MINISTRY OF HEALTH AND SANITATION SIERRA LEONE

THE SIERRA LEONE FRAMEWORK FOR THE PERSON-CENTRED LIFE STAGES APPROACH TO HEALTH SERVICE DELIVERY

2023-2030

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Acronyms

Abbreviation	Definition
ABR	Auditory Brainstem Response
ACT	Artemisinin-based Combination Therapy
ANC	Antenatal care
ARI	Acute Respiratory Infection
ART	Antiretroviral Therapy
ARV	Antiretroviral
BCC	Behaviour Chance Communication
BEmONC	Basic Emergency Obstetric and Newborn Care
BP	Blood Pressure
CHA	Community Health Assistant
CHC	Community Health Centre
CHO	Community Health Officer
CHP	Community Health Post
CHPS	Community Health Planning and Services
CHVs	Community Health Volunteers
CEmONC	Comprehensive Emergency Obstetrics and Newborn Care
CO	Clinical Officers
CPR	Contraceptive Prevalence Rate
DHAS	Directorate of Hospital and Ambulance Services
DHIS	District Health Information System
DHMT	District Health Management Team
DMO	District Medical Officer
DHS	
DNMS	Directorate of Nursing and Mid-Wifery Services
DPT	Diphtheria-Pertussis-Tetanus
EHSP	Essential Health Services Package
EmONC	Emergency Obstetrics and Newborn Care
EMR	Electronic Medical Records
eMTCT	Elimination of Mother to Child Transmission
ETAT	Emergency Triage Assessment and Treatment
FCDO	Foreign and Commonwealth and Development Office
FP	Family Planning
FTAM	First Term Adolescence Mothers
GBD	
GDP	Gross Domestic Product
GDP	Gross Domestic Product
HCW	Health Care Workers
DHIS	District Health Information System
HIV	Human Immunodeficiency Virus
HIB	Haemophilus Influenzae Disease
HLMA	Health Labour Market Analysis
HPV	Human Papillomavirus
HRH	Human Resource for Health
HTN	Hypertension
ICCM	Integrated Community Case Management

Abbreviation	Definition
IFA	Indirect Immunofluorescence Assay
IMAM	Integrated Management of Acute Malnutrition
IMNCI	Integrated Management of Neonatal Childhood Illnesses
IPC	Infection Prevention Control
MTP	Massive Transmission Protocol
IPT	Intermittent Preventive Therapy
IPTp	Intermittent Preventive Treatment of Malaria for Women
IRC	International Rescue Committee
IUCD	Intrauterine Contraceptive Device
JD	Job Description
LLITNs	Long-Lasting Insecticide-Treated Nets
KMC	Kangaroo Mother Care
LCA	Life Course Approach
LSA	Life Stages Approach
M&E	Monitoring and Evaluation
MCH	Maternal and Child Health
MCHP	Maternal Child Health Post
MIYCN	Maternal Infant and Young Child Nutrition
MICS	Multiple Indicator Cluster Survey
MMR	Maternal Mortality Rate
MMS	Multiple Micronutrient Supplements
MO	Medical Officer
MOG	Ministry of Gender
MOH	Ministry of Health
MOSW	Ministry of Social Welfare
MOSW	Ministry of Social Welfare
MOYA	Ministry of Youth Affairs
MTCT	Mother to Child Transmission
MTNDP	Medium-Term National Development Plan
NACP	National Aids Control Program
NCDs	Noncommunicable Diseases
NEMS	National Emergency Medical Services
NGOs	Non-Government Organization
NHSP	National Health and Sanitation Policy
NHSSP	National Health Sector Strategic Plan
NMCP	National Malaria Control Program
NMSA	National Medical and Supply Agency
OOP	Out of Pocket
OPD	Outpatient Department
ORS	Oral Rehydration Solutions
PET	Public Expenditure Tracking
PHC	Primary Health Care
PHUs	Peripheral Health Units
PLHIVs	People Living with HIV
PMTCT	Prevention of Mother to Child Transmission
PNC	Post Natal Care
QOC	Quality of Care
RDT	Rapid Diagnostic Test
RMNCAH	Reproductive Maternal, Newborn, Child and Adolescent Health

Abbreviation	Definition
SAHP	School and Adolescent Health program
SARA	Service Availability and Readiness Assessment
SBA	Skilled Birth Attendant
SDGs	Sustainable Development Goals
SDHS	Sierra Leone Demographic Health Survey
SDI	Service Delivery Index
SECHN	State Enrolled Community Health Nurse
SBGV	Sexual and Gender Based Violence
SLeSHI	Sierra Leone Social Health Insurance Scheme
SLL	Small Lymphocytic Lymphoma
SP-IPTi	Intermittent Preventive Treatment for Infants with Sulfadoxine Pyrimethamine
SRH	Sexual and Reproductive Health
STEPS	STEPwise Approach to Surveillance
STIs	Sexually Transmitted Infections
TB	Tuberculosis
TFR	Total Fertility Rate
UHC	UHC Universal Health Coverage
WASH	Water Sanitation and Hygiene
WCA	Women of Child-bearing Age
WHO	World Health Organization
WDI	World Development Indicators
WRA	Women of Reproductive Age

Minister's Foreword

The Ministry of Health and Sanitation (MOHS) has a vision and strong ambition to institutionalize life stages approach in the public health system with a broader aim of preventing diseases and reducing disease burden on individuals, households, community, and the health system by addressing services delivery at all stages of life. The MOHS is convinced that the life stages approach to service delivery will help in significantly reducing morbidity and mortality from both communicable and non-communicable diseases and therefore serve as the vehicle to delivering UHC in Sierra Leone by 2030. This will require that the life stages approach is meticulously applied in policy formulation, programming, planning, implementation, and service delivery.

The life stages approach ensures that the health needs of individuals are addressed throughout the individual's life course. Wholistic care is provided to an individual, being cognisant that the care being given to an individual at a point in time will determine their health not only at that moment but throughout all the stages of their life. The life course approach emphasises addressing early "upstream" determinants of health to change personalized trajectories positively. This asserts that vulnerabilities in later life stages can be reduced by the care given to an individual at earlier stages.

This service delivery model is envisioned to be person-centred where the health of an individual is prioritised at all stages. The foundation is preconception care, care of the pregnant mother, and care of the new-born which then influences the rest of the child's health and productivity in childhood, adolescence, adulthood, and old age. There is overwhelming consensus among key stakeholders on the need to shift from disease-based programming to planning for the whole individual, so that the health system can respond irrespective of the ailment that befalls the individual. The life stages approach seeks to provide wholistic care for a client at one stop and therefore calls for the integration of services and mechanisms to ensure that all aspects of the patients' needs are addressed. It also requires investment in primary care systems to provide health promotion, disease prevention, curative, rehabilitative and palliative services to all life stages, leaving no one behind.

The government will prioritize implementation of recommendations in this framework per life stage as well as health system strengthening to ensure the delivery of quality healthcare services, leaving no one behind. I highly encourage all other stakeholders, including international development partners, to join hands with the Ministry of Health and Sanitation and fully align their investment strategies and support mechanisms to one national approach to achieve UHC through the life stages approach.

Austin Demby

Dr. Austin Demby
MINISTER OF HEALTH AND SANITATION

Acknowledgements

The Ministry of Health and Sanitation has developed the Framework for the Life Stages Approach to Health Service Delivery. This approach aims to provide wholistic person centred, family focused care to all age cohorts leaving no one behind. The framework is envisioned to enable the country achieve the UHC 2030 targets through strengthening of health systems and service delivery reorganisation to reach all the life stages, while still guided by the Sierra Leone Health Sector Strategic Plan and the UHC Roadmap.

The Ministry acknowledges the vision by the Minister of Health and Sanitation, Dr. Austin Demby to use a life stages approach to optimise service delivery in the country. His guidance in the development of this document is highly appreciated. I acknowledge the work put in by the Reproductive and Child-health Directorate led by Dr. Tom Sesay, in the development of this document as mandated in the 2022 Health Summit Aide Memoire Plan of Action. I also acknowledge the leadership of Dr. Francis Smart in this process. I appreciate the contribution of all the Ministry of Health and Sanitation Directorate and Program leads, District Medical Officers and the facility health workers in the development of the framework.

I would also like to appreciate the donor and implementing partners and CSOs for their contributions and urge them to commit to joint implementation of this framework's recommendations. The Ministry of Health and Sanitation is especially grateful to the World Health Organisation Country Office and AFRO Regional Office for the technical and financial support provided throughout the process.

The Ministry of Health and Sanitation is committed to using the Life Stages Approach Framework for health service delivery to improve health outcomes for all from birth to old age to ensure each individual attains their highest potential. I, therefore, urge all stakeholders to collaborate and support the MOHS implementation of the Life stages Approach for service delivery.

Dr. Sartie M. Kenneh
CHIEF MEDICAL OFFICER

CHAPTER 1: INTRODUCTION

1.1 Definition of life course approach (LCA)

The LCA to service delivery is a model whereby wholistic care is provided to an individual, being cognisant that the care being given now will determine their health not only now but throughout all the stages of their life. The LCA emphasises addressing early "upstream" determinants of health to change personalized trajectories positively. This asserts that vulnerabilities in later life stages can be reduced by the care given to an individual at earlier stages. For example, the care given in pregnancy determines the baby's birth outcome, and the care and nutrition at birth and in the first 1000 days affect their neurodevelopment and risk of developing hypertension, diabetes, or obesity in adulthood.

The lLCA looks at the health of the individual from conception all through their life to ensure they live life at their maximum health capacity. The LCA calls for focus across age cohorts (stages) with different vulnerabilities to implement critical high-impact interventions and meet the health requirements at that time, to ensure better health outcomes and productivity in the subsequent life stages. The breakdown of the LCA into life stages allows for earlier measurement of health outcomes based on cohort needs and interventions implemented. The foundation of the life course is preconception care, care of the pregnant mother, and care of the new-born which then influences the rest of the child's health and productivity in childhood, adolescence, adulthood, and old age.

In the definition of the life-stages approach (LSA) in Sierra Leone, various stakeholders expressed the need to move from disease-based programming where for example, a new-born is resuscitated at birth only to die of dehydration due to diarrhoea as a child, or a child managed for pneumonia but dies of drug abuse as an adolescent. The service delivery model is person-centred, where the health of an individual is prioritised at all stages. The LSA seeks to provide wholistic care for a client at one stop and therefore calls for the integration of services and mechanisms to ensure that patients are not lost to follow-up. The LSA envisioned as shown in Table 1 below.

Table 1: Shift from program-based service delivery to life stages approach to service delivery

Programmes approach	**Life Stages Approach**
Service delivery at one point in a person's life	Services delivery now to cater for the person at all subsequent stages of their life
Disease centred	Person-centred
Medical care (curative)	Health care (preventive, promotive, curative, rehabilitative, rehabilitative)
Fragmented patient care	Integrated patient care
Loss to follow up	Continuity of care
Verticalized Interventions	Health systems approach
Individual programs	Collaboration and partnership

Programmes approach	Life Stages Approach
Might leave out vulnerable groups and some cohorts	Leaving no one behind including the most vulnerable e.g. new-borns, adolescents

The LSA envisions health care delivered across all levels of care from health promotion, disease prevention, curative, rehabilitative and palliative care across the different levels of health care in Sierra Leone. Service delivery shall be across all levels of care in Sierra Leone from the community health units, the primary healthcare facilities (including the MCHPs, CHPs and community health centres), to the secondary and tertiary hospitals. In implementing the LSA, the population impact indicators are expected to improve, leading to improved quality of life, and increased life expectancy, ultimately leading to human capital development for Sierra Leone

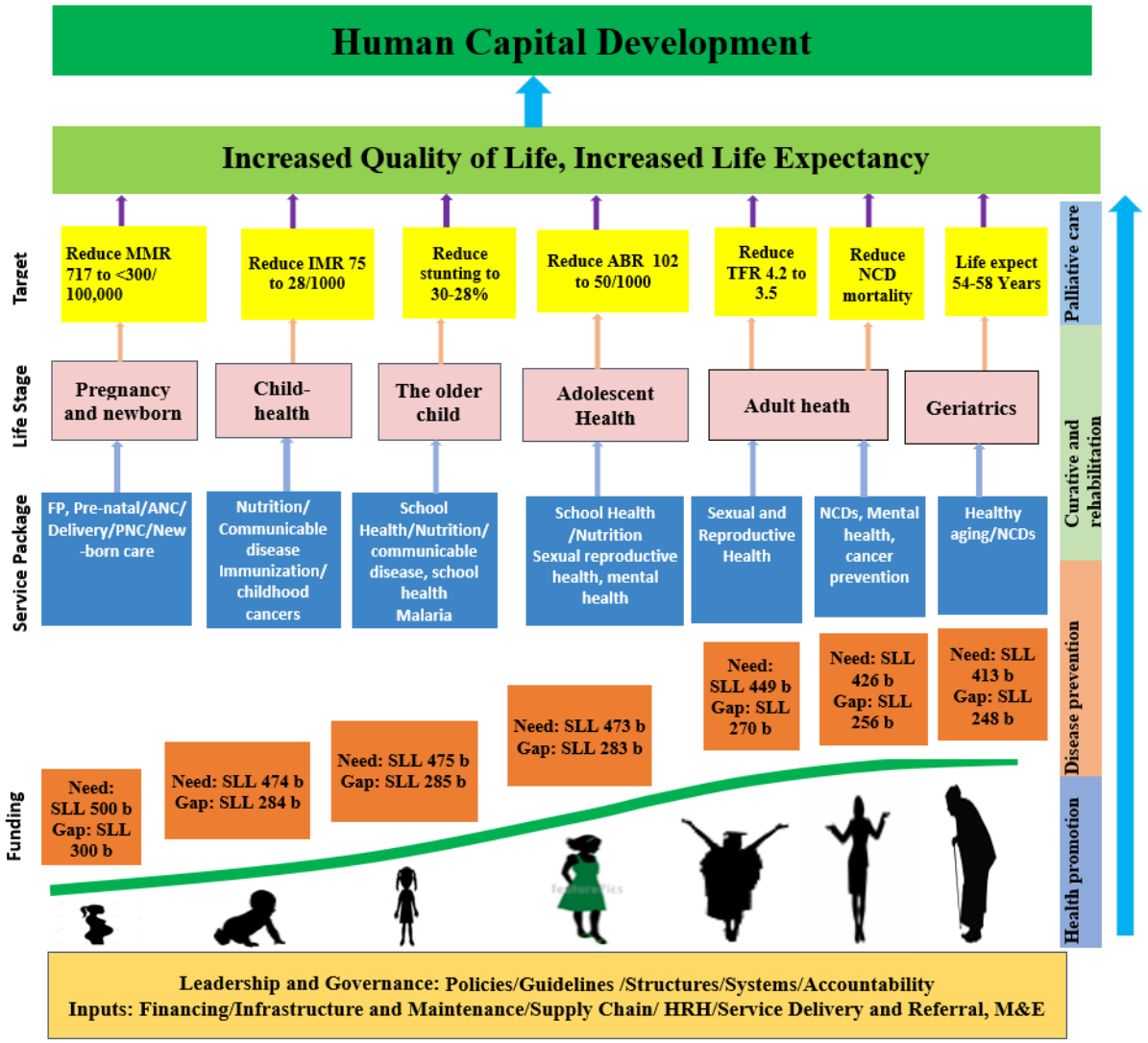

Figure 1: Life Stages Approach Conceptual Framework

1.2 Global understanding and implementation of life stage approach in achieving Universal Health Coverage (UHC)

UHC means that all people have access to the full range of quality health services they need, when and where they need them, without financial hardship. It covers the full continuum of essential health services, from health promotion to prevention, treatment, rehabilitation and palliative care.

Using the LSA, countries can tailor UHC packages towards national priorities and resources but should include services that: 1) promote health, address protective and risk factors, and tackle major diseases (through promotion, prevention, treatment, rehabilitation, and palliative care); 2) are provided across every life stage; and; 3) adequately prepare people for the next stage of life. These packages represent a LSA and facilitate healthy life trajectories. They should expand over time, with increasing quality and technical efficiency, to reach all populations in need, and the financial burden of accessing these services must be reduced for all age groups.[1]

As a foundation for and way to move towards UHC, WHO recommends reorienting health systems to primary health care (PHC).[2] PHC enables universal, integrated access in everyday environments to the full range of quality services and products people need for health and well-being, thereby improving coverage and financial protection. Most (90%) essential UHC interventions can be delivered through PHC and there are significant cost efficiencies in using an integrative PHC approach. Some 75% of the projected health gains from the Sustainable Development Goals (SDGs) could be achieved through PHC, including saving over 60 million lives and increasing average global life expectancy by 3.7 years by 2030.[3] Strengthening health systems based on PHC should result in measurable health impacts in countries.

1.3 Life Stage Framework Concepts

Developmental Perspectives in Life Course

There are certain key developmental stages of extreme biological sensitivity and vulnerability. These are stages of rapid growth and physiological development including neurological development. These periods of vulnerability include the foetal development, at birth and during the first 1000 days. There is capacity for biological adaptation at these stages in response to negative external environments and social pressures. These adaptations may be maladaptive, resulting in poor health at later stages in response to the external environments and social exposures.[4] Examples include eclampsia of diabetes whereby negative biological exposures to the foetus in utero resulting in poor birth outcomes or developmental challenges to the baby. A

[1] https://cdn.who.int/media/docs/default-source/universal-health-coverage/who-uhl-technical-brief-template---uhl-life-course.pdf?sfvrsn=d64aadc_3&download=true

[2] https://extranet.who.int/uhcpartnership/featured/primary-health-care#:~:text=In%20order%20to%20reach%20universal,at%20the%20core%20of%20integrated

[3] https://www.who.int/news-room/fact-sheets/detail/universal-health-coverage-(uhc)

[4] Jones NL, Gilman SE, Cheng TL, Drury SS, Hill CV, Geronimus AT. Life Course Approaches to the Causes of Health Disparities. Am J Public Health. 2019 Jan;109(S1):S48-S55. doi: 10.2105/AJPH.2018.304738. PMID: 30699022; PMCID: PMC6356123.

baby exposed to respiratory distress due to meconium aspiration or birth asphyxia can result in varying degrees of cerebral palsy which affects their lifelong neurosensory and neuromuscular development depending on the degree of asphyxia. The nutrition in the first 1000 days is also a period of vulnerability as poor nutrition and stunting impacts the overall physical and neurodevelopmental growth and possibly limit the maximum potential a child can reach. [5]

Studies have shown that experiences of early adversity (childhood abuse, neglect, and exposure to other traumatic stressors) influenced many adult health outcomes (e.g., chronic obstructive pulmonary disease, heart disease, depression, alcoholism) in a strong and graded fashion. Upstream prevention of these early adversities has a high potential for payoff in health outcomes and dollars. [6] The developmental perspective is demonstrated in figure 2.

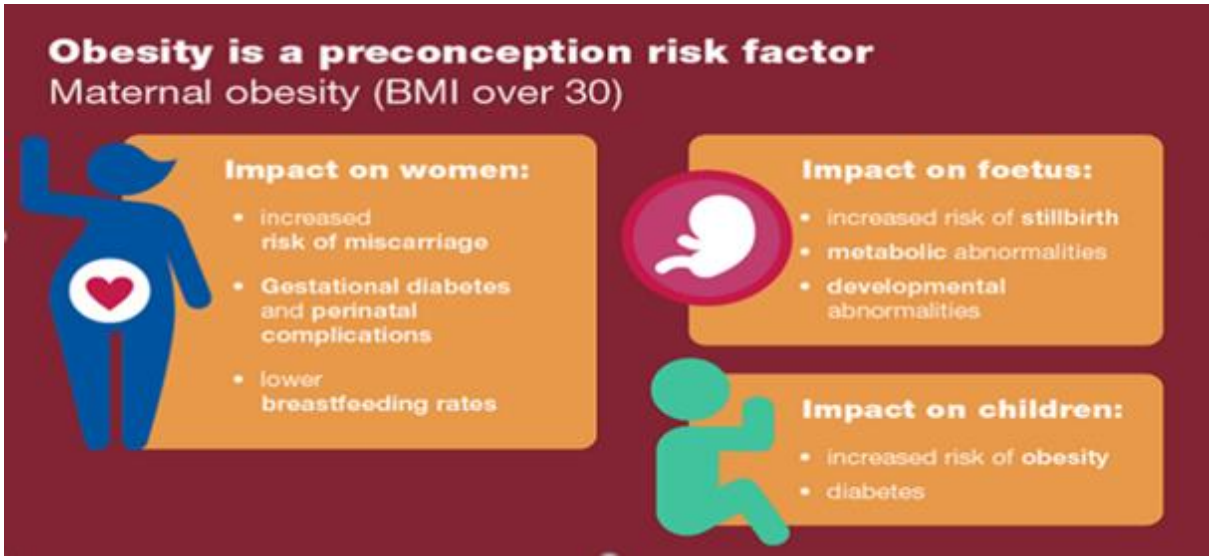

Figure 2: Life course approach illustration

Structural Concepts in Life Course

The concept states that repeated exposure to certain external factors (social, economic, environmental, cultural) may influence the health and outcomes of an individual even outside critical developmental stages. Those external factors that affect the health of an individual or community are called social determinants of health. Social determinants of health are the conditions in the environments in which people live, learn, work, play, worship, and age that affects a wide range of health, functioning, and quality-of-life outcomes and risks. Some of the social determinants of health include education; employment; health systems and services; housing; income and wealth; the physical environment including water, sanitation, and transport systems; public safety; the social environment; and transportation.[7]

[5] 14. Felitti VJ, Anda RF, Nordenberg D, Williamson DF, Spitz AM, Edwards V, et al. Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The adverse childhood experiences (ACE) study. *American Journal of Preventive Medicine.* 1998;14:245–258. [PubMed] [Google Scholar]

[6] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3883993/#R14

[7] National Academies of Sciences, Engineering, and Medicine; Health and Medicine Division; Board on Population Health and Public Health Practice; Committee on Community-Based Solutions to Promote Health Equity in the United States; Baciu A, Negussie Y, Geller A, et al., editors. Communities in Action: Pathways to

When some social groups are more exposed to these disadvantages morethan others, this leads to health inequities. Those disadvantaged will therefore be exposed to more health risks and therefore have worse health outcomes e.g., those in arid areas will have a higher risk of dying of malnutrition due to poverty, lack of clean drinking water, poor road connectivity to reach the nearest health services, etc. Maternal health outcomes will likely be worse where the women and community are not educated, where nutrition is poor, health services are poorly accessible, or is not well equipped to handle emergencies. Adolescents are a susceptible cohort to structural influence in determining their health outcomes. Adolescent access to social support, education, and peer influence can determine their sexual reproductive health choices and therefore determine their health outcomes during adolescent stages and later in life e.g., risk for developing sexually transmitted infections (STIs), cervical cancers, and other reproductive health conditions.

Integration of Services for Life Course Approach

There is need for integration of services with a focus on the individual, family and community. *Vertical integration* of health services involves integration and linkages between primary, secondary and tertiary care and different health disciplines. *Horizontal integration* involves the merging of health services with other service sectors including the health, social and civic sectors. *Longitudinal integration* of services across the age span suggests that attention to transition points is needed where handoffs or discontinuities in service providers (e.g., transition from prenatal to postnatal care or transition of paediatric to adult health care) can be challenging. *Intergenerational integration* of services when a woman becomes pregnant, and a new child enters the family is also needed with recognition of the interdependence of the health of family members across generations.

1.4 Methodology for the Development of the Life Stages Approach Framework

In the development of the LSA Framework, various methods were used. Literature review was done to understand the healthcare landscape of health including health inputs, service delivery and the social determinants of health. This included a review of several policy and strategy documents including the Sierra Leone National Health and Sanitation Policy (NHSP), The National Health Sector Strategic Plan (NHSSP), the draft Essential Benefits Package, the Health Financing Strategy 2021-2025, the UHC Roadmap, the Health Labour Market Analysis 2019, the Human Resources for Health (HRH) Policy.

The Service Availability and Readiness Assessment (SARA) 2017, the Service Delivery Index (SDI) 2018, and The Sierra Leone Demographic Health Survey (SDHS) 2019 were also reviewed to assess key input, output, outcome and impact indicators. District Health Information System (DHIS) data was also analysed to assess trends in key outcome indicators data across the life stages.

Key informant interview to assess strength, weaknesses, opportunities and threats in service delivery and to understand the application of the life stages approach to improve health outcomes was carried out with the MOHS leadership, senior officials including heads of

Health Equity. Washington (DC): National Academies Press (US); 2017 Jan 11. 3, The Root Causes of Health Inequity. Available from: https://www.ncbi.nlm.nih.gov/books/NBK425845/

directorates and programs. Key informant interviews were also conducted with development partners and the Non-governmental Organizations (NGOs) representative. Focus group discussions were held with healthcare workers at the King Harman Road Hospital and with clients receiving services there to get their perceptions on heath service delivery at the community and health facility levels.

The findings were analysed to identify key success factors, weaknesses, opportunities for improvement and threats to a successful implementation of the LSA. The strategic directions were then developed along the emerging themes, aligned along the health systems' building blocks. Under each strategic direction, several strategies were recommended by MOHS leadership, partners and other key stakeholders. The document was then shared with different stakeholders for review including MOHS officials, development partners, NGOs, and health care workers. A consultative meeting was then held to bring the stakeholders together to have a comprehensive review of the document along the life stage gaps and agree on the key strategies and activities, desired outcomes, outputs, and targets.

The framework was then consolidated considering stakeholder contributions. A validation meeting was held, further feedback was incorporated, and the framework was finalised.

CHAPTER 2: SIERRA LEONE HEALTH SITUATION ANALYSIS

2.1 REGIONAL HEALTH CONTEXT IN AFRICA INCLUDING GLOBAL AND REGIONAL COMMITMENTS

The Sierra Leone health plan and commitments are elaborated in the NHSSP 2021–2025. The NHSSP is anchored in the NHSP, the UHC Roadmap for Sierra Leone 2021-2030, and the Medium-Term National Development Plan (MTNDP). The objectives and goals in the documents are anchored on the commitment given in Section 8 3(d) of the Constitution of Sierra Leone 1991 that "there are adequate medical and health facilities for all persons, having due regard to the resources of the State". The policies and strategies are also based on global, regional and national commitments some of which are outlined below:

- The SDGs 2030 to achieve UHCThe Africa Union Agenda 2063
- Astana Declaration of 2018 on sustainable development, in pursuit of health for all.
- Ouagadougou Declaration on Primary Health Care and Health Systems of 2008
- Maputo Declaration of 2003 on Agriculture and Food Security
- Abuja Declaration of 2001 calls for the allocation of 15% of the government budget to health
- Bamako Initiative of 1988 on increasing the availability of essential drugs and other healthcare services
- Alma Ata Declaration of 1978 on Primary health care

2.2 The Health System in Sierra Leone

Country Profile

Sierra Leone is situated on the west coast of Africa, covering an area of 71,740 km². It is bordered by Guinea to the northeast, Liberia to the southeast, and the Atlantic Ocean to the southwest. According to the Census of 2019, the population is 7,541,641. The country is subdivided into four administrative regions – the North, East and Southern provinces, as well as the Western Area, where the capital city of Freetown is located. These regions are further subdivided into 16 districts (Fig. 3 below). The districts are further subdivided into 152 chiefdoms. 43% of the population lives in urban and 57% in rural areas. The country has roughly fifteen different ethnic groups. The official language is English, and most individuals also speak Krio, the most common local language[8].

60% of the population is below 24 years with 41.5 being below 14 years. Those between 25-54 are 32% with those aged 55 and above only being 8%[9].

[8] Statistics Sierra Leone (SSL) and ICF International. 2014. Sierra Leone Demographic and Health Survey 2013. Freetown, Sierra Leone and Rockville, Maryland, USA: SSL and ICF International.
[9] https://www.populationpyramid.net/sierra-leone/2020/

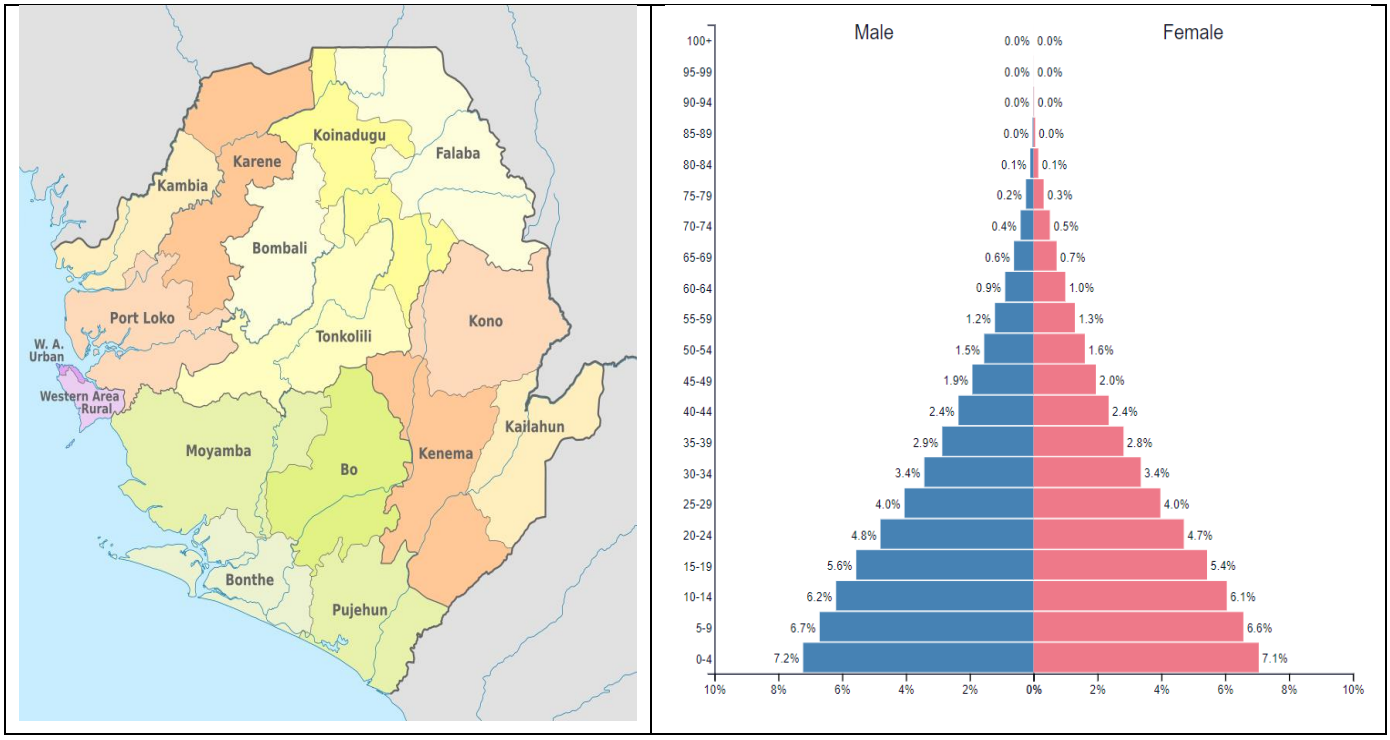

Figure 3: Map of Sierra Leone showing 16 administrative districts and the country population,

Source: https://www.populationpyramid.net/sierra-leone/2020/

Sierra-Leone Healthcare System

The MOHS is responsible for policy, planning and coordination activities, management and oversight of specific health programmes as well as supporting and monitoring the work of the districts and other health sector areas. It also directly manages the tertiary referral hospitals.

Health care services at the district level are currently provided by peripheral health units (PHUs) overseen by the District Health Management Team (DHMT) headed by the District Medical Officer (DMO) who is responsible for managing public health activities in the district. The DHMT is responsible for planning, organizing and monitoring health provision, training personnel, working with communities and supplying equipment and drugs.

The health care system comprises primary, secondary, and tertiary health facilities. The lowest unit of care is the community health unit which serves the community level. The first point of contact with a health facility is the Maternal Child Health Post (MCHP), followed by the Community Health Post (CHP) and then the Community Health Centre (CHC) which together make up the Primary Care Unit. The secondary tier of facilities comprises 16 district hospitals and five regional hospitals. The tertiary referral and teaching hospitals are the highest-level health facilities which in addition to offering specialised services also serve as teaching and research centres.

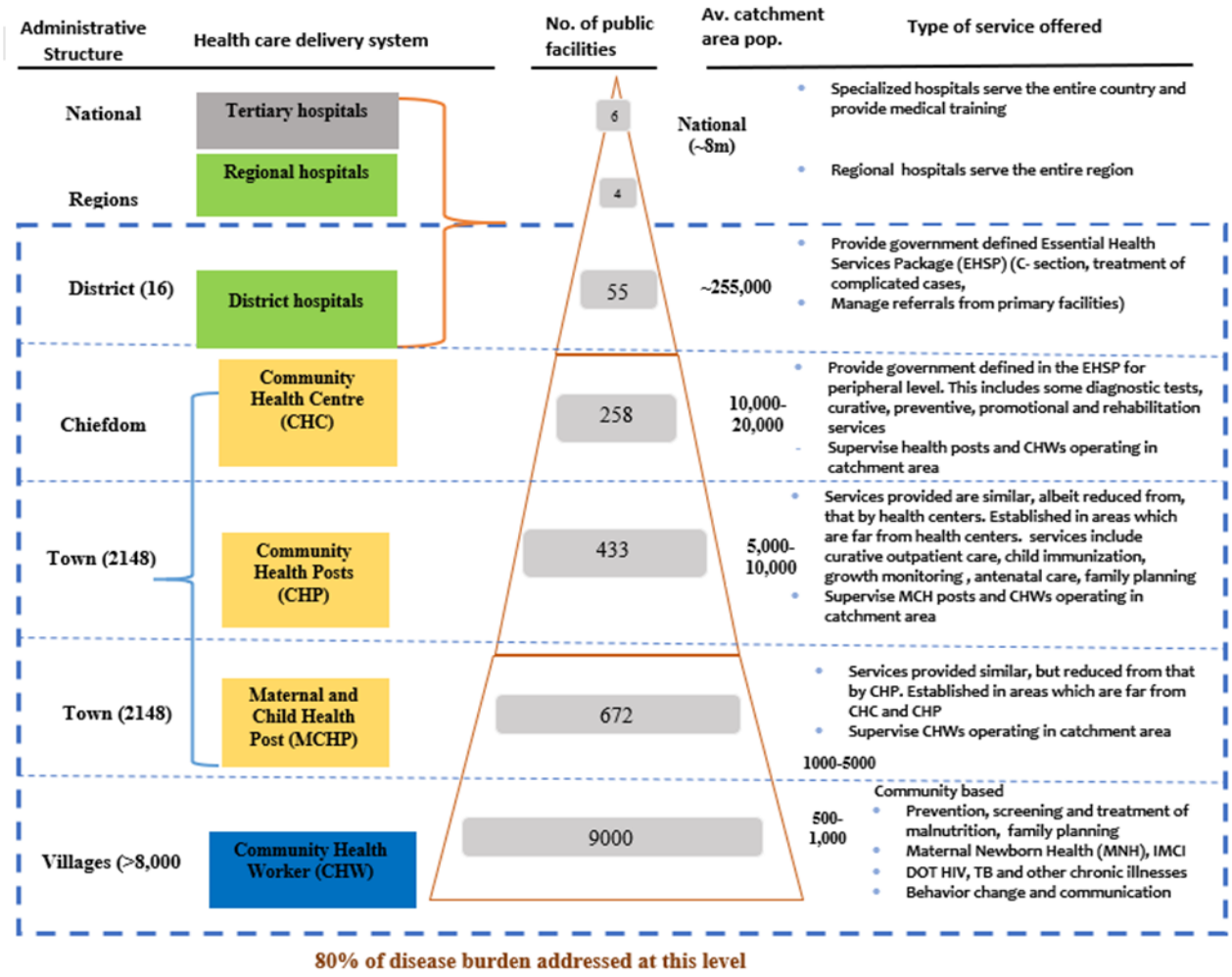

Figure 4: Organisation of Health Service Delivery in Sierra Leone

Ideally, the first point of contact with the health system should be in the community through the community health units served by Community Health Workers (CHWs). They are meant to provide health promotion and disease prevention messages and services along with basic primary care services for uncomplicated conditions and refer more complex cases to health facilities. However, their functionality is low with most of the CHWs being volunteers as they are not paid, resulting in high rates of attrition and low motivation to work.

As per the Essential Health Services Package (EHSP) 2015-2021, the MCHP are meant to be staffed by 3 Maternal and Child Health (MCH) Aides, the CHPs are meant to have two MCH aides and a State Enrolled Community Health Nurse (SECHN), and one midwife with support staff. The CHC offers more comprehensive services and so additionally has a Community Health Assistant (CHA), Community Health Officer (CHO), pharm-tech, and a lab assistant. CHPs provide the same types of services that are provided at the MCHPs, but they also include prevention and control of communicable diseases and rehabilitation. They refer more complicated cases to the next level of health care, the Community Health Centers (CHCs). [10] The District Hospitals are meant to offer specialised services with specialist doctors - at

[10] Sierra Leone PHC handbook

minimum an anaesthetist, surgeon, obstetrician gynaecologist, paediatrician and physicians and dentist.

Table 2: Health cadres in Sierra Leone

	MCHP	CHP	CHC (upgrade some)	District Hospital
MCH Aide	3	2	4	
SECHN	0	1	2	
Midwife	0	1	2	
Registered Nurse	0	0	0	12 per ward, plus specialised nurses
Registered Nurse Midwife	0	0	0	8
CHA	0	0	1	0
CHO	0	0	2	1
CO	0	0	0	6
MO	0	0	0	6
Pharma tech			1	6
Pharmacist	0	0	0	3
MO Specialists	0	0	0	8 *
Lab Assistant	0	0	1	
Lab Tech	0	0	1	6

*(Anaesthetist, obstetrician, paediatrician, 3 physicians, surgeon, dentist)

2.3 Sierra Leone Epidemiological Context

The leading cause of mortality in 2019 was malaria followed by respiratory infections including Tuberculosis (TB), and cardiovascular diseases were the third leading cause of mortality followed by maternal and neonatal deaths. This emphasises the need to implement the life stages approach in service delivery as the triple burden of diseases is emerging with the increase of deaths due to Non-communicable Diseases (NCDs) and injuries, while still tackling communicable diseases.

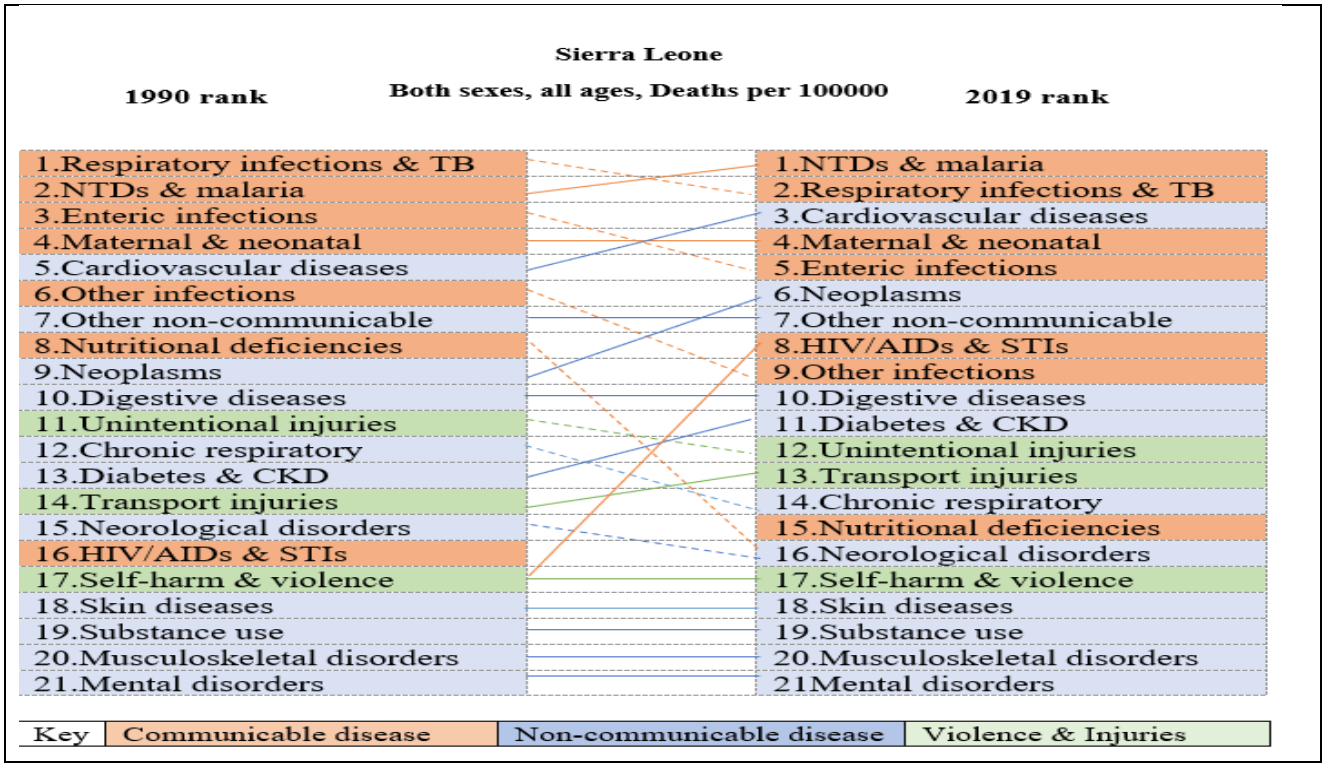

Figure 5: Top causes of morbidity in Sierra Leone, all ages

The leading causes of hospital visits for children under 5 years was diarrhoea, pneumonia, malaria, complications due to malnutrition, low birthweight and prematurity, acute respiratory infections, birth trauma, human Immunodeficiency virus (HIV) and worm infestations.

Among adults, lower respiratory infections, diarrheal diseases, pneumonia, malaria, worm infestations were the leading causes of health facility visits. Among adults, hypertension, diabetes, sexually transmitted infections (STIs) and road transport accidents were also among the top causes of Out-patient Departments (OPD) visits confirming the triple burden of communicable, non-communicable diseases and injuries.

Table 3: Top causes of OPD visits in Sierra Leone 2022

Major causes of under-five OPD	**Major causes of over five OPD**
1 Diarrhoea	1 Acute Respiratory Infection
2 Pneumonia	2 Diarrheal
3 Malaria	3 Pneumonia
4 Malnutrition	4 Malaria
5 Low Birth Weight and Prematurity	5 Worm Infestation
6 Acute Respiratory Infection (ARI)	6 Hypertension
7 Birth Trauma and Asphyxia	7 Eye Infection
8 HIV	8 Diabetes
9 Worm Infestation	9 STI)
10 Eye Infection	10 Road Transport Accident

2.4 Sierra Leone SWOT Analysis Across the Life Stages

2.4.1 Pregnancy and Reproductive Health

The modern Contraceptive Prevalence Rate (CPR) was 24%, with a higher CPR among unmarried at 54% and 21% among married women. The demand for FP use among married women was low at 46% of married women wanting to use a contraceptive method (SDHS 2019).

The care for a pregnant woman is packaged around promoting their reproductive health, use of contraceptives, preconception care and care during pregnancy. The package of care for pregnancy is well defined with many programs supporting family planning, and maternal newborn programs. The preconception, pregnancy and birth of a baby are periods of high vulnerability to the child which influences their health trajectory. Poor quality of care at delivery is especially detrimental whereby any delays leading to oxygen deprivation can have lifelong negative effects. Despite the high-impact interventions to reduce maternal, perinatal and neonatal mortality, several challenges still exist.

Previously, the preconception care package had not been defined and so was not implemented. The Sierra Leone MOHS recognises the importance of preconception care as a key intervention that can prevent or manage maternal conditions before conception, to improve maternal and child outcomes. This is articulated in the Integrated Obstetric Care Guidelines. Preconception care is not yet well implemented, and the development of the guidelines is on the way.

Although 97% of women receive antenatal care, and 79% had at least 4 Anti-Natal Care (ANC) visits, the quality of care issued is poor (SDHS 2019). ANC care is meant to pick out high-risk women for close follow-up and planned delivery in a Basic Emergency Obstetric and Newborn Care (BEmONC) or Comprehensive Emergency Obstetric and Neonatal Care (CEmONC) facility. However, the diagnostic capacity in primary and secondary facilities is low. This means despite the high ANC coverage; the main objective of the ANC visit is not met as the clinics are not equipped to recognise high-risk clients.

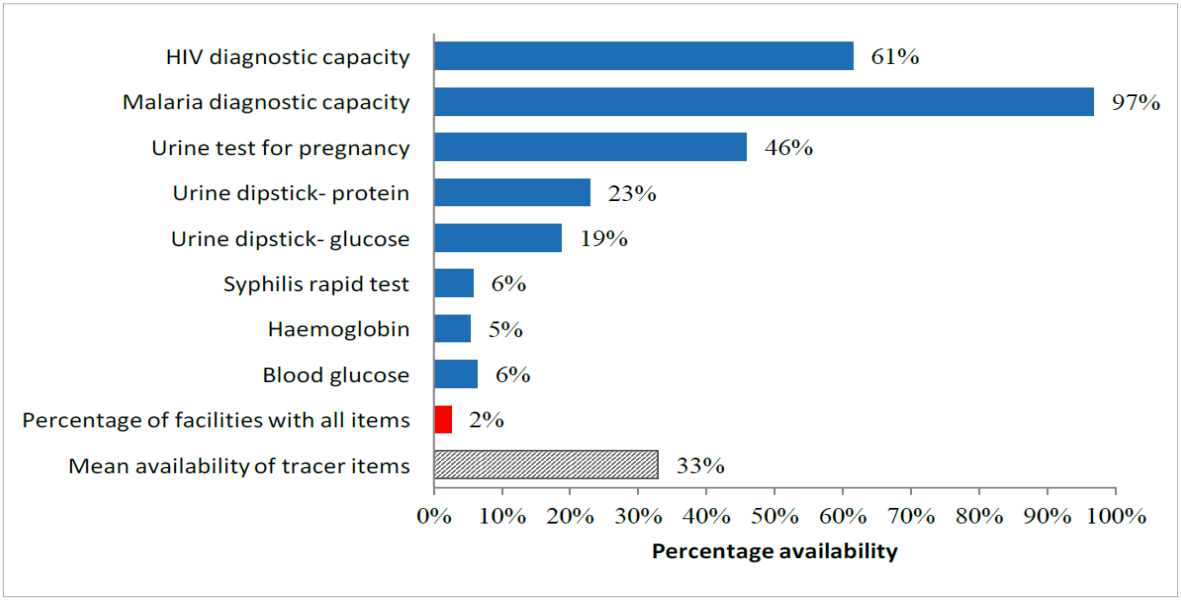

Figure 6: Percentage of health facilities with tracer items for diagnostic capacity (N=1284), Source: SARA 2017

Delivery by skilled health workers was 87% with 83% of women delivering in a health facility (SDHS 2019). However, most mothers deliver under MCH aides who are auxiliary health staff.

Although a nurse and midwife are meant to be stationed at a CHP, often only MCH aides are available. This is of concern given that 33% of deliveries take place in MCHPs, 29% in CHPs, 25% in CHC, and only 13% in hospitals (DHIS2, 2022 data). The MCHPs and CHPs are not equipped to serve as BEmONC facilities and so most women deliver in facilities that are not appropriately equipped or staffed to manage any obstetric or new-born emergencies. More than 70% of maternal deaths take place in hospitals, likely due to late referrals from primary-level facilities and hospital-level challenges in the delivery of BEmONC or CEmONC services. As a result, despite high ANC and Skilled Birth Attendants (SBA) coverage, the Maternal Mortality Rate (MMR) remains high at 717/100,000 as per the (DHS, 2019).

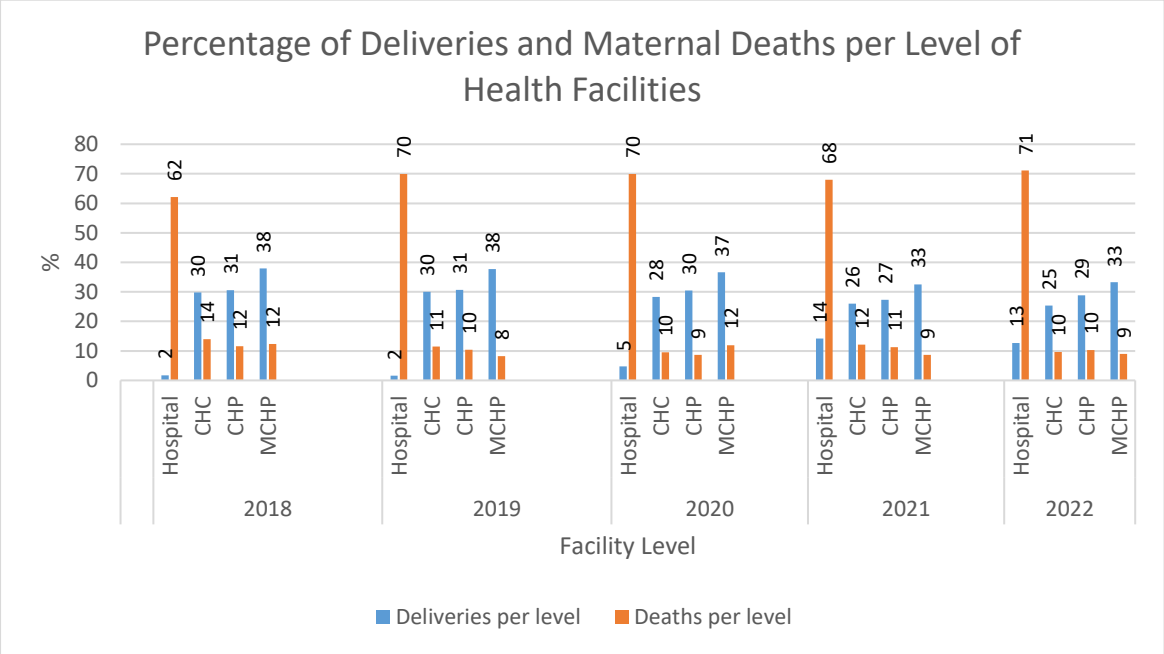

Figure 7: Proportion of skilled deliveries and Maternal Deaths by Facility Level

Other challenges in offering quality services for the mother and newborn include the unavailability of essential commodities, unavailability of diagnostic equipment and items required to provide caesarean section and blood transfusion services. Drugs and commodities for maternal and new-born care are funded by Foreign, Commonwealth and Development Office (FCDO) which has supported more than 95% of the budget. This amount only supports the purchase of a quarter of the quantified MCH commodities with minimal contribution from the government. Availability of lifesaving commodities as per the SARA 2017 was mixed with availability of oxytocin at 86%, magnesium sulphate at 91%, Amoxil at 72% but injectable antibiotics at 23%, and resuscitation equipment at 43%. Although oxytocin was found to be widely available, cold chain storage conditions were not met in 72% of the facilities thereby not guaranteeing its effectiveness in the prevention and management of haemorrhage, the leading cause of maternal deaths. Blood screening is expensive and therefore a challenge with only 47% of designated CEmONC facilities (n=17) doing blood typing, 27 % doing cross matching and 31% reporting sufficiency of blood supply. International Rescue Committee (IRC) funding for blood transfusion services support at the district level is coming to an end and subsequently, blood availability may reduce further.

2.4.2 Newborn and Child (0 to 59 months)

Sierra Leone has made strides in reducing under-5 child mortality. The under-5 mortality rate decreased from 156 deaths per 1,000 live births in 2013 to 122 deaths per 1,000 live births in 2019. Similarly, infant mortality decreased from 92 to 75 deaths per 1,000 live births and

neonatal mortality declined from 39 to 31 deaths per 1000 live births (SDHS 2019). The reduction in neonatal deaths has been slow. Challenges in providing care for the new-born are the same challenges experienced in healthcare to the pregnant woman during pregnancy and delivery. These include few trained health workers and inadequate equipment and commodities to manage new-born emergency care. The availability of essential items for new-born resuscitation was low in CEmONC facilities and therefore likely even lower in BEmONC facilities. The SARA 2017 survey showed that only 42% of 17 CEmONC facilities has oxygen, 53% had a resuscitation table and 12% had an incubator.

The new-born is followed up from birth especially through the care of the new-born during the post-natal period and through the immunization program. The percentage of children 12 to 23 months who received all basic vaccinations in Sierra Leone decreased from 68% in 2013 to 56% in 2019. There was a high dropout rate of 16.5% between Diphtheria-Pertussis-Tetanus 1 DPT1(94.6) and DPT3 (78.1). Only 54.4% of children below 24 months received the 2nd measles vaccine (SDHS 2019). The high dropout rates indicate poor community and facility-based follow-up mechanisms for clients seeking health services. To implement the life stages approach, the primary healthcare system needs to be reorganised to be able to follow up with clients for care while remaining cost-effective and responsive to community needs.

Table 4: Immunisation coverage by Antigen Type

Vaccine	Timing	Vaccine coverage	Age-appropriate vaccinations
DPT1	6 weeks	94.6	94.1
DPT3	14 weeks	78.1	76.2
Measles 1	9 months	74.7	65.6
All basic Vaccinations at 1 year	12 months	56.3	49.1
Measles 2	24 months	54.4	50.1
All basic Vaccinations at 2 years	24 months	50.7	40.1

Source SDHS 2019

In the child health program, children are followed up from birth for immunization and for developmental growth monitoring up to 5 years. Nutrition of a child in the first 1000 days (between a woman's pregnancy and her child's second birthday) is critical. Approximately one-third (30%) of children under the age of 5 are stunted in Sierra Leone (SDHS 2019), a reflection of chronic malnutrition. The effects of stunting last a lifetime, leading to impaired brain development, lower IQ, weakened immune systems and a greater risk of diseases later in life. Children who were stunted frequently have lower productivity and earn up to 20 percent lower than average wages as adults. Stunting can reduce a country's Gross Domestic Product (GDP) by as much as three percent[11]

The overall health-seeking behaviour of caregivers with ill children was good with more than 75% seeking advice or treatment for the leading causes of under 5 deaths (malaria, acute respiratory infections and diarrhoea). However, there were delays in seeking advice or treatment for children with fever and acute respiratory infections as shown in Table 5. The management of children with diarrhoea was suboptimal with only 30% of the under 5 with diarrhoea being given more fluids than usual as per the management recommendations. This

[11]https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9640361/#:~:text=Children%20who%20receive%20proper%20nutrition,kindergarten%3B%20and%20benefit%20from%20better

demonstrates a gap in community health education on the prevention and management of illnesses.

Table 5: Health Seeking Behaviour for Children Under 5 with Acute Illnesses

Indicator	**Percent**
Children with fever for whom advice or treatment was sought.	75%
Children with fever for whom advice or treatment was sought same or the next day	50%
Children under 5 with ARI for whom treatment was sought	86%
Children under 5 with ARI for whom treatment was sought the same or next day	40%
Children under age 5 with diarrhoea who sought medical advice or treatment	75%
Children under age 5 with diarrhoea who were given more liquids than usual, as recommended	30%

Source SDHS 2019

In terms of the management of childhood illnesses, the SARA report 2017 showed that guidelines and trained health workers on the management of childhood illnesses were available but the gaps were in the availability of diagnostic tests. The haemoglobin test was only available in 4% of the facilities while stool microscopy was available in 5% of the facilities. Robust follow-up mechanisms are required to ensure the health of the baby up to 59 months which is the foundation of good health for the individual.

2.4.3 The older child and adolescents (5-19 years)

Globally, an estimated 0.9 million children aged 5 to 14 years died in 2018, about 2,500 deaths in this age group a day. Globally deaths among children aged 5-9 years accounted for 61% of all deaths of children aged 5 to 14 years[12]. The leading causes of death in the 5 to 19-year groups is shown in figure 7 below.

[12] https://www.who.int/news-room/fact-sheets/detail/mortality-among-children-aged-5-14-years

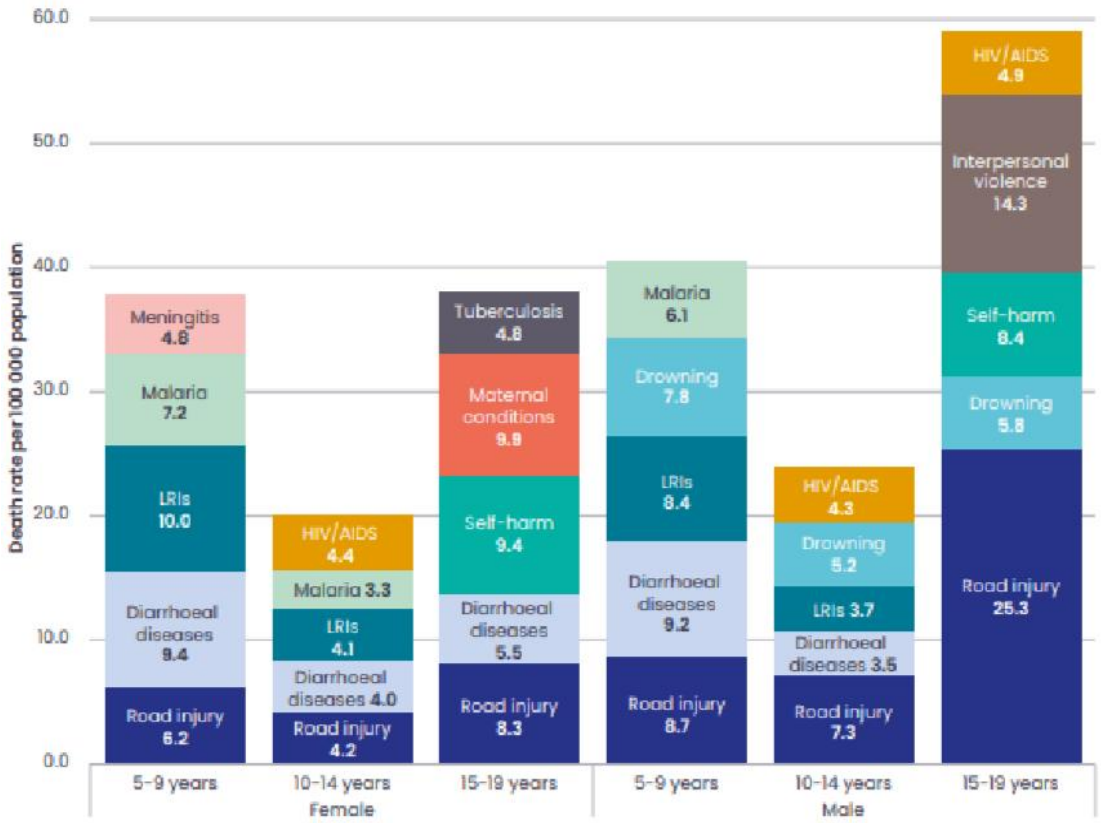

Figure 8: Leading causes of mortality among the 5 -19 age groups, source WHO

The leading causes of death for the 5-9 age group is predominantly communicable diseases. HIV in the younger adolescent group, (10-14) is a major cause of death after road injuries. For females aged 15 to 19 years, maternal deaths are a leading cause while deaths from road injuries, interpersonal violence and self-harm are the leading causes of death among males aged 15 to 19 years. In Sierra Leone, the proportion of teenagers who have begun childbearing rises rapidly with age, from 4% at age 15 to 45% at age 19. Rural teenagers are more likely to have started childbearing (29%) than urban teenagers (14%), (SDHS 2019).

This indicates the need to have specific packages for the older child, younger and older adolescents distinctly as their risk factors for death are different. Adolescent programs targeting behaviour change communication (BCC) are key to providing messages on sexual and reproductive health and providing psychosocial support to reduce adolescent pregnancies, HIV, STIs, self-harm and violence. Schools have an extraordinary potential to provide intensive, long-term and large-scale health programmes to children and adolescents. [13]

According to the SARA 2017, 89% of facilities offered adolescent health services, the highest being provision of male condoms and Family Planning (FP) services. However, the services were not comprehensive as only 60% offered adolescent HIV testing and counselling services, 34% offered adolescent HIV services and 15% offered adolescent Intrauterine Contraceptive Devices (IUCDs). Therefore, in addition to health education through BCC, applying the life stages approach should be targeted at increasing access to adolescent-friendly health services.

2.4.4 The Adult (20-49 years)

This is the age group most likely to be affected by violence and injuries, the beginning of NCDs, and the age group to target for early screening and treatment of cancers for breast, and

[13] file:///C:/Users/user/Downloads/9789240029392-eng.pdf

cervical. Prostate, gastrointestinal (GI) cancers. They are still vulnerable to communicable diseases like TB, HIV, and Malaria and are also in need of reproductive health services. Their essential health package is therefore the widest for this age group.

The service delivery systems prioritize maternal and child health while population groups like adolescents and adults beyond sexual reproductive health needs are not catered for. With the improvement of health and life expectancy increasing, NCDs are expected to increase, and systems need to be in place to manage them, including cardiovascular diseases, cancers and mental health diseases.

According to the Sierra-Leone STEPwise Approach to Surveillance (STEPS) survey in 2009, 34.8% of adults 25 to 64 years had raised BP (SBP ≥ 140 and/or DBP ≥ 90 mmHg or were on BP medication. However, 93.2% of those with raised BP were not currently on medication for the raised BP. Despite, the development of national NCD Policies and treatment guidelines (National Policy and Strategic Plan on NCDs2019-2023, National Mental Health Policy and Strategic Plan 2019-2023, National NCD Treatment Guidelines, and National Physical Rehabilitation Medicine Policy 2012, the service delivery implementation mechanisms for NCDs remain weak.

Management of NCDs in Sierra Leone mostly takes place at the hospital level. Despite, 75% of hospitals offering cardiovascular disease diagnosis and management, NCD clinics are not institutionalised as part of the government service delivery system. Few hospitals and CHCs run NCD clinics under partner support, funding the lab tests and commodities. There are few healthcare workers trained in NCD management, including mental health. Despite, mental health nurses being trained and deployed to district hospitals, most are working in other areas due to a lack of drugs to manage mental health conditions.

The Community Health Workers (CHWs) training modules were revised to incorporate NCD prevention and management training. This creates an opportunity for increasing awareness and promoting NCD screening for hypertension, and diabetes which is currently not being done.

Table 6: Services offered per facility type

Facility Type	**Offers cardiovascular disease diagnosis and /or management**	**Offers Diabetes diagnosis and /or management**	**Cancer**	**Respiratory disease services**	**Basic surgical services**	**Total number of facilities**
Hospital	75%	79%	-	-	76%	56
CHC	36%	25%	-	-	47%	224
CHP	17%	5%	-	-	37%	328
MCHP	10%	2%	-	-	34%	629
Clinic	36%	34%	-	-	44%	47
Overall average availability	**20%**	**11%**	**3%**	**15%**	**41%**	**1284**

The advanced diagnostic capacity in hospitals was low. This means there is limited capacity for early screening and detection and management of NCDs. The availability of tests like kidney and liver function tests was low with only 15% of hospitals able to do serum electrolyte

and 30% doing renal and liver function tests. The correct diagnostic capacity is also needed in management of communicable diseases and injuries across all the other life stages.

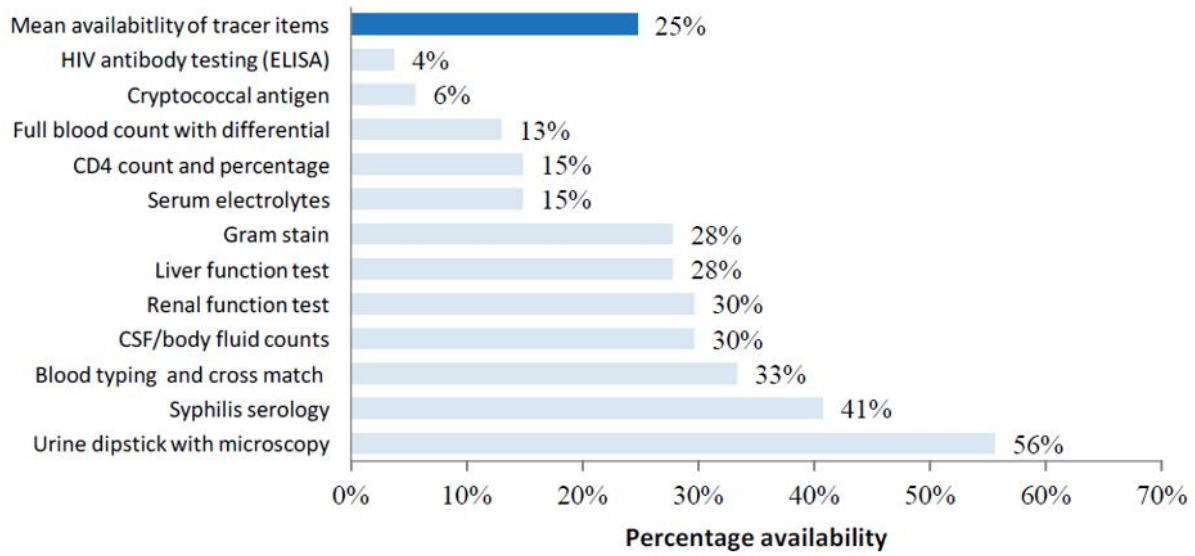

Figure 9: Availability of advanced diagnostic services in hospitals (N=54)

2.4.5 The older adult (above 50 years)

This cohort has largely been underserved. The largest burden of disease in this category is NCDs with cardiovascular diseases, diabetes, and cancers. There is also a high incidence of injuries in this group due to aging and mental health diseases like Alzheimer's, dementia and other mental health challenges due to neglect social, and cultural issues. The same challenges experienced in providing health services in this age cohort are the same for the management of NCDs highlighted for the younger adult. The summary of key areas of leading causes of morbidity and mortality, the major gaps, and interventions areas to address the gaps are summarised in Table 7 below.

Table 7: Summary Table: SWOT Analysis Per Life Stage

Life Stage	Leading cause of morbidly and mortality	Strengths	Weaknesses	Opportunities/ Service Delivery Model	Commodities needed
Pregnancy	Haemorrhage Hypertensive conditions Obstructed labour	• Policies, strategies and guidelines to guide service delivery developed e.g., Sierra Leone Reproductive Maternal, Newborn, Child and Adolescence Health (RMNCAH) and Nutrition Strategy 2017 to 2025 • Integrated obstetric care guidelines • The Free Health Care Initiative providing health services for pregnant women and children under 5	• Deliveries under auxiliary staff in poorly equipped facilities • Late referrals from primary facilities • Basic Emergency Obstetric and New-born Care services (BEmONC) • Resultant Hugh MMR and • Still birth rate despite skilled deliveries	• Community Health Interventions (for robust health education health promotion, disease prevention and early health seeking behaviour) • Facility Health Education	• Blood • Oral and IV antibiotics • Oxytocin/Carbatocin • Magnesium Sulphate • Caesarean section services
New-born	Asphyxia Sepsis Low birth weight		• Inadequate BEmONC and CEmONC facilities with low availability of essential commodities for newborn resuscitation and newborn care	• BEmONC services • Essential Newborn Care Package • Health Education	• Oxygen • Corticosteroids • Antibiotics • IV fluids
0-5 years	Malaria respiratory infections Diarrhoea	• Robust immunisation program (EPI) for prevention of most childhood illnesses • Implementation of Integrated Community Case Management (ICCM) of childhood illnesses • Increased use of bed nets for prevention of malaria and testing for malaria treatment	• Sub optimal full immunisation coverage at 1 year and high dropouts by 2 years • Suboptimal health seeking behaviour and management of common childhood illnesses • Low diagnostic capacity of health facilities for diagnosis and management of childhood illnesses	• Community Health Interventions • ICCM of childhood illnesses • Environmental Sanitation and Hygiene Education	• Antimalarial • Oral and IV antibiotics • Zinc and ORS • Nutrition supplements • Availability of surgery services
5-9 years	Malaria Respiratory infections Diarrhoea Injuries	• School Health Policy and Strategy to promote health in this age group	• Poorly followed up cohort • Health education mostly provided through schools. • Most schools lack school clinics	• Community health interventions • School Health Interventions • School and home environmental sanitation and hygiene education	• Antibiotics • Anti-retrovirals • Anti-malarials •

Life Stage	Leading cause of morbidly and mortality	Strengths	Weaknesses	Opportunities/ Service Delivery Model	Commodities needed
10-19	Communicable Diseases (HIV/TB, Malaria, respiratory infections Diarrhoea) Maternal deaths Injuries (Road traffic violence, self-harm)	hool Health Policy and Strategy to mote health in this age group	• Few avenues to engage the youth in the community and schools • Most schools lack a school clinic or nurse • Few trained teacher counsellors in schools • Lack of funds to support school health initiatives	• Community Health Interventions • School Health Interventions including education on personal and environmental hygiene, sexual, reproductive health, nutrition and physical activity • School and Home Environmental Sanitation and Hygiene	• Contraceptives • STI medication • Antibiotics • Antivirals • Antimalarials • Surgery services • Support for drug abuse recovery
20 to 50	Sexual and reproductive health needs and Family planning Communicable diseases Non-Communicable diseases Violence and injuries Mental health cases	• RMNCAH Strategy in place to address Sexual and Reproductive Health (SRH) • NCD Policy, Strategy and Guidelines • Mental Health Policy and Strategy • Physical Rehabilitation Policy	• Low availability of screening and management for NCDs especially in primary facilities • Unavailability of NCD drugs and commodities • Poor data to monitor NCD services • Low availability of cancer services • Low availability of basics surgery services	• Community Interventions • Robust diagnostic and curative services for both reproductive health, communicable and non-communicable disease • Early Screening for NCDs like hypertension diabetes and cancers	• Contraceptives • Antibiotics • Anti-retrovirals • Anti-malarials • Antihypertensives, anti-diabetics and other NCD medication • Mental health medication • Chemotherapy and radiotherapy services • Surgery services
Cross Cutting		Low financing Poor diagnostic capacity Unavailability of essential drugs and commodities Inadequate number of healthcare workers			

2.5 Sierra Leone SWOT Analysis Across the Building Blocks

The SWOT analysis across the health system blocks is summarised in table 8.

Table 8: Health Security Analysis (SWOT)

	Strength	Weakness	Opportunity	Threat
Leadership	• President and senior leadership prioritisation of health • Minister and senior leadership are champions for LCA	• Suboptimal coordination of programs and directorates to deliver integrated wholistic care to the individual. • Weak inter-ministerial collaboration mechanisms • MOHS organogram does not sufficiently address all the country health needs, programs are very verticalized, • Despite the clear planning in the NHSSP, the operational work plans are heavily donor influenced and do not always follow the county priorities.	• Review organogram to align with the LCA • Create key posts to support implementation of LCA e.g., structure for ministerial and inter-ministerial coordination, QOC, HRH	• Tendency for governments to plan within the 5-year MTP cycles and not more long term
Partners and coordination	• Partners willing to support	• Poor collaboration of partners with partners having direct entry to counties • Parallel funding and duplication of efforts • Partners not aligned to government priorities	• Creating partner coordination framework outlining both technical and financial support guidance • Focal point for partner coordination at the MOHS • Create basket funding to strengthen health system inputs towards LCA	• Lack of transparency and accountability in spending of funds

	Strength	Weakness	Opportunity	Threat
Financing	• Increases allocation to health from 6 to 11%	• Low funding to health as GDP is also low • High Out of Pocket (OOP) (46.6%) payments • Low insurance coverage at 2-4% • Primary and secondary health facilities are not adequately reimbursed to meet their operational costs • There is no pooling /basket funding mechanism • Poor government financial management accountability and transparency mechanism	• Increase government allocation to 15 % • Risk pooling through insurance and tax systems • Coordinate partner funds through basket/pooled funding	• Low uptake of insurance due to low-income levels • Weak mechanisms to ensure collection of taxes/premiums • Weak financial management systems
Service delivery	• Increase in inputs (health facilities, HRH to deliver health services) with improving health indicators over time.	• Weak community health systems to deliver health promotion, disease prevention, basic curative and referral services • High attrition of CHWs as they are not paid • Poorly equipped PHUs with inadequate staff, frequent drug stockout and lack of diagnostics is the largest cause for bypassing them • High workload at the district hospitals due to low diagnostic and management capacity at PHUs • Low capacity for emergency care and tertiary services like dialysis and intensive care • Poor referral mechanisms • QOC	• Strengthening CHU structures • Restructuring PHC system to equip the facilities to be at CHP level • Map 1-2 CHCs to equip them to provide superior diagnostic and BEmONC services • Creating Primary Care Networks to coordinate the functioning Hub (district hospital) and the PHUs to bring services closer to the people • Strengthen emergency care by expanding National Emergency Medical Services (NEMS) to serve all	• Construction of new PHUs without equipping them or planning for HRH • Focusing on curative services while not strengthening primary care systems
Health Infrastructure and equipment	• Health facilities increased to 1428 in 2022, therefore density of	• Low availability of diagnostic equipment and reagents at all levels • Lack of infrastructure and equipment norms and standards	• Leasing agreements to ensure equipments are serviced and maintained, with parts made available	• Lack of funding to build infrastructure, acquire and

	Strength	Weakness	Opportunity	Threat
	1.8/10,000 population	• Challenges with acquiring, servicing and maintaining equipment		maintain equipment
Healthcare workers	• Increase in HRH numbers since 2002 to the 11,732 (HLMA 2019)	• Low number of HRH across all tiers • Lack of skilled HCW especially nurses, and doctors • Lack of capacity for government to hire the health care workers (HCWs) • Lack of clarity on Job Description (JD) of different workers with roles task shifted to lower qualified auxiliary health workers • accreditation	• Training HRHs-undergraduate and specialised • Absorb CHWs as part of the health workforce	• Lack of a long-term training plan anticipating future health needs • Task shifting of cadre roles
Drugs and consumables	• Support from Foreign and Commonwealth Development Office (FCDO) to purchase commodities for maternal health and under five children	• Frequent stock out of drugs due to low funding allocation to procure drugs by the government • Prioritisation of drug supplies is more for maternal and new-born health • Last-mile distribution and poor visibility over stock levels in the districts	• Local manufacture of essential drugs • Strengthen the National Medical Supply Agency (NMSA) for commodity procurement and last mile distribution	• Lack of domestic planning and funding to procure commodities
Quality of care	• QOC prioritised in the NHSSP, the UHC roadmap and the essential benefits package • QOC Unit formed	• Quality of care systems not yet institutionalised i.e., leadership, standards, accreditation, quality improvement etc • Poor QOC due to lack of diagnostics, medicines and consumables, and quality standards-resulting in poor mortality outcomes despite access	• Strengthen the QOC Unit to deliver on its mandate to institutionalise quality of care mechanisms	

2.6 Purpose /justification for Life Stages Approach to Health Service Delivery

The Sierra Leone government is committed to attaining the SDG goals including Goal No. 3 of achieving UHC. Investments through the Sierra Leone government and partners have resulted in improved health outcomes like the reduction in maternal mortality from 2480 in the year 2000 to 717 in 2019. Child mortality has reduced from 140 in 2008 to 122 per 1000 live births in 2019. However, the improvement in these outcomes has been slow. The inability of the health sector to achieve desirable health outcomes has been linked to verticalization of programs in the Ministry and weak intersectoral collaboration. Bottlenecks from other ministries have also limited the functionality of health facilities, including a lack of reliable water, electricity and road network. Implementing the UHC roadmap using the life stages approach was deemed necessary to ensure coordinated service delivery to increase efficiency and effectiveness of service delivery across all the life stages.

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- The life stages approach aims to ensure person centred wholistic care as opposed to service delivery per disease, where one is managed for one condition but may die of another disease. It will ensure all the citizens' health is prioritized, leaving no one behind.
- Aims to move away from verticalization of programs, crating integration and collaboration across programs and partners to realize a system-wide strengthening approach to enable-cost savings though synergy and coordinated annual work planning, program implementation and joint monitoring and evaluation.
- The life stages approach forces a review of the health systems strengthening inputs to ensure the strengthening of the entire health sector rather than building of a few strong vertical programs.
- Improves the population's health outcomes by prioritising the health of the mother – which ensures the health of the family.
- The life-stages approach will prioritize the health of the child which has long life effect on an individual’s health is secured.
- Ensures the adolescents are, not left out, especially regarding sexual and reproductive health. which is a determinant of their reproductive health years, and challenges to do with unplanned pregnancies, HIV and STIs.
- Reaches the adults and prepares for the double/triple burden facing most countries as the population life expectancy ages and comes along with an increasing burden of non-communicable diseases, while still dealing with communicable diseases. The urbanisation has also brought along with it increased mental health conditions, and increased violence and injuries.
- By investing in a healthier population and investing in the social determinants in health like water, sanitation, and agriculture, there is a healthier workforce for increased productivity and overall national social-economic development.

CHAPTER 3. IMPLEMENTATION OF THE LIFE STAGES APPROACH

Building on the strengths and progress demonstrated in the Sierra Leone Health Policy, UHC roadmap, and Sierra Leone HSSP and considering identified challenges and obstacles, the following vision, mission, goals, core values and policy objectives were articulated for the Sierra Leone Life Stages Approach Framework for Service Delivery.

3.1 Vision

All people in Sierra Leone have access to affordable quality healthcare services and health security at all stages of their lives without suffering undue financial hardship.

3.2 Mission

Building resilient and responsive health systems to provide and regulate comprehensive healthcare services in an equitable manner through innovative and appropriate technology and partnerships, while guaranteeing social and financial protections.

3.3 Goal

All people in Sierra Leone have equitable access to quality and affordable health and sanitation services whether public or private at all times without any undue financial hardship by 2030.

3.4 Strategic Pillars

There are 9 Strategic Pillars that are needed to institutionalise a health system to deliver health services using a life stages approach, which is anchored on a foundation of strong leadership and coordination for integration.

A reorganisation of the service delivery models in Sierra Leone shall be the major fulcrum for providing services using a life stages approach.

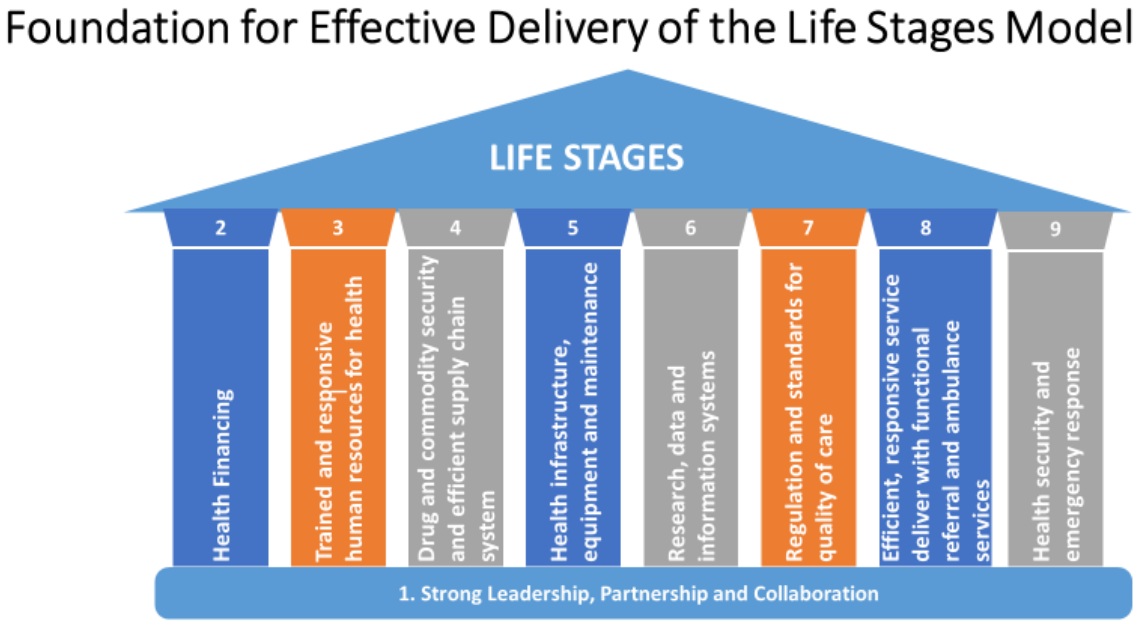

Figure 10: Pillars for the Implementation of the Life Stages Approach

1. Leadership and governance, partnership and collaboration
2. Health Financing
3. Trained and responsive human resources for health
4. Drug and commodity security and efficient supply chain system
5. Health infrastructure, equipment and maintenance
6. Research, data and information systems
7. Regulation and standards for quality of care
8. Efficient, responsive service delivery community participation and ownership with functional referral and ambulance services
9. Health security and emergency response

3.5 Leading Causes of Morbidity and Mortality, Key High Impact Interventions per Life Stage and Recommendations per Life Stage

In line with using the life stages approach in health service delivery as the vehicle to achieve UHC, the MOHS has developed the Essential Health Services Package (EHSP). The package defines the services that should be available at each level of care (community to tertiary level), for each age cohort, and across each public health functions. The package is expected to set precedence in defining 'essential' set of services for the population in Sierra Leone. The conditions are listed below:

3.5.1 Preconception Care

Table 9: Preconception Care

Preconception Care			
Key causes of morbidity and mortality, disability	**High impact interventions to address these causes for wellbeing and positive pregnancy outcome**	**Current Implementation Status**	**Indicators to measure success of high impact interventions**
Anaemia (Sickle), Malnutrition,	• Pre-conception counselling and screening for risk factors. • Folic Acid supplementation	• Partially implemented • Partially implemented	• pre-conception screening rate, • prevalence of anaemia • prevalence of malnutrition,
STI (syphilis, HIV, HPV, Hepatitis)	• Prevention, screening and treatment of STIs	• Partially implemented	• % of women of child-bearing age (WCA) screened for Syphilis testing • % of population aware of HIV status • % of people living with HIV (PLHIV) that are on antiretroviral therapy (ART)
Pre-existing chronic condition (diabetes,	• prevention and management of chronic	• Partially implemented	• Prevalence of HTN/diabetes

Preconception Care			
Key causes of morbidity and mortality, disability	**High impact interventions to address these causes for wellbeing and positive pregnancy outcome**	**Current Implementation Status**	**Indicators to measure success of high impact interventions**
hypertension (HTN) Cardiac diseases, Chronic pulmonary diseases, Renal, liver diseases etc.)	Conditions according to guidelines		• % of those with HTN/diabetes on medications
Child marriage, unwanted pregnancy	• Prevention of teenage and unwanted pregnancies • Family planning services	• Fully Implemented	• Contraceptive prevalence rate Unmet need for FP
Infertility	Management of infertility	• Not implemented	• % of districts with basic services for infertility • % of regions with advanced services for infertility

Key recommendations to enable implementation of high impact preconception care interventions:

- Technical guideline/strategy for preconception care
- Integration of preconception care at point of care for Women of Reproductive Age (WRA)
- Strengthen linkage to training institutions

Link from previous life stage

- HPV vaccination,
- Early marriage and teenage pregnancy prevention, STI prevention, sickle cell screening,
- HIV screening,
- HPV screening,
- promotion of healthy life style among children and young adolescent, promotion of life skills"

How to ensure continuity to the next Life stage

- Linkage of preconception care to pregnancy management

3.5.2 Pregnancy and Delivery

Table 10: Pregnancy and delivery

Pregnancy and Delivery			
Key causes of morbidity and mortality, disability	**High impact interventions to address these causes for wellbeing and positive pregnancy outcome**	**Implementation Status**	**Indicators to measure success of high impact interventions**
Haemorrhage, pregnancy induced hypertension and eclampsia, sepsis, abortion, obstructed labour, fistula	• Education on danger signs • Increase early ANC and identify high risk women for delivery at higher level facilities • Birth preparedness and readiness • BEmONC • CEmONC (Blood availability for transfusion and caesarean section services) • Adhere to Obstetric Care Guidelines • Elimination of Mother to Child Transmission (eMTCT) • Multiple Micronutrient Supplements (MMS)	• Partly Implemented • Partly implemented • Partly implemented • Fully implemented • Partly implemented • Partly implemented • Partly implemented • Not implemented	• % of BEmONC facilities provide all 7 signal functions • % of hospitals providing all 9 CEmONC signal functions • ANC 4+ coverage • % of deliveries attended by SBA coverage • Caesarean Section rate. • % of correctly filled partographs • Postnatal care coverage • Case specific obstetric mortality rates • Institutional MMR • % of pregnant women receiving MMS
Malaria, Anaemia (Sickle cell), Malnutrition, STI (syphilis, HIV, HPV, Hepatitis)	• Health education for proper nutrition and safe sexual reproductive health practices • ANC: - prevention, testing, management of STIs, - IFAs supplementation - MMS - Intermittent preventive treatment of malaria for pregnant women (IPTp) • Adherence to obstetric care guidelines • Respectful maternity care	• Fully Implemented • Fully implemented • Fully implemented • Not implemented • Fully implemented • Partly implemented	• % of pregnant women tested for HIV • ART coverage for HIV +ve pregnant women • MTCT transmission rate • % of pregnant women tested for viral hepatitis • IPT3+ coverage • % of pregnant women with anaemia • % of women attending ANC given IFAs or MMS

Pregnancy and Delivery			
Key causes of morbidity and mortality, disability	**High impact interventions to address these causes for wellbeing and positive pregnancy outcome**	**Implementation Status**	**Indicators to measure success of high impact interventions**
		• Partly implemented	
Pre-existing chronic conditions (diabetes , HTN, cardiac diseases, chronic pulmonary diseases, renal disease, liver diseases etc.)	• Health promotion for prevention and management of existing chronic conditions, • Treatment of pre-existing chronic conditions • Referral of cases requiring specialised care	• Partly implemented • Not implemented • Partly implemented	• Prevalence of HTN/diabetes.in pregnancy
Unwanted pregnancy, Unsafe abortion, Early marriage, Mental disorders (depression, psychosis)	• Community education against early marriage • Women empowerment • Postpartum family planning • Post abortion care • Management of mental health conditions	• partly implemented • Partly implemented • Partly implemented • Partly implemented • Not implemented	• Postpartum Family Planning (PPFP) uptake • Modern Contraceptive Prevalence Rate (mCPR) • Unmet need for FP • Number of new FP acceptors

3.5.3 Immediate New-born Care

Immediate New-born Care			
Key causes of morbidity and mortality, Disability	**High impact interventions to address these causes for wellbeing and positive pregnancy outcome**	**Current Implementation Status**	**Indicators to measure success of high impact interventions**
Birth asphyxia, respiratory distress syndrome, sepsis, jaundice, prematurity and low birth weight, macrosomia, hypothermia, hypoglycaemia,	• Effective antenatal care and skilled delivery, BEmONC services • Neonatal resuscitation, • Essential New-born Care Package (delayed cord clamping, thorough drying, assessment of breathing, skin-to-skin contact, early initiation of breastfeeding, thermal care including	• Partly implemented • Partly implemented • Partly implemented	• proportion of facilities providing neonatal resuscitation services • Proportion of facilities providing essential new-born care • % of children breastfeed within one hour of birth • Still birth rate

Immediate New-born Care			
Key causes of morbidity and mortality, Disability	**High impact interventions to address these causes for wellbeing and positive pregnancy outcome**	**Current Implementation Status**	**Indicators to measure success of high impact interventions**
	Kangaroo Mother Care (KMC) • Nurturing care • Infection prevention • Management of small and/or sick new-born • Recognition and management of danger signs • Vitamin K • Corticosteroids for premature babies	• Fully Implemented • Fully Implemented • Fully Implemented • Fully Implemented • Partially implemented • Not implemented	• Fresh and macerated still birth rate • Early neonatal and neonatal mortality • Case fatality rate • Perinatal mortality rate
Congenital anomalies, HIV, Hepatitis B, Syphilis Haemorrhagic disease of new-born,	• Pre-conception care including sexual health promotion to prevent STIs, and nutritional support • Testing of babies born to mothers who are HIV/Hepatitis B positive and early treatment • Vitamin K injection at birth	• Not implemented • Fully Implemented • Fully Implemented	• Preconception care rate • 4 ANC clinic/8 ANC contacts • % women supplemented with IFAs • ART uptake • Proportion diagnosed with syphilis on management • Proportion of new-borns given Vit K

Key recommendations to enable implementation of pregnancy and immediate new-born care interventions

- Strengthen community education and interventions for RMNCAH
- Pre-service and in-service training for HCWs to provide MNH services
- Respectful Maternity Care for obstetric services
- Supportive supervision, preceptorship and mentorship of HCW
- Implement MNH quality of care standards and quality improvement at point of care
- Improve infrastructure and equip identified facilities to meet BEmONC and CEmONC standards
- Implementation of the MCH Handbook

Link from previous life stage

- Preconception screening for communicable diseases (HIV, Syphilis)
- Preconception screening for chronic conditions
- Prevention of MTCT conditions emerging from pregnancy e.g. HIV, syphilis, hepatitis,
- prevention, management and follow up of chronic care conditions e.g., diabetes, hypertension, malnutrition

- Preconception care, nutrition supplement to prevent congenital abnormalities
- Provide quality delivery services to prevent complications at delivery leading to cerebral palsy, epilepsy etc.

Ensuring continuity to the next life stage (0-59 months, 5-9 years)

- Ensure timely immunisation
- Nature early childhood cognitive development,
- Provide essential nutritional care in the first 1000 days and growth monitoring,
- Manage conditions emerging from pregnancy and childbirth e.g., HIV, epilepsy, congenital anomalies etc.

3.5.4 The 0 to 59 months and 5 to 9 years Cohorts

Table 11: The 0 to 59 months and 5 to 9 years Cohorts

0 to 59 Months, 5 to 9 years			
Key causes of morbidity and mortality, Disability	**High impact interventions to address these causes for wellbeing and positive pregnancy outcome**	**Current Implementation Status**	**Indicators to measure success of high impact interventions**
Malnutrition	• Early initiation and exclusive breastfeeding • Community education on maternal infant and young child nutrition (MIYCN) • Vit A supplementation • Deworming • Growth monitoring • Nutrition Counselling • Integrated Management of Acute Malnutrition (IMAM) • School Feeding (6-9 years)	• Partially implemented • Partially implemented • Fully Implemented • Fully Implemented • Fully Implemented • Partially Implemented • Fully Implemented • Partially Implemented	• Proportion of women who initiate breastfeeding in one hour • Proportion of children under 6 months old who are exclusively breastfed (%) • Wasting • Stunting
Malaria	• Scale up prevention measures including environments hygiene and sanitation • Increased use of long-lasting insecticide-treated nets (LLITNs) for prevention of malaria • Testing and treatment of malaria • Intermittent preventive treatment in infancy with SP (SP-IPTi) • Treatment of severe malaria with IV Artemisinin/Artemisinin-based Combination Therapy (ACT)	• Partially implemented • Partially implemented • Fully implemented (stock out challenges) • Not Implemented • Fully implemented (stock out challenges)	• Proportion of targeted children sleeping under LLITNs (%) • Malaria Incidence • Malaria case fatality rate

0 to 59 Months, 5 to 9 years			
Key causes of morbidity and mortality, Disability	**High impact interventions to address these causes for wellbeing and positive pregnancy outcome**	**Current Implementation Status**	**Indicators to measure success of high impact interventions**
Respiratory infections & sepsis	• Community and school health education • Immunisation services • Integrated Management of Neonatal and Childhood Infections (IMNCI) • Emergency Triage Assessment and Treatments (ETAT) • Treatment (depending on specific disease - oxygen, antibiotics, blood, antiviral, diagnostics, etc)	• Partially implemented (needs to be strengthened in gov schools) • Partially implemented Coverage. Services are available up to the last mile • Partially implemented • Partially implemented • Partially implemented	• Proportion of children with Acute Respiratory Infection (ARI) who sought medical treatment on same day or next day • Proportion of children with pneumonia treated with Amoxil • Coverage can be captured as an indicator
Diarrhoeal Diseases	• Community and School Health education • Sanitation/Hygiene • IMNCI • Treatment (Zinc, ORS, IV fluids, Antibiotics) • ETAT • Immunization (Rota virus)	• Partially implemented • Partially implemented • Partially implemented • Partially implemented • Partially implemented • Fully implemented	• Proportion of children under 5 with diarrhoea treated with oral rehydration salts and zinc (%) • Proportion of HCFs with waste zones and Water, Sanitation and Hygiene (WASH) infrastructure • Proportion of schools with WASH facilities • Proportion of HCWs Infection Prevention Control (IPC) counselling
Sickle Cell disease	• Community awareness on sickle cell trait and disease • Pre-conception screening • Post-natal screening • Treatment	• Partially implemented • Not implemented • Not implemented • Partially implemented	• Prevalence of sickle cell disease • Proportion of women screened at both pre-conception and post-natal
HIV, Hepatitis, Syphilis,	• Early infant diagnosis and management for diseases transmitted from mother to child • Preconception, at birth vaccination	• Partially implemented • Not implemented	• Syphilis testing and treatment rates • HIV testing rate • Antiretroviral Therapy (ART) uptake rate

0 to 59 Months, 5 to 9 years			
Key causes of morbidity and mortality, Disability	**High impact interventions to address these causes for wellbeing and positive pregnancy outcome**	**Current Implementation Status**	**Indicators to measure success of high impact interventions**
			• Proportion of new-borns hepatitis at birth dose
Congenital abnormalities Eye disorders (e.g. congenital cataract, neonatal conjunctivitis) Oral disorders Hearing disorders	• Community awareness on prevention of eye, oral and hearing disorders • Screening and diagnosis of eye, ear, and oral disorders in community, schools for early management and rehabilitation • Promote vaccination: measles rubella, haemophilus influenzae disease (HIB)	• Partially implemented • Not implemented • Partially implemented	Proportion of children screened for eyes, hearing, and oral
Trauma (falls, ingestion/aspiration of foreign bodies, road traffic injuries, drowning)	• Education of parents and children on personal safety • Early recognition of signs of seizures disorders • Multi-sectoral approach to reduce incidences of trauma e.g., falls, burns	• Partially implemented • Not implemented • Partially implemented	• Death rate due to road traffic injuries/ mortality rate from road traffic injuries (per 100 000 population)

Key recommendations to enable implementation of high impact interventions for the 0 to 59 months, and 5 to 9-year-old child

The 0-5-year olds will be followed up through immunisation and growth monitoring clinics up to 59 months. At 5-9 years, the school health program and a robust community health system shall be the mainstay of follow up.

- Strengthen community health services to provide community education for wash, sanitation, nutrition to prevent diseases and promote good health seeking behaviour
- Strengthen immunization and minimize dropout rates
- Capacity build HCWs from CHWs to specialists to give appropriate care at different levels
- Pre-service trainings in for IMNCI, ETAT and in-service mentoring and coaching including use of digital platforms for self-learning.
- Strengthen supportive supervision to ensure quality of health services
- Update childhood guidelines with follow up dissemination and trainings
- Train teachers in school to provide health education on personal and environment hygiene adolescents in schools, and teachers.
- Implement the school health policy and strategies
- Ensure availability of diagnostics for screening and diagnosing diseases for early management
- Ensure availability of commodities to manage top causes of morbidity and mortality

Link from previous life-stage

- Adult vaccination for hepatitis B, tetanus, rubella and management of other infections that can affect the child (HIV, STIs).
- Counsel the mother during ANC and post-natal care, immunisation and growth monitoring visits on nutrition, hygiene sanitation, use of bed nets
- Screened for sickle cell and other disease conditions before getting pregnant
- Malaria prophylaxis during pregnancy (IPTp), counselling mother on environmental hygiene and for children to sleep under bed nets
- Counselling during pregnancy, hand hygiene during ANC and post-natal period. this should continue during wellness child visits.

Ensuring continuity to the next life stage(adolescence)

- Ensuring the full vaccination coverage
- Ensuring adequate nutrition and formation of good eating habits
- Ensure community awareness on childhood illnesses and early health seeking behaviour
- Promotion of physical activity in schools and home
- Providing age appropriate life-skills, personal hygiene, reproductive and sexual health education

3.5.5 10 to 19 years cohort

Table 12: 10 to 19 years cohort

10 to 19 years			
Key causes of morbidity and mortality, disability	**High impact interventions to address these causes for wellbeing and positive pregnancy outcome**	**Current Implementation Status**	**Indicators to measure success of high impact interventions**
Sexual reproductive health			
Teenage pregnancy	• Provide life skills education which includes comprehensive sexuality education in schools and school clubs • Counselling on delayed onset of sexual debut • Increase access to FP among adolescents • Encourage tailored ANC/Obstetric/PNC Services for first time adolescent mothers (FTAM) • Train providers to implement FTAM package • Strengthen implementation of adolescent friendly health services	• Partially implemented • Partially implemented • Partially implemented • Partially implemented • Partially implemented • Partially implemented	• Number teenage pregnancies • Proportion of adolescents receiving FP • CPR • Adolescent birth rate • School dropout rate due to pregnancy • Number of HCWs trained in FTAM

10 to 19 years			
Key causes of morbidity and mortality, disability	**High impact interventions to address these causes for wellbeing and positive pregnancy outcome**	**Current Implementation Status**	**Indicators to measure success of high impact interventions**
	• Mother-to-mother support groups at community level	• Partially implemented	
Complications of unsafe abortion	• Sensitization on dangers of unsafe abortion • Provide post abortion care in all health facilities • Enforce laws and policies against quack providers	• Partially implemented • Partially implemented • Not implemented	• Proportion of deaths due to unsafe abortion • Proportion of deaths due to complication
STIs (HIV, hepatitis)	• Life skills education including HIV and other STI prevention in schools and community • Promote use of barrier methods • Train providers on management of STIs • HPV Vaccination • Treat STIs and complications	• Partially implemented • Partially implemented • Fully implemented • Fully implemented for 10 yr. old girls) • Partially implemented	• Syphilis testing and treatment rates • HIV testing rate • ART uptake rate # of clients fully treated.
Communicable Diseases			
HIV, hepatitis,	• Education for HIV, hepatitis, syphilis prevention • Diagnosis and (test and treat) management	• Partially implemented • Partially implemented	• HIV incidence rate (%) • ART uptake coverage
TB	• Active case finding at community and facility levels, diagnosis and treatment • Follow up to ensure completion of regimen • Diagnose and treat TB/HIV co-infection • Active case finding at community • TB contacts tracing	• Partially implemented • Partially implemented • Partially implemented • Partially implemented • Partially implemented	• TB incidence rate per100,000 adults • TB treatment success rate (all forms of TB) (%)
Malaria	• Scale up prevention measures including environments hygiene and sanitation • Increased use of bed nets for prevention of malaria • Testing and treatment of malaria	• Partially implemented • Partially implemented • Fully implemented (however issues around stock out)	• Malaria prevalence rate • Malaria mortality rate

10 to 19 years			
Key causes of morbidity and mortality, disability	**High impact interventions to address these causes for wellbeing and positive pregnancy outcome**	**Current Implementation Status**	**Indicators to measure success of high impact interventions**
	• Ensure availability of antimalarials for mild and severe malaria	• Fully implemented (however issues around stock out)	
Other infections	• Ensure availability of appropriate drugs e.g. antibiotics, antivirals and antifungals	• Partial implemented	• Disease specific case fatality rate
Non-communicable Diseases			
Mental health issues and substance abuse	• Implement School Health Policy to educate adolescents in school on making life choices • Train and post teacher counsellors to schools • Enforcement of laws against substance abuse	• Partial implemented • Not implemented • Not implemented	• Proportion of health facilities providing adolescent and youth friendly services • The proportion of planning units that have a substance abuse management plan • Proportion of clients that received psycho-social interventions
Malnutrition and NCDs (diabetes, hypertension, cancer)	• Healthy school feeding and promote the food based dietary guidelines in schools and in the public • Exercise promotion as per the school health policy • Sensitization and screening for NCDs • Treatment of NCDs	• Partial implemented • Partial implemented • Partial implemented • Partial implemented	• Prevalence of raised blood glucose/ diabetes in adolescents • Mortality rate attributed to cardiovascular disease, cancer, diabetes and chronic respiratory disease
Sickle Cell Disease	• Screening for sickle cell disease using rapid point of care test • Education on living with sickle cell disease and avoiding triggers • Equipping target facilities to manage sickle cell disease crisis and underlying trigger	• Not Implemented • Partially implemented • Partially implemented	• pre-conception screening rate • prevalence of sickle cell disease
Violence and Injuries			
Trauma (falls, RTAs) Self-harm	• Sensitization • Enforcement of Road safety regulations • Treatment of trauma	• Partially implemented • Partially implemented • Partially implemented	• Death rate due to road traffic injuries/ mortality rate from road traffic injuries (per 100 000 population) • Suicide mortality rate
Sexual and Gender-based	• Provide comprehensive life skill /sexuality education	• Partially implemented • Partially implemented	• Proportion of facilities offering SGBV services

10 to 19 years			
Key causes of morbidity and mortality, disability	**High impact interventions to address these causes for wellbeing and positive pregnancy outcome**	**Current Implementation Status**	**Indicators to measure success of high impact interventions**
Violence (SGBV)	• Train teachers on prevention and management of SGBV • Provide SGBV education in school health clubs • Establish SGBV centres • Sensitize and educate the community and other stakeholders on SGBV and where to access services • Training/sensitization of HCWs on SGBV management	• Partially implemented • Partially implemented • Partially implemented • Partially implemented	• Proportion of women aged 15–49 who experienced SGBV in the past year (%)
Harmful traditional practices	• Popularize and enforce laws and policies against harmful traditional practices • Advocacy and sensitization about negative impact of harmful traditional practices	• Partially implemented • Partially implemented	•

Key recommendations to enable implementation of high impact interventions in the 10-19 years cohort

- Implement the School Health Policy and Strategy to deliver health education, health promotion, and disease prevention messaging among the 10 to 19-year olds,
- Review school curriculum to ensure age-appropriate, comprehensive messaging to prevent major causes of morbidity and mortality in school-aged children
- Train teachers to provide health age-appropriate sexual reproductive health education
- Strengthen collaboration between PHUs and schools to provide age-appropriate health education and services
- Strengthen community and sports clubs as avenues for health education

Link from previous life-stage

- Ensuring adequate nutrition and formation of good eating habits
- Promotion of physical activity in schools and home
- Providing age-appropriate life-skills, personal hygiene, reproductive and sexual health education
- Ensure community awareness on early health seeking behaviour

Link to the next life stage

- Avail psychosocial support for adolescents to develop good coping skills
- Providing age-appropriate life-skills, personal hygiene, reproductive and sexual health education

- Ensure availability of contraceptives as per the national guidelines
- Strengthen health information, education and communication to promote reproductive health and prevent SGBV and STIs
- Promote healthy lifestyles to prevent NCDs
- Strengthen emergency response services

3.5.6 20 to 49 years cohort and 50 + cohort

Table 13: 20 to 49 years cohort and 50 + cohort

20 to 49 Years			
Key causes of morbidity and mortality, disability	**High impact interventions to address these causes for wellbeing and positive pregnancy outcome**	**Current Implementation Status**	**Indicators to measure success of high impact interventions**
Sexual reproductive health			
STIs	• Social mobilisation for STI prevention package • Diagnosis, treatment of STIs, • Counselling and contact tracing	• Partially implemented • Fully implemented • Partially implemented	• % population aware of prevention measures for STIs • % of health facilities providing STI services
Unplanned pregnancy and unsafe abortion	• Promote education on FP methods in community and facilities • Ensuring access and availability of FP commodities • Capacity building of providers on the wide range of contraceptive method and comprehensive abortion care	• Partially implemented • Partially implemented • Partially implemented	• Mean availability of modern contraceptive methods • New users of FP methods • Modern contraceptive prevalence rate • Demand for FP that is met with a modern FP method • Availability of ontraceptive methods
SGBV	• Sensitize and educate the community and other stakeholders on SGBV and where to access services • Training/sensitization of HCWs on SGBV management • Establishment of one stop centres for SGBV	• Partially implemented • Partially implemented • Partially implemented	• Proportion of facilities offering SGBV services • Proportion of women aged 15–49 who experienced gender-based violence in the past year (%) • % of HCF with a one stop centre
Non-Communicable Diseases			
Cancers	<u>RH cancers</u> <u>Awareness raising about cancers</u> • HPV vaccine in the previous cohort • Institutionalise cervical cancer, breast and prostate cancer screening • Improve diagnostic and treatment capacity for	• Partially implemented • Partially implemented • Partially implemented	• Proportion of facilities offering cancer screening services • Proportion of facilities offering cancer treatment services • Proportion of women screened for cervical cancer/ breast cancer

20 to 49 Years			
Key causes of morbidity and mortality, disability	**High impact interventions to address these causes for wellbeing and positive pregnancy outcome**	**Current Implementation Status**	**Indicators to measure success of high impact interventions**
	cancers (cervical, breast), prostate • Strengthening and promote use of National Cancer Registry <u>Others Cancers</u> • Prevention, diagnosis and treatment of lung cancers, gastrointestinal tract and other cancers	• Partially implemented • Partially implemeted	• Proportion of women with positive cancer screening result who received intervention
Hypertension and Diabetes (including gestational diabetes and hypertensive disease in pregnancy)	• Promote prevention, screening, diagnosis and treatment of NCDs • Increase availability of NCD drugs at appropriate levels through cost recovery methods like public private partnerships (PPPs) • Improve data collection and reporting management of NCD data	• Partially implemented • Not implemented • Partially implemented	• Proportion of facilities providing NCD screening, diagnosis and/or treatment services • Proportion of Diabetics/hypertensives on management • Proportion of deaths due to NCDs • % of facilities reporting stock out of tracer NCD drugs
Epilepsy	• Community awareness on epilepsy • Build capacity of HCW to Identify, diagnose and treat epilepsy • Availability and accessibility of anticonvulsant drugs	• Partially implemented • Partially implemented • Partially implemented	• CHWs trained to identify and link epileptic clients • Proportion of facilities with anticonvulsant medication • % of HCW trained on management on epilepsy
Common mental health conditions	• Train healthcare workers to manage mental health services -counselling and psychosocial support at PHUs • Promote screening for mental health conditions • Integrate mental health in various national frameworks and sectors	• Partially implemented • Not implemented • Not implemented	• Proportion of health facilities with at least 1 HCW trained on mental health services • % of health facilities that have integrated mental health in their package of care
Communicable diseases			
Top causes of morbidity and mortality, Disability	**high impact interventions to address these causes for wellbeing and positive pregnancy outcome**		**Indicators to measure success of high impact interventions**
Hepatitis	• Community education, prevention through	• Partially implemented	• Hepatitis B surface antigen prevalence (%)

20 to 49 Years			
Key causes of morbidity and mortality, disability	**High impact interventions to address these causes for wellbeing and positive pregnancy outcome**	**Current Implementation Status**	**Indicators to measure success of high impact interventions**
	immunisation screening and management of hepatitis		
TB	• ACF, diagnosis and treatment as above ensure availability of drugs and follow up for completion • Diagnose and treat TB/HIV co-infection • Active case finding at community • TB contacts tracing • Treatment of multi drug resistance TB • Social mobilisation drives to create awareness	• Partially implemented • Fully implemented • Partially implemented • Partially implemented • Fully implemented • Fully implemented	• TB incidence rate per100,000 adults • TB treatment success rate (all forms of TB) (%) • % of districts/facilities reporting stock out of TB drugs
HIV	• Education for HIV prevention • Diagnosis and management of HIV • Availability and accessibility of testing kit	• Partially implemented • Partially implemented • Partially implemented	• HIV incidence rate (%) • ART Uptake Coverage • % of facilities with stock out of HIV testing kits
Malaria	• Scale up preventive measures • Ensure availability of antimalarials • Enhance testing capacity (RDT and lab microscopy)	• Partially implemented • Fully implemented • Partially implemented	• Availability of antimalarial drugs in facilities • % of facilities with malaria testing capacity (Rapid Diagnostic Test [RDT] and or Lab) • Malaria prevalence rate • Malaria mortality rate
Other infections	Ensure availability of appropriate drugs e.g. antibiotics, antivirals and antifungals	• Partially implemented	• Mean availability of tracer drugs in facilities
Violence and injuries			
Road traffic and other injuries, self-harm, accidents	• Map facilities along the highways for equipping to manage emergencies • Train staff for emergency care • Train Community Health Volunteers (CHVs) to conduct basic first aid • Expand NEMS to cover other medical emergencies	• Not implemented • Partially implemented • Not implemented • Not implemented	• Proportion of facilities with staff trained on emergency response care • Number of reported cases of Road Trafic Accident (RTA) • Mortality rate due to road traffic injuries

20 to 49 Years			
Key causes of morbidity and mortality, disability	**High impact interventions to address these causes for wellbeing and positive pregnancy outcome**	**Current Implementation Status**	**Indicators to measure success of high impact interventions**
50+ Years			
Complications of NCDs Falls	• Improve management capacity for NCDs and their complications • Prevention of falls • Promotion of physical activity • Training HCWs in geriatric care • Promoting public support and education about caring for the elderly	• Partially implemented • Not implemented • Not implemented • Not implemented • Not implemented	• Availability of policies to enhance care and improve environment for the elderly

Key recommendations to enable implementation of high impact interventions in the 20-49 years life stage

Sexual Reproductive Health

- Strengthen community mechanisms for health promotion and disease prevention including, healthy nutrition, physical activity, and safe sexual reproductive health practices
- Avail commodities for FP, SGBV management, NCD management and for Communicable Diseases
- Establish SGBV centres (one stop centres)
- Enhance capacity building on SRH

NCDs, cancer, violence and injuries

- Train CHWs and MCH aides to provide NCD, cancer and mental health community-based services, including health education and referral for early screening
- Institutionalise screening for NCDs at all health facilities and appropriate referral for treatment
- Improve diagnostics for screening and diagnosis and management of NCDs, including dialysis and intensive care
- Institutionalise NCD clinics at all district hospitals and tertiary facilities for continuity of care for NCD patients
- Determine key drugs for NCD care and develop cost recovery mechanisms to ensure the availability of these drugs at the hospitals
- Equip referral hospitals for cancer management
- Train HCWs to provide mental health services including counselling and psychosocial support
- Equip district hospitals and facilities along highways to manage emergencies and conduct surgery
- Include these interventions as part of the Sierra Leone Social Health Insurance Scheme (SLeSHI) package
- Digitalisation to improve continuity of care for those with chronic conditions
- Multisectoral collaboration to reduce exposures to health risks, including food safety, healthy lifestyles and road safety

Linkage from 10-19 life stage

- Good nutrition in childhood, healthy school feeding programs
- Promote physical activity – public re-creation areas, walkways, media
- Tobacco, nicotine and alcohol control
- Strengthen the Standards Bureau to regulate quality of food and other consumables

Linkage to 50+ life stage

- Ensure proper nutrition and physical activity for the 20-49 life-stage
- Improve capacity for management of complications of NCDs e.g., dialysis
- Strengthen rehabilitative and palliative care

3.6 Overall Health System Strengthening Recommendations to Deliver Person Centred, Family Focused Health Services

Reorganise the service delivery models to maximise the available resources to reach all the life stages.

- Strengthen the community health systems to deliver person centred-family focused health promotion, disease prevention, and curative health services
- Upgrade the MCH post to serve as a CHP with at least one trained nurse to provide comprehensive basic primary health services across the life stages, not only for the mother and child.
- Map and rationalize CHCs per district which serve large populations and vast geographical areas for equipping and operationalization to serve as higher-level facilities to provide BEmONC services and superior diagnostic services
- Strengthen linkage and coordination of PHUs, primary (district hospitals), secondary and tertiary hospitals.
- Strengthen referral and ambulance and emergency care services to encompass all life stages
- Institutionalize quality assurance and quality improvement mechanisms across the life stages through a directorate for quality, standards and regulations

Create leadership and governance structures to institutionalise life stages

- Align the MOHS organogram to the life stages to ensure all cohorts are well-planned for
- Strengthen intersectoral coordination to deliver integrated health services
- Strengthen multisectoral coordination to institutionalise the full life stages approach

Align Health financing to cater across the life-stages from pregnant women to the geriatric age groups

- Coordinate of donor resources to increase allocative efficiency and align to the life-stages approach
- Increase domestic funding to strengthen health system inputs to serve all populations

Reorient and train healthcare workers to deliver health services in wholistic life-stages packages rather than only disease-specific care

- Train healthcare workers to be well-equipped to deliver services using the life stages approach

- Train and recruit HCWs in various specialisations to deliver quality healthcare to all the life stages

Ensure the availability of diagnostic equipment and essential medicines across the life-stages

- Ensure availability of essential commodities to meet all the life stage needs from community level to tertiary level to meet community needs

Strengthen HIS and M&E systems to support health systems management and decision-making along the life stages

- Strengthen monitoring and evaluation to provide routine data for decision making
- Develop Electronic Medical Records (EMR) systems and Apps to enable patient level data entry and analysis and use of job aides and prompts to improve quality of care
- Develop digital health technologies to support continuity of care in service delivery and strengthen health financing, human resource, and commodity management

CHAPTER 4: IMPLEMENTATION CONSIDERATIONS

Implemetationof the LSA should follow the outlined recommendations in this framework, in order to, deliver quality health services from the community, primaty, secondary to terciary care levels. Although, there are particular needs for each age cohort, a health systems strengthening approach will ensure comprehensive focus on all population groups.

Key drivers for successful implementation for service delivery across the life stages include

1. Strong stewardship, management and coordination, including health in all policies
2. Health system strengthening
3. Service delivery reorganisation for optimisation of available inputs
4. Institutionalise mechanisms to ensure quality of care
5. Identify and build only enablers of health across the life stages (Health education, nutrition and healthy lifestyles, water, sanitation and environmental hygiene)

4.1 Strong Stewardship, Management and Coordination

Implementation of the life stages approach to service delivery will require strong leadership, sectoral coordination between health programs, partners and other stakeholders. Multisectoral collaboration with other ministries will also be a key success factor.

4.1.1 Intersectoral coordination

Key directorates and programs in implementing high impact interventions per life stage are summarised in Table 14.

Table 14: Key MOHS directorates and programs per life stage

Preconception, pregnancy, newborn	0-5, 5-9 years	10-19 years	20-49, 50+ years
Ministry of Health and Sanitation			
• Reproductive and Child-Health Directorate: RH/FP program, School and Adolescent Health program (SAHP), CH/EPI program) • Non-communicable Diseases and Mental Health Directorate • Directorate of Food and Nutrition • Directorate of Hospital and Ambulance Services (DHAS) • Directorate of Primary Health Care • National Malaria Control Program, • National Aids Control Program (NACP), • Directorate of Nursing and Midwifery Services (DNMS) • Health Education Program	• Directorate of Food and Nutrition • Directorate of RCH, (EPI/Child Health) • Directorate of Environmental Health • National Medical and Supply Agency (NMSA) • Directorate of Primary Health Care • National Malaria Control Program, • National Aids Control Program • Health Education Program	• Reproductive and Child health Directorate • RH/FP program, School and Adolescent Health Program (SAHP), • RMNCH Directorate, • Non-communicable Diseases and Mental Health Directorate • National Malaria Control Program • HIV Program • TB and Leprosy Program • Directorate of Hospital and Ambulance Services • Directorate of Primary Health Care	• Reproductive and Child Health Directorate • Non-communicable Diseases and Mental Health Directorate • National Malaria Control Program • HIV Program • TB and Leprosy Program • Directorate of Hospital and Ambulance Services • Directorate of Primary Health Care • Directorate of Pharmaceutical Services • Directorate Planning, Policy and Information
Other line ministries			
• Ministry of Gender (MOG), • Ministry of Social Welfare (MOSW) • Ministry of Youth Affairs (MOYA) • Teenage Pregnancy Secretariat • Ministry of Agriculture	• Ministry of Education • Ministry of Agriculture	• Ministry of Education • Teenage Pregnancy Secretariat • Ministry of Youth Affairs (MOYA) • Ministry of Agriculture	• Ministry of Social Welfare (MOSW) • Ministry of Agriculture

To ensure policies, strategies and interventions cater fully to the specific life stages, there is need for a coordination arm to drive the process. A suitable office within an existing directorate should be tasked to:

- Coordinate the operationalization of the life stages framework through appropriate allocation of responsibilities, support for implementation of key strategies
- Mobilise resources for implementation
- Promote integration of health services
- Develop appropriate guidelines
- Monitor implementation of the framework
- Facilitate multi-stakeholder coordination with other ministries, partners and communities to achieve intended objectives

- The coordination office should additionally foster coordination, joint planning, implementation, monitoring and evaluation with the DHMTs. The role of the district teams and community is shown in table 15.

Table 15: District health stakeholders

District Local government	
DHMT	• Coordinating LSA in the districts • Mapping the CHCs to equip to a higher-level comprehensive diagnostic and service delivery facility • Promote vertical integration with linkages from the community to all levels of health facilities
Referral Hospitals	• Provide comprehensive curative services for all the life stages • Provide training for HCWs to provide packages along the life stages
District Hospitals	• Provide leadership and oversight to the PHUs, identify and provide curative service support to the CHC level through periodic medical officer and other specialist clinics
PHUs	• Provide linkage between community health unit and the CHCs • Provide comprehensive services serving all the life stages
Communities	• Demand for quality community and facility health services • Provide feedback for improvement of health services • Take part in health promotion and disease prevention activities

4.1.2 Multisectoral and Partner Coordination

A partner coordination framework should be developed to guide on structures to define Health Sector Partnership Structures with terms of reference for these structures. The coordination framework should follow global partnership coordination frameworks like the health in all policies[14] to promote consideration of health implications in all policies geared towards reducing health risk factors and promoting health. Other frameworks like the SDG GAP[15] promote partner collaboration efforts towards government priorities, alignment of partner funding through harmonising operational and financial strategies, policies and approaches and joint reporting and accountability towards health systems strengthening. Table 16 below summarises the multisectoral stakeholder roles in the life stages approach implementation.

Table 16: Health sector stakeholders and role in implementing life stages approach

Role of other line ministries, donors and implementation partners	
Ministry of Education	• Support health promotion through age-appropriate health education curriculum in different subjects • Implement healthy eating school feeding programs
Ministry of Water	• Ensure clean safe drinking water
Ministry of Agriculture	• Expand agriculture to promote food security and nutrition

[14] https://www3.paho.org/hq/index.php?option=com_content&view=article&id=9360:2014-about-health-all-policies&Itemid=0&lang=en#gsc.tab=0

[15] https://www.who.int/initiatives/sdg3-global-action-plan/about

Ministry of Finance	• Prioritize funding for health financing and support strong financing management systems
Other agencies, organization and institutions	
Civil Society Organizations	• Hold the government accountable to facilitate the delivery of public health services and promote community engagement and empowerment to have better health seeking behaviour and demand quality health services.
Academia- Universities and Tertiary Institutions	• Training of HCWs in line with the MOHS training plan to implement the life stages approach • Conduct operational research to inform policy and strategic direction
Health Development Partners	• Align funding prioritize with country priorities to achieve UHC
Implementing Partners (local and international)	• Support the MOHS in implementation of the national priorities
Private Sector	• Provide health services including specialized services to the community • Collaborate with public sector to share best practices

4.2 Health System Strengthening

The key interventions to ensure health of each life stage are specific to some life stages but others cut across all life stages. To implement all the interventions, specific health system inputs are required. These include, ensuring availability of diagnostics and essential commodities to diagnose, prevent and manage specific conditions for each life stages stage. The health workforce numbers and skills mix must be addressed to meet the needs of all the life stages. Infrastructure though critical must be planned for with a plan for adequate equipment, staff and commodities to deliver services as designed for the level of service delivery. The leadership must commit resources and optimise their use through proper management and coordination of different stakeholders to realise cost effective service delivery.

4.3 Service Delivery Re-organisation

Health promotion and disease prevention shall be a corner stay of ensuring health and wellness for the population, while still strengthening delivery of curative, rehabilitative and palliative health services. Primary healthcare services meet more than 80% of the community health needs. Strengthening primary health systems is key to ensure person centred -family focused health services, leaving no one behind. Therefore, service delivery reorganisation using appropriate models will ensure cost effectiveness in provision of health care is key. These include, strengthening community health services through CHWs, use of static and mobile outreach services and expansion of school health services.

The recommendation to upgrade the MCHP to CHP level is in keeping with the life stages approach for vertical and horizontal integration to cater not only to the mother and child, but to the entire household, including the adult and elderly. At the first point of care, the individual should be seen by duly qualified personnel, hence the recommendation to ensure a SECHN is posted to each CHP will ensure post. With the scale up of MCHPs to CHPs, the number of CHPs shall need to be reviewed and rationalised to meet the community needs while providing quality primary health services. The recommendation to upgrading a minimum of two high volume CHCs to enable diagnostic capacity and provide comprehensive obstetric and new-born care and other emergency care services will reduce the workload from the district

hospitals and enable delivery of more efficient services across the continuum of care. Plans to gradually expand referral hospitals to serve all life stage groups should be developed.

Strengthening of the community and facility primary health system to deliver health education for health promotion, disease prevention and early referral will also reduce the workload burden on curative services. Efficient referral pathways to secondary and tertiary facilities close the loop to ensure responsive service delivery models. Investment along the health system blocks is critical to achieving the desired health service delivery models. This is demonstrated in figure 11.

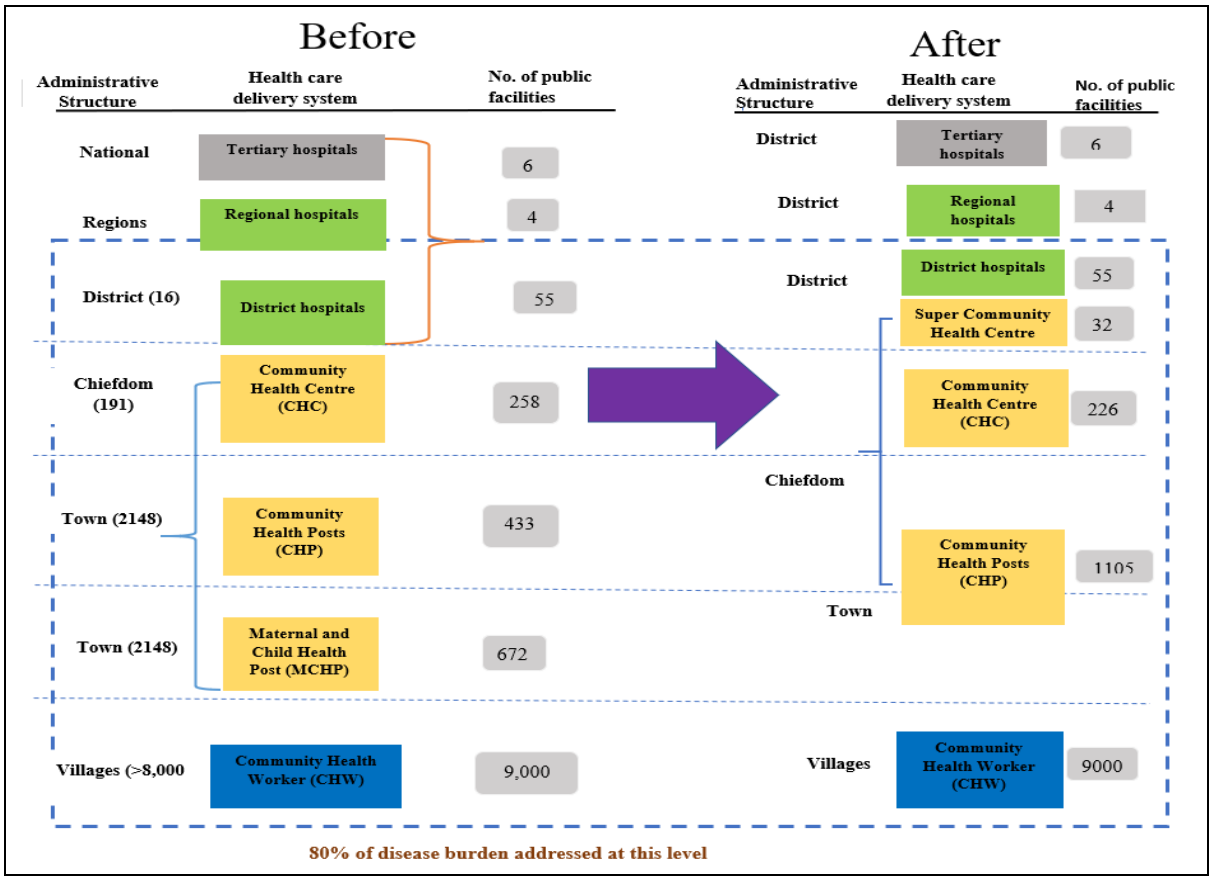

Figure 11: Reorganisation of Service delivery models to deliver responsive effective healthcare

The life stages approach can be implemented in a stepwise approach starting with 3 to 5 districts with incremental implementation to other districts leveraging on bottle necks realised, successes and lessons learnt to catalyse implementation in the scale up districts.

Integration: Vertical integration of services across the different levels of care can be strengthened by working as networks using hub and spoke models, where the district hospitals over-see and support service delivery to the lower-level facilities rather than working independently. Horizontal integration in programming e.g., provision of ANC and HIV care for prevention of mother to child transmission (PMTCT), integration of FP in HIV and TB clinics will be required to deliver more wholistic person centred healthcare. Longitudinal integration will require clear guidance on transition of one cohort to another e.g., defining the age at which age an adolescent is seen in a paediatric clinic vs adolescent clinic and the age of transition to adult services.

Continuity of care: The use of appropriate technology will be important in supporting continuous follow up of individuals from birth. This includes the use of EMRs and unique

identifiers to ensure continuity of care, streamline patient and lab referrals and improve coordination of care at community, primary, secondary and tertiary care levels. Other mechanisms to ensure continuity of care should be strengthened, including follow up of clients missing hospital appointments for maternal child health services, management of communicable and non-communicable chronic diseases. Use of clinics for high-risk clients across the life stages to promote continuity of care. Examples include high-risk ANC clinics, paediatric clinics, NCDs clinics, mental health clinics, should be instituted starting at the district hospital level and gradually moving to the CHCs.

4.4 Institutionalisation of Quality of Care

The life stages approach to service delivery envisions delivery of high quality services which ensure care that is evidence based, ensures patient safety is effective and efficient while offered in a timely manner. The health services should be patient centered, and responsive to the client needs, such that quality of care is not only measured by the services provided, but also by the clients perception of care.

Development of health inputs norms and standards (infrastructure and equipment norms and standards, HRH norms and standards, essential commodities list, health financing guidelines, leadership and cordination frameworks) will guide the necessary investments needed per service delivery level and further guide the licensure and accreditation of health facilities. Development health service standards and guidelines for clinical management of the identified conditions in the EHSP will be key to ensure the quality of care offered to all age cohorts.

4.5 Enablers

Health promotion and disease prevention

Health promotion is the process of empowering people to increase control over their health and its determinants through health literacy efforts and multisectoral action to increase healthy behaviors. Key areas to ensure health of an individual through all the life stages include emphasis on good nutrition, sufficient pysical activity, safe drinking water, personal hygiene and environmental sanitation.

Disease prevention involves actions to reduce or eliminate exposure to risks that might increase the chances that an individual or group will incur disease, disability, or premature death. These include actions to improve health through changing the impact of social determinants, the provision of information on behavioral and medical health risks, alongside consultation and measures to decrease them at the personal and community level, food supplementation and clinical preventive services such as immunization.

Stong primary health care systems

Health promotion and disease prevention require strong community and primary health care systems. Trained CHWs need to be in place to educate the community on behavioral risk factors. Suitable methods to reach the communities, including CHWs, outreach activities and mobile clinics need to be considered to leave no one behind.

Reduction of environmental health risk factors

The largest risk fators for the leading causes of morbidity and mortality in Sierral Leone include malnutrition, air pollution, unsafe water, poor sanitation and hygiene practices, high BP, tobacco use, unnsafe sex , alcohol and othr dietary risks[16]. These result in the diseases causing disability and death. Consequently, creation of policies to safeguard the environment and investing in good nutrition, safe cooking and fuels, safe drinking water, hygiene sanitation, healthy lifesytles will reduce most of the communicable and noncommunicable diseases across all the life stages.

[16] https://vizhub.healthdata.org/gbd-compare/

CHAPTER 5: MONITORING & EVALUATION

The below indicators will measure input indicators and life stage specific outcome and input indicators to monitor performance of the life stages implementation. The indicators are aligned to the health sector strategic plan targets.

Table 17: Life stage performance indicators

Life Stage	Indicator	Baseline 2021/22	Midterm target	End term targets (2030)	Data source	Frequency	Responsible
A. Input							
1. Health Financing							
All	Expenditure for primary healthcare as percentage of national government financing	3% (2015– 2019)	4.5%	8%	SL Health PET	Annually	
All	Government expenditure on health as percentage of total recurrent national budget (%)	11%	15%	15%	MoF Annual Budget reports	Annually	
2.Human Resources for Health							
All	Core HCW (density, doctors, nurses, midwives) per 10,000 population	12.3 (2019)	16	25	HLMA	5 years	
All	Physicians per 1,000 population	0.25 (2011)	1	2	HLMA	5 years	
All	Nurses and midwives per 1,000 population	2.2 (2016)	7	12	HLMA	5 years	
All	CHWs per 5,000 population	5.8	8	10	PHC report	Annually	
3.Health Infrastructure							
All	Mean Availability of Basic Amenities	57% (2017)	65%	70%	SARA	5 years	
All	Mean Availability of Basic Equipment	77% (2017)	80%	85%	SARA	5 years	
All	Mean Availability of IPC score	83% (2017)	90%	92%	SARA	5 years	
All	Mean Availability of Diagnostics score	33% (2017)	50%	60%	SARA	5 years	
All	Mean Availability of Essential Medicines	31% (2017)	50%	60%	SARA	5 years	
All	General Service Readiness	56% (2017)	67%	72%	SARA	5 years	
B. Output Indicators							
1. Access							
Pregnant and newborn	Proportion of expected delivery facilities which offered BEmONC services	60% (2017)	70%	85%	SARA	5 years	
Pregnant and newborn	Proportion of facilities conducting deliveries which offer all 7 BEmONC services	8%	15%	25%	BEmONC Assessment	2 years	
Pregnant and newborn	Proportion of sampled hospitals conducting deliveries which offer all 9 CEmONC services	35%	50%	70%	BEmONC Assessment	2 years	

Life Stage	Indicator	Baseline 2021/22	Midterm target	End term targets (2030)	Data source	Frequency	Responsible
Adolescents 10-19	Proportion (%) of facilities that offer adolescent health services	89% (2017)	92%	95%	SARA	5 years	
Child health	Proportion of facilities providing immunization services	95% (2017)	95%	98%	SARA	5 years	
Child health	Proportion of facilities providing immunization services daily	12% (2017)	40%	60%	SARA	5 years	
Child and adolescent health	% of schools providing comprehensive health education	No data	100%	100%	SARA	Annually	
All	% of facilities offering malaria diagnosis or treatment availability	100% (2017)	100%	100%	SARA	5 years	
All	Readiness - Proportion (%) of facilities that have all tracer items for malaria services among facilities that provide malaria services	28% (2017)	50%	70%	SARA	5 years	
All	Availability - Proportion (%) of selected facilities that offer ARV services	40% (2017)	50%	70%	SARA	5 years	
Adolescents	Availability - % of facilities offering FP services	96% (2017)	98%	98%	SARA	5 years	
Adults	Readiness - % of facilities with all the FP tracer items	17% (2017)	50%	60%	SARA	5 years	
Older Adults	Proportion of facilities offering NCD services	No data	50%	80%	SARA	5 Years	
All	Availability of cancer services (nationally)	3% (2017)	10%	15%	SARA	5 years	
All	% of facilities offering basic surgical services	59% (2017)	70%	80%	SARA	5 years	
C. Outcomes							
1. Community awareness of health promotion and disease prevention mechanisms							
All	The percentage of women and men with comprehensive knowledge of HIV	28% Women 33%men	50% 50%	60% 60%	SDHS		
Adolescents	Comprehensive knowledge about HIV among young people aged 15-17;	25% of young women 19% of young men age 15-17	50% 50%	60% 60%	SDHS	5 years	
Pregnant and women of reproductive age	The percentage of women who know that MTCT can be reduced by taking special medications	55% women 41% men	70% 60%	80% 70%	SDHS	5 years	
2. Health Seeking behavior practices							
Children 0-5	Children with fever for whom advice or treatment was sought. (75%)	75%	80%	90%	SDHS	5 years	

Life Stage	Indicator	Baseline 2021/22	Midterm target	End term targets (2030)	Data source	Frequency	Responsible
Children 0-5	Children with fever for whom advice or treatment was sought same or next day	50%	60%	80%	SDHS	5 years	
Children 0-5	Children with under 5 with ARI for whom treatment was sought	86%	95%	98%	SDHS	5 years	
Children 0-5	Children under 5 with ARI for whom treatment was sought the same or next day	40%	60%	80%	SDHS	5 years	
Children 0-5	Children under age 5 with diarrhoea for whom medical advice or treatment was sought	75%	85%	95%	SDHS	5 years	
Children 0-5	Children under age 5 with diarrhoea given more liquids than usual, as recommended	30%	60%	80%	SDHS	5 years	
3. Service Coverage							
Pregnant	Births attended by skilled health personnel (%)	87% (2019)	93%	100%	DHS	5 years	
Pregnant	Antenatal care coverage (4+ visits) (%)	79% (2019)	91%	100%	DHS	5 years	
Pregnant	Postpartum care coverage within 2 days of birth – women (%)	86% (2019)	97%	100%	DHS	5 years	
Newborn	Incidence of low birth weight among newborn (%)	5%	3%	2%	DHS, MICS, HMIS	5 years Annually	
Newborn	Postnatal care coverage within 2 days of birth – newborn (%)	83% (2019)	94%	100%	DHS	5 years	
Child health	Children receiving Penta-3 before 12 months of age (%)	76.2% (2019)	91%	98%	DHS, MICS, HMIS,	5 years Annually	
Adolescents	Percentage of those 20-24 years married by age 18 years	29.6% (2019)	20%	15%	SDHS	5years	
Adolescents	Adolescent Birth Rate	21%	18%	11%	SDHS	5years	
All	ART coverage among people living with HIV (%)	45.0% (2020)	80%	95%	HMIS	Annually	
All	Intermittent preventive therapy for malaria during pregnancy (IPTp) 3+ doses (%)	36% (2019)	72%	90%	SDHS, MICS, HMIS, MIS	5 years Annually	
Adults and elderly	Raised blood pressure among adults (%)	22.4% (2009)	20%	16%	STEPs	5 years	
Adults and elderly	Raised blood glucose/diabetes among adults (%)	2.4% (2009)	2%	2%	STEPs	5 years	
4. Service Coverage (Improved Continuity of Care)							
Child health	Immunization dropout rate (difference between DPT1 and DPT3)	16.5% (2019)	10%	**5%**	SDHS HMIS	5 years Annually	
Pregnant, newborn	ANC visits below 13 weeks	No data (2019)	30%	60%	SDHS HMIS	5 years Annually	
10-19	Adolescents ARV uptake coverage				HMIS		
All	HIV retention rate				HMIS		

Life Stage	Indicator	Baseline 2021/22	Midterm target	End term targets (2030)	Data source	Frequency	Responsible
All	TB treatment success rate	89% (2021)	92%	95%	HMIS		
All	Percentage of those treated for malaria who were tested for malaria	91.3	100	100	HMIS	monthly	health facility staff
5. Risk factors and exposures							
0-5	Children under 5 years who are stunted [SDG 2.2.1] (%)	30% (2019)	25%	20%	SDHS	5 years	
0-5	Children under 5 who are wasted	5.4% (2019)	3%	2%	SDHS	5 years	
All	Population with access to at least basic sanitation service	55% (2019)	70%	80%	SDHS	5 years	
All	Population with access to an improved sanitation facility	58% (2019)	75%	80%	SDHS	5 years	
D. Impact							
Pregnant	Maternal mortality rate	717 (2019)	400	250	SDHS		
Newborn	Neonatal mortality rate	31 (2019)	23	18	SDHS		
Child health (0-5)	Infant mortality rate per 1,000 live births.	75 (2019)			SDHS	5 years	
Child health (0-5)	Under 5 mortality rates per 1,000 live births.	122 (2019)	71	60	SDHS	5 years	
Child health (0-5)	Malaria prevalence (among children 6-59 months Malaria incidence rate)	36%			SDHS, MIS	5 years	
Adolescent	Adolescent birth rate per 1000	102 (2019)	74	55	DHS	5 years	
Adolescents &WRA	Reduced total fertility rate	4.2 (2019)	3.6	3	DHS	5 years	
All	HIV prevalence	1.2 (2019)	0.6	0.4	DHS	5 years	
All	TB incidence rate	289	280	270	World TB report	Annually	
All	TB case detection rate	72	80	90	World TB Report	Annually	
All but especially adults and elderly	Reduce NCD mortality rate (per100,000)	285	280	270	GBD Estimates	Annually	
All	Average life expectancy (in years)	54 (2019)	58	60	DHS		
All	Out-of-pocket health spending as percentage of total health expenditure	64.6	45	30	NHA	3 years	
All	Proportion of the population with impoverishing health expenditure	15.6 (2011)		10	WDI, DHS, MICS	5 years	

ANNEXES

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Annex 2: Participants at the Validation of the Framework for Life Stages Approach to Health Service Delivery

THE SIERRA LEONE FRAMEWORK FOR THE PERSON-CENTRED LIFE STAGES APPROACH FOR HEALTH SERVICE DELIVERY