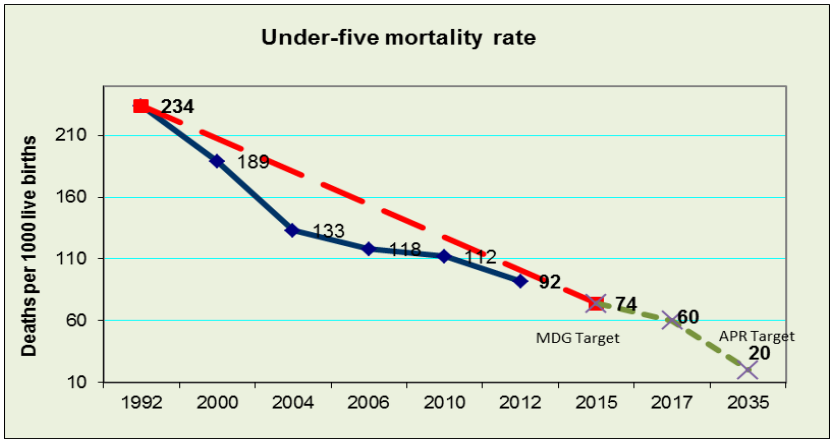
Figure 3: Trends in coverage data for maternal and newborn-related interventions and packages(2000-2010)



1.2.2 Status of Newborn and Child Health

Malawi has registered good progress in child survival during the implementation of the ACSD Strategic Plan. According to DHS, the infant mortality rate has declined from 76/1000 in 2004 to 66/1000 in 2010. In the same period the under-five mortality has moved down from 133/1000 to 112/1000 and neonatal mortality has declined from 36/1,000to 31/1000 (DHS 2010). Out of 100 children that are born, 11 die before they reach their 5th birthday.

Figure 4: Trends in Under-five mortality[4]

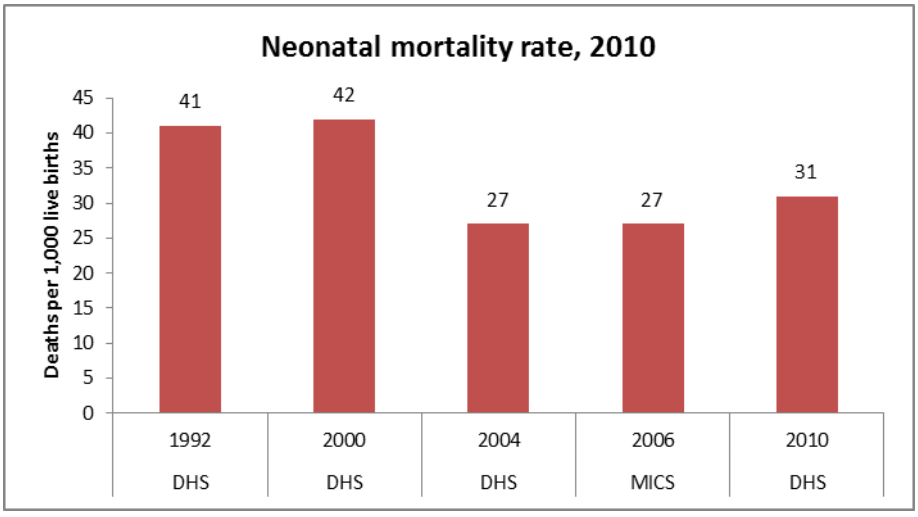


[4]U5MR from www.childinfo.org, NMR from WHO estimates 2009 including DHS 1992, DHS 2000, MICS 2006, DHS/MICS 2009

Although the neonatal mortality rate (NMR) is declining globally this has been slower than for maternal and under-five mortality rates (Darmstadt et al, 2012). Neonatal deaths contribute 30% of under-five deaths with preterm birth complications being the most important immediate cause. Over one million children die globally every year due to complications of pre-term birth (Kinney et al, 2012). Malawi has the highest pre-term births in the world with 18% of babies born prematurely. Other leading causes of neonatal mortality are asphyxia and neonatal sepsis.

According to the 2010 DHS, low birth weight is estimated at 12% and early initiation of breast feeding within one hour is at 95% with excusive breastfeeding at 4-5 months at 40%. The proportion of newborns immunised at birth (BCG) is at 94% (DHS, 2010). Neonatal mortality is contributing to an increasing proportion of under-five mortality. In 2010, estimates by DHS showed that neonatal mortality increased from 27 (2004 DHS and 2006 MICS) to 31 (2010) and these deaths accounted for 31% of under-five deaths which is still deemed very high.

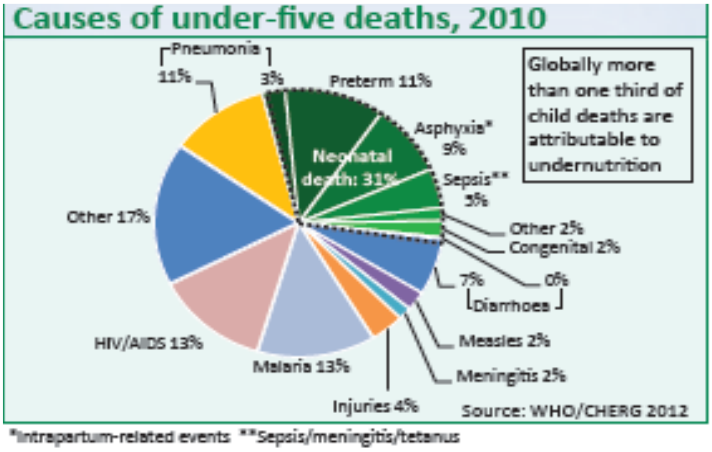
Figure 5: Trends in Neonatal mortality



The major causes of neonatal deaths are prematurity (11%), asphyxia which includes intra-partum complications (9%), sepsis, which includes meningitis and tetanus (5%), pneumonia (3%), congenital (2%) and other causes (2%). There has been a reduction in pneumonia case fatality from 18.7% in 2000 to 5.7% in 2008 and an increase in the proportion of children with acute respiratory infections taken to health facilities for treatment from 19.6% in 2004 to 70.3% in 2010. Immunization coverage is high with 81% of the children aged 12-23 months old fully immunised in 2010.

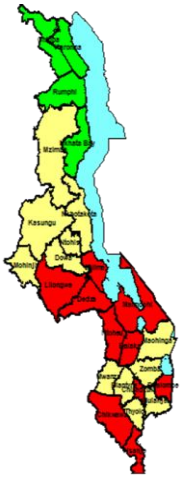
The major causes of under-five deaths in Malawi are malaria (13%), HIV/AIDS (13%), pneumonia(11%), diarrhoea (7%) and other conditions (17%)(DHS 2010). Underlying causes of the poor health status of under-five children include food insecurity and poor hygiene and sanitation. Indirect causes of children's poor health include inadequate knowledge and poor caring capacities of caregivers and inadequate access to and poor quality of health services.

Figure 6: Causes of under-five deaths, 2010



Since the last MICS in 2006, where 10 districts had under-five mortality rate of over 140, there has been varying degrees of achievements by districts. According to the 2006 MICS, under-five mortality rate of 140 was considered to be very high. Six of the high mortality districts had under-five mortality rates of less than 140 per 1000 live births while four remained above 140. The rest of the districts either stagnated or achieved minimal reduction levels. The urban districts account for a large proportion of child deaths. Lilongwe district accounts for the largest proportion (10%) of child deaths in the country. Four urban districts (Lilongwe, Mzimba MZ City, Blantyre and Zomba) account for about 30% of child deaths. This call for more attention to urban areas.

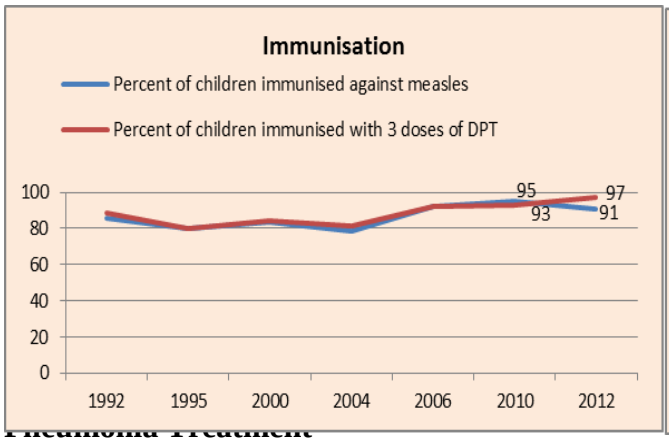
Figure 7: Under-five Mortality Rates by District, 2006-2010

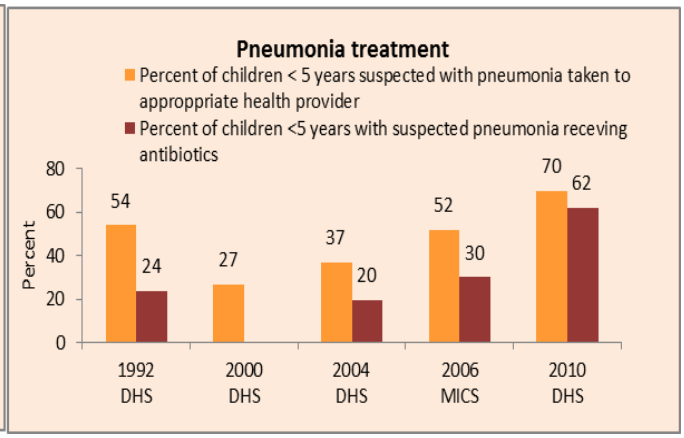
Under-five Mortality, 2006 (MICS)	Under-five Mortality, 2010 (MDHS)
	
Deaths per 1000 live births 81 - 99 100 - 140 141 - 171 Missing Data	Deaths per 1000 live birth 73-110 111-139 140-157

Progress in coverage indicators of child health interventions

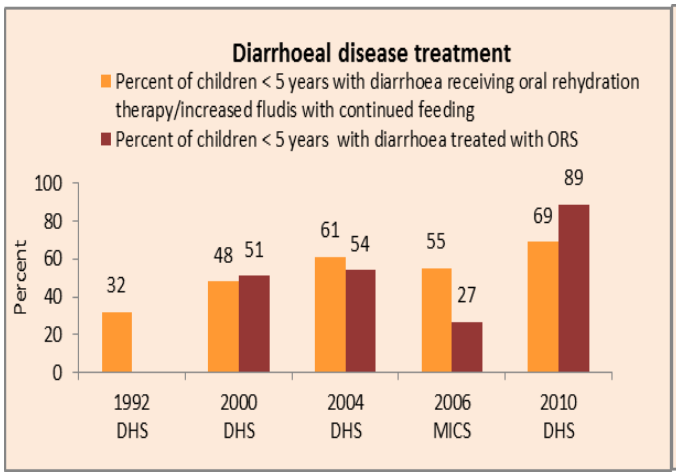
According to the 2010 DHS, the prevalence of pneumonia in under-five children is 7%, of which 70% receive antibiotic treatment. The prevalence of diarrhoea is 8%, stunting 47%, and malaria 35%. Among children 6-59 months, 80% receive vitamin A supplementation and the proportion of children sleeping under Long Lasting Insecticide Nets (LLIN) is 28%.

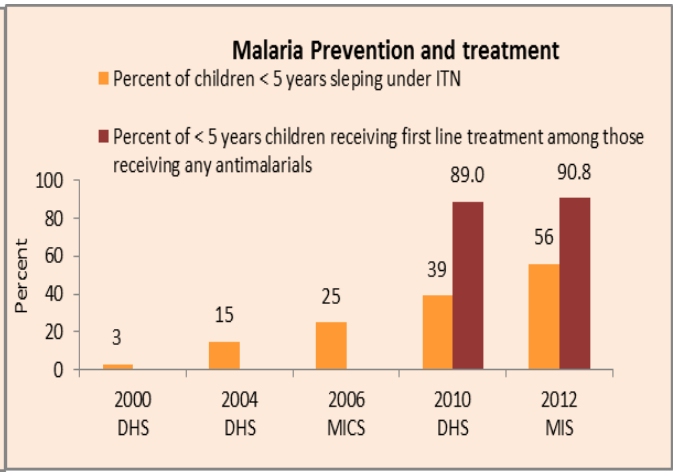
Figure 8: Progress in the coverage of interventions for selected childhood diseases and their prevalence





Diarrhoea, Malaria Prevention and Treatment

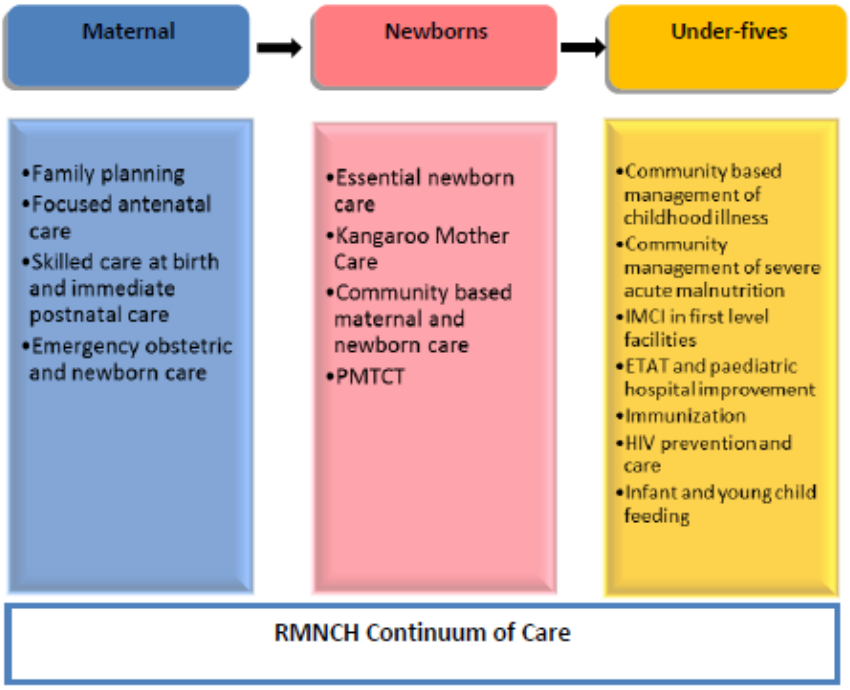




1.3 PROGRAMS IN THE RMNCH CONTINUUM OF CARE

The chart below shows the RMNCH continuum of care highlighting some key programmes and interventions implemented nationwide in the maternal, newborn and child health that were deemed of high impact on newborn and child morbidity and mortality. A more detailed list of core intervention packages reflecting the continuum of care across life course and levels of service delivery is available in Annex 1 of this report.

Figure 9: The RMNCH Continuum of Care nationwide intervention package



1.3.1Interventions in Maternal and Newborn Health

Before the year 2000, newborn survival was hardly mentioned in health policies but greater attention emerged in the early 2000s and this intensified after 2005 (Zimba et al, 2012) but funding for newborn care services remains low. Official Development Assistance for maternal, newborn, and child health doubled from 2003 to 2008, yet only 6% of this funding mentioned newborn and only 0.1% of these funds exclusively targeted newborns (Darmstadt et al, 2012).

Maternal and child health programmes took the initiative to incorporate newborn issues in their strategies and treatment algorithms. Newborn health issues were included in IMCI clinical algorithms in 2007 and training was finalized in 2010. Similarly, the Road Map for Accelerating Reduction of Maternal and Newborn Mortality and Morbidity in Malawi ('Road Map'), was revised to expand newborn content in 2007 after the publication of the Lancet Neonatal series (Lawn et al. 2005). As a result of the 'Road Map', development partners worked with government to harmonize multiple existing training materials into one training manual for facility-based health workers called Integrated Maternal and Newborn Care. This included focused antenatal care (FANC), essential newborn care, basic EmOC and newborn care, KMC and postnatal care. MoH adopted the Community-Based Maternal and Newborn Care (CBMNC) package in 2007 with a focus on antenatal and postnatal home visits. Recently Helping Babies Breathe (HBB) has been introduced. This strategy therefore links up with the current package of interventions in the HSSP and the Malawi Essential Health Package.

Essential Newborn Care (ENC) offers basic care for all babies immediately after birth. The World Health Organisation divides ENC into two categories; basic newborn care and special

care. Basic newborn care comprises interventions for all newborns to meet their physiological needs at birth and after. Key components of basic care include cleanliness/infection prevention practices, thermal care including immediate drying and wrapping of the newborn and maintenance of warmth through skin to skin contact. Other components are initiation of breathing, early initiation and exclusive breastfeeding, eye care, early postnatal contact and follow up postnatal care.

The second category for ENC is special care, which comprises interventions for a small group of newborns with conditions that require extra care. The initiation and expansion of quality special essential newborn care (ENC) to include newborn resuscitation facilities; appropriate antibiotic therapy for sepsis and quality KMC services for premature/low birth weight babies. Most newborn deaths, especially during the first week of life are as a result of three major causes namely; prematurity, asphyxia, and sepsis. Malawi has focused on scaling up simple evidence-based newborn interventions**.** Among the few programmes that specifically addressed newborn survival were the Saving Newborn Lives, the Partnership for Maternal, Newborn and Child health (PMNCH) and the Catalytic Initiative (CI).

Birth asphyxia is the third leading cause of neonatal deaths in Malawi accounting for 23% of all newborn deaths (MICS report 2006). In Malawi 71% births are attended by skilled birth attendants, however about two thirds of the skilled birth attendants lack skills in newborn resuscitation (EMONC Report 2010). Furthermore, the HBB Rapid Assessment Report of 2011 indicated that most health facilities in Malawi had inadequate equipment for newborn resuscitation. The Helping Babies Breathe initiative was endorsed by the Ministry of Health in March 2011 to strengthen the skills of service providers in management of birth asphyxia. It is within the essential newborn care package and its goal is to contribute to the reduction of child mortality and makes a contribution towards achieving Millennium Development Goal 4 by addressing an important cause of newborn death. Within the context of integrated MNH and strengthening of Essential Newborn Care (ENC), HBB objectives are to increase knowledge, skills and practices of skilled birth attendants for immediate management of birth asphyxia in health care facilities in Malawi. Ensure availability of equipment and training materials to facilitate competence based practices and Strengthen systems to monitor maternal and newborn care including birth asphyxia management. HBB uses cost effective equipment and can be done in all health care settings where babies are born as the first step in newborn resuscitation at birth.

In view of the high pre-term birth rates, the Malawi Government has recently taken the initiative to reduce deaths due to pre-term complications through the scale up of the use of antenatal corticosteroids (ANCS). There is a global movement to scale up use of ANCS which helps to speed up maturation of foetal lungs and prevent respiratory problems. It is estimated that ANCS could save almost 400,000 lives a year in low-income countries (Lawn, 2012 cited in Count Down to 2015). Currently, a task force has been established to oversee the scale up of ANCS in Malawi.

1.3.2 Integrated Management of Childhood Illnesses (IMCI)

The Ministry of Health, with support from partners, has been implementing a successful IMCI strategy since 1998 to deal with high under-five morbidity and mortality. It aims at improving health workers' skills, availability of essential drugs, referral system, and promoting family and community childcare practices for child survival, growth and development.

IMCI is coordinated by the IMCI Unit which is mandated to ensure that all children suffering from common illnesses are managed holistically through out-patient and in-patient services at health facilities and at home. The Unit also ensures that all health facilities have: at least two IMCI trained health service providers; supplied with all essential drugs and supplies; and have adequate transportation and communication systems for effective management of common childhood illnesses. Its goal is to ensure that 80% of households practice all the key care practices of IMCI and child care.

The development of the 2006 IMCI Policy followed by the 2008-2012 ACSD Strategic Plan were the first attempts by MoH to provide policy guidance and strategic vision for reducing under-five mortality. The policy and strategic plan emphasised the implementation of the 15 high impact interventions.

In 2008, MoH established integrated Community Case Management (iCCM) in which HSAs are trained, deployed and supported in hard to reach areas where access to health services was restricted by distance (more than 8km) and other geographic barriers. The HSAs are entrusted to open village clinics where they manage uncomplicated cases of malaria, pneumonia, diarrhoea, malnutrition and red eye and refer severe cases to higher level. Management of newborn sepsis at the community level is being incorporated in the protocol but has not been fully rolled out. To date, iCCM is being implemented in all 28 districts with partners allocated to support specific districts. By 2013, a total of 3,746 HSAs have been trained and deployed to provide iCCM services, representing 94% of the total hard-to-reach areas identified nationwide.

The main constraints and challenges to the IMCI programme includes inadequate financial resources to implement the package as a whole in all districts; acute shortage of staff at the health facility level; inadequate referral and communication systems; frequent stock-outs of essential drugs and supplies; and inadequate coordination and inequitable allocation of resources resulting from lack of interest by partners.

In order to address these challenges, all IMCI partners are encouraged to support efforts to scale up and maintain universal coverage of a standardized minimum package of maternal, newborn and child high impact interventions using the IMCI approach through a managed partnership.

1.3.3 Acute Respiratory Infections (ARI) Programme

Acute respiratory infection is one of the most significant causes of morbidity and mortality amongst children worldwide. The ARI programme aims at contributing to the reduction of under-five deaths through reducing pneumonia deaths and other related childhood lung diseases. The programme activities have evolved overtime; it now includes improving the emergency and inpatient management of seriously ill children through Emergency Triage Assessment and Treatment (ETAT) and the Paediatric Hospital Improvement Initiative (PHI). With ETAT and PHI, the programme aims to establish well-functioning emergency rooms and emergency areas that will respond to the needs of sick children. In the health centres, the programme aims to equip a holding room with basic emergency equipment so that children can receive adequate treatment when referral is difficult.

Since a lot of neonatal deaths are due to respiratory problems, the programme has been mandated to roll-out Continuous Positive Airway Pressure (CPAP) in all hospitals across the country. It is expected that all district hospitals will have neonatal units equipped with basic

lifesaving equipment such as CPAP machines, oxygen concentrators, suction machines, pulse oximeters, glucometers and other basic emergency care equipment.

Challenges faced by the ARI program include a lack of adequate resources to scale up the implementation of the interventions to satisfactory level, inadequate availability of emergency equipment; and poorly trained health workers in the use of emergency equipment.

With its increasing scope of activities, the ARI programme is in the process of developing a detailed operation plan for paediatric care in the country. This plan will cover all factors that negatively affect paediatric care such as the health education system, service delivery that includes equipment sourcing and management, information management and use and operational research. It will be aligned to the Health Sector Strategic plan (HSSP) and the current Child Health Strategy.

1.3.4 Expanded Programme of Immunization (EPI)

To avert deaths caused by vaccine preventable diseases, MoH is implementing an immunisation programme called the Expanded Programme on Immunization (EPI). The mission of EPI is to reduce infant morbidity and mortality rates due to vaccine preventable diseases by providing quality immunization services. The goal of the programme is to increase access to immunization services, provide effective and potent vaccines and increase demand for the services.

Malawi has had a robust and enviable immunization programme for many years and achieved universal childhood immunization (UCI) in 1989, with over 80 per cent coverage for all antigens. High coverage has been sustained since 1989 (Ministry of Health, 2008). Malawi received a shield in December 2012 from GAVI as a symbol of recognition for maintaining high levels of immunization coverage. The 2010 DHS shows that 81% of children aged 12-23 months were fully immunized with 97% receiving BCG, 93% pentavalent, 86% polio, and 93% received measles vaccine.

Recently MoH has introduced two vaccines in the national immunisation schedule which are yet to be rolled out. These include pneumococcal vaccine against pneumonia launched in 2011 and rotavirus vaccine against diarrhoea launched in 2012.

The EPI has faced a number of challenges including delayed disbursement of funding for vaccine procurement; not reaching the required non polio AFP rate of 4.0; not reaching the required stool adequacy rate of 80%; lack of an EPI policy; delay in review of EPI manual; and a delay in the updating of the EPI communication plan.

1.3.5 National Malaria Control Programme

Malaria is endemic throughout Malawi and continues to be a major public health problem with an estimated 6 million cases occurring annually. It is the leading cause of morbidity and mortality in children under-five years of age and pregnant women. The primary control strategies include intermittent presumptive treatment (IPT) for pregnant women and distribution of long lasting insecticide mosquito nets (LLINs) to mothers during antenatal visits and to children in under-five clinics. It also includes treatment of malaria cases, especially under five children and women, using artemisinin combination drugs. The programme is also conducting Indoor Residual Spraying (IRS). The Malawi Malaria

Indicator Survey (MIS) 2012 showed that the national parasite prevalence rate by slide microscopy has reduced from 43% in 2010 to 28% in 2012. .

The Malaria Control Programme aims at reaching universal coverage of LLINs in line with the WHO recommendation of one net for every two individuals. To achieve this, the programme conducts mass distribution of LLIN every three years. In between the mass distribution exercises the programme continues to distribute LLINs to pregnant women and under-five children.

The National Malaria Control Programme faces some major challenges including: low utilization of LLINs despite an increase in coverage; low supply of ACTs (LA) on the global market; global market forcing the country to opt for generic LA shortage due to delays in the disbursement of funds, which resulted in a nationwide stock out of LA; higher consumption of LA due to presumptive treatment at all levels; and a low supply of RDTs to curb overuse of LA.

1.3.6 Nutrition

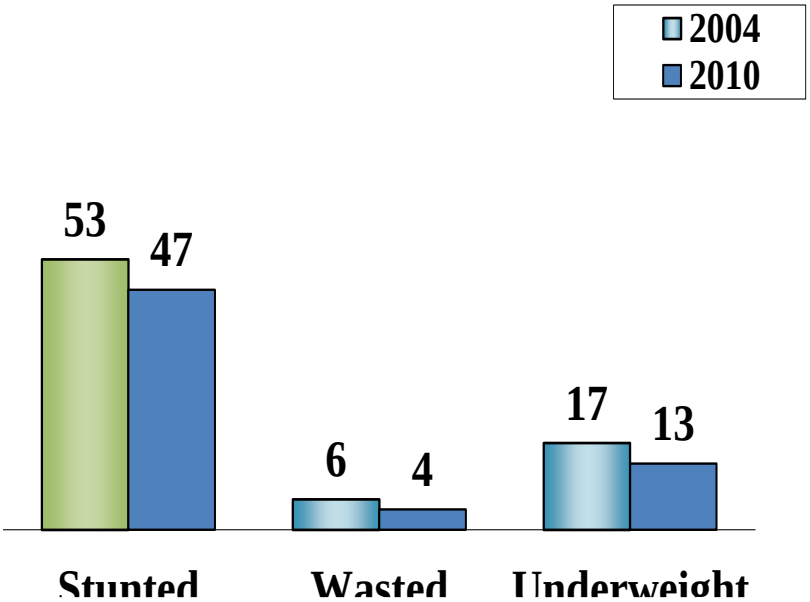
Malawi's nutritional status has remained constant for a long period despite efforts to improve the situation. According to the 2010 Malawi Demographic Health Survey, 47% of under-five children are chronically malnourished (stunted), 4% have acute malnutrition (wasting) and 13% are underweight (DHS 2010). Stunting has declined less visibly from 56% in 1992 to 53% in 2006 and to 47% in 2010 but this figure is still very high[5]. The average rate of stunting in Sub-Saharan Africa is 40% with Malawi having one of the highest rates of stunting on the continent. According to the recent Lancet series on nutrition (2013), malnutrition accounts for 45% of deaths among under-five children. These deaths can be prevented by simple interventions including in the SUN initiative discussed later.

The majority of under-five children in Malawi are anaemic, which in early childhood is a major factor in compromised cognitive development, associated with losses of up to 8 Intelligence Quotient points. Anaemia is concentrated among children aged 0-2 years, after which the percentage starts to decline. According to the DHS 2004 and 2010, the percentage of children under five with anaemia dropped from 73% to 63% respectively. In women of reproductive age, anaemia is a major cause of maternal mortality and is also associated with low birth weight, fatigue and reduced productivity. Over the past decade, the percentage of anaemic women (aged 15-49 years) has declined from 47% in 2001 to 44% in 2004 and 29% in 2010 (DHS 2001, 2004, 2010). This improvement can partly be attributed to the large scale malaria program, notably the distribution of insecticide-treated bed nets (ITN).

Micronutrient deficiencies of vitamin A, iron and iodine are also high. Such high malnutrition levels have long-term adverse effects on the intellectual and physical ability of an individual and undermines the individual's academic and professional achievement and productivity. By 2010, vitamin A supplementation was provided in all health facilities and extended to hard to reach areas through the bi-annual Child Health Days. According to the 2009 NMS preliminary results, 95% of children 6-59 months had received Vitamin A supplementation. Vitamin A deficiency dropped from 59.2% in 2001 to 53.7% in 2009. During the same eight-year period households using adequately iodised salt increased from 47.1%to87% and adequate iodine status was found in 73% of school age children and 71% of women[5].

[5] Global Database on Child Growth and Malnutrition at www.who.int/nutgrowthdb/database/en/

Figure 10: Prevalence of malnutrition among children under-five (DHS)



Malawi has joined the global Scaling Up Nutrition (SUN) – 1,000 Special Days Movement under the theme "United to End Stunting", which aims to reduce child stunting levels to 20% by 2016. SUN promotes optimal care in the critical period for the pregnant mother and the child up to 24 months. Malawi is scaling up community level nutrition interventions in all the 28 districts through a multi-sectoral approach. Coordination mechanisms have been established for SUN implementation at national, district, Traditional Authority and village levels. Malawi has prioritized the promotion of early initiation of breastfeeding, exclusive breastfeeding during the first six months and optimal complementary feeding. Exclusive breastfeeding (EBF) for 6 months and vitamin A supplementation (VAS) have contributed significantly to the reduction in child mortality in Malawi, and has reached high coverage through capacity building and linkages with immunisation days and child health week.

In addition, the MoH is currently using Community-based Management of Acute Malnutrition (CMAM) in treatment of acute malnutrition. CMAM has four main components namely, Community Outreach, Out-patient Therapeutic Programme (OTP), Nutrition Rehabilitation Units (NRU) and Supplementary Feeding Programme (SFP). Management of acute malnutrition is implemented throughout the country with technical and financial support from development partners. CMAM Cure Rates have usually been above the WHO Sphere standards of above 75%. Overall CMAM death rates are below the set standards of less than 10%.

1.3.7 EMTCT, PMTCT and Paediatric ART

The HIV unit coordinates the health sector response to HIV and AIDS through prevention and treatment interventions. Since the inception of the free anti-retroviral therapy (ART) programme in 2004, Malawi has been able to initiate about 70% of those in need of ART. There are currently close to 650 health facilities certified and offering ART/PMTCT services spread through all the zones in the country.

A key prevention component in child health is Prevention of Mother to Child Transmission (PMTCT). The PMTCT program continues to expand the geographical coverage in order to increase access and uptake. In July 2011, a new PMTCT protocol was introduced where it stipulates that all HIV positive pregnant women should be initiated on lifelong ART regardless of their WHO clinical stage and/or their CD4 cell count commonly known as *Option B+*. Malawi integrated the ART and the PMTCT programmes to streamline services, improve efficiency as well as enhance the implementation of option B+, which entails initiating pregnant women on ART within the MNCH services. This is moving towards the direction of elimination of new pediatric HIV infection by 2015.

The implementation of PMTCT Option B+ has effectively integrated PMTCT and ART services. ART may be started and continued at ANC, labour and delivery, and at ART clinics. All infants born to HIV-infected women are supposed to start daily Nevirapine prophylaxis for the first 6 weeks of life. Nevirapine syrup is given to women at the earliest opportunity to take home with instructions how to give it to the newborn. ART scale-up has resulted in a growing proportion of HIV-infected women who are already on ART when becoming pregnant. Implementation of Option B+ will further increase ART coverage in this group. Currently the number of health facilities offering Option B+ is 663 and those offering early infant diagnosis services are 513.

The country developed a plan for the elimination of mother to child transmission (EMTCT**)** to run from 2011 -2015. The goal of the plan is moving towards elimination of new paediatric HIV infections among children and keeping their mothers alive by 2015. A series of trainings are being carried out in order to build capacity and one of these important training has been on early infant diagnosis (EID) targeting HTC counsellors and HSAs.

There are many challenges faced in the delivery of HIV and Paediatric ART services. These challenges include: high HIV prevalence in the general population; low HTC uptake among adult males, non-pregnant women and HIV exposed children; access of modern family planning methods among HIV positive women; lost to follow-up of mothers and children in the continuum of care; weak health system to address issues that affect good delivery of maternal and child health services that includes HIV and AIDS as well as PMTCT; and funding for the procurement of ARVs.

These challenges, notwithstanding, PMTCT continues to make steady progress. It is hoped that strategies outlined in the EMTCT plan, coupled with availability of resources and a conducive political environment will allow the program to meet its targets.

1.3.8 Water and Sanitation

Lack of access to safe drinking water and proper sanitation are the main causes of diarrhoeal diseases. The prevalence of diarrhoea in Malawi is estimated at 17.5% and in children aged 6-12 months the prevalence is 38%. According to DHS 2010, 80% of households use an improved source of water while the proportion of households without a toilet facility is 11%. In the HSSP special attention is given to improve safe water accessibility, sanitation, hygiene and ensuring food safety and hygiene. The Environmental Health Section is working with various partners such as the Ministry of Water Development and Irrigation (MoWD&I), Ministry of Trade, Development Partners and Non-Governmental Organizations in ensuring that risks to health are minimized.

The Ministry of Health is intensifying efforts to reduce transmission of diarrhoeal diseases through the promotion of the use of faecal disposal facilities. A strategy for ensuring Open Defecation Free (ODF) Malawi by 2015 was developed and launched in 2011 by the Ministry of Water Development and Irrigation in collaboration with MoH and partners. A task force comprising all these partners was formed, chaired by MoH to oversee the implementation of the strategy.

Strategies used to curb the occurrence of diarrhoeal diseases include: reducing food contamination through food inspection and food premises auditing; promotion of household water treatment and safety (HWTS) water storage; reducing water and sanitation related diseases; and promotion of hand washing.

According to the 2010 DHS report, 32% of the households in Malawi use HWTS. A strategic plan has been drafted and is in place to assist in guiding scaling up of HWTS in terms of bringing awareness on other point of use water treatment options, regulation of the options, developing user manual and modes of scaling up.

In terms of hygiene promotion, hand washing with soap has been singled out as the main behaviours to be promoted in hygiene promotion.

2.0 MODELLING EFFECTIVE INTERVENTIONSUSING LIVES SAVED TOOL (LIST)

To determine the interventions that would save more lives in this strategy, a Lives Saved Tool (LiST) was used. The tool was modelled to determined neonatal and under-five deaths averted by cause and intervention. The modelling shows that 67% of prematurity deaths, 14% of sepsis deaths and 9% of asphyxia deaths can be averted. By interventions, the modelling shows that 49% of neonatal deaths can be averted by use of antenatal corticosteroids to prevent preterm births, 22% by resuscitation and 21% by KMC.

For under-five deaths, the modelling shows that 34% of malaria deaths, 19% of pneumonia deaths, and 17% diarrhoea deaths can be averted. By intervention, it shows that 24% of under-five deaths can be averted by anti-malarials, pneumococcal vaccines can avert 14% of deaths and 12% can be averted by antenatal corticosteroids or pre-term labour. Details of the LiST Modelling are shown in Annex 2.

Figure 11: Neonatal deaths averted by cause in 2020

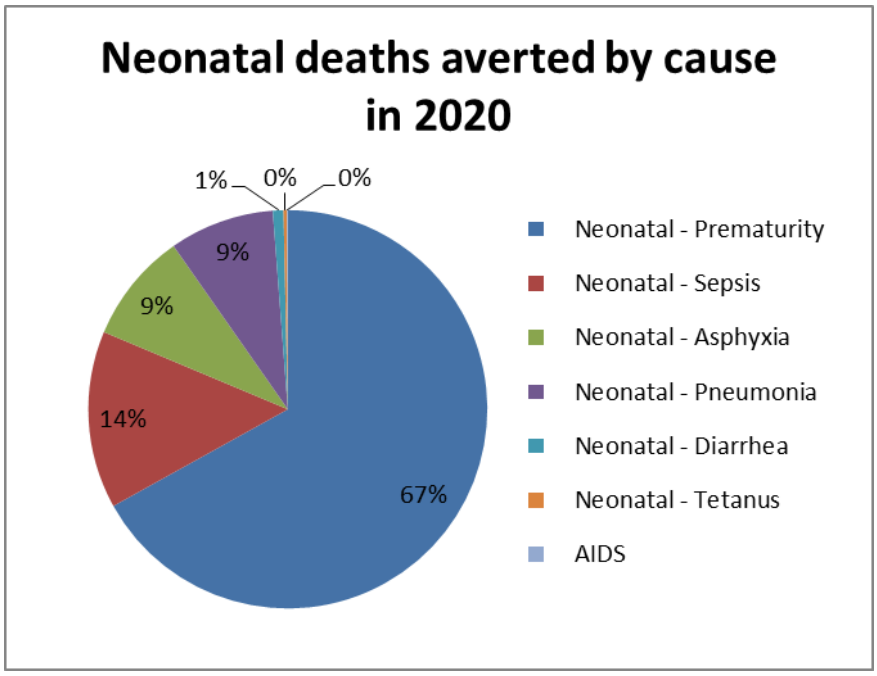


Figure 12: Neonatal deaths averted by Intervention in 2020

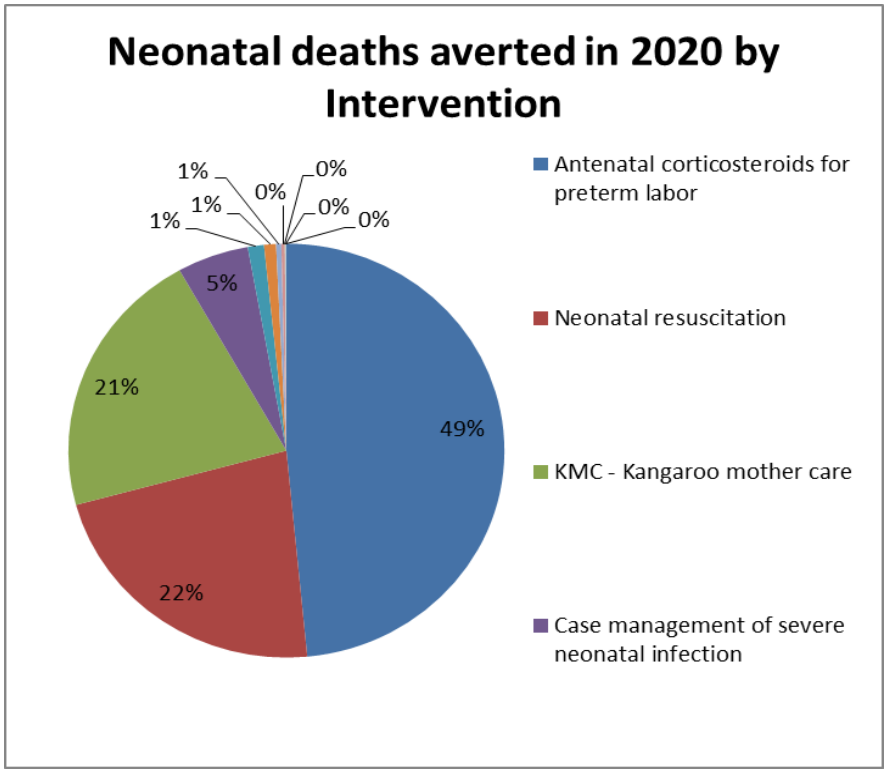


Figure 13: Under-five deaths averted by cause in 2020

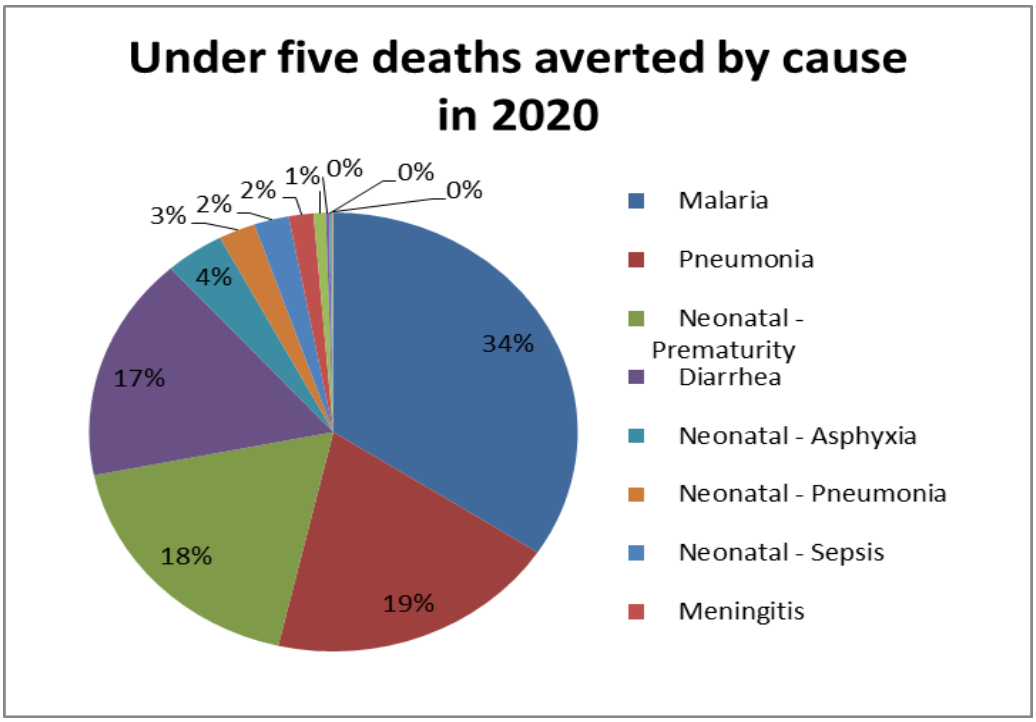
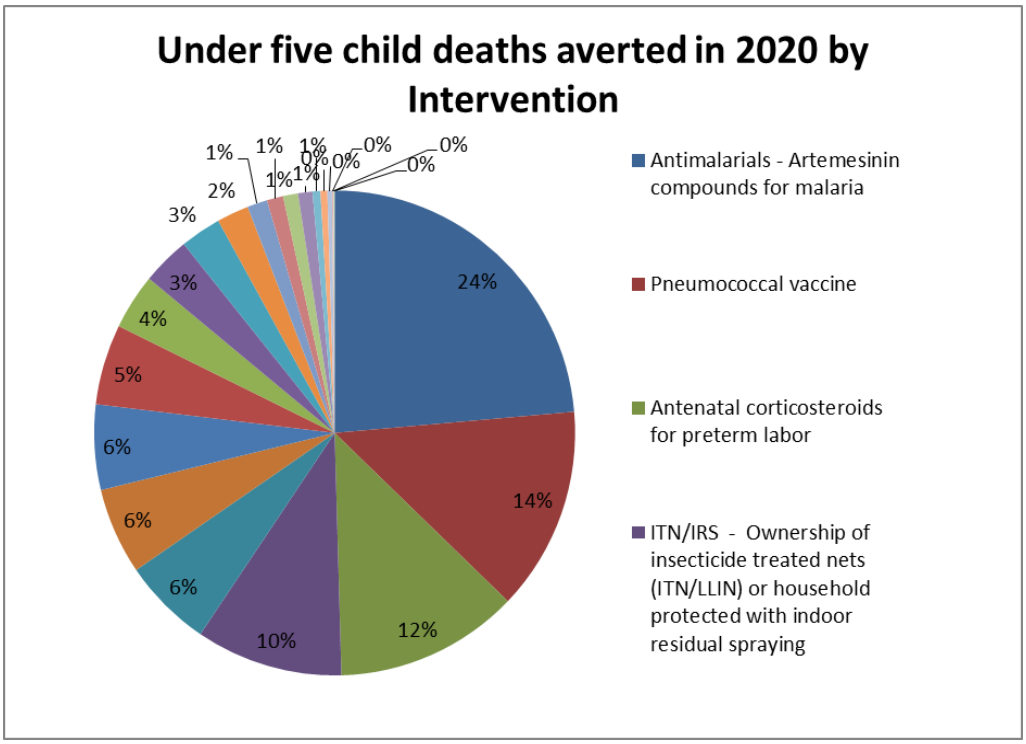


Figure 14: Under-five child deaths averted by intervention in 2020



5.0 MALAWI HEALTH SYSTEM: STRUCTURE AND FUNCTIONING

The Malawi health delivery system has three levels, namely; primary, secondary and tertiary which are linked to each other through an elaborate referral system. Primary health care is provided at community level, secondary health care at district level and tertiary health care is provided in central hospitals and specialist private hospitals. Health Surveillance Assistants (HSAs) are the cadre that provide services at the lowest health facility levels and deliver health services within the communities. HSAs constitute a link between the community and the health centre. By the year 2009, Malawi had 10,451 HSAs serving at community level.

In terms of physical access to health care, there are certain districts that are better served than others based on the recommended 8 km radius of a health facility. The proportion of population living more than the 8 km distance from a health facility is high for Chitipa (51%), Kasungu (38%), Balaka (32%), Chikwawa and Mangochi (27%) districts. It is quite low in Chiradzulu, Blantyre, Mulanje and Zomba districts, where less than 5% of the population reside more than 8 km from a health facility (Ministry of Health, 2011). This situation is most likely to change when the Ministry adopts the 5km radius as recommended distance even for community case management, which used 8 km radius from the nearest health facility to establish village clinic sites.

Commodity Availability and Supply Chain Management System

One of the common challenges of the Malawi health care system is ensuring consistent availability of essential commodities. Significant progress has been made to ensure that essential medicines are made available in all health facilities. However, numerous challenges remain: there is inadequate space for storage of essential medicines; procurement processes are lengthy; pilferage is still a major problem; supply chain management is weak; and some health facilities still report a shortage of drugs. A significant proportion of districts overspend on drugs through buying at higher prices from the private sector. This notwithstanding, MoH is striving to ensure the availability of adequate quantities of high quality, safe and affordable essential medicines for effective delivery of the EHP to all Malawians (Ministry of Health, 2011).

Although the Central Medical Stores Trust (CMST) plays a co-ordination role for procurement and supply chain management, there has been a proliferation of parallel supply chains (PSCs) in recent years in the form of parallel procurement, warehousing, and distribution. The PSCs, which operate concurrently with the CMST, have increased significantly due to weaknesses in existing national systems in handling increased volumes of donor-supported commodities. The use of parallel systems increased markedly following mismanagement of commodities. A strategy has been proposed for a phased transition of the PSCs in Malawi in favour of effective national supply chain systems that are capable of meeting the needs of public health programs for drugs and medical supplies[6].

To ensure availability of essential medicines at community level for Community Case Management (CCM), Government of Malawi with support from partners has provided a mechanism for procurement and supply of medicines and improved supply chain system for commodities used at the community level. Specifically, the SC4CCM project has supported

[6] Final Report of a Multi-Stakeholder Planning Mission. Joint Strategy for Supply Chain Integration in Malawi. August 2012

the Ministry in increasing visibility of commodity needs for the CCM Program through supporting annual forecasting and quantification of CCM specific commodity needs, periodic reviews of CCM commodity forecasts to ensure changes in demand are timely captured for decision makers' action, and highlighting budget requirements needed to ensure a full pipeline for CCM programme.

The SC4CCM Project has also successfully pioneered use of an electronic Logistics Management Information System (eLMIS) tool known as *c-Stock*, which supports HSAs in hard-to-reach areas with timely reporting and re-supply of health products. In the 6 intervention districts where *c-Stock* was piloted, it has significantly improved visibility into and management of product availability at the community level for CCM, reproductive health, malaria, and HIV testing. *cStock* has already been approved by MoH for nation-wide scale up and the World Health Organization (WHO) is already supporting this scale up process, with 9 additional districts added as of April 2013.

5.4 Human Resources for Health (HRH)

The Malawi Health Delivery System has for a long time had a critical shortage of health personnel. From 2004 to 2010 development partners supported the implementation of a six-year Emergency Human Resource Plan (EHRP) under the health Programme of Works (PoW). With this support, the human resource situation within the health sector improved significantly. The total number of professional Health Care Workers (HCWs) increased by 53% from 5,453 in 2004 to 8,369 in 2010; the capacity of health training institutions increased across a range of programs; and staff retention improved. Despite this effort, only four of the 11 priority cadres (namely clinical officer, environmental health officers, radiolographers and laboratory technicians) met or exceeded their targets as set in the original EHRP design. Additionally, an expanded staff establishment among priority HCW cadres has led to significant vacancies.

The human resource challenges remain both acute and complex and HR projections show that at current output levels it will take many years to come anywhere near the numbers of health staff needed to provide minimum standards of service delivery (Ministry of Health, 2011).

According to the Malawi Human Resources Strategic Plan, the physician density in 2009 per 100,000 population was 2; nurses and midwives was 36.8; pharmacists was 1.7 and Laboratory Technicians was 2.9. The 2010 HR report shows an overall vacancy rate of over 60%. The vacancy rate for specialist doctors is 86%; 84% for clinical officers; and 72% for nurse/midwife technicians.

Table 1: Vacancy rate by cadre in 2010 (Planning Department – MOH, and CHAM 2010)

Cadre	MOH			CHAM		
	Posts	Filled	Vacancy rate (%)	Posts	Filled	Vacancy rate (%)
Specialist doctor	230	33	86%	n.a.	n.a.	n.a.
Medical Officer	344	168	51%	116	33	71.5%
Clinical Officer	756	118	84.3%	649	240	63%
Medical Assistant	955	683	28.5%	245	199	18.7%
RH Officer	4	8	-100%	n.a.	n.a.	n.a.
Nursing Officer	1017	45	95.6%	266	96	64%
Nursing Sister	n.a	n.a	n.a	1248	329	73.6%
Community Nurse	216	48	77.8%	363.	31	91.4%
Enrolled Nurse/Midwife	0	71	n.a	1542	154	90%
Nursing /Midwife Technician	9057	2473	72.7%	847	754	11%%
Health education officer	93	27	71%	n.a.	n.a.	n.a.
Health Surveillance Assistant	0	4017	0%	n.a.	n.a.	n.a.

n.a. = not available

Almost all health facilities fall short of staffing norms and programme requirements for effective service delivery. Only 42% of health centres meet the 2:2:1 required ratio of two clinicians, two nurse/midwives and one environmental health officer. Guidelines exist for minimum number of health workers at all levels of health care to deliver maternal, newborn and child health. The IMCI policy for instance, states that a health centre shall have a minimum of two health workers trained in IMCI and that 80% of health facilities in each district should meet this requirement. Currently coverage ranges from 46% to 54%.This points to the need for a rapid increase in the number of health workers through a well-supported human resource expansion plan.

There is an estimated number of 10, 451 HSAs who works as frontline health workers in the community. Each HSA is expected to serves a population of 1000 and to deliver community based interventions. In addition to the HSAs, community-based distribution agents (CBDAs) and community support groups exist to support the delivery and uptake of health interventions at the community level. There is a need to clarify roles and strengthen supervision and coordination mechanisms between extension workers, village health committees and health centres.

Health Infrastructure

There are currently 714 health facilities in Malawi comprising 4 central hospitals, 3 psychiatric hospitals, 23 district hospitals, 58 community and other hospitals, 457 health centres, almost 100 dispensaries, 17 maternity units and 2 rehabilitation units. These health facilities are managed by the MOH (5177), CHAM (165), BLM (28) and NGOs (4).

In practice, each primary health care facility covers an average of 22,000 people. However, the norm is that each health centre should provide health services for 10,000 people. This discrepancy points to a need to increase the number of primary health facilities by 660 in order to reach a total of 1250 health centres. Moreover, most health facilities need rehabilitation and upgrading. Currently, 74% of health facilities have the capacity to deliver the Essential Health Package (MoH, 2012). At the community level, there are 4,000 identified hard to reach areas which lack infrastructure to serve as a village clinic. A total of 3,746 village clinics are functional and providing health services to under-five children in hard to reach areas. To address the infrastructure challenge, there is need to conduct an assessment of health infrastructure which should culminate in a health infrastructure expansion programme to service the areas of need.

Information management

The health sector uses the Health Management Information System (HMIS) as its major source of data on health services. The system collects data for the health facility and the district consolidates it before sending to the central level. Data from the community is aggregated at facility level. However, the quality of the data remains poor because staff members responsible for collecting and processing the data have insufficient skills to evaluate its validity, and the DHMT does not often review or use the data systematically. Vertical programs, such as EPI, collect data parallel to the HMIS. There is insufficient coordination between vertical programs, IDSR and HMIS. Currently the Ministry is rolling out the District Health Information System (DHIS2), a web-based application that will likely improve reporting of data in real time.

Furthermore, at the community level, the village health register (VHR) is the tool for headcount and reporting on uptake of high impact interventions in the community. The tool has been launched, but the use of this tool has been inadequate. There is a need to retrain the HSAs to correctly use the VHR and to compile data on a monthly basis for feedback to the community and reporting to health facility, district and central levels.

BOTTLENECK ANALYSIS

This section presents a synthesis of the bottleneck analysis carried out to inform the development of the child health strategy. The analysis shows tracer intervention, main bottlenecks, the causes, solutions, and targets set in terms of bottlenecks reduction. The analysis categorises the interventions by two main delivery platforms namely; community based interventions[7] and facility-based interventions, including outreach[8].

[7] List of cross-cutting strategies identified that are likely to benefit all the interventions delivered at community level (including input from ARI at community level).

[8] List of cross-cutting strategies identified that are likely to benefit all the interventions delivered at facilities and through outreach (including input from analysis of Full Immunization).

Table 2: Community based interventions

Malaria, ARI and Diarrhoea treatment			
Bottleneck	Causes	Solutions	Bottleneck Reduction
Commodities: 60% stock out for antibiotics (High)	Lack of data use for quantification and budgeting that includes community requirement	Capacity building for health centre and district teams for quantification for health commodities	80% of facilities without stock outs of essential commodities
	Lack of effective monitoring system at both national and district level	Redefine village clinic to include those that need to up graded into health posts, and expansion plan	
Access. Low access to pneumonia treatment from village clinics (13%)	Competing tasks of the HSAs that demand them to assist in other activities at the facilities	Clear distinction of HSAs working at facilities and those at village clinics	80 % of village clinics with an HSA present in the catchment area
	Low retention of HSAs in hard to reach villages	HSAs to be recruited from the areas they come from as per policy e.g. in the safe motherhood approach with the involvement of local leaders (decentralised recruitment)	
		Rational selection of HSAs for CCM training	
		Enforce and redeploy HSAs in CCM to live in hard to reach area as per guidelines/policy	
	Lack of proper housing	Provide housing to HSAs in their assigned villages	
		Engagement of the Local Government in the construction and provision of structures/ accommodation and clinics using Local Development	

	Lack of supervision and monitoring	Strengthening of supervision at both the community and district levels	
		Adequate transportation for HSAs in hard to reach areas in support of their activities	
	Inadequate motivation among the HSAs	Motivation to HSAs in hard to reach areas	
		Develop definite career path and providing for advantages in competing for the positions	
Children U5 sleeping under bednets			
Utilization. Low uptake of Long Lasting Insecticide Treated Nets in good condition (58%)	Misuse of the nets	Continued sensitisation on the use of nets	53% of children U5 that slept under a bed net the night before the survey
	Altitudes towards use of Bednets		
	Lack of proper care of the Bednets		
Complementary feeding and micronutrients			
Small proportion of children 12-23 months receiving minimum acceptable diet (utilization)	Time to apply the knowledge (parents are busy)	Training, refresher and mentorship of frontline workers	70 % of children 12-23 months receiving minimum acceptable diet.
	Knowledge gap on the part of the parents	Improve IEC (pretested by audience). Continuous production of IEC	
ARTs for HIV+ children			
Utilisation	Low awareness of communities of the need for follow up visits for HIV exposed children	Sensitization of communities on the need for follow up visits of exposed children at village clinic or at health facility (face to face, media)	At least 30 % of HIV+ mothers take their U-5 children to health facilities for post-exposure check-ups
		Explore the possibility of linking follow-ups to routine services (e.g. EPI, growth monitoring, TB programme).	
Promotion of hand washing with soap			
Poor knowledge	Lack of resources to	Position hand washing	55% of health

transfer from frontline workers to caretakers	train	& use of safe water as a multi-sectoral issue to leverage resources from other sectors	professionals trained in effective promotion of hand washing
Lack of information (evidence) for programmers (however access to soap remains a big issue)	Knowledge may not be translating to BC - e.g. buying & using soap	Review and revise the BCC strategy	70% of mothers of children U5 that know when it is necessary to wash their hands
	Lack of evidence (identifying underlying reasons for lack of hand washing which will allow better targeting)	Conduct research on challenges affecting HWWS.	
Poor access to soap	Low prioritisation of hand washing with soap at the HH level	Conduct Community mobilisation/behaviour Change Communication to ensure that communities are aware of the importance of hand washing with soap	30 % of households with a designated place with water and soap for hand washing

Table 3: Facility based interventions including outreach

Inadequate supplies and poor quality of services for essential newborn care (ENC), Newborn resuscitation, KMC, sepsis management and related newborn complications			
Bottleneck	Causes	Solutions	Bottleneck Reduction
Inadequate supplies and poor quality of services for essential newborn care (ENC), Newborn resuscitation, KMC, sepsis management and related newborn complications	Lack of assessments, data and quantification	Inclusion and reviews of Strategies, DIPS and TWGs	80% of facilities providing quality neonatal care services
Health workers motivation/attitude (resulting in lack of provision of interventions) - G1	Remuneration and incentives	Increase remuneration package for government staff	95% of midwives and nurses practicing newborn resuscitation
	No objective performance appraisal	Strengthening individual performance appraisal system	
	Poor working	Retention package	

	conditions	for health workers in the system	
Antenatal corticosteroids			
Low utilization (due to Lack of Knowledge by HR)	Not emphasized during in-service training	Mentorship at all levels of service delivery. Develop guideline and protocols for facility use. Strengthen supervision. Include on essential list. Strengthen community awareness on preterm labour and management. Strengthen comprehensiveness of ANC.	50 % of potential pre-term births for whom corticosteroids are administered to the mother (benefits from specific solutions)
ARTs for Children			
HR	Poor clarity on roles and responsibilities limit support for HSAs' assigned the task (e.g. supervisors not trained and HSA hesitant)	Training of supervisors as mentors	At least 2 supervisors from each health centre trained as mentors by end 2015 >80% of trained supervisors providing mentoring every quarter
Commodities	Long turnaround times for returning results	Expansion of rapid SMS and other communication mechanisms	At least 50% of districts fully covered with Rapid SMS for reporting on EID
HR		Clarification of paediatric treatment guidelines	National paediatric treatment guidelines refined by end 2013 and operationalized in all districts by June 2014
Utilization	Low awareness of communities of the need for follow up visits for exposed children	Sensitization of communities on the need for follow up visits of exposed children at village clinic or at health facility (face to face, media)	At least 30 % of HIV+ mothers take their U-5 children to health facilities for post-exposure check-ups
		Explore the possibility of linking	40% HIV exposed children taken to a health

		follow-ups to routine services (e.g. EPI, growth monitoring, TB programme)	facility for ART treatment initiation
Transporting of samples from h/centres and district hospitals (commodities)	Inadequate access to transport and fuel for delivery of samples	Mobilise partners for supporting transport and logistics for samples	
	Backlog of testing due to inadequate numbers of staff in designated labs	Re-examine deployment of lab staff	
Quality	Lack SOPs for Provider Initiated Testing and Counselling for children	Develop SOPs for PITC targeting children	National SOP for PITC developed by end March 2014 and operationalized by end June 2014
	Limited follow up of exposed children	Ensure health centre and district review active tracking of cases of exposed children	60% health centres track HIV expose children under-five for prophylaxis and treatment initiation and adherence
Skilled birth attendance			
HR	Understaffed facilities	Increase the number of midwives in the training institutions	50% of facilities with adequate number of midwives and nurses
		Motivate the nurses and midwifes in remote areas through different incentives like career path	
Low access to skill birth attendance	Lack of proper transport to the facilities	Pilot outsourcing emergency transportation Community organised transportation to maternity	80% of mothers are delivered by skilled attendance
	Health facilities are far apart	Upgrade health posts to full health centres	
Utilization	User fees in CHAM institutions	Signing of new SLA and timely renewal of existing SLAs on maternal and child	90% of women who delivered in a health facility

		services	
Continuity	Lack of effective referral system	Provide back up for staff in PHC level through effective referral systems from community to facility level	100% of complicated deliveries referred to a higher level of care facility
		Development and integration of referral guidelines for RMNCH	
	Low access due to lack of transportation	Allocate money to operational costs	
	Lack of money to maintain motorbikes		
Immediate and Exclusive Breastfeeding for 6 months, promotion			
Small proportion of maternity facilities apply at least six of the ten steps to successful breastfeeding as compared to HW trained & commodities available (access)	No adequate resources	Make steps in BF as part of the message delivered during first ANC 1. Provide effective counselling for EBF.	90 % of health facilities applying 10 steps for successful breastfeeding
Inadequate Human resource to provide counselling and provide BF (HR)	Infrequent training or refresher on BF	Refresher courses	90% of HR in facilities trained in BF counselling
	Few frontline staff trained in the past 3 yrs.	Mentorships, appraisals	
Vitamin A for children			
Low effective coverage for proportion of children received Vitamin A supplementation (utilization)	Mother do not value vitamin A as much as immunisation	Integrate vitamin A supplementation with immunisation	70 % of children 1 year old who received 2 doses of vitamin A
	Inadequate IEC to the parents	Improve IEC	
	Vitamin A supplementation not well documented	Improve documentation i.e. during CHD or campaigns	
Complementary feeding and micronutrients			
Inadequate human resource to provide promote complementary	Infrequent training or refresher on BF	Training, refresher and mentorship of frontline workers	90 % of HR in facilities trained in complementary feeding counselling.

feeding (HR)			
Antenatal corticosteroids			
Low utilization (due to Lack of Knowledge by HR)	Not practiced at all levels of service delivery	Policy at health centre level	50 % of potential preterm births for whom corticosteroids where administered to the pregnant woman
	Not emphasized during in-service training	Mentorship at all levels of service delivery. Develop guideline and protocols for facility use. Strengthen supervision. Include on essential list. Strengthen community awareness on preterm labour and management. Strengthen comprehensiveness of ANC.	
Lack of supplies / commodities at all levels	It is on the list of essential drugs, but health workers do not order it	Should be one of the priority drugs in the CMST	80 % of maternities without stock outs of corticosteroids
Antibiotics for newborns at community level			
No drugs for community level	Policy issue	Need specifically one dose package	Policy in place and enforced
Community Based MNH			
Community Based MNH **Low coverage of PNC**	Low coverage (HSAs not residing in catchment area) Focus is on mother not newborn. Short period hospital stay.	48 hours hospital stay for PNC. Intensify supervision to health facilities. Have adequate resources for care.	
Kangaroo Mother Care			
Coverage is low	KMC not supported at health centre level	Set up/policy &update guidelines for KMC at all health facility levels including health centre level	95 % of pre-term newborn who receive KMC

Poor quality of services	Care left to support staff. Inadequate counselling. Inadequate supervision.	Train all levels of health workers to provide regular support to KMC services Orient DHMTs to KMC services and needed support Strengthen community awareness and support for KMC. Need to have relevant support and resources for the service e.g. enough staff, supplies, beds, Improve documentation and monitoring and reporting of KMC services.	

6.0 STRATEGIC ISSUES

This section synthesises the internal and external environmental factors that can promote child health interventions or those factors that have the potential to negatively affect the achievement of child health targets in the MDGs and *A Promise Renewed*.

6.1 Coordination and Accountability for newborn and child health outcomes

The achievement of child health outcomes will depend on a strong coordination mechanism that ensures accountability in achieving the targets set in the child health strategy. This could be done through strengthening the TWG meetings, the child review meetings, and SWAp reviews. The strategy proposes the establishment of a single Child Health Unit with a focal person who is accountable to deliver the strategy and is given the necessary support and autonomy to make decisions. With a clear coordination and operation framework, the IMCI Unit shall act as a Child Health Unit working closely with health programmes that have a bearing on child health. This does not mean changing the current structure of MoH or reporting lines of programme heads. It will only strengthen the existing coordination and accountability structures by clarifying roles and linkages in line with the EHP TWG.

6.2 Limited access and low effective coverage of high-impact RMNCH interventions

Access to services is limited due to lack of essential commodities and equipment; insufficient professional staff at facility level and in the community; and geographical access to facilities. In some cases, there is also insufficient demand for the interventions among the population.

The Child Health Strategy aims at bringing high impact interventions to the community to be delivered by health extension workers (HSAs) during household visits, in village clinics and during outreach, in addition to delivery at the health facility level. Integrated delivery of

interventions will reduce missed opportunities, and cross-sectoral cooperation will enhance success in reaching those who are in hard to reach areas. For example, CBCCs will also be used as entry points for delivery of more high impact interventions, such as immunisation, growth monitoring and action, vitamin A supplementation, de-worming, focused antenatal care, HTC and family planning.

To improve access to health services for populations living closer to health facilities that charge user fees, MoH will create and strengthen partnerships with the private sector, especially with CHAM, the private-for-profit sector, CSOs and other government agencies. It is estimated that almost 60% of patients are seen in government while private health facilities see around 40% of all clients, 37% of which are seen in CHAM facilities. A robust PPP arrangement will enable marginalised populations to have access to health services, especially populations within catchment areas of CHAM and other private providers. This fulfils the equity agenda in the provision of health services.

6.3 Financing the Child Health Strategy and Accountability

Child health and nutrition related interventions are integrally incorporated in the Health SWAp, as all high impact interventions from EPI, Malaria, IMCI, ARI, HIV, and Nutrition are part of the Essential Health Package. The health sector, which had a budget allocation of 11.5% continues to lobby to realise its 15 per cent allocation from the national budget to health, in line with the Abuja declaration. However, high levels of poverty and shifting donor priorities might act against this intention. There is therefore an urgent need to identify, re-orient and better coordinate the allocation and use of existing resources (public, donor and private sector) and to secure new sources to finance to accelerate the implementation of the Strategic Plan at all levels.

Funding opportunities from initiatives such as the Global Fund, GAVI, Malawi Social Action Fund and other multi-lateral and bilateral support will be used effectively to support programmes for accelerated child survival. However, this will be accompanied by an increased demand for financial and performance accountability that links resource allocation to performance management, programme effectiveness and results-based and timely reporting. Resources from the private sector and CSOs, including FBOs, should be mapped into the strategic response.

To achieve the targets set in the Child Health Strategy, there is need for a mechanism to hold partners and programmes accountable for what they are committed to do. This is based on the realisation that in a situation where there are multiple partners, there is a possibility of partners defaulting their responsibility thinking the other is doing it. It is also not easy to hold programs within and outside MoH accountable for child health outcomes.

Currently, there are many actors in child health at community, district and national levels that involve different public sectors and private providers, including CSOs, faith-based organisations (FBOs) and development partners. Coordination of these actors is weak, especially at district and sub-district levels. Strengthening coordination mechanisms will enable districts to lead and map the geographical location, interventions and resources of each

actor in order to ensure better coverage and more efficient use of resources. The work of community resource persons and approaches towards community participation and empowerment in decision making processes and service delivery should be harmonised for both public and private sectors.

6.4 Systems capacity

The weak capacity of the health system has affected availability, access, utilisation and quality of health services at all levels. Essential commodities are often out of stock at the point of use and the supply management chain remains weak. Across the healthcare delivery system, there is a serious shortage of qualified and motivated staff. Yet every key intervention requires human resources of different types and skills at all levels of the health system to increase coverage and quality. Knowledge and skills for stewardship (policy formulation, regulation, enforcement of standards, training and curriculum development), programme management (planning, budgeting, implementing and reporting), supervision, and provision of clinical care are inadequate. Yet these are critical factors in a decentralised health system. Physical infrastructure and essential equipment are inadequate and some require urgent repairs. Logistics systems are weak with frequent stock outs, yet supplies of ITNs, drugs for malaria or vaccines are critical for success of the Strategic Plan.

6.5 Monitoring and Evaluation

The Department of Planning and Policy Development has the overall responsibility for coordinating, monitoring and evaluating health programmes. Within this department, the Central Monitoring and Evaluation Division (CMED) is responsible for the production of quarterly, biennial and annual reports using data from HMIS.

At the programme level, the Child Health Strategy shall provide a framework for M&E of high impact interventions for child survival. It states that monitoring and evaluation will be done at three levels namely: local monitoring to improve service management; monitoring coverage to strengthen health systems; and real time monitoring and national evaluation platform for implementation strengthening.

The plan institutes a mechanism for harmonizing program data with HMIS and proposes a structure for monitoring at community, district and national levels.

7.0 STRATEGIC DIRECTIONS

This section sets out the vision, mission, guiding principles, goal, priority interventions and key strategies for the Child Health Strategy. It has been developed in the context of the SWAp, HSSP, MGDS, and the Child Health Policy in Malawi.

The achievement of the reduction of newborn and child morbidity and mortality requires focused attention to districts with poor coverage indicators, addressing the bottlenecks in the health system and allocation of adequate resources to areas of need. The strategy uses result based management and will monitor progress towards universal coverage of high impact

interventions. In addition to aiming at universal coverage, the Strategy will also pay particular attention to address factors that impinge on utilisation of health services.

7.1 Goal

The goal of the Child Health Policy and this accompanying Child Health Strategy, which will also include a budgeted Strategic Plan, is to achieve a reduction in childhood morbidity and mortality according to MDGs targets for 2015 and for *A Promise Renewed* target of 20 under-five deaths per 1000 births by 2035. By the end of the Child Health Strategy in 2020, it is projected that there will be a reduction in under-five mortality to 66 deaths per 1000 births and neonatal mortality to 21 deaths per 1000 births.

7.2 Vision

The vision of the Child Health Policy and this accompanying Strategy is to keep all children in Malawi healthy and free from all common childhood illnesses so as to survive, grow and develop to their full potential.

7.3 Mission

The mission is to provide holistic and integrated services for the delivery of a comprehensive package of quality, equitable and efficient child health interventions for the survival of children under five years of age in Malawi.

7.4 Guiding Principles

The following guiding principles represent the common values of the Child Health Policy and Child Health Strategy and provides guidance for policy decisions, programme priority setting, design of interventions, approach to implementation and resource allocation criteria for achievement of the Child Health Strategy Strategic Plan.

7.4.1 Recognition of existing policies and interventions

- The Child Health Strategy is developed in cognisance of existing policies and programmes addressing child survival issues.
- The Strategy will ensure continuity of interventions envisioned in the National Roadmap for Accelerated Reduction of Maternal and Neonatal Morbidity and Mortality in Malawi and other RMNCH and Nutrition interventions
- The Child Health Strategy shall be implemented within the context of the EHP and SWAp.
- The Strategy is aligned and seeks to achieve milestones for global and national commitments and goals.

7.4.2 Decentralised decision making

- The operational decision-making process of the Child Health Strategy will be decentralised to local assemblies and communities to ensure acceleration of universal coverage of high impact RMNCH interventions.

7.4.3. Intra-sector involvement

The work of many different programs within the health sector directly influences child survival, e.g. Reproductive health, Nutrition, HIV and AIDS, malaria control programme,

EPI, ARI, and IMCI. There are several other cross-cutting functions within the MoH that have significant contributions to the achievement of the goals of this Strategy. In order to harness this intra-sectoral nature of the response, there will be effective advocacy at senior policy levels among Government, Development Partners, CSOs and the private sector to ensure that decision makers are aware of the implication of child survival and the opportunities within their own programs/unit to support the national response. The implementation of the Child Health Strategy will take into consideration the multiplicity of partners involved in the delivery of the high impact interventions using the PPP approach.

In consolidating the intra-sectoral response, the strategy will strive to put in place mechanisms for securing commitment from and constantly engage programmes and partners in fulfilling their mandate towards child survival. The policy seeks to strengthen and build new partnerships, and will create opportunities and entry points for new partners to participate, while devolving implementation to each unit and to decentralised levels in order to reach the child, household and community more effectively.

7.4.4 Rights based approach

The promotion, protection and safeguarding of the rights of children will be used as the basis and criteria for assessing the feasibility of interventions and policy options during implementation of this policy. As the right to life is a fundamental right to all children, the Strategy will ensure that the packaged high impact interventions for each level reach as many children as possible in tandem with the existing global child rights declarations. This will also enable capacity building of communities.

7.4.5 Integration of interventions

The Child Health Strategy will be implemented within the context of the Essential Health Package and SWAp frameworks. It is heavily dependent on the achievement of SWAp outputs for clinic-level interventions. Efforts will be made to ensure that policy decisions, programming and service delivery embrace the integrated approach. To the best extent possible, all interventions will be integrated within existing structures and systems. Services that target childhood conditions and high-impact, low-cost interventions for accelerating child survival and development will be integrated in each delivery mode: household, community, primary health care unit and hospital.

7.4.6 Balancing interventions to protect, prevent and treat

While several of the child survival interventions may be curative in nature, there is a need to balance the interventions so that children are protected from exposure to conditions or environments that may affect their health or wellbeing. Similarly, preventive and promotive interventions are critical to ensure that children should not fall sick in the first place.

7.4.7 Focus on universal coverage and equity

Interventions are effective when they are implemented to a large scale both in terms of geographical coverage and comprehensiveness of the interventions implemented. The Child Health Strategy seeks to make health services accessible to those socially, economically and geographically marginalized. The Strategy, therefore, will ensure universal coverage of the interventions and equity between groups of people. Particular emphasis will be put to reach less served populations in hard to reach areas.

7.4.8 National and district focus

The Child Health Strategy will isolate intervention or programme areas that can be effectively done at the national level and those to be done at the district level. At the national level the focus will be on policy guidance, programming conceptualisation, programme oversight, supervision, capacity building and mentoring. The districts will, in line with decentralization, focus on translating the Strategy into action. As such the focus at the district level will be on implementation and monitoring and evaluation of the high impact and cost effective interventions.

7.4.9 Community engagement and mobilization

To address demand side bottlenecks to the utilization of health services, efforts have to be made to mobilise communities through various media of communication. The Strategy will put in place mechanisms for community engagement and mobilization. To ensure effective transmission and use of messages, targeted communication will be used. This will ensure that populations at all levels are reached including those in rural and hard to reach areas. The communities, through the established structures such as Village Health Committees, will be engaged in planning and implementation of health interventions in their own communities.

7.4.10 Well-functioning Health System

Child health programming recognizes that the delivery of key child health interventions is affected by health system challenges. In liaison with other programmes, the child health unit will ensure that health system challenges are addressed. The Strategy will ensure that resources are leveraged from a range of partners on child health and avoid duplication of efforts during the planning, implementation and monitoring of interventions.

7.4.11 Accountability for actions

MoH recognizes the contribution of various programmes and interventions. It further realises that without a coordinated framework the efforts of programmes and partners contributing to child health will be wasted. The Strategy, therefore, will put in place mechanisms for ensuring accountability for actions of all those that have a stake in child health. The Strategy will also ensure accountability for goals and targets set in global and national frameworks. The Strategy will also ensure that all child health programs are accountable to their contribution towards the attainment of the wellbeing of the child in the country by having transparent plans on implementation of interventions within their mandates.

7.4.12 Life cycle approach and continuum of care

The interventions for child health are age specific and have to address determinants of child health from pre-pregnancy, pregnancy, childbirth, neonatal period and early childhood period. The Strategy will hence adopt the lifecycle approach and ensure continuum of care in the delivery of services for all under-five children.

7.5 Strategic Objectives

1. Achieve universal coverage of selected high-impact interventions for maternal, newborn and child survival and development by 2020.
2. Strengthen interventions that promote uptake of high impact interventions by 2020
3. Strengthen the capacity of systems for leading, managing and providing high-impact and low-cost priority interventions for women and children by 2020

4. Improve partnerships, coordination and sectoral commitment for resources to support programmes for implementation of child survival interventions by 2020

7.6 Expected Results

The Child Health Strategy Strategic Plan focuses on results at impact and outcome levels. Indicators related to inputs, process and outputs, as measures of programme performance, are included in the Results Framework (Annex II). Target results for the Strategic Plan are set for each priority intervention area. However, some targets are not attributable directly to one priority area (e.g. under-five mortality rate (U5MR), infant mortality rate (IMR), neonatal mortality rate (NNMR) and maternal mortality rate). Table 4 below summarises all targets for under-five mortality, proportional infant and neonatal mortality rates, and maternal mortality rate to be achieved by 2020.

Table 4: Target Statement for Impact Results

Using the List Modelling Tool the following targets were derived for the impact results

Objectives:								
1. To reduce IMR, NNMR and MMR proportionally by two-thirds and "A promise renewed targets"								
To reach universal coverage of high impact interventions for women and children in communities and at primary health care level by 2017.								
Target Area	**Targets for 2017**	**Baseline (2006, MICS)**	**Progress by 2010 DHS**	**Progress by 2012, UN est**	**ARR (2006-2012)**	**MDG target 2015**	**Strategy target 2017**	**APR Target 2035**
Mortality	38% reduction in under 5 mortality rate (ARR = 7.6)	118	112	83	5.9%	78	66	20
	47% reduction in Neonatal mortality rate (ARR=4.0)	27	31	27	2.3%	23	22	10
	63% reduction in maternal mortality ratio (ARR = 12.6)	984	675	460	12.7%	280	280	50
	37% reduction in stunting prevalence (ARR = XX)	46%	42%	42%	2.5%	25%		
Morbidity and prevention practices	9 % reduction in under weight prev. (ARR= 1.8)	19%	13%	13%	9.5%	12%		
	50% reduction in low birth weight (ARR = XX)	16%						
	80% population with sustainable access to water source	74%	80%	80%	1.9%	80%	90%	
	30% increase in CPR (ARI = 5.8%)	33%	42%	42%	6.0%	50%	56%	
	Source : Targets based on LIST Tool and Global Targets							

8.0 PRIORITY AREAS FOR INTERVENTIONS

This section defines targets to be achieved in the implementation of the Child Health Strategy Strategic Plan, lists the main service-delivery mode for delivering identified interventions to reach universal coverage and presents an approach for delivering the high impact interventions the service-delivery modes to be used.

In delivering the interventions stated above, the strategy shall package the agreed upon high impact interventions according to the three service delivery points namely: community-based preventive and curative interventions; outreach and facility-based preventive and curative interventions; and individual-oriented clinical services.

A detailed list of intervention packages at all levels of care and lifecycle can be found in Annex III.

8.1 Target conditions for child survival and development

The main target conditions account for two-thirds of under-five deaths in Malawi, and are therefore the focus for interventions in the Child Health Strategy: neonatal conditions (sepsis, asphyxia, preterm), malaria, acute respiratory infections (pneumonia), diarrhoea, HIV/AIDS, and malnutrition.

8.2 Priority high-impact interventions for newborn and child survival

The high-impact interventions in the minimum package for Malawi (Table 5) are chosen based on the causes of childhood mortality in Malawi; Lancet series on evidence-based interventions for reducing under-five mortality; Malawi's epidemiological profile and experience in implementation of the Child Health Policy, ACSD; and consideration of health care delivery capacity. The selection of interventions emphasises preventive and promotive approaches based on maternal, neonatal and child health (MNCH) concepts to reduce exposure to infection and reduce the likelihood that exposure leads to disease. Clinical care is added to reduce the likelihood that the disease or condition will lead to death.

Table 5: Minimum Package of High Impact Interventions for Maternal and Child Health

	High Impact Intervention	Operational Definition
A	**For prevention**	
	Intermittent presumptive treatment (IPTp) of malaria in pregnancy	Administering monthly doses starting form the second trimester (after quickening).
	Focused Antenatal Care (FANC) and clean delivery	Ensuring that every pregnant woman receives the recommended four antenatal visits (FANC) and recommended doses of tetanus toxoid (TT2+) vaccination, and is fully supported by her family and community in seeking appropriate care, especially at the time of delivery and during the postpartum period. Pregnant women receive institutional delivery or delivery by skilled attendants. Use of simple and clean delivery kits (plastic sheet, thread to tie umbilical cord, new razor blade to cut the cord, umbilical cord cutting board, and a bar of soap to wash hands). Ensuring that the newborn baby gets at least one skilled consultation in its 1st week of life.
	Management of preterm labour	Administration of antenatal corticosteroids to all eligible women at risk of preterm labour. Comprehensive assessment of all pregnant women.
	Cord care using Chlorhexidine	Routine use of Chlorhexidine for cord care of all newborns.
	Postnatal Care for mother and newborn	Keep mother and babies for at least 48 hours in health facility. Strengthen client monitoring and assessments whilst in hospital. Home visits for mother and newborn for subsequent PN follow up (Day 1, 3, 8).
	Breastfeeding	Breastfeed infants immediately after birth and exclusively for six months. Infants of less than 6 months of age who were exclusively breastfed in the last 24 hours.
	Immunisation	Taking children as scheduled to complete a full course of immunisations (BCG, diphtheria-pertussis-tetanus-hepatitisB-Hib (pentavalent), oral polio vaccine (OPV) and measles) before their first birthday.

		Children aged 12–23 months vaccinated against measles before 12 months. Children aged 12 – 23 months who are fully immunised against diphtheria, pertussis and tetanus before their 1st birthday. Children aged 12–23 months vaccinated against PCV. Children aged 12–23 months vaccinated against Rotavirus vaccine.
	Complementary Feeding	Starting at six months, feed children freshly prepared energy and nutrient rich complementary foods, while continuing to breastfeed up to 2 years or more. Children aged 6- 9 months receiving breastfeeding and appropriate complementary foods and children who are 24 months of age or under and are still being breastfed.
	Long lasting Insecticide treated nets (LLIN)	Protecting all under-five children and pregnant women from malaria by ensuring that they sleep under recommended Long lasting Insecticide-treated nets throughout the year. Caregivers acquire long lasting insecticide treated mosquito nets. Households receive at least one LLIN per 2 individuals.
	Vitamin A	Providing children with adequate amounts of micronutrients (esp. vitamin A, iodine and iron) either in their diet or through supplementary sources. Children aged 6 – 59 months who have received a high dose of vitamin A in the last 6 months.
	Water and Sanitation	Disposing of all faeces safely, and use of safe drinking water. Hand washing with soap after defecation and before preparing meals and feeding children.
B	**For Treatment**	
	Care of asphyxiated newborns	All asphyxiated newborns are resuscitated using the Helping Babies Breathe or a nationally recommended newborn resuscitation approach.
	Care for pre-term babies and LBW	Access to essential newborn care and KMC.
	Antibiotics for Newborn sepsis	Access to recommended antibiotics and administration by HWs or authorised caregivers for newborn with sepsis, children with bacterial infections.
	HIV/AIDS and Paediatric ART	Exposed newborn should be managed according to guidelines.

		Children with suspected or confirmed HIV infection. The clinical expression of HIV in children is highly variable. Some HIV positive children develop severe HIV-related signs and symptoms in the first year of life. Other HIV+ children remain asymptomatic or mildly symptomatic. The management of the child with confirmed, suspected or possible HIV infection includes ART and cotrimoxazole therapy. ARTs is not a cure; the goal of ART is to prolong life by disabling the virus in the individual. Adherence to treatment is therefore important. Administering ARVs to HIV positive children. Cotrimoxazole preventive therapy is given to children with confirmed or suspected HIV infection or children who are HIV exposed to prevent pneumocystis carinii pneumoniae (PCP) and other opportunistic infections. Cotrimoxazole preventive therapy should be given from 6 weeks of age until child has been tested and HIV infection ruled out. If an HIV exposed infant is confirmed HIV positive, cotrimoxazole preventive therapy should be continued indefinitely.
	Oral rehydration therapy (ORT)	Continuing to feed and offer more fluids, including breast milk, to children when they are sick. Children under-five with diarrhoea in the last 14 days given ORT. Sick children whose caregivers are advised to give extra fluid and continue feeding. Sick children whose caregivers are advised to give Zinc.
	Antibiotics for pneumonia and dysentery	Access to recommended antibiotics and administration by HWs or authorised caregivers for newborns with sepsis, children with pneumonia or fast breathing, and children with mucoid/blood stained stool. Recognising when sick children need treatment outside the home and taking them for health care to the appropriate providers.
	Timely and adequate treatment of malaria	Treat children with fever within 24 hours of the onset of illness. Children who were reported to have had fever in the

		previous 2 weeks and were treated with locally recommended anti-malarial (ACT). Caregivers of children who know at least two signs for seeking immediate medical care divided by total number of caregivers. These signs are: a) child not able to drink or breastfeed; b) child becomes sicker despite home care; c) child develops a fever (in malaria risk areas or if child aged less than 2 months); d) child has fast/difficult breathing; e) child has blood in stool; and f) child is drinking poorly. Proportion of children prescribed oral anti-malarials, whose caregivers can correctly describe how to give the proper treatment.
	De-worming	Administering of de-worming drugs to under-five children and pregnant women. Children aged 6 – 59 months who have received a dose of anti-helminths drug (albendazole) in the last 6 months. Pregnant women who have received a dose of anti-helminths drug (albendazole) during pregnancy.

8.3 Communication strategies in delivery of high impact interventions

Communication will be guided by a Child Health Communication Strategy and will be used to create awareness and mobilise the population to adopt risk-reducing and health-promoting practices at individual and social levels. The purpose is to ensure adoption of desired risk-reducing behaviours, health promotion, prompt care seeking practices and promotion of health service utilisation. Communication strategies for delivery of high impact interventions include:

- Intensive advocacy at national, zonal and district levels to influence policies, legislation, plans and resources;
- Community mobilisation and networking with existing and new communicator networks and alliances with private sector, media partners and development journalists;
- Communication with families and households through face-to-face interaction;
- Promotion of services and creating awareness during child health campaigns and malaria SADC week;
- Mass media (TV, radio, newspapers); and
- A branded campaign (social marketing for high impact interventions).

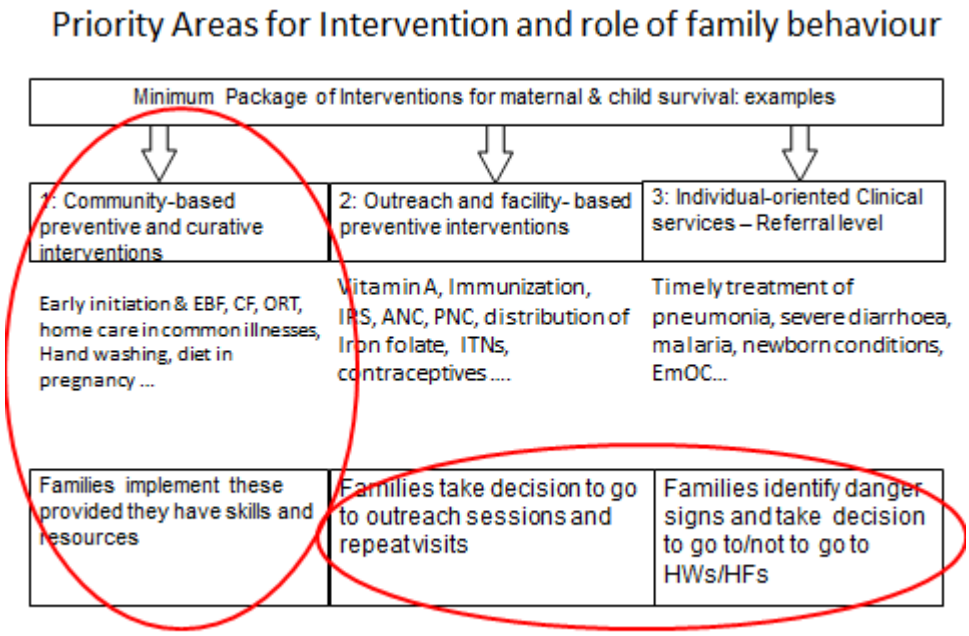
8.4 Service-delivery Modes for High-Impact Intervention

The delivery of the high impact interventions will be done through three service delivery modes. This will ensure that the high-impact interventions reach pregnant women, newborn babies and under-five children in need of the services. These are summarised in Fig. 15 below:

1. Community-based preventive and curative interventions
2. Outreach and facility-based preventive interventions

Individual-oriented clinical services

Figure 15: Conceptual Framework of three categories of interventions and role of family behaviour in these interventions (in red circle)



8.4.1 Priority Area 1: Community-based preventive and curative interventions (levels include referral, primary health care facility, outreach and community)

Evidence shows that coverage and impact of community-based services can be high even in situations of extremely weak health systems, as is the case in Malawi. Trained community health workers can deliver this service on a daily basis with periodic supervision from skilled health personnel. The main bottlenecks for provision of services in community-based services include: lack of trained community workers; poor and irregular supply of commodities such as ITNs and ORS; low demand for services; poor supervision of community health workers with resultant poor quality of services; and inadequate capacity to manage basic curative health services.

3. HSAs are considered to be the main change agents for health in the community and should be empowered to provide preventive services and simple and safe basic curative

care for the most important causes of morbidity, such as acute malnutrition, malaria, pneumonia and diarrhoea to save lives, while referring more complicated cases to the facility. Providing basic care will enhance the credibility and effectiveness of HSAs to undertake health promotion. The HSAs should operate out of the health centre/post, with their work supervised by the District Health Office in collaboration with the health centres/posts. The HSAs should lead, supervise, harmonise and coordinate their work with those of other community workers, including: community-based distributors (CBDs); extension workers; Village Health Committees and Village Development Committees. The HSAs can also play an important role in mobilizing families and communities in improving coverage with category 2 and 3 services (marked in red circle in Figure 3. This will improve coverage of outreach and facility-based preventive interventions. They can educate the families in detecting the danger signs early and timely referral to avail the category 3 Individual-oriented clinical services.

8.4.2 Specific Objectives

1. To achieve a population universal coverage target with community-based preventive and curative interventions (see list above).
2. To strengthen the capacity of caregivers, community members and community health workers to provide family-oriented community-based services.

8.4.3 Major Interventions

Availability of essential commodities

- Advocate for improved system for procurement of ITNs, supplies and other essential commodities.
- Strengthen community-based drug supply and management system e.g. c-Stock.
- Procure and provide each extension worker with means of transport (bicycle) and basic kit for community health work, including medicine kit, information, education and communication (IEC) materials, boots, uniform and identification tag.
- Establish and regularly restock the village clinic medicine kit with a defined list of essential medicines, consumables and basic supplies (anti-malarials, cotrimoxazole, paracetamol, oral rehydration salts (ORS), de-worming tablets, tetracycline eye-ointment, etc.) for use and distribution by the HSAs.

Capacity building for community health workers

- Accelerate basic training of newly recruited HSAs.
- Deploy and pay wages for community health workers (HSAs) to achieve a target population ratio of one HSA per 1,000 population.
- Review training curriculum for extension workers to include newborn and communication skills issues.
- Develop survival and health development interventions to strengthen CCM model

- Train health workers and extension workers on essential newborn care and CCM 0 – 2 months.
- Strengthen existence of groups at all levels on malnutrition
- Train new and/or re-orient existing extension workers on issues of child health and development, mobilisation and provision of basic curative services.
- In partnership with other related units/programs, review the job aid for extension workers to support them in their work.
- Develop/reproduce IEC material for promotion of high impact interventions.
- Roll out community management of acute malnutrition, including screening for acute malnutrition and scaling up nutrition.
- Develop and implement performance targets linked to objectives.

Community mobilisation and awareness creation

- Conduct monthly household visits to change behaviour through high impact interventions regarding issues of maternal, newborn and child health.
- Involve community leaders (at all levels), women's and men's groups, and other key groups, in community-level mobilisation through community dialogue and advocacy to support issues of maternal and newborn health for child survival.
- Conduct community mobilisation in tandem with other national events/campaigns including Child Health Days; Day of the African Child; and World AIDS Day. Integrate other mobilisation activities during such events such as the distribution of mosquito nets.
- Conduct regular radio programmes to support maternal, newborn and child survival and develop programmes and initiatives.
- Develop appropriate IEC materials to support community-level education.
- Institutionalise programme for home visits by community health workers to all homes within coverage area/population, including more frequent visits to homes with high-risk families.

Table 6: Targets for community-based preventive and curative interventions

Intervention	**Indicators**	**Baseline** DHS 2004	**Target** 2012	**Progress** 2012	**Target** 2020
Use of safe drinking water	% of people living in households using improved sources of drinking water	74%	80%	80%	90%
Use of sanitary latrine	% of people living in households with at least a pit latrine	46%	90%	75%	
Hand washing at 4 critical moments	% of caregivers washing hands at 4 critical times	4%	60%		70
Use of iodised salt	% of households using adequately iodised salt (15 ppm)	49%	90%	97%	99%

Intervention	Indicators	Baseline DHS 2004	Target 2012	Progress 2012	Target 2020
Early breastfeeding and temperature management	% of newborns initiated on breast milk within the first hour of birth	70%	80%	95%	99%
Universal extra community-based care of low birth weight (LBW) infants	% of LBW infants receiving extra care	16%	50%	68%	80%
Exclusive breastfeeding for children up to 6 months	% of children exclusively breastfed for 6 months	56%	80%	71%	85%
Continued breastfeeding for children 6-24 months	% of children aged 20-23 months still breastfeeding.	70%	80%	77%	85%
Complementary feeding for children	% of children aged 6-59 months who received 5 or more feeds in the last 24 hours	49%	80%	86%	90%
Complementary appropriate food for pregnant and lactating women	% of pregnant women receiving supplementary food (likuni phala)	60%	90%		90%
Therapeutic feeding for severely malnourished children	% of malnourished children under five receiving therapeutic feeding	40%	80%		80%
Insecticide-treated mosquito nets for under-five children	% of under-five children sleeping under insecticide treated bed nets (ITNs) the previous night	25%	80%	56%	70%
Insecticide-treated mosquito nets for pregnant women	% of pregnant women sleeping under insecticide treated bed nets (ITNs) the previous night	25%	80%	51%	80%
Oral rehydration therapy (ORT)	% of diarrhoea cases offered more fluid, ORT and more	47%	85%	74%	85%

Intervention	Indicators	Baseline DHS 2004	Target 2012	Progress 2012	Target 2020
	food				
Prompt malaria treatment of children with anti-malarial	% of children under five with fever receiving antimalarial within 24 hours after onset of fever	27%	80%	28%	65%
Prompt malaria treatment of pregnant women with anti-malarial	% of pregnant women with fever receiving antimalarial within 24 hours after onset of fever	33%	80%	89%	90%
Prompt treatment of suspected pneumonia in under-five children with antibiotic	% of children with breathing difficulty and cough receiving antibiotics within 24 hours after onset of illness	29%	80%	70%	85%
Prompt treatment of suspected pneumonia in newborns with antibiotics	% of newborn with breathing difficulty and cough receiving antibiotics within 24 hours after onset of illness	0%	80%		80%
Access to CCM quality services	CCM-trained HSAs providing CCM services	54%	80%	84%	100%
	CCM trained HSAs with supply of key CCM drugs in the last 3 months			27%	95%
	CCM trained supervised in the last 3 months with reinforcement of clinical practice			41%	80%

Provision of basic Community-level counselling and curative services

- Conduct mapping of households with pregnant women, newborns and under-five children using the village health register.
- Regularly follow up with case-specific households to monitor family compliance with pregnancy monitoring, maternal postpartum and newborn postnatal care, and monitoring of child growth and development in the areas of nutrition, breastfeeding, immunisation schedules, vitamin A and treatment advice.
- Build capacities of HSAs and caregivers to prevent, manage and provide basic care for common causes of childhood illnesses at home, such as treatment of malaria, pneumonia, diarrhoea, preventive care for newborns, and management of sepsis and pre-term delivery.

- Schedule and conduct regular village clinic days for provision of health services.
- For emergencies and other danger signs, provide an opportunity for children to access health services outside the normal working hours of a village clinic and promote community-based emergency transport systems to facilitate quick referral.
- Promote linkages and referral between health facilities and communities.

Monitoring, supervision and reporting

- Improve the use of the village health register, village development committees, village health committees and area development committees for monitoring the uptake of high impact interventions.
- Conduct monthly reporting and supervision meetings at the community level.
- Work closely with other community structures and support groups to increase coverage and coordinate efforts.
- Strengthen monitoring of iodised salt in markets and households.

8.5 Priority Area 2: Outreach and facility-based preventive interventions

In a weak health system, where geographical access presents major barriers, outreach and facility-based preventive interventions provide an avenue for community action, expanded access and coverage for preventive, promotive and basic curative services. It also creates the required linkages between community services and health facilities.

Preventative interventions should be rolled out in the community using outreach services. An appropriate community structure (shelter) should be available at the outreach site in order to ensure that all services will be provided in a confidential and private manner. When scheduling outreach, attention should also be paid to variations in access to services within the community. Focus will be on areas or populations that are underserved. CBCCs may be considered as a possible service delivery point. Outreach will be planned with the community and community members should provide support to track defaulters.

8.5.1 Specific Objectives

1. To achieve universal coverage for outreach and facility-based preventive interventions.

2. To strengthen the capacity of local health posts/centres to provide outreach and facility-based preventive interventions.

8.5.2 Major Interventions

Logistics and supplies management

- Review procurement procedures for commodities, vaccines and injection materials.
- Improve supply and management system for essential drugs and other supplies.
- Supply additional vehicles, motorbikes and fuel for integrated outreach.
- Improve maintenance system of cold chain, transport means and other equipment.

Capacity building

- Train additional health workers and extension workers for integrated outreach services (newborn postnatal home visits, EPI, growth monitoring, cotrimoxazole preventive therapy, ITNs, ANC, IPT, iron-folate, vitamin A, de-worming, family planning, HTC, and PMTCT).
- Establish community-based health posts for provision of outreach services to patients/clients in a manner that guarantees confidentiality and privacy in service provision (building provided by community).
- Procure and ensure regular availability of essential supplies, commodities and consumables for provision of scheduled population-oriented services.

Services

- Integrate and package service provision of newborn postnatal home visits and related actions, EPI, growth monitoring, cotrimoxazole preventive therapy, ITNs, ANC, IPT, iron-folate, vitamin A, de-worming, family planning, HTC, and PMTCT.
- Conduct community-level micro-planning of integrated outreach services, identifying and mapping under-served communities and developing schedules to extend outreach services to them, taking into account CBCCs a as possible outlet point.
- Conduct regular, defined and predictable scheduled outreach from local health facilities to each identified community site.
- Deliver interventions at Child Health Days (EPI, Vitamin A, de-worming, ITN distribution, hygiene and sanitation, infant feeding, and growth monitoring, among others).
- Strengthen the referral system and continuum of care.
- Enhance supportive supervision and mentoring at all levels.

Community mobilisation for services uptake

- Social mobilisation for improved uptake of preventive services, including male involvement and defaulter tracking, for immunisation, ANC, PMTCT, Postpartum/PNC, FP and cotrimoxazole preventive therapy.
- Initiate community dialogue to address negative perceptions that inhibit uptake of health services.
- Map community health workers and mobilise eligible families with mothers and/or under-five children who need services that can be provided through community scheduled outreaches, and trace defaulters.

Monitoring and supervision

- Strengthen monitoring system for all high impact interventions provided at outreach and static service delivery points (HMIS and VHR).

Table 7: Targets for facility-based preventive interventions including Outreach

Intervention	Indicators	Baseline DHS MICS 2004/06	Target 2012	Progress 2012	Target 2017
Family Planning (FP)	% of women of reproductive age continuously using any modern FP method for the last 2 years	20%	40%	46%	60%
Antenatal Care (ANC)	% of women who received ANC during first trimester of their pregnancy	8%	43%	12%	30%
Tetanus immunization	% of pregnant women who received at least 2 doses of tetanus immunisation (TT2+)	84%	90%	69%	90%
De-worming in pregnancy	% of pregnant women who received de-worming	0%	90%	27%	90%
Detection and management of syphilis in pregnancy	% of pregnant women with syphilis screened and treated with antibiotics	20%	60%		60%
Prevention and treatment of iron deficiency anaemia in pregnancy	% of pregnant women with anaemia receiving iron supplementation	80%	90%	32%	90%
Intermittent presumptive treatment (IPT) for pregnant women	% of pregnant women who received 2 doses of IPT during last pregnancy	47%	90%	54%	90%
PMTCT (testing, counselling, AZT + sd NVP, and infant feeding counselling)	% of mother/baby pairs born to HIV+ mothers who are given ARV for PMTCT	6%	80%	9%	80%
Cotrimoxazole prophylaxis for HIV+ mothers	% of eligible HIV+ pregnant women receiving cotrimoxazole prophylaxis	0%	65%		
Cotrimoxazole prophylaxis for children of HIV+ mothers	% of children born to HIV + mothers receiving cotrimoxazole preventive therapy	6%	65%		
Measles immunization	% of children who	84%	84%	93%	99%

Intervention	Indicators	Baseline DHS MICS 2004/06	Target 2012	Progress 2012	Target 2017
	received measles vaccination				
BCG immunization	% of children who received BCG vaccination	94%	94%	94%	99%
OPV immunization	% of children who received 4 doses of polio vaccination	80%	80%	86%	99%
Pentavalent (DPT-HiB-Hepatitis) immunization	% of children who received three doses of pentavalent	85%	85%	93%	99%
Vitamin A supplementation	% of children aged 6-59 months who received at least one vitamin A supplement within the last 6 months	80%	80%	86%	99%
Post-partum vitamin A supplementation	% of pregnant women who received Vitamin A within 2 months after birth	0%	80%	57%	80%
Use of Chlorhexidine for cord care Postnatal care for mother and newborn					
De-worming of children	% of children aged 12-59 months who received de-worming in the last six months	10%	80%	69%	80%
Management of preterm labour	% of health facilities offering Antenatal corticosteroids	0%	0%	0%	50%

Child care	% of fully functional health centres offering quality child care services	32%	80%	46%	100%
EmONC services	% of EmONC facilities that are equipped to provide EmONC services (define the medicines) without stockouts				
	Oxy			61%	100%
	Mag Sulph			42%	100%
	Gent			100%	100%
	Safe blood			100%	100%
Supportive Supervision	% of health facilities that received Child health supervision in the last 3 months with reinforcement of clinical practice			63%	100%
Stocks-out of child health commodities	% of health facilities with Child health medicines in stock in the last 3 months (LA, co-trimoxazole, ORS, zinc, injectable pre-referral RX, quinine or rectal artesunate;		no data		100%
	% of health facilities with no stock-outs of LA in the last 3 months		no data		100%

8.6 Priority Area 3: Individual-Oriented Clinical Services- Referral level

This service-delivery mode requires health workers with advanced skills (registered nurses/midwives, clinical officers or physicians) that are available on a permanent basis. It addresses individual specific clinical services required by children or pregnant women who are sick or giving birth. Although preventive and promotive services are important in reducing under-five morbidity and mortality, achievement of the MDGs requires back-up facility-based services for referral care for sick children, pregnant women presenting with severe conditions, and women requiring emergency obstetric care.

Infrastructure development will be required to strengthen this strategy. Accelerated expansion of PHC facilities, its staffing and training of health workers is needed to achieve universal coverage. Accelerated in-service training of medical and paramedical staff will be achieved through training of trainers (TOT) teams that will split up and undertake rapid, concurrent trainings. Planning and trainings will be facilitated by training colleges and universities already training these cadres of staff. These institutions will also incorporate trainings in maternal, newborn and child health and development in their training curriculum so that their graduates qualify with the required skills for these services.

8.6.1 Specific Objectives

1. To achieve universal coverage for essential health services for women and children at all levels of health care.
2. To strengthen capacity of service providers at all levels of care to provide clinic-based maternal, newborn and child health services.

8.6.2 Major Interventions

Logistics and supply management

- Improve supply chain management for essential drugs and supplies by central medical stores trust (CMST) district and health facilities with no stock-out of any single supply for more than 2 weeks. These also include supplies for birth registration.
- Equip B-EmONC centres with essential equipment.
- Procure and install essential diagnostic and other equipment required for out-patient and in-patient care.
- Support the establishment of transport and communication systems for referral between rural areas and nearby facilities.

Human resource capacity building

- Mobilise for second phase of emergency plan for human resources and finalise deployment policy, prioritising underserved areas and delivery of high impact interventions for maternal, newborn and child care.
- Recruit and deploy adequate staff for each level of care as per MoH staffing norm.

- Train at least 2 staff per health facility in skills for delivery, newborn care and Integrated Management of Childhood Illnesses (IMCI), lifesaving skills, and emergency obstetrics care, including management of 3rd stage of labour during deliveries.
- Adapt IMCI in-service training curriculum for specialised health care workers.
- Train medical and paramedical lecturers as trainers of trainers in maternal, newborn and child care, including IMCI in order to roll out in-service and pre-service training.
- Ensure that health workers are trained to register children immediately after birth or at the first contact with health facility for those born outside health facilities.
- Integrate training in newborn and IMCI, paediatric AIDS care, and emergency obstetrics care in pre-service training curriculum of all medical and paramedical training institutions in Malawi.
- Review and define the role of TBAs in maternal and neonatal health.

Infrastructure

- Construct 660 new primary healthcare facilities to achieve minimum standard norm per defined population (e.g. 1 health centre for 10,000 population; 1 B-EmONC centre for 100,000 and 1 C-EmONC for 500,000 population).
- Renovate/refurbish 185 primary healthcare facilities.

Services provision

- Provide 24 hour free and integrated maternal, newborn and child health services in health facilities within Malawi, in particular for skilled delivery and EmONC.
- Reinforce blood transfusion services at C-EmONC facility.
- Improve transport system for emergency referrals of obstetrics and paediatric cases between community level/health centre and hospitals.
- Improve quality of care in service provision in all health facilities.

Community mobilisation and Awareness creation

- Strengthen/establish community initiatives and capacities and involve men in maternal, newborn and child health, especially regarding prompt care seeking and timely referral.
- Mobilise households/families and communities to adopt preventive measures and healthy practices and access and utilise maternal, newborn and child health services.

Monitoring and evaluation

- Conduct maternal, neonatal, child death reviews and clinical audits.
- Provide regular supportive supervision to enhance quality of care.

Table 8: Targets for individual –oriented clinical services

Intervention	Indicators	Baseline 2004/2006	Target 2012	Progress 2012	Target 2017
Prompt malaria treatment of children with anti-malarial	% children under five with fever receiving antimalarial within 24 hours after onset of fever	27%	80%	28%	85%
Prompt malaria treatment of pregnant women with anti-malarial	% pregnant women with fever receiving antimalarial within 24 hours after onset of fever	33%	80%	89%	90%
Management of complicated malaria (2nd line drug)	% of children with complicated malaria treated with 2nd line drug	50%	80%		
Prompt treatment of suspected pneumonia in children under five with antibiotic	% of children with breathing difficulty or cough receiving antibiotics within 24 hours after onset of illness	29%	80%	70%	85%
Prompt treatment of suspected pneumonia in newborns with antibiotics	% of newborns with breathing difficulty and cough receiving antibiotics within 24 hours after onset of illness	0%	80%		
Antibiotics for diarrhoea and enteric fevers	% of diarrhoea and enteric fever cases receiving antibiotics	25%	80%		85% **(behavior)**
Vitamin A treatment for measles	% of children with measles treated with vitamin A	75%	80%		
Antibiotics for opportunistic infections	% of AIDS cases treated for opportunist infections	0%	50%		
ART for children with AIDS	% of eligible children receiving ART	11%	80%	41%	75%

Intervention	Indicators	Baseline 2004/2006	Target 2012	Progress 2012	Target 2017
ART for pregnant women with AIDS	% of eligible pregnant women receiving ART			82%	90%
Skilled delivery care	% of deliveries assisted by personnel trained in life saving skills	12%	81%	72%	90%
Resuscitation of asphyxiated newborns at birth	% of newborns that received neonatal resuscitation services	30%	81%		81%
Antibiotics for preterm/prelabour rupture of membranes (P/PROM)	% of P/PROM cases receiving antibiotics	30%	81%		81%
Detection and management of (pre)eclampsia (magnesium sulphate)	% of (pre) eclampsia cases receiving mag sulph from a skilled health worker	80%	81%		81%
Management of neonatal infections at PHC level	% of neonatal sepsis receiving antibiotic from a skilled health worker	40%	81%		81%
Basic emergency obstetric and neonatal care (B-EmONC)	% of complicated pregnancies treated in quality EmONC facility (B-EmONC or C-EmONC)	2%	81%	47%	60%
Management of severely sick children (referral IMCI)	% of very sick children treated in hospital (first or second line)	11%	40%	54%	60%
Management of neonatal infections at primary referral level	% of neonates with infection who received antibiotics	30%	81%		81%

Intervention	Indicators	Baseline 2004/2006	Target 2012	Progress 2012	Target 2017
KMC or low birth weight and preterm newborns.					
Universal emergency neonatal care (asphyxia aftercare, management of serious infections, management of the low birth weight [LBW] infant)	% of LBW infants who received universal emergency neonatal care	30%	81%		81%

9.0 SUPPORTING STRATEGIES

This section covers interventions that aim to strengthen health systems essential for delivery of the Child Health Strategy Strategic Plan. Interventions include logistics management; resource mobilisation and management; supervision and management; community mobilization; monitoring and evaluation; communication and development; and human resources for health.

9.1 Logistics Management

Poor logistics planning, management and monitoring are the major constraints identified as causing bottlenecks in the implementation of child survival programmes. The various programmes involved in maternal, neonatal and child health will have to undertake thorough quantification of their logistical needs and develop a robust procurement plan that takes into consideration lead time from order to delivery and the need for sufficient buffer stock. These should be done within the framework of the SWAp and with institutional support from the central medical stores trust. Where necessary the system should be flexible to allow procurement and delivery of programme specific essential drugs and supplies. Quantification should also consider the logistical needs of community-level services.

Each intervention unit will ensure that district-level drug quantification and forecasting includes requirements for clinic days and home visits by community extension workers[9] and for emergency treatment. Ensure mapping of parallel systems within districts and their contribution to the pipeline. HTSS in liaison with relevant units, will facilitate distribution of supplies and drugs (both push and pull systems) to ensure equitable access in all districts. The planning, management and monitoring of logistics should be strengthened at all levels.

9.1.1 Specific Objectives

1. To strengthen capacities for logistics planning and management at all levels.
2. To ensure adequate financing of critical inputs; essential medicines; medical supplies; and equipment.
3. To ensure timely uninterrupted availability of essential drugs, commodities and supplies at all levels at all times.

9.1.2 Major Interventions

- Facilitate quantification, procurement and distribution of essential medicines, medical supplies and equipment and maintain sufficient levels of stock at all times.
- Monitor utilisation and ordering of drugs at all levels of service provision.
- Orient hospital and health centre management teams including pharmacy technicians and other cadres on logistics management and use of the logistics management information system (LMIS).
- Strengthen health facility level management of essential medicines, medical supplies and equipment for child survival and health development at health facility and community level.
- Orient community leaders and community drug management committees on issues of logistics management.
- Incorporate community drug/logistics management into the HSA curriculum.
- Procure additional transportation and communication equipment and supplies.

Expected Results

- Strengthened capacity for logistics management including adequate functioning of cold chain, supply of medical equipment, availability of transport for referral and supervision at all levels of health systems.
- Adequate availability of resources, commodities, supplies and drugs at all levels of healthcare delivery system.

9.2 Resource mobilisation and management

One of the main constraints to a scaled-up and accelerated implementation of child survival and development interventions is inadequate financial resources. There is need for development of financial sustainability plans for child survival and development for the

[9] This includes all categories of people who extend services to families, communities, and include: health surveillance assistants, nutrition promoters, CBDs, etc.

critical interventions for child survival and development. Regularly assess the available resources at national and district levels. The implementation of such financial sustainability plans is coordinated through the SWAp for pooled and discrete funds. Pledges and commitments made should be owned by both government and donors. Accountability is also required not only for resources used, but to gauge performance/value for money, which is directly linked to the achievement of results within the Child Health Strategy as a contribution to the Health Sector Strategic Plan. This will also benefit from the Accountability Framework for Maternal, Newborn and Child Health.

At the district level strengthen resource mobilization by developing costed multiyear plans and costed micro plans for health centres that can be used as advocacy and resource mobilization tools for local government, NGOs and other partners working in the district.

Resource mobilisation shall be guided by: (a) the need to implement the package as a whole in all District Implementation Plan (DIPs); (b) the need to promote equitable allocation of resources in a synergistic and accelerated manner from all partners while giving priority to underserved areas/populations; (c) unequivocal declaration of interest and commitment to the Child Health Strategy Strategic Plan in the spirit of a managed partnership; and (d) mapping and costing contributions of partners within a coordinated framework in the national response.

9.2.1 Specific Objectives

1. To strengthen capacities in resource mobilisation, utilisation and performance-based accountability at the national, district and sub-district level.
2. To build capacity for gap analysis, resource management and reporting.
3. To mobilise and increase funding available for the implementation of programmes for child health.

9.2.2 Major Interventions

- Prepare a costed Child Health Strategy Strategic Plan to provide guidance for financial requirements and possible sources.
- Develop district operational plans for implementing the strategic plan ensuring that there is coherence between district plans and child health strategy operationalization plan.
- Prepare consolidated annual work plan and budget for implementing the strategy.
- Develop and orient members of coordination committees at various levels in Child health, results based programme management, resource mobilization and accountability.
- Conduct selected resource mobilisation campaigns or advocacy missions to solicit funds from development partners for the implementation of this Plan.
- Negotiate and formalise memorandum of understandings/partnership agreements with development partners, donors, and foundations committing financial contributions of defined amounts over a specified period of time.
- Develop programme/project proposals to mobilise additional resources from development partners, private sectors and foundations.

- Mobilise resources through PPPs by coordinating their response /contribution within the framework of the Child Health Strategy Strategic Plan.

Expected Results

- Sustained availability of adequate resources for critical inputs, essential medicines, medical supplies, equipment, HR and transportation.
- Increased amount of additional resources mobilised for the scale up plan.
- Increased sector budget allocation for programmes to accelerate implementation of the Plan.
- Formal/defined strategic partnerships fostered for resource mobilisation and predictability.
- Strengthened capacity for mobilising and managing resources.

9.4 Human Resources for Health

The Child Health Strategy Strategic Plan will specifically address human resources for child survival and health development. Though issues related to long-term recruitment and training of skilled staff will be addressed within the SWAp framework, this strategy highlights the importance of uninterrupted access to skilled workers for child survival and health development at community, health centre and hospital levels. Pre-service trainings in MNCH interventions will be integrated in the curriculum for medical and paramedical training institutions. As an approach to accelerated implementation of child health, health training institutions will revise the content of their maternal, paediatrics and child health teaching to include high impact interventions and current priorities as highlighted in the strategy.

It is desirable that the Ministry of Health and health development partners conducting in-service training coordinate and harmonise the content of various MNCH/IMCI trainings and ensure adherence to quality standards and priorities of this strategy.

Human and financial resource needs to be adequately mobilized to ensure availability of skilled workers at the service delivery points with the view of improving equitable access to child survival and health development services. The quality of both pre-service and in-service trainings need to comply with quality assurance mechanisms.

Expected Results

- Reviewed and standardized norms as related to child survival and health development.
- Reviewed and harmonized training curriculum.
- Strengthened capacities of medical and paramedical institutions to train in MNCH.
- Increased skills of medical and paramedical health workers in the management of childhood illnesses and other maternal, newborn and child conditions.
- Increased number and skills of community health workers providing basic home-based care for common maternal, newborn and child health conditions, and identifying conditions that need referral.
- Harmonised strategies, plans, targets and resources for child survival.

Major Interventions

Rapid roll out of training will require forming a team of trainers of trainers to cover a given region/district where they can plan and execute training courses for all key cadres within the region/district. However, it is important that Ministry of Health first re-orient all the trainers on key concepts of the Child health strategy and on the revised curriculum.

9.5 Supervision

Supervision will be essential at and between various levels of the health system, and especially for the success of community-based programmes. The Quality of Care assessment study stressed the need to identify appropriate trained supervisors for each service delivery mode (Nsona et al, 2009)[10].

Therefore, all related programmes should develop a common supervisory mechanism and supervisory checklist with attendant human resources and financial commitment to produce a sustainable supervisory mechanism for expanded access to interventions for maternal, newborn and child health.

The frequency of supervision will be as follows for each level:

- Monthly supervision of HSAs by staff from the health facility catchment's area and senior HSAs, with involvement of community leaders; and bi-monthly (every 2 weeks) supervisory meetings of all community health workers within a given village as a peer supervisory mechanism.
- Two-monthly supervision of each health facility by members of the DHMT. During such supervision, members of the Health Centre Management Team will also be involved. Each health centre staff will also participate in a monthly quality-of-care audit meeting for all staff to identify bottlenecks, performance standards and other quality-of-care issues and propose immediate remedial actions.
- Quarterly supervision of each DHMT by zonal and central programme officials.
- Bi-annual meetings of the Technical Working Group to provide peer review on implementation of the Strategic Plan.

11.0 MONITORING and EVALUATION

This section defines the monitoring and evaluation (M&E) mechanism and structures that will be used in implementation of the Child Health Strategy Strategic Plan. Because of the multi-sectoral nature of the response, there is need for one monitoring and evaluation framework that regularly allows for timely collection of data on maternal, newborn and child health; epidemiology, including morbidity; mortality and their causes; and programme performance indicators.

[10]Scaling up integrated community case management of childhood illnesses; update from Malawi, The American Journal of Tropical Medicine and Hygiene, Vol 87, 2012 No5

11.1 Basis for Monitoring and Evaluation

Regular monitoring of a standard set of indicators on progress and outcome results is important for purposes of timely, accurate and comparable data at all levels, in order to understand the scale and outcomes of implementation; and how such information can be used for evidence-based decisions.

The purpose of this section is therefore to guide in developing and strengthening the M&E system and direct how data and information will be gathered and used in monitoring and evaluating implementation of the Strategic Plan. Monitoring and evaluation will be done at three levels:

1. Local monitoring to improve services management.
2. Monitoring coverage to strengthen health systems.
3. Real time monitoring and national evaluation platform for implementation strength.

The plan institutes a mechanism for harmonising program data with HMIS and proposes a structure for monitoring at community, district and national levels.

There is a need to conduct real time monitoring of availability of essential commodities, accessibility, initial utilisation, continuous utilisation and effective coverage of the high-impact interventions for maternal, newborn and child health. This M&E framework has been developed to guide the collection, analysis, use and provision of information that enables tracking of progress made in child health, in order to make informed decisions, including mid-stream adjustments in strategies and resources use/mobilisation. The specific objectives for the M&E framework are:

1. To strengthen M&E capacity of all levels and programmes involved in implementation and coordination of this strategic plan in timely and quality collection, analysis, utilisation and reporting, including dissemination of data on child survival.
2. To guide the development/strengthening of a national data base on child survival and accurate tracking of the same in a structured and coordinated flow of routinely collected data/information among players at all levels.
3. To facilitate and enhance efficient and appropriate use of resources at all levels of implementation of the Strategic Plan, by tracking resource disbursements and utilisation at all levels to ensure results-oriented performance and best use of resources.
4. To enhance the national, regional and international data collection and reporting requirements on child survival and development (e.g. MDGs, *A Promise Renewed*).

11.2 Mechanisms for M&E

Effective monitoring and evaluation is important in the strategy, to ensure progress towards achieving the MDGs through increased coverage of high impact interventions. A set of high-priority indicators and operational targets is proposed that will be objectively measured and used for monitoring and evaluation purposes. This framework provides indicators to measure inputs, outputs, outcomes and impact of implementing the high-impact, low-cost

interventions for child survival and development. The inputs, processes and outputs will be assessed as part of performance M&E (using reports from sectors/departments and services statistics); while outcomes and impact will be assessed in terms of effectiveness M&E and by use of population level surveys such as DHS, MICS and incidence studies.

Monitoring of the implementation of child health programmes will be done through:

- ***Monthly programme activity reports*** by departments, NGOs and sector organisations working on child health. The information will be collected using existing data capture tools and reporting mechanisms at each level.
- ***Quarterly programme reports*** by health facilities providing details on services provided and outputs of programmes specific to child survival. They will be collected using a routine system and processed through the Health Management Information System.
- ***Financial Management Report*** will be provided by implementers of the various programmes to assist in compiling reports on financial monitoring and to provide a link to programme activity reports.

To accelerate child health, the coverage of a selected set of high impact interventions will be monitored per locality at operational level through:

- Availability of essential commodities.
- Access to services, with special attention to vulnerable, marginalised or under-served populations.
- Initial and continued utilisation of services and defaulters tracing.
- Quality of service being provided.

Evaluation of the programme on child survival will be achieved through:

1. Malawi Demographic and Health Survey (DHS), population level surveys conducted by the Statistical office and the National Evaluation Platform (NEP).
2. Multiple Indicator Cluster Surveys (MICS), also to be done by the Statistical office.
3. Special surveys and studies to be conducted by implementers and other partners as operations research to address areas of interest in implementation of the Plan.

11.3 Structure for M&E

At the national level, there will be a central repository (database) located at the Child Health Secretariat linked to the HMIS. This will be linked to M&E subsystems in different Departments within the Ministry of Health, in child-focused units and organisations through routine reporting mechanisms. All partners involved in the implementation of the Strategic Plan shall report on progress in their specific areas within existing reporting lines and coordination frameworks created to oversee implementation of the Strategic Plan. Capacities for monitoring and evaluation will be strengthened at all levels.

The TWG for child health will work closely with the HMIS to:

1. Strengthen M&E functions for the Strategic Plan, with a particular focus on data collection at the community level through the village health register and at facility level.
2. Develop an M&E implementation plan and an Operational Manual for the Strategic Plan, and ensure evidence-based planning with M&E information for district implementation plans and district development plans.
3. Build capacities of the sub-systems.
4. Mobilise resources to support the M&E functions.
5. Analyse and prepare appropriately packaged national M&E reports.
6. Utilise the M&E and related research reports to guide decision making.
7. Ensure quality control in M&E.

11.3.1 Role of partners

Partner institutions, development partners, CSOs and private sectors who are implementing, funding or coordinating child health interventions will report through relevant monitoring systems on their activities and outputs. They will:

- Monitor and evaluate their activities.
- Use, and where appropriate, build capacities of existing system for M&E.
- Utilise data collected for own decision making.
- Submit reports to the coordinating entity.

11.3.2 Coordination of M&E in a decentralised context

The basis for M&E at all levels is to use the data/information for programming, planning, resources mobilisation/allocation and advocacy.

Community Level

Most programmes will be implemented at the community level. Therefore, MoH and partners must collect data and use it to monitor trends in supply of inputs, routine activities and progress made to make regular adjustments in the programme. The coordinating entity at each level (village, traditional authority) will collect data from its implementing partners and use it for resource allocation, decision-making and priority setting.

All key sectors involved in implementation of the Child Health Strategic Plan will meet at the community level every month to monitor progress of their work at the community level (AEC). Reports from these meetings will be submitted to the Traditional Authority within which the village is located. TAs will ensure that appropriate remedial actions are taken for any bottlenecks identified at the village level.

District Level

Each District will receive reports from their TA, and will convene bi-annual District Joint Review Meetings to analyse district performance and progress in implementing the Strategic Plan. Districts will submit their bi-annual joint review meeting reports to the national level.

National Level

At the national level, the Ministry of Health will convene multi-sectoral review meetings of key national level partners and selected representatives from the District. The purpose of these meetings is to identify early enough any problems in implementation and take appropriate and timely remedial actions, and to disseminate best practices to be adopted in areas that are not performing well. Annual Joint Review Meetings for all stakeholders in child health will be convened. These meetings will act as a peer review forum for assessing progress in achieving targets set in child survival and development, as well as identifying barriers and making proposals for remedy.

The Technical Working Group on Child Health will develop a research agenda in collaboration with district health offices and training and research institutions, especially as they relate to coverage, quality, utilisation and compliance with the high impact interventions. The operations research agenda will be based on analysis of monitoring, supervision and evaluations, taking advantage of the district databanks, wherever they exist.
The Child Health Unit and partners will be supported to assess and document their experiences and use the lessons during re-planning and for advocacy purpose. The Child Health Unit shall prepare routine progress reports on a quarterly and bi-annual basis.

Each level may conduct: 1) community-based participatory assessment and analysis; 2) population-based monitoring to assess progress and constraints; and 3) facility-based monitoring including use of MCH audits. Support for action-oriented research will be important to fill any gap. There is a need to link effective coverage, quality of care and impact results to achievement of national targets, MDGs and other reporting obligations for accountability at all levels.

10.0 COORDINATION AND OPERATIONAL FRAMEWORK

This section presents the management, coordination and governance framework for the operationalization of the Child Health Strategy and implementation of monitoring and accountability at all levels (national, districts and sub-districts). Figure 16 summarizes the coordination and operational framework.

10.1 National Child Survival and Health Development Steering Committee

In order to ensure an effective intra-sectoral and inter-sectoral response to child survival and health development needs of children, there shall be a Child Health Steering Committee (CHSC) made up of the Secretary for Health and senior officials from the Ministry of Health, relevant line Ministries, health development partners, Civil Society and Private Sector. The CHSC will be chaired by the Secretary for Health. The structure of the national steering committee should be mirrored at district and health centre levels.

Child Health Steering Committee Membership

- Secretary for Health

- Director of Preventive Health Services
- Director of Clinical Services
- Director of Reproductive Health
- Director of HIV/AIDS
- Director of Planning and Policy Development
- Director of HTSS
- Director of Nursing Services
- Director of Human and Administration
- Programme Manager EPI
- Programme Manager Malaria
- Programme Manager IMCI
- Programme Manager Nutrition
- Deputy Director Health Education
- Office of the President and Cabinet (OPC) - Nutrition, HIV/AIDS and other functions related to Child Health.
- Representatives of relevant line Ministries
- Christian Health Association of Malawi
- Multilateral agencies
- Bilateral Donors
- NGOs
- Civil Society

Child Health Steering Committee Terms of Reference

- Oversee the implementation of the Child Health Strategy Strategic Plan.
- Provide political visibility, policy direction and support to child health programmes.
- Facilitate the coordination of input from all major internal and external partners in the country in child health;.
- Advise the Child Health Technical Working Group.
- Facilitate coordination with non-health sectors relevant to child survival.
- Act as the national point of contact with the Global Child Health Partnership.
- Assist in raising funds for the Child Health Strategy.
- Promote and identify funding for research to address problems of child health.
- Conduct Advocacy for resource mobilization.

Child Health Steering Committee Coordination

- Hold inter-programme meetings to harmonise operation and arrive at a common understanding on selected issues, including: (a) targets year by year; (b) time of key activities; and (c) allocation of resources, taking into consideration the funding gaps and intervention coverage levels.
- Develop and harmonise a coordinated framework for community-level approach to child survival.

- Develop a common system for supervision, monitoring and reporting for all community extension workers.
- Mobilise each child health partner to: (a) endorse the child health strategy; (b) articulate their mandate for child health; (c) prepare an action plan and budget every year; and (d) nominate a focal point person for implementation of the Child Health Strategy Strategic Plan.
- Form Technical Working Groups and Task Forces amongst partners, when necessary, to achieve a given task.
- Conduct bi-annual, quarterly and monthly Joint Programme Reviews together with partners for child survival.

Expected Results

- Increased coordination of key stakeholders in child survival.
- Harmonised strategies, plans, targets and resources for child survival at all levels.

10.2 Child Health Technical Working Group

The Child Health Technical Working Group will provide programmatic and technical support to the CHSC. It is comprised of senior technical officials from participating partners and appropriate departments and programmes involved in child survival.

Child Health Technical Working Group Membership

- Same departments and institutions as for CHSC Committee, but with deputy directors and senior technical officers from each relevant units/departments.
- CSO representatives.

Child Health Technical Working Group Terms of Reference

- Provide technical advice to the CHSC
- Coordinate planning, implementation, monitoring and evaluation, and coordination of programmes related to child survival at national and district levels.
- Develop and disseminate technical and managerial guidelines on child survival.
- Support district and sub-district planning for child survival.
- Monitor and evaluate national implementation of the Strategy, including periodic reviews.

10.3 Managed Partnership

Partners and programmes in the implementation of child health shall be bound by the following:

- Unequivocal declaration of commitment to the Child Health Strategy and its strategic plan.
- Recognition of the need and acceptance of their roles within their mandates as well as their willingness to discharge their responsibilities.

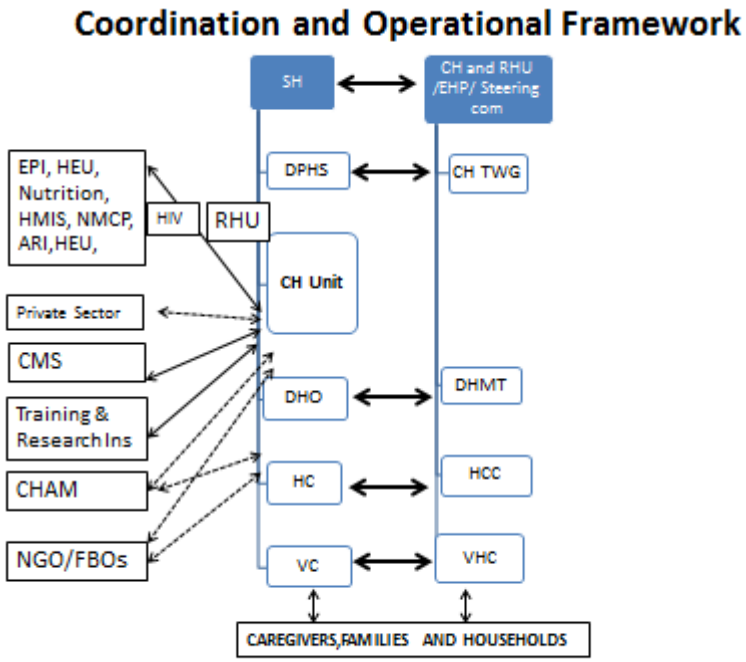
- Respect for the institutional framework and their position and relations in it.
- Shared responsibility to advocate and support other partners to discharge their accountabilities and responsibilities.

10.3.1 Roles and responsibilities

The strategy demands an intra-sectoral approach with a common set of roles and responsibilities amongst child health programmes in the MoH. Specifically programmes and partners should:

1. Articulate their mandate and action plan for the implementation of child health including resource mobilisation.
2. Support health promotion and education related to all the elements in the Malawi minimum package of high impact interventions.
3. Provide policy, programmatic and administrative guidance and support to the relevant components according to their specific mandate.
4. Ensure participation in community dialogue.
5. Communicate the CHSC decisions to and from all levels of their organisational and management structure.

Figure 16: Coordination and Operational Framework for the implementation of Child Health in Malawi



10.3.2 Programme and Partner-specific roles and responsibilities

The Ministry of Health

The Ministry of Health will provide overall leadership for managing implementation of the Strategic Plan for Child Health in Malawi through its administrative structure from headquarters to the community level. This leadership role will be supported by policy and programmatic contributions from other Sections/Units in the Ministry.

In particular MoH shall:

(i) Chair and provide the secretariat for CHSC and TWG.
(ii) Take a leading role in policy formulation/review implementation, monitoring and coordination of Child health.
(iii) Procure and supply drugs, supplies and equipment for case management or referral.
(iv) Coordinate expansion plans for human resources, facilities, logistics, resources, taking into consideration other departmental plans.
(v) Facilitate signing of service level agreements (SLAs) between CHAM and District Health Offices.
(vi) Establish management, monitoring and supervision structure for the Plan.
(vii) Mobilise and allocate resources for child health interventions.
(viii) Continually provide policy oversight and guidance for implementation of the Plan.

The Ministry of Health will be in-charge of coordinating the Child Health Strategy Strategic Plan and will collaborate with CHAM, the private sector, research and training institutions, and NGOs as appropriate. The child health unit will serve as secretariat to the intra-sector child health committees (Steering Committee and Technical Working Group).

Office of the President and Cabinet – Department of Nutrition, HIV/AIDS

As a member of the CHSC, TWG and multi-sectoral training, supervision, monitoring and evaluation teams, OPC Department of Nutrition, HIV/AIDS shall:

(i) Coordinate multi-sectoral nutrition programs at the national level and ensure consistency, adequacy and relevance across sectors.
(ii) Promote food security, dietary diversification, sanitation, processing, preservation, storage and utilisation of nutritious foods in households and communities in relation to the minimum package of high impact interventions.

CHAM

(i) Member of TWG for training, supervision, monitoring and evaluation team.
(ii) Speed up the signing of service agreements with the District Health Offices.
(iii) Ensure that the pre-service training curriculum contains components of child health.

NGOs /CSOs

(i) Member in the CHSC and TWG.

(ii) Identify partners to implement the Malawi minimum package.
(iii) Ensure that their interventions are approved and supported by the CHSC.
(iv) Provide technical support for monitoring and evaluation at district and sub-district level.
(v) Ensure sustainability of initiatives beyond the period of donor support.

United Nations Agencies

All members of the UN family will:

(i) Be members of the CHSC and TWG.
(ii) Mobilise resources to support implementation of the Strategic Plan.
(iii) Provide programmatic and technical support to the Government of Malawi in the health sector.
(iv) Provide support for equipment, supplies and other commodities.
(v) Support surveys, operations research and evaluations related to Child Health.

Bilateral agencies and other donor partners

(i) Member of CHSC and TWG.
(ii) Resource mobilisation to scale up child health to reach universal coverage.
(iii) Provide programmatic and technical support to the Government of Malawi in the health sector.

12.0 COSTING AND FINANCING THE STRATEGY

The costs for the delivery of high impact interventions include programme costs, drugs, commodities and supplies and a share of health system costs exclusively for the concerned high impact interventions; human resources; trainings; transport and logistics; infrastructure and equipment; supervision, monitoring and evaluation; and communication for behaviour change. Major costs are estimated from the LiST and the one UN costing tools.

The costs for the essential commodities are presented per high impact intervention. Availability of essential commodities at the required quantities is the first condition to achieving universal coverage of the high impact interventions. However, essential commodities alone will not achieve the objectives, as the system to deliver the interventions is equally important. The system costs are dependent production functions. High impact interventions are delivered in a package and therefore system costs are shared between the high impact interventions. Thus, it is impossible to present system costs per high impact intervention.

ANNEX 1: MATERNAL AND CHILD HEALTH INTERVENTIONS

	Pre-conception and pregnancy	Labor and delivery	Postnatal and neonatal period	Post-neonatal and early childhood (1-59 months)
Referral Hospitals	• Availability and provision of safe abortion care when indicated • Provision of post abortion care	• Antibiotics for preterm prelabour rupture of membranes • Corticosteroids to prevent respiratory distress syndrome in newborns • Induction of labour to manage prelabour rupture of membranes at term • Skilled obstetric care and immediate newborn care and resuscitation • Preventing Parent to Child Transmission (PPTCT) of HIV • Postpartum sterilization • Prophylactic uterotonics to prevent postpartum hemorrhage • Manage postpartum hemorrhage using uterine massage and uterotonics • Magnesium sulphate for eclampsia • Active management of third stage of labour to prevent postpartum hemorrhage • Caesarean section for maternal/fetal indication • Prophylactic antibiotics for caesarean section	• Essential newborn care • Care of sick newborn • Initiation of early breastfeeding • Exclusive breastfeeding • Hygienic cord and skin care and mask (by professional health workers for babies who do not breathe at birth) • Kangaroo mother care for preterm and low-birth-weight babies • Extra support for feeding small and preterm babies • Management of newborns with jaundice ("yellow" newborns) • Initiate prophylactic antiretroviral therapy for babies exposed to HIV • Presumptive antibiotic therapy for newborns at risk of bacterial infection • Use of surfactant (respiratory medication) to prevent respiratory distress syndrome in preterm babies • Continuous positive airway pressure (CPAP) to manage babies with respiratory distress syndrome • Case management of neonatal sepsis, meningitis and pneumonia • Family planning • Prevent and treat maternal anemia • Detect and manage postpartum sepsis	• Emergency triage Assessment and treatment • Pediatric Hospital Initiative • Care of children with severe acute malnutrition • Vitamin A supplementation for 6-59 month olds • Routine immunization (including *Hib*, PCV and rotavirus vaccines) • Management of severe and complicated malaria • Case management of severe pneumonia • Case management of diarrhea including dysentery and persistent diarrhea

	Pre-conception and pregnancy	Labor and delivery	Postnatal and neonatal period	Post-neonatal and early childhood (1-59 months)
Primary level facilities	• Management of unintended pregnancy • Availability and provision of safe abortion care when indicated • Provision of post abortion care • ***Appropriate antenatal care package:*** - Screening for anemia - Screening for maternal illnesses - Screening for hypertensive disorders of pregnancy - Iron and folic acid to prevent maternal anemia - Intermittent Preventive treatment for malaria - Counseling on family planning, birth and emergency preparedness - Smoking cessation - Tetanus vaccination - Prevention and management of sexually transmitted infections and HIV, including with antiretroviral medicines	• Antibiotics for preterm prelabour rupture of membranes • Corticosteroids to prevent respiratory distress syndrome in newborns • Induction of labour to manage prelabour rupture of membranes at term • Skilled obstetric care and immediate newborn care and resuscitation • Preventing Parent to Child Transmission (PPTCT) of HIV • Postpartum sterilization • Prophylactic uterotonics to prevent postpartum hemorrhage • Manage postpartum hemorrhage using uterine massage and uterotonics • Magnesium sulphate for eclampsia • Active management of third stage of labour to prevent postpartum hemorrhage	• Essential newborn care • Care of sick newborn • Immediate thermal care • Initiation of early breastfeeding • Exclusive breastfeeding • Hygienic cord and skin care and mask (by professional health workers for babies who do not breathe at birth) • Kangaroo mother care for preterm and low-birth-weight babies • Extra support for feeding small and preterm babies • Initiate prophylactic antiretroviral therapy for babies exposed to HIV • Presumptive antibiotic therapy for newborns at risk of bacterial infection • Family planning • Prevent and treat maternal anemia	• Facility-based care of childhood illnesses (IMCI) • Emergency triage Assessment and treatment • Pediatric Hospital Initiative • Care of children with severe acute malnutrition • Exclusive breastfeeding for 6 months • Continued breastfeeding and • complementary feeding from 6 months • Vitamin A supplementation for 6-59 month olds • Routine immunization (including *Hib*, PCV and rotavirus vaccines) • Case management of uncomplicated malaria and severe malaria • Case management of uncomplicated pneumonia • Case management of simple diarrhea

	Pre-conception and pregnancy	Labor and delivery	Postnatal and neonatal period	Post-neonatal and early childhood (1-59 months)
Family and Community	• Interventions to delay first pregnancy and promote birth spacing • Antenatal home visits by CHWs • Iron and folic acid supplementation • Prevention of malaria with insecticide treated nets • Counseling on family planning, birth and emergency preparedness • Smoking cessation	• Social support during childbirth • Prophylactic uterotonics to prevent postpartum hemorrhage • Misoprostol to prevent hemorrhage	• Postnatal home visits by CHWs (Day 1, 3 and 7) • Immediate thermal care • Initiation of early breastfeeding • Exclusive breastfeeding • Hygienic cord and skin care • Kangaroo mother care for preterm and low-birth-weight babies • Case management of neonatal sepsis • Family planning • Prevent and treat maternal anemia • Detect and manage postpartum sepsis	• Routine immunization (including *Hib*, PCV and rotavirus vaccines) • Prevention malaria using insecticide treated bednets • Case management of uncomplicated malaria • Pre-referral treatment of suspected severe malaria • Case management of uncomplicated pneumonia • Case management of simple diarrhea • Screening and referral of children with severe acute malnutrition • Exclusive breastfeeding for 6 months • Continued breastfeeding and • complementary feeding from 6 months • Vitamin A supplementation for 6-59 month olds

ANNEX 2: COSTING

Summary costs with drugs disaggregated by programme area/delivery channel (MWK) - CHPS20132017_Final

	2013	2014	2015	2016	2017
Child health					
Programme Costs	1,399,380	4,215,842,320	4,343,169,400	2,182,401,920	2,579,305,669
Drug, commodities, and supplies	22,496,041,284	26,467,260,494	30,555,288,540	34,789,872,654	39,167,462,872
Share of health systems costs	44,407,889,103	41,521,409,131	38,609,681,514	35,718,908,736	32,804,981,836
Total Child health	**66,905,329,766**	**72,204,511,944**	**73,508,139,454**	**72,691,183,310**	**74,551,750,377**

Detailed Programme Costing - Child health

	2013	2014	2015	2016	2017
1. **Programme-Specific Human Resources**	0	927,750,000	920000000	0	0
1.1 National-Level Staff	0	5,500,000	0	0	0
1.2 Regional-Level Staff	0	2,250,000	0	0	0
1.3 District-Level Staff	0	920,000,000	920000000	0	0
2. **Training**	0	1,716,224,401	1957162481	686500001	648000000
2.1 In-service / Refresher Training	0	1,706,204,151	1951851231	686500001	648000000
2.2 Training of Trainers	0	269,000	0	0	0
2.3 Development of Training Programmes and Material	0	5,311,250	0	0	0
2.4 Changing the Pre-Service Training Curriculum	0	4,440,000	5311250	0	0
2.5 Support Activities	0	0	0	0	0
3. **Supervision**	0	126,180,000	126180000	126180000	126180000

	2013	2014	2015	2016	2017
3.1 Coordination Meetings	0	34,020,000	34020000	34020000	34020000
3.2 National Staff Visiting Local Staff	0	92,160,000	92160000	92,160,000	92160000
4. **Monitoring and Evaluation**	0	12,929,041	12929041	12929041	12929041
4.1 Design of M and E Frameworks and Systems	0	8,558,571	8558571	8558571	8558571
4.2 Design of Quality Control and Assurance	0	0	0	0	0
4.3 Design/Review of Data Management Systems	0	0	0	0	0
4.4 Data Collection and Analysis	0	0	0	0	0
4.5 Quality Control/Quality Assurance	0	4,370,470	4370470	4,370,470	4370470
5. **Infrastructure and Equipment**	0	586,250,000	848750000	848750000	1426250000
5.1 Situational Assessment	0	0	0	0	0
5.2 Equipment Upgrade for Health Centers	0	525,000,000	787500000	787,500,000	1365000000
5.3 Equipment Upgrade for Hospitals	0	61,250,000	61250000	61250000	61250000
6. **Transport**	1399380	450,216,380	251808380	257775380	143873380
6.1 Situational Assessment	0	0	0	0	0
6.2 New Vehicle Purchase(MWK)	0	436,850,000	232475000	232475000	115550000
6.3 Vehicle Operation and Maintenance	1399380	13,366,380	19333380	25300380	28323380
7. **Communication, Media & Outreach**	0	0	0	0	0
7.1 Development of Communication Strategy	0	0	0	0	0
7.2 Mass Media	0	0	0	0	0
7.3 Printed Materials	0	0	0	0	0
7.4 Social Outreach Activities	0	0	0	0	0
8. **Advocacy**	0	60,278,498	60278498	60278498	60278498
8.1 Planning an Advocacy Strategy	0	15,121,250	15121250	15,121,250	15121250
8.2 Advocacy Activities	0	45,157,248	45157248	45157248	45157248
8.3 Advocacy Materials	0	0	0	0	0
9. General Programme Management	0	12,887,000	15503250	11,237,000	11237000
9.1 Design and Review of Country Strategy	0	2,000,000	2000000	2000000	2000000
9.2 Development and Review of Annual Work Plan	0	6,090,000	6090000	6090000	6090000

	2013	2014	2015	2016	2017
9.3 Development/Review of Human Resource Plan	0	1,650,000	1650000	0	0
9.4 Programme Coordination Meetings	0	3,147,000	5763250	3147000	3147000
9.5 Commodity Regulation and Policies	0	0	0	0	0
9.6 Situation Analysis	0	0	0	0	0
Other Costs	0	323,127,000	150557750	178752000	150557750
Annual Quantification meeting	0	28,194,250	0	28,194,250	0
Procure essential equipment for BeMOC sites	0	126,000,000	0	0	0
Procure Radio Equipment for comunication	0	18,375,000	0	0	0
Renovation of healthcare facilities	0	137,593,750	137,593,750	137,593,750	137,593,750
Distribution of essential supplies	0	12,000,000	12,000,000	12,000,000	12,000,000
TWG Biannual meeting	0	964,000	964,000	964,000	964,000
Total	**1,399,380**	**4,215,842,320**	**4,343,169,400**	**2,182,401,920**	**2,579,305,669**

ANNEX 3: iCCM REQUIREMENTS

Commodity Costs	**Financing Gap**			
	2014	**2015**	**2016**	**2017**
ACTs	$ (785,577.26)	$ 16,785.59	$ 1,313,027.96	$ 1,169,198.01
RDTs	$ (1,309,621.92)	$ (17,248.02)	$ 2,219,078.11	$ 2,071,061.63
ORS	$ 300,882.00	$ 473,731.00	$ 493,414.00	$ 519,958.00
Zinc	$ 22,377.00	$ 150,168.00	$ 156,408.00	$ 164,822.00
AmoxC	$ 145,126.00	$ 299,693.00	$ 319,949.00	$ 337,161.00
Respiratory Rate Timers	$ 13,111.00	$ 6,175.00	$ 6,354.00	$ 6,538.00
Additional iCCM commodities	$ 315,406.00	$ 424,105.00	$ 460,366.00	$ 497,993.00
Subtotal Commodity costs	**$ (1,298,297.17)**	**$ 1,353,409.57**	**$ 4,968,597.07**	**$ 4,766,731.64**
Delivery Costs				
iCCM Delivery Costs (including training, supervision, BCC, incentives, etc)	$ 2,423,662.00	$ 3,544,566.00	$ 3,669,038.00	$ 3,777,097.00
Start Up CHW Platform Costs				
CHW Tools & Enablers	$ 1,449,939.00	$ 2,022,797.00	$ 2,088,186.00	$ 2,148,744.00
CHW Recruiting, Training, Data, and Program Management	$ 1,529,175.00	$ 2,073,070.00	$ 2,140,085.00	$ 2,202,147.00
Health Posts Shelters/Infrastructure	$ 600,600.00	$ 840,600.00	$ 864,977.00	$ 890,062.00
Subtotal delivery costs	**$ 6,003,376.00**	**$ 8,481,033.00**	**$ 8,762,287.00**	**$ 9,018,050.00**
Total iCCM Financing Gap	**$ 4,705,078.83**	**$ 9,834,442.57**	**$ 13,730,884.07**	**$ 13,784,781.64**