Government of Sierra Leone

Ministry of Health and Sanitation

Health Sector Annual Performance Report 2015

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Abbreviations

6mcp	Six-month contact point strategy
A4P	Agenda for Prosperity
ACF	Action Contre Faim
ACT	Artemisinin-based combination therapy
AGD	Accountant General's Department
AIDS	Autoimmune Deficiency Syndrome
ART	Anti-retroviral therapy
ARV	Anti-retrovirals
ANC	Antenatal care
BEmONC	Basic emergency obstetric and neonatal care
BCC	Behaviour change communication
BCG	Bacillus Calmette-Guérin vaccine (against TB)
BPEHS	Basic Package of Essential Health Services
CDC	US Centers for Disease Control
CDD	Community directed distributors
CDI	Community directed intervention
CEmONC	Comprehensive emergency obstetric and neonatal care
CGA	Charlie Goldsmith Associates
CHA	Community health assistant
CHAI	Clinton Health Access Initiative
CHC	Community health centre
CHO	Community health officer
CHW	Community health worker
CPES	Comprehensive Programme for Ebola Survivors
CYP	Couple years of protection
DDPC	Directorate of Disease Prevention and Control
DFID	UK Department of International Development
DFN	Directorate of Food and Nutrition
DHMT	District health management team
DHRH	Directorate of Human Resources for Health
DHS	Demographic and Health Survey
DOT	Directly observed therapy
DPHC	Directorate of Primary Health Care
DPPI	Directorate of Policy, Planning and Information
DRCH	Directorate of Reproductive and Child Health
DTP/DPT	Diphtheria, tetanus and polio vaccine
EHSD	Environmental Health and Sanitation Directorate
EID	Early infant diagnosis
EMTCT	Elimination of mother-to-child transmission of HIV
ENT	Ear, nose and throat
EPI	Expanded programme of immunisation
ERC	Ebola response consortium
ESICOME	Expanded Sanitary Inspection Compliance and Enforcement
ETC	Ebola treatment centre
EVD	Ebola virus disease
FHCI	Free Health Care Initiative
FIT	Facility Improvement Team
FWC	Freetown WASH Consortium

GAM	Global acute malnutrition
HCT	HIV counselling and treatment
HCW	Health care worker
HED	Health Education Division
HIS	Health Information System
HIV	Human immunodeficiency virus
HKI	Helen Keller International
HMIS	Health management information systems
HRH	Human resources for health
HRIS	Human Resource Information System
HRMO	Human Resource Management Office
HSRP	Health Sector Recovery Plan
IDSR	Integrated disease surevilance and response
IEC	Information, education and communication
IHPAU	Integrated Health Project Administration Unit
IMAM	Integrated Management of Acute Malnutrition
IPC	Infection prevention and control
IPF	Inpatient facility programme
IOM	International Office for Migration
IUD	Intra-uterine device
IYCF	Infant and young child feeding
JIATF	Joint inter-agency task force
JICA	Japan International Cooperation Agency
KAP	Knowledge, attitudes and practices
KPI	Key performance indicator
KSLP	Kings Sierra Leone Partnership
LF	Lymphatic filariasis
LLIN	Long-lasting insecticidal net
M&E	Monitoring and evaluation
M-IYCF	Maternal and infant and young child feeding
MAM	Moderate acute malnutrition
MCHW	Maternal and child health week
MDA	Mass drug administrations
MDG	Milennium Development Goals
MICS	Multiple indicator cluster survey
MNCAH	Maternal, neonatal, chid and adolescent health
MNCH	Maternal, neonatal and child health
MNP	Micronutrient powder
MWR	Ministry of Water Resources
MoFED	Ministry of Finance and Economic Development
MoHS	Ministry of Health and Sanitation
MUAC	Mid-upper arm circumference
NBI	Nest Builders International
NCD	Non-communicable diseases
NERC	National Ebola Response Centre
NGO	Non-governmental organisation
NHA	National Health Accounts
NHSSP	National Health Sector Strategic Plan
NIPCU	National Infection Prevention and Control Unit
NSAHP	National School and Adolescent Health Programme

NSRTP	National Strategy for the Reduction of Teenage Pregnancy
NTD	Neglected tropical disease
OPV	Oral polio vaccine
ORS	Oral rehydration salts
OTP	Outpatient therapeutic programme
PBF	Performance based financing
PHU	Peripheral health unit
PFMICP	Public Financial Management Improvement and Consolidation Programme
PMTCT	Prevention of mother-to-child transmission
PNC	Postnatal care
PPASL	Planned Parenthood Association of Sierra Leone
PPE	Personal protective equipment
RI	Routine immunisation
SAM	Severe acute malnutrition
SECHN	State-enrolled community health nurse
SIA	Supplementary immunisation activity
SLA	Service level agreement
SLESRC	Sierra Leone Ethics and Scientific Review Committee
SLMS	Sierra Leone Micronutrient Survey
SOP	Standard operating procedure
SRH	Sexual and reproductive health
TB	Tuberculosis
TSFP	Targeted Supplementary Feeding Programme
TWG	Technical working group
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNCT	United Nations Country Team
UNICEF	United Nations Children's Fund
UNFPA	United Nations Population Fund
UNOPS	United Nations Office for Project Services
VSO	Voluntary Service Overseas
WASH	Water, sanitation and hygiene
WHO	World Health Organization
WFP	World Food Programme
YF	Yellow fever

Foreword

The 2015 Health Sector Performance Report is the first since 2011. The report is very important because it presents an assessment of health system performance in Sierra Leone. It summarises the effectiveness of inputs, processes, outcomes and their impact on the health system, measured by indicators from the National Health Sector Strategic Plan (2010-2015) and the Health Sector Recovery Plan (2015-2020).

The report is premised on an analysis of commitments in the NHSSP (2010-2015) and the HSRP (2015-2020). The 2015 Performance Report was informed by two performance reviews during the reporting year with broad stakeholder participation including other MDAs, the Head of Civil Service, representatives from the State House, and development partners in health. It is based on the assessment of what has been achieved and what has not, and reasons why, in order to guide future programming.

The MoHS is committed to refocusing priorities to interventions aimed at making positive progress towards implementing the strategies of the Recovery Plan, and achieving the health-related targets in the Agenda for Prosperity. The MoHS continues to prioritize interventions defined in the Basic Package of Essential Health Services (BPEHS) under a Sector-Wide Approach arrangement.

The Government of Sierra Leone recognises the contribution of health development partners, civil society, the private sector and the community in the reporting sector performance. The MoHS will continue to promote a pleasant working relationship with all in the coming years towards achieving a full recovery and a resilient health sector. My assurances go to the citizenry of this country that, the Government's leadership and the MoHS in particular, will remain committed to supporting the implementation of the strategies and interventions of the 10-24 month recovery plan.

My leadership will ensure henceforth that, Health Sector Annual Performance Reports are produced and disseminated widely among the relevant stakeholders. These reports will be improved over time to ensure that they present updates on indicator areas included in previous years' Performance Reports; show trends, and progress towards targets; and, in some cases, regional and district variations.

Dr Abu Bakarr Fofanah

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Hon. Minister of Health & Sanitation

Remarks from the CMO and Permanent Secretary

The Chief Medical Officer – MoHS: Dr Brima Kargbo

The year 2014 was very challenging for the health sector following the EVD outbreak. Consequent to priority shift towards containing the epidemic, the sector was able to fully implement only 25% of the its planned strategies and interventions in the NHSSP (2010-2015).

In spite of the challenges in responding to the EVD outbreak in 2015, our assessment revealed that 70% of the initiatives in both the Early Recovery Plan and the NHSSP (2010-2015) were fully implemented.

The MoHS appreciates the support of the Government leadership and our development partners in making a difference to health sector performance in 2015.

The Permanent Secretary – MoHS: Mr David W. S. Banya

A stock-taking process on implementation of planned activities is the cornerstone of a well-performing institution.

MoHS will continue to promote accountability of all stakeholders on our collective commitment to revamp the health sector, by continuously monitoring the implementation of initiatives in our local policies and strategies, as well as our international obligations including the Sustainable Development Goals.

Acknowledgement

The production of the 2015 Health Sector Performance Report, which emanated from two sector-wide stakeholder engagements at a time when the country was battling with the EVD outbreak, was indeed a tough feat. Whilst officials at both national and sub-national levels were focused largely on the containment efforts of the outbreak, they were also able to dedicate time and effort to both the preparation and participation in two health sector reviews that informed this report.

I wish to thank the leadership of MoHS, notably the Chief Medical Officer, Dr Brima Kargbo and the Permanent Secretary, Mr David W.S. Banya for their tremendous support towards the conduct of the reviews and the production of the first Health Sector Performance Report since 2011. The Permanent Secretary's links with the Civil Service influenced the participation of the Head of Civil Service, Officials from State House, MoFED and LGFD in both reviews. This provided assurance that the challenges highlighted during those reviews would be managed in subsequent years for an improved health sector.

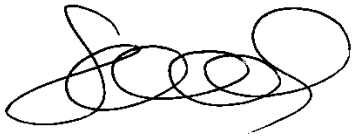
Also commendable was the dedication of Central Programme Managers and Directors as well as the leadership of all DHMTs on the reviews and the production of this report.

Sector performance cannot be improved and sustained without the dedicated efforts of all categories of health workers, working under sometimes challenging conditions, especially in the rural and hard-to-reach parts of the country. I commend the dedicated and productive health workers, and I implore those health workers whose work ethic, behaviour and conduct are holding back health sector progress to improve and change for the better.

The MoHS is grateful to all partners for their support to the health sector during the outbreak and towards our collective effort to recover from the damages of the EVD scourge. The participation of civil society, local and international health non-governmental organisations, and support from development partners – in particular the support of the World Bank towards the holding of the reviews, is also very much appreciated.

Special gratitude goes to Mr Alhassan Fouard Kanu (Acting Planning Specialist-DPPI/MoHS) and Mr Philip Amara (MEAL Specialist-IHPAU/MOHS) both of whom ensured that this annual report was compiled.

It is my hope that this report will be widely used to inform strategies for improved health sector performance in 2016 and beyond.



Dr SAS Kargbo
Director, Policy Planning & Information

Executive summary

The goals of the Ministry of Health and Sanitation (MoHS)

The goals of the MoHS are to provide quality and affordable health care and nutrition services; to reduce inequalities in access to health care; and to promote health and improve the health of all Sierra Leoneans, especially mothers and children, through strengthening national health systems to boost health related outcomes. These goals permeate the overall mission and vision of the MoHS and guides our strategic approach to service delivery.

The MoHS' vision is to establish a functional national health system delivering efficient, high quality health care services that are accessible, equitable and affordable for everybody in Sierra Leone. In this regard our mission is to contribute to socio-economic development by promoting health and ensuring access to quality health and nutrition services for the population of Sierra Leone through effectively functioning national health systems.

To realise this vision and mission, the MoHS has adopted the 'Primary Health Care' approach that focuses on the provision of a Basic Package of Essential Health Services (BPEHS) and continues to implement the Free Health Care Initiative (FHCI).

The outbreak of the Ebola Virus Disease (EVD) disrupted service delivery and resulted in a decline in service utilisation and high health facility acquired infections. Following the outbreak being brought under control, our strategic focus for 2015 was on ensuring patient and health worker safety and restoring essential health services.

Key outcomes/results in 2015

1. In anticipation of the end of EVD, the MoHS, with support from its development partners, developed the 'Sierra Leone Health Sector Recovery Plan' (HSRP). The HSRP is subdivided into early recovery, transition, and full recovery towards a functional health system capable of delivering on the outcomes on the Agenda for Prosperity (A4P). To drive health sector recovery over the first 6-9 months, the plan prioritised patient and health worker safety and restoring essential health services in 40 hospitals and 1,300 primary health care facilities. A 'Health Sector Delivery Team' was set up in the MoHS to guide the implementation of the plan under the supervision of the Office of the President. Resources were mobilised and the final operational plan was launched by the President of the Republic of Sierra Leone in July 2015, formally marking the start of implementation.

2. A National Infection Prevention and Control Unit (NIPCU) was created at the MoHS to ensure patient and health care worker safety. NIPC policy, guidelines, and a pocket book with a standardised training curriculum on infection prevention and control were developed. Over 8,000 health care workers (HCWs) were trained in infection prevention and control (IPC). IPC committees were established in all health care facilities to monitor compliance with patient and healthcare worker safety protocols. The MoHS, with support from partners, established screening and isolation units in all health facilities together with the construction of permanent screening and isolation units. These were either completed or at various stages of completion in 46 Community Health Centres and 22 government hospitals. This system allowed patients to be examined and

separated based on their need for medical care, and suspected Ebola cases are swiftly isolated. The MoHS, with support from the Ebola Response Consortium, conducted assessment of IPC compliance in 1182 health facilities nationwide. Approximately 90% of health care facilities assessed were either partially (40%) or fully compliant (50%) with IPC standards, indicating a significant improvement compared to the situation before the outbreak. Consequently, zero cases of healthcare acquired Ebola was achieved and the country was declared Ebola free on November 8th 2015.

3. The MoHS made significant progress in restoring essential health services. The FHCI continued to be implemented within the context of the HSRP, prioritising the restoration of essential health services for women and children. Routine and supplementary immunisation, defaulter tracing of TB and HIV/AIDS patients were intensified. About 210,865 children were fully immunised against childhood killer diseases, and 206,229 women of child bearing age have received at least two doses of tetanus toxoid vaccine to protect against neonatal tetanus. In June 2015, a total of 1,475,856 children 0-59 months were vaccinated against polio which represented 98.8% coverage. House-to-house birth registration of children was done, and about 1,756,692 children between the ages of 0-59 months were registered and issued with a birth certificate. Over 12,103 TB cases were notified to health authorities, 13,796 HIV patients received treatment, and 569,373 malaria-positive children under the age of five years were treated. About 3,057 EVD survivors received eye care while 567 were treated with ENT related problems.

4. The National Strategy for the Reduction of Teenage Pregnancy (NSRTP) was implemented as part of the sector approach to reduce maternal mortality. 400 teachers were trained on sexual, reproductive and adolescent health issues, and over 1000 adolescent girls, teachers and parents were sensitised through the ''No Sex for Grades" campaign. To facilitate the reopening of schools, 1,617 schools were cleaned and 40 schools in the Western Area, previously used as Ebola treatment centres or holding centres, were decontaminated. 600 teachers were trained on IPC at school and provided with clear guidelines and protocols on how to operate in a safe and protective learning environment in the context of the Ebola outbreak.

5. An extensive program of health facility construction and rehabilitation was launched. WASH upgrade projects were implemented in over 295 health facilities, and permanent screening and isolation structures were constructed in 46 community health centres and 22 public hospitals.

6. The EVD outbreak in 2014 presented the MoHS with challenges that were unanticipated. Ignorance, fear and denial encouraged by strongly entrenched cultural practices resulted in the spread of the disease in all districts. To improve community trust in the health system and improve service uptake, the MoHS embarked on intensive community engagement of traditional and opinion leaders, as well as radio programmes, reviewing messaging, and engaging the media. As a result, about 70% of the population now have comprehensive knowledge of EVD and can identify three means of prevention. Misconceptions have been reduced, with increased acceptance of burial teams, increased sickness and death alerts, reduced secret burials, increased hand washing with

soap, and increased community participation in the EVD response compared with before the outbreak.

7. The BPEHS which guides the delivery of primary health care services in Sierra Leone, including the FHCI, was reviewed to incorporate the emerging health issues brought about by the EVD epidemic – particularly the need for community ownership of health care delivery. The revised document clearly spells out the services that would be delivered at the various levels of care, including services to be delivered directly to the doorstep of households. The national community health worker (CHW) programme was revitalised with the establishment of a national secretariat. The programme will ensure key community groups are engaged in community surveillance and high impact, and cost effective health care services are brought to the doorstep of the community.
8. The MoHS strengthened coordination with stakeholders and partners and adopted the 'Service Level Agreement' (SLA) approach to service delivery in the health sector. Every implementing partner in the health sector is required to sign an agreement with the MoHS at central level, and the relevant District Management Team(s) and District Council(s). The SLA approach will enable us to document all the projects in the health sector; ensure proposed projects are aligned with national health priorities; quality standards are adhered to; and ultimately to ensure equitable service provision across the 13 districts to the benefit of every Sierra Leonean. 51 SLAs were signed in 2015.

1. Introduction

The annual report of the MoHS outlines the progress made towards improving patient and health worker safety and the restoration of essential health services that were badly disrupted following the EVD outbreak.

In May 2014, Sierra Leone was hit by a major EVD epidemic with catastrophic consequences. The number of cumulative confirmed cases due to the epidemic was 8,704, with 3,589 confirmed deaths. There was high rate of nosocomial infections resulting in the death of 221 HCWs, as well as mutual mistrust between HCWs and the population.

Health service utilisation declined, undermining previous gains already made in reducing maternal and child mortality and the prevalence of communicable and non-communicable diseases. The outbreak in Sierra Leone spread throughout the country largely because of serious weaknesses in the country's health system.

To recover from the adverse effects of the outbreak and to avert the reoccurrence of such a catastrophe, the MoHS, with support from WHO and other development partners, developed the Sierra Leone Health Sector Recovery Plan (HSRP) 2015-2018. The aim of the recovery plan is to reconstruct the national health system to make every district health system functional and resilient to future outbreaks by focusing on:

1. Improving patient and health worker safety
2. Increasing the availability of human resources for health (HRH)
3. Restoring essential health services
4. Fostering community ownership
5. Strengthening health management information systems (HMIS)

The implementation of the plan was divided into three phases: getting to zero cases of EVD transmission; early recovery and transition; and recovery and attaining a functional and resilient health system. During the early recovery phase (July 2015-March 30th 2016) the main focus was on improving patient and health worker safety and restoring essential health services. Accordingly, the strategic objective as reflected in the Presidential Recovery Priorities for the health sector was: 'ensure that 40 hospitals and 1,300 primary health facilities are safe and have capacity to provide essential health care'. The specific priority interventions were as follows:

1. Zero cases of health care acquired Ebola
2. Children and mothers receive free essential healthcare
3. TB, HIV and malaria patients return to long term treatment
4. 3,500 Ebola survivors receive free care and support

The MoHS performance report for 2015 details the achievements made by various Directorates and Programmes towards the accomplishment of the early recovery priorities.

2. Health sector planning and governance

Development of the Health Sector Recovery Plan (HSRP) 2015-2020

In May 2014, the health sector was hit by the worst outbreak of the Ebola Virus Disease (EVD) in human history. Ignorance about the means of transmission of the disease, exacerbated by cultural practices such as unsafe burial of the dead, led to high rate of infection and death in the population. Due to the inadequacy of infection prevention and control (IPC) measures at various health facilities, there was a high rate of nosocomial infections leading to deaths of health care workers (HCWs). As a result, the disease spread throughout the country and by November 8th (when the country was officially declared Ebola free), the number of cumulative confirmed cases was 8,704, with 3,589 deaths.

To adequately respond to the EVD outbreak and develop a resilient health system, the MoHS embarked on institutional reforms including the development of a recovery plan that could adequately address the needs of the sector. The health system reconstruction, resilience and recovery framework was developed under the leadership of the MoHS, setting the vision for mobilising donor funds for developing a resilient plan.

A Health Systems Strengthening Hub was created within the Directorate of Planning Policy and Information (DPPI), staffed with specialists to facilitate the review of the National Health Sector Strategic Plan (NHSSP) 2010-2015; the development of a resilient health sector recovery plan; and the implementation of the special initiatives identified as crucial to strengthening the health sector and ensuring a full recovery.

A consultative planning process towards building a resilient health system was undertaken by the MoHS. The HSRP 2015-2020 was formulated based on inputs from sector reviews, taking into consideration the impact of Ebola on the health sector. Desk reviews of the relevant documents to inform planning at the national level was conducted, and consultative meetings of pillar working groups and other stakeholders were held. The HSRP was predicated on five pillars namely:

1. Patient and HCW safety
2. An adequate and skilled health workforce
3. Essential health services
4. Community ownership
5. Information and Surveillance

By the end of March 2015, the draft HSRP was prepared. The series of consultations that followed resulted in the development of the Early Recovery (6-9 month) Plan, based on the Presidential priorities for recovery and transition.

The Early Recovery (6-9 month) Plan

In April 2015, the Office of the President with support from McKinsey and DFID organised a two day workshop that brought together the key sectors heavily impacted by the EVD outbreak (health, education, social protection and the private sector), to develop a consolidated Early Recovery Plan that clearly

identified high impact activities that could be accomplished in the first six to nine months.

The health component of the plan set the health sector recovery priorities, focusing mainly on getting to zero cases of health care acquired Ebola and restoring essential health services. Relevant high impact activities were taken from the draft MoHS district and central level recovery plans developed through a consultative process to develop the Health Sector Early Recovery Plan, to be implemented in six to nine months beginning in 2015. Objectives of the Early Recovery Plan for the other sectors included getting kids back to school; protecting of the vulnerable; and private sector recovery and growth.

The Consolidated National Early Recovery Plan was presented at the World Bank Spring Meeting by the Government of Sierra Leone. Several donors provided resources to facilitate the implementation of the plan. The Government committed itself to implementing, within six to nine months, the activities detailed in the Plan.

Creation of the Health Delivery Team on Recovery and Transition

To facilitate implementation, a Presidential Delivery Team on Recovery and Transition was created in the Office of the President, and similar structures were replicated in the four Ministries of Health, Education, Social Welfare and Agriculture; and at the District level.

The Health Delivery Team was created in the MoHS to coordinate and drive the implementation of activities in the Early Recovery Plan. The team managed performance, and provided weekly updates to the Office of the President on progress through a dashboard comprising of clearly defined set of key performance indicators (KPIs).

Through a series of consultative workshops and meetings, the Health Delivery Team helped define the implementation timeline, mapped the resources available, set the KPIs, defined reporting and accountability mechanisms, and finalised the operational plan. On July 24th 2015, the HSRP was formally launched by the President of the Republic of Sierra Leone, marking the start of implementation of activities. A sample of the health delivery dash board used to report progress on a weekly basis is shown in Figures 1-2.

Figure 1: Health Delivery Team dashboard for monitoring progress on KPIs relating to resilient zero

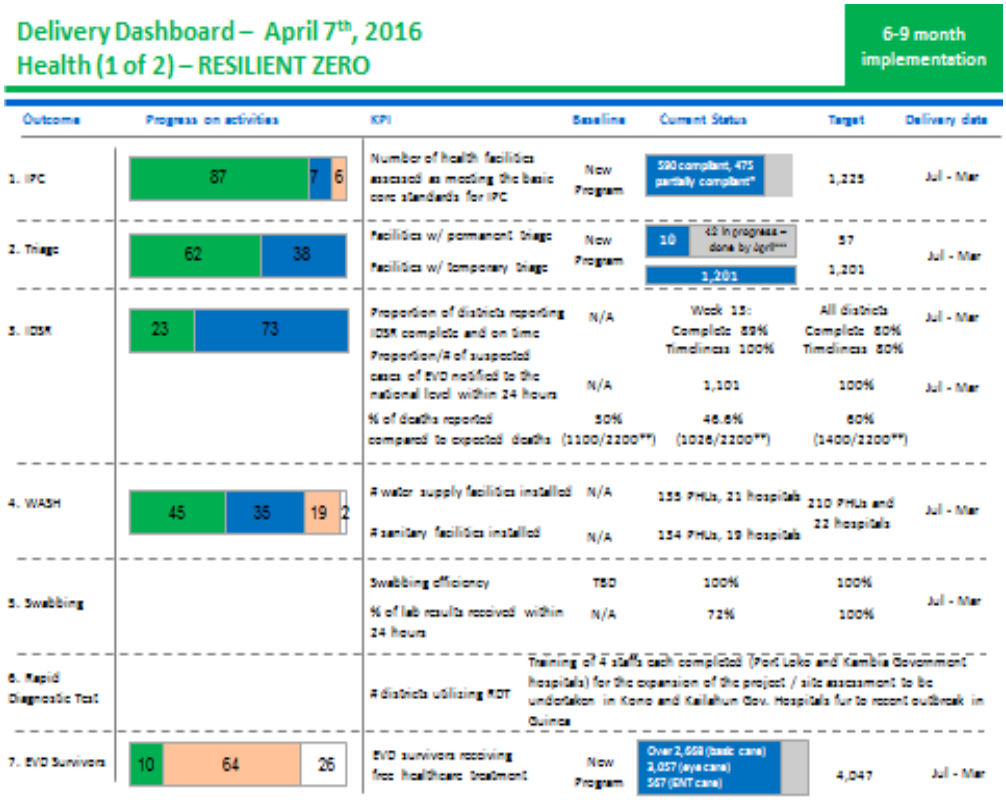
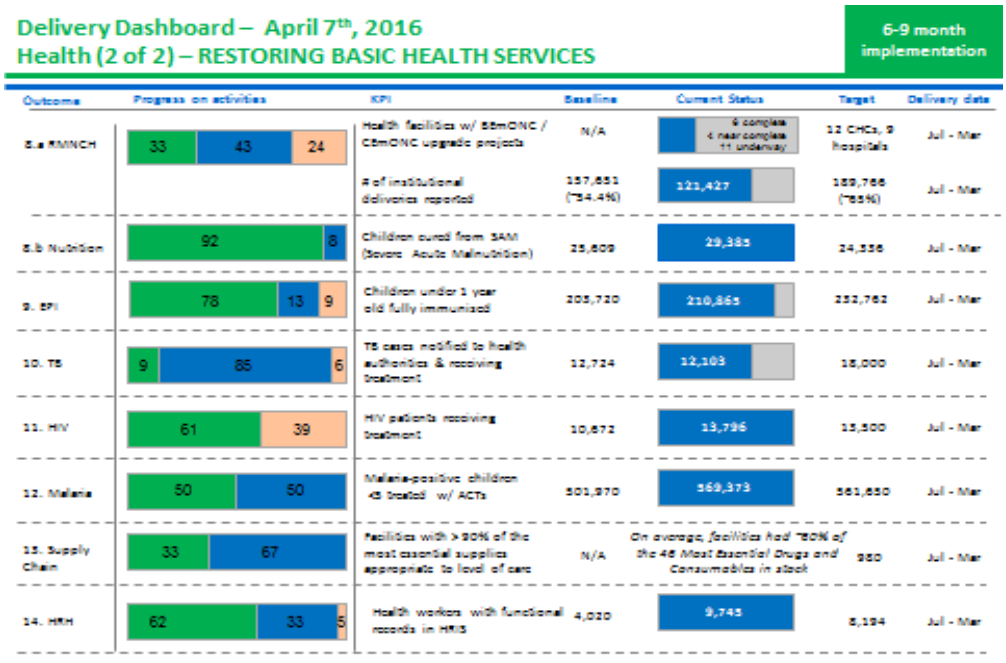


Figure 2: Health Delivery Team dashboard for monitoring progress on KPIs relating to restoring basic health services



The Review of the Basic Package of Essential Health Services (BPEHS)

The MoHS adopted the 'Primary Health Care' approach as platform for ensuring inclusiveness and reducing inequalities in health. In this regard, the MoHS introduced the Basic Package of Essential Health Services (BPEHS) in 2010 as the guiding document for the implementation of the National Health Policy and the Free Health Care Initiative (FHCI).

The package defines the minimum set of health care services that the Ministry of Health and Sanitation is committed to providing to the people of Sierra Leone at the various levels of care. The main focus of the BPEHS is to reduce mortality rates, particularly infant and maternal mortality. Since the introduction of the BPEHS and the FHCI in 2010, the MoHS has scaled up interventions defined in the package relating to maternal, newborn, child and adolescent health (MNCAH), including nutrition; sexual and reproductive health (SRH) including family planning; HIV/AIDS, TB and malaria; mental health and disability services; and environmental health and sanitation.

The unprecedented Ebola epidemic that plagued the country exposed the weaknesses of the health sector and highlighted many gaps in service delivery, as well as the lack of preparedness of the health system to respond to disease outbreaks. Through the outbreak response and planning for recovery, new priorities emerged. It was therefore deemed appropriate to revise the BPEHS to ensure it remains a relevant, useful and actionable document for the health sector in Sierra Leone. The revised BPEHS was developed through a series of consultative meetings that were part of a larger process to develop the HSRP.

The updated BPEHS incorporates almost all the basic interventions in the 2010 BPEHS, with added focus on emerging health issues brought to the fore by the EVD outbreak. These are:

1. Improving surveillance, early reporting, control, and treatment of epidemic-prone diseases
2. Promoting patient and HCW safety, including reducing the risk of occupational hazards to health workers
3. Ensuring alignment between the services in the BPEHS and new guidelines, protocols, and policies that have been implemented in the intervening years
4. Adding an emphasis on the emerging importance of non-communicable diseases in the health of the population

The interventions in the BPEHS are closely aligned with the five pillars of the HSRP, with a special emphasis on ensuring community ownership of health interventions and bringing high impact, cost-effective, and evidence-based interventions to the doorstep of communities through CHWs.

The Free Health Care Initiative (FHCI)

The MoHS continued to implement the FHCI in 2015. The Initiative was introduced in 2010 by the President of the Republic of Sierra Leone, with significant support from DFID and other health development partners, in order to combat the high maternal and child mortality rate.

The FHCI ensures that pregnant, lactating mothers and children under the age of five years can access medical care services without paying user fees. This targeted removal of user fees is informed by evidence that shows the user fees limit access to and utilisation of health care for the most needy and vulnerable in society. In Sierra Leone, user fees have been a significant barrier for the utilisation of health services by mothers and children. The Demographic and Health Survey (DHS) 2013 shows that service utilisation by mothers and children increased significantly since the introduction of the FHCI.

Strengthening sector coordination through 'Service Level Agreements' (SLAs)

MoHS has strengthened coordination with stakeholders and partners through the introduction of Service Level Agreements (SLA). Every implementing partner in the health sector is required to sign an agreement with the Ministry at central level, as well as with District Management Teams and the District Councils.

The SLA approach enables the Ministry to document all projects in the health sector; ensure proposed projects are aligned with national health priorities; ensure that quality standards are adhered to; and ultimately ensure equitable service provision across the 13 districts to the benefit of every Sierra Leonean.

By the end of December 2015, 75 SLAs were received, and 51 were recommended by the top management team for approval.

Eradicating corruption

During 2015, the MoHS implemented key initiatives to reduce corruption including the ACC anticorruption prevention strategies and guidelines. The procurement, audit and integrity committees were reactivated. An active procurement committee ensures that procurement processes conform to the procedures outlined in the Procurement Act, and the revived internal audit system conducted financial audits of all financial transactions in the Ministry.

Additionally, the Ministry reconstituted the Integrated Health Project Administration Unit (IHPAU). A Team Lead was appointed and specialists in financial management, procurement, monitoring and evaluation, and audit were recruited. The Fund Management Manual was developed and circulated for review by donors. The World Bank, Global Fund, Islamic Development Bank and the GAVI Alliance indicated a willingness to channel financial support to the Ministry through IHPAU after a capacity assessment of the Unit in 2016.

3. Capacity building for Service Delivery

Emergency medical services

In 2015, the MoHS initiated plans to establish a 'National Medical Emergency Service' to provide pre-hospital care and transportation of patients to hospital, as well as strengthening the referral system. Over 67 new ambulances were procured in addition to those used as part of the EVD response.

A public-private partnership approach will be used to operationalise the service, and an open, competitive process is being used to recruit the support partner. By the end of the year, invitations for expression of interest were sent out and the proposals of various interested parties were received.

Postgraduate Medical Training College and the School of Health Sciences

To ameliorate the acute shortage of medical personnel, the MoHS initiated plans to establish a Postgraduate Medical Training College to train specialist medical doctors locally. A secretariat was established to coordinate the training program and accreditation was sought.

The Act for the establishment of a Postgraduate Medical Training College was finalised and approved by parliament. The Act made provision for the establishment and operations of the Postgraduate College of Medical Specialties Board to expedite the commencement of local training; the new Postgraduate Medical Training College structures; and the Teaching Hospital Board.

The School of Health Sciences is being established in Makeni to intensify training of medical professionals domestically, focusing on middle level cadres. The construction of the school will soon be completed, and the full complement of staff will be recruited. The primary aim is to train Community Health Officers (CHOs), with the possibility of extending to other disciplines.

Nursing and midwifery training

The 'National Training of Nurse Anaesthetists' project funded by the Government of Sierra Leone and UNFPA continued to train nurse anaesthetists to address the acute shortage of personnel in the anaesthesia departments at various hospitals. The project aims to support task shifting to increase national capacity to deliver comprehensive high-quality maternal health services, and ensure that all service delivery points are covered by anaesthetic staff.

120 nurse anaesthetists and other anaesthetic staff were trained and posted to hospitals to deliver services where medically trained anaesthetists are lacking. All hospitals in the country now have at least one member of anaesthetic-trained staff to deliver comprehensive obstetric and neonatal care services.

National community health worker (CHW) programme

The national CHW programme was revitalised with the establishment of a national secretariat. The aim of the program is to ensure that key community groups and stakeholders are engaged in community surveillance; and that high impact and cost effective health care services are brought to the doorstep of the community. The services that will be delivered at the community level by Community Health Workers have been spelt out in the BPEHS.

4. Ebola Virus Disease (EVD) cases and deaths

Overview

The EVD outbreak had devastating consequences on human lives in the country. From May 2014 to 13th October 2015, a total of13,992 cumulative cases of EVD were reported, of which 8,704 were confirmed Ebola patients. The cumulative number of persons admitted to treatment centres was 7,245, of which 4,051 were discharged as survivors. Of the confirmed EVD cases, 3,589 died of the disease representing a case fatality rate of 41%. The case fatality rate by district is shown in Table 1.

Table 1: Cumulative cases of EVD as of October 13th 2015 (Source: EVD Situation Report, 14th October 2015)

District	Non-cases	Reported cases of Ebola			Reported deaths from Ebola			CFR
		S	P	C	S	P	C	
Bo	7,010	359	44	314	8	43	114	36.3
Bombali	6,935	276	25	1,050	22	19	391	37.2
Bonthe	2,120	101	1	5	1	1	5	100
Kambia	1,561	54	67	565	4	35	228	40.4
Kailaihun	3,723	200	9	259	6	9	160	61.8
Kenema	5,210	383	0	503	5	0	265	52.7
Koinadugu	2,135	63	64	109	0	32	57	52.3
Kono	3,829	446	20	254	2	19	186	73.2
Moyamba	4,494	284	21	209	9	20	78	37.3
Port Loko	8,362	659	2	1,485	74	1	586	39.5
Pujehun	1,949	87	2	31	3	2	16	51.6
Tonkolili	5,291	177	25	457	4	21	161	35.2
Western Rural	7,933	529	2	1,166	12	2	528	45.3
Western Urban	17,000	1,368	5	2,283	8	4	813	35.6
Missing	199	15	0	14	0	0	1	7.1
National	77,751	5,001	287	8,704	158	208	3,589	41.2
Total	77,751	13,992			3,955			

S: suspected; P: probable; C: confirmed

The care of EVD survivors

A study conducted by the MoHS with support from Centers for Disease Control (CDC) examined the persistence of the Ebola virus in the fluid of survivors over seven months after their discharge from an Ebola Treatment Unit. It found that Ebola virus fragments can persist in the semen of survivors for a considerable period after discharge. 3 out of 60 men followed-up showed particles of EVD in their semen. This demonstrates the possibility of the reintroduction of the virus into the community.

In a study conducted in Sierra Leone that documented the common symptoms self-reported by 132 EVD survivors invited to return for follow-up clinical and psychological assessment, it was found that the most common symptoms reported were: joint pain (42.8%), headache (41.1%), vision and eye problems (25.8%), excessive fatigue (24.5%), and muscle pain (24.0%). EVD survivors were also reported to experience flashbacks, emotional and psychosocial problems, and stigma.

To minimise the risk of survivors transmitting the virus into the community, and to reduce the burden of medical care on survivors, the MoHS with support from partners provided the required clinical and psychosocial care for survivors as one of the key priorities of the early recovery phase. The main objective was to ensure that all EVD survivors received free health care treatment. To achieve this aim, the MoHS with support from partners put the following measures in place:

1. Launching 'Project Shield', with the primary objective of conducting semen testing to help survivors know their status and provide them with means to engage in safe sex. Testing clinics were established and semen testing started at the Makeni Government Hospital, the Lumley and Port Loko Government Hospitals. The project also conducted psychosocial counselling in Port Loko and Bombali districts, and in 69 wards in Western Area.
2. In collaboration with the Ministry of Social Welfare Gender and Children's Affairs, the MoHS launched the Comprehensive Programme for Ebola Survivors (CPES). The overall objective of CPES is to provide quality, sufficient, secure and sustainable health and psychosocial services, including support for livelihood reconstruction for EVD Survivors.
3. The Government of Sierra Leone through the Chief Medical Officer authorised all public health care facilities to make free health care services available to survivors. The specific services provided include: acute ophthalmology, neurology, mental health and psychosocial care, rheumatology, and rehabilitation and physiotherapy.

As shown in Table 2, survivor clinics were established in Bombali, Kambia, Kono, Koinadugu, Moyamba, Port Loko, and Western Rural and Western Urban districts. Specialised services are provided at Connaught Hospital, 34 Military Hospital, Port Loko, and at Lunsar UMC Eye Hospitals. The provision of outreach services was also made available through mobile medical teams in 12 districts.

Table 2: EVD survivor clinics and outreach services in Sierra Leone (Source: as reported by implementing partners; Mauricio Calderon (Sept 2015); Survivor TWG Partner Mapping; WHO & JIATF (Sept 2015))

Provider	Health facility	Services provided	Eligibility criteria
GoSL	34 Military; Freetown	1.Prescriptions for medication 2. Laboratory work 3. Radiology	All survivors
GoSL	Connaught Hospital, Freetown	1. ENT 2. Eye care 3. Other specialty care including psychosocial and physiotherapy	All survivors and negative discharges from holding centres
UMC	Kissy UMC Hospital; Freetown	1. Eye care	N/A
MSF OCA/OCB	MSF Survivor Clinic, Magburaka, Tonkolili and Freetown	1. Outreach with team visiting survivors for follow-up 2. Comprehensive care; medical examination and psychosocial support. 3.Eye problems and hearing complications	All survivors
Partners in Health (PIH)	Western Area (urban and rural), Port Loko, Kambia, and Kono	1. Survivors suffering from uveitis 2. Comprehensive free Survivor primary care clinic based at Baptist Eye Hospital Lunsar	All survivors
Medicos del Mundo (MDM)	Moyamba; Koinadugu	1. Accompaniment of survivors after discharge to the community. 2. Psychosocial follow up of survivors with specific needs 3. Community Outreach	All survivors and their families
World Hope International	Makeni; Old Government Hospital	1. Health care - both curative, preventative and strong education component 2. Full assessment done of health status, physical, psychological, psychosocial and emotional needs 3. Mobile Outreach in District	All survivors
Sightsavers	Kenema, Kono and Kailahun, Bo, Moyamba, Bonthe and Punjehun; Freetown	1. Sensitisation 2. Training health workers on Ebola eye complications 3. Screening and Treatment 3. Monitor and follow ups	All survivors and health workers
Welthungerhilfe	Bo	24 bed Post Ebola Care Centre (PECC) providing beds, counselling, medical treatment, and wellness training/information	All survivors

5. Patient and HCW Safety

Overview

The Early Recovery Plan priority to improve on patient and HCW safety focused on:

1. Establishing the infrastructure for implementing and sustaining IPC practices in all health facilities. This includes putting in place a national IPC organisation to coordinate, supervise and monitor IPC implementation.
2. Building the capacity of HCWs to implement IPC policies, guidelines and practices in health facilities.
3. Provision of IPC materials in health facilities and strengthening the corresponding supply chain management.
4. Establishing a system for monitoring and supervision to ensure compliance with IPC precautions, including screening and isolation protocols.
5. Provision of screening, isolation and waste management infrastructure at health facilities.

With the support of partners and donors, it was expected that at the end of the early recovery phase:

1. All health facilities would be compliant with IPC policies
2. 40 hospitals and 149 CHCs would have screening and isolation capacity
3. All hospitals and CHCs would have access to safe water
4. All peripheral health units (PHUs) would have improved sanitation facilities

Background to IPC measures undertaken

At the onset of the EVD outbreak in May 2014, Sierra Leone had no policy, guidelines or strategy on IPC in health facilities. Ebola Treatment Centres (ETCs) were established and persons with EVD symptoms were encouraged to seek treatment at these facilities or call for an ambulance to be transported to such facilities, however some patients continued to turn up at health care facilities not intended to treat EVD cases.

These staff were inadequately prepared to treat Ebola, but also to detect and prevent themselves from being infected. There was acute shortage of basic IPC infrastructure, equipment and consumables and supplies and HCWs were not well trained to implement IPC protocols. As a result, 221 HCWs became infected and died of EVD.

The fear and mistrust in the health system that resulted from the high rate of nosocomial infections resulted in a decline in the utilisation of health care services, particularly among women and children. Accordingly, IPC became a national priority – not only to achieve zero cases of EVD transmission, but also to restore confidence in the health system and improve service uptake.

Formation of the National Infection Prevention and Control Unit

The EVD outbreak attracted widespread national and international support, with several partners opting to provide IPC related support. However, there was no central coordination for the partners' efforts or the response at the facility level.

Accordingly, with the support of CDC, WHO and other partners, a national IPC task force was established to coordinate IPC activities, and standardise IPC training and messaging.

To ensure sustainable IPC improvements, a National Infection Prevention and Control Unit (NIPCU) was created at the MoHS to monitor patient and health worker safety at health care facilities. A National IPC Coordinator was appointed and the Secretariat was staffed with other professional and support personnel to coordinate IPC activities in the country. The IPC Unit oversees the implementation of IPC standards at health facilities.

The National IPC Advisory Committee was appointed to support the work of the IPC Unit. The Advisory Committee advocates for financial, material and human resources to be allocated for IPC activities; helps set IPC targets and goals; and discusses other strategic management issues as needed. In 2015, the Advisory Committee facilitated the development of the IPC policy, strategic plan, guidelines, and standard operating procedures (SOPs). The Committee also met on a quarterly basis to discuss IPC implementation at health care facilities.

District IPC focal persons and committees, hospital IPC focal persons and committees, and PHU IPC focal persons were also appointed in each district to facilitate the implementation, monitoring and supervision of IPC protocols and guidelines.

The development and roll-out of the national IPC policy, guidelines and standard operating procedures

The National IPC Policy was developed following the setup of the IPC unit. The national IPC policy establishes the framework and provides guidance on the implementation of IPC at all health care establishments. The policy outlines roles, responsibilities and accountability processes for an effective IPC Program. National guidelines and recommendations related to infection prevention were also developed. General guidelines were developed on: hand hygiene; environmental cleaning/disinfection; isolation precautions; injection safety for HCWs. Staff were trained on the national guidelines and copies of the guidelines were produced and distributed nationwide.

IPC Training

Training in IPC was a key activity under the Early Recovery Plan. The plan was to deliver basic and Ebola IPC training to HCWs at 25 government and private hospitals, including clinical leads, all PHU staff, EVD HCWs, CHWs, and others. With support from WHO, the Ebola Response Consortium (ERC), and other partners, 8,525 health workers were trained in IPC from September 2014 to July 2015.

Table 3: Number of health workers trained in IPC between September 2014 and July 2015 by type of training

District	Ebola IPC	Decont. and decomm. of Ebola facilities training	Vehicle cleaning and decont. training	Safe re-opening of schools	Basic IPC	Basic IPC for national vaccination campaign
Western Area	865	189	0	0	727	0
Bombali	745	31	21	115	431	0
Port Loko	1084	40	0	0	151	0
Kambia	582	149	16	0	403	0
Tonkolili	85	15	35	0	82	0
Koinadugu	81	0	6	0	229	0
Kono	395	0	13	0	480	63
Kenema	56	0	6	0	187	0
Kailahun	0	108	0	0	0	0
Bo	0	10	20	0	208	110
Bonthe	0	0	17	0	0	0
Moyamba	277	0	20	0	122	0
Pujehun	0	0	4	0	285	62
National	4170	542	158	115	3305	235

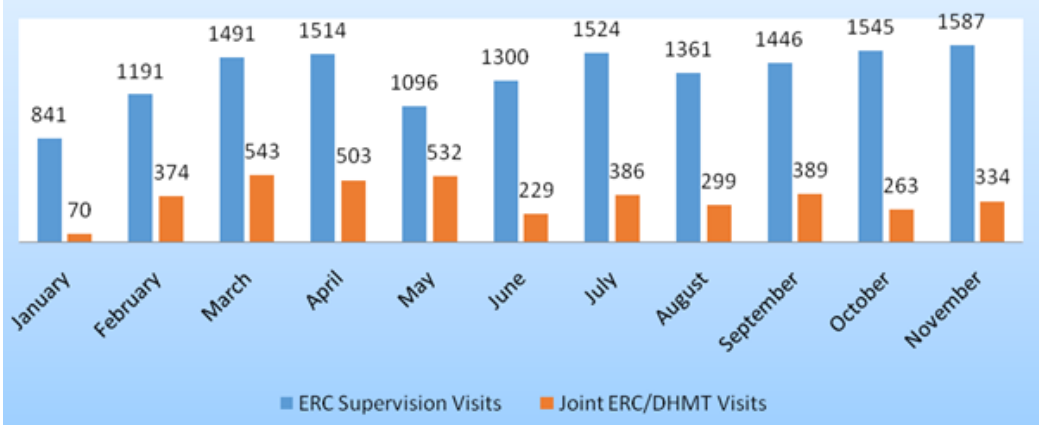
About 48% of the training was related to Ebola while 38% of staff received basic IPC training. All categories of staff including medical doctors, CHOs, nurses, technicians, drivers, burial teams, and CHWs were provided with IPC training including the IPC training manual. 50 district supervisors were trained on the national IPC guidelines and protocols to enable them to monitor IPC procedures at PHUs and hospitals. The full list comprises:

- 55 medical doctors
- 131 CHOs
- 4,119 nurses, midwives, laboratory technicians, community health assistants, and nurse aides
- 226 midwifery and nursing students
- 2,130 support staff, hygienists, sprayers, cooks, security staff, electricians, plumbers, survivors, and volunteers
- 1,119 burial team members, ambulance team members, swab collectors, contact tracers, surveillance team members, home decontamination team members, social mobilisers, and vehicle decontamination team members
- 380 co-ordinators, directors, finance specialists, administrators, and pharmacists
- 115 teachers
- 250 unclassified

Supportive supervision and assessment of IPC compliance

Joint supportive supervision visits were conducted by the IPC Units, DHMTs, ERC and other partners in order to monitor IPC compliance. Figure 3 shows the number of supervisory visits made by the ERC, both alone and jointly with the DHMTs between January to November 2015.

Figure 3: Number of IPC supervision visits in 2015 (Source: IPC Assessment Report, ERC 2015)



The IPC in PHUs assessment tool was revised and monthly IPC assessments of PHUs were carried out. The target was to monitor and ensure that 1,225 PHUs were assessed as meeting the basic core standards of IPC. NIPCU, in collaboration with the Ebola Response Consortium (ERC) and the DHMTs, conducted assessment of all the healthcare facilities nationwide on IPC practices and compliance.

Out of 1,182 health facilities assessed by the end of the early recovery phase, 590 health facilities were reported to be compliant while 475 health facilities were partially compliant with IPC standards. This represents a full compliance rate of about 50%.

Supply of IPC Materials

IPC was set as a Presidential priority under the early recovery plan. The main objective of the IPC interventions was to ensure zero health facility acquired infections. This was achieved by ensuring that all health facilities were provided with the necessary IPC materials, and HCWs fully implemented IPC protocols and national guidelines.

The ERC, with financial support from DFID, provided a continuous supply of IPC materials to all PHUs and hospitals nationwide. These included handwashing posters, soap and veronica buckets, sharp safety boxes, waste bins, personal protective equipment (PPE), and other supplies. In addition to the ERC, the International Office for Migration (IOM), Welbodi Partnership, and the Kings Sierra Leone Partnership (KSLP) also implemented IPC projects in selected hospitals.

With the support of our partners, significant improvements have been recorded in ensuring patient and health worker safety through effective IPC. The country has maintained zero cases of health care acquired Ebola and Sierra Leone was declared free of EVD on November 8th 2016.

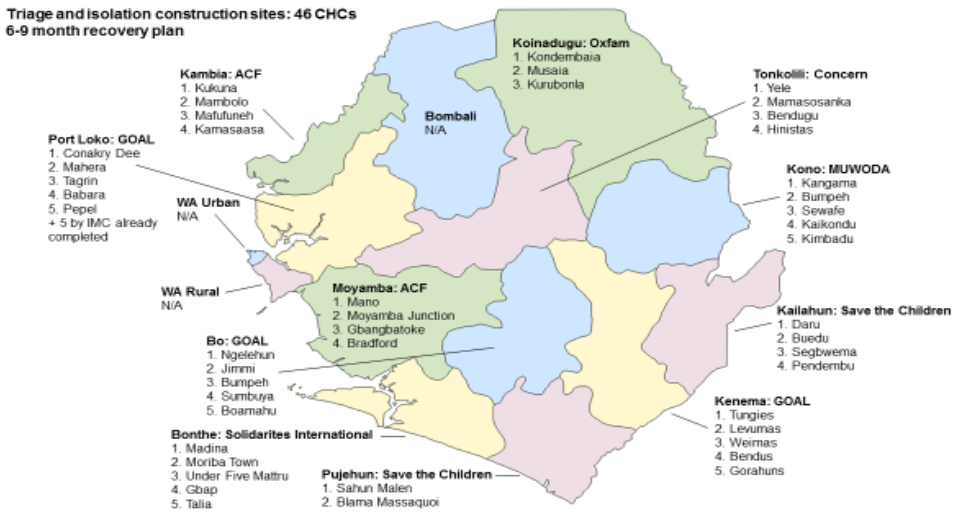
Screening and isolation

At the onset of the outbreak in 2014, there were close to zero screening and isolation units in health facilities. The target was to ensure that all health facilities had permanent or temporary screening and isolation units.

As part of the Ebola response and with the support of various partners, all health facilities were provided with at least temporary screening and isolation facilities.

The ERC proposed constructing 46 permanent screening and isolation units in community health centres (CHCs) during the early recovery phase, and UNOPS proposed constructing screening and isolation units in 22 government hospitals. The CHCs were selected at meetings held together with DHMTs to prioritise appropriately. The selection of priority PHUs was done based on geographic location and distribution (including areas particularly affected by EVD) and CHCs with the highest patient utilisation in chiefdom. The distribution of CHCs selected and the details of the ERC partner responsible for the construction is illustrated in Figure 4.

Figure 4: Distribution of CHCs targeted for permanent screening and isolation units (Source: ERC programme data)



As of December 2015, 10 screening and isolation units (including those constructed by IOM in Port Loko) had been completed and 42 were under construction.

Screening and isolation standards are in place in all health facilities nationwide. Patients who visit public health facilities are screened and separated based on their need for medical care and suspected Ebola cases are swiftly isolated.

WASH in health facilities

Waste management, water and sanitation projects were implemented in 295 health facilities by ERC (151), UNICEF (84), UNOPS (23), and the Freetown WASH Consortium (37). Additionally, UNFPA conducted WASH upgrades in 11 health facilities. These are illustrated in Table 4.

Table 4: Scope of WASH activities in health facilities during the early recovery phase

No.	WASH component	Recommended Scope of Work
1	Water supply	Improve existing water sources, e.g. re-deepening hand dug wells and installing hand and submissive pumps
2	Water storage	Increase no. of water sources by constructing new hand dug wells
3	Water quality	Ensure water supply to laboratory, delivery rooms, consultation rooms, observation rooms, and antenatal and postnatal units
4	Excreta disposal: latrines/toilet coverage	Provision of power supply through installation of solar panels
5	Excreta disposal: septic tanks	Construction of towers and provision of water storage tanks
6	Hand washing facilities	Water quality tests
7	Showers	Chlorination of water at the reservoir
8	Laundry and kitchen	Residual chlorine measurement
9	Drainage systems	Construction of outdoor pit latrines, VIP latrines, dislodging and upgrading existing latrines
10	Waste collection and segregation	Provision of water supply to all existing latrines; replacement of hand basins/sinks
11	Waste treatment and disposal	Construction/rehabilitation of septic tanks, inspection chambers and soakaways
12	Fencing of waste management area	Rehabilitation of existing hand washing facilities

An assessment of the status of WASH in health facilities was conducted by MoHS, Ministry of Water Resources (MWR), Freetown WASH Consortium (FWC) and the ERC, and the draft report was produced. The report informed the WASH upgrades that took place at health facilities. Technical guidelines were developed, validated and distributed to the partners for inputs and comments. The status of implementation of projects implemented by UNICEF, ERC, UNOPS and FWC is shown in Table 5.

Table 5: Status of WASH infrastructure projects in PHUs as of February 2016 (Source: FWC, DEHS, MoHS)

Agency	Facility type	Status											
		Water supply systems				Sanitary toilets				Medical waste facilities			
		T	C	O	N	T	C	O	N	T	C	O	N
UNICEF	PHU	84	46	29	9	84	56	23	5	84	30	53	1
UNOPS	Hospital	23	2	21	0	0	0	0	0	22	12	10	0
ERC	CHC	128	17	63	48	128	9	66	53	128	26	65	37
	Hospital	23	9	13	1	21	4	17	0	21	6	15	0
FWC	PHU	37	35	2	0	37	37	2	-2	0	0	0	0
TOTAL		295	109	128	58	270	106	108	56	255	74	143	38

T: target; C: completed; O: ongoing; N: not started

6. Reproductive and child health

Overview

One of the main health challenges in Sierra Leone is the high maternal and child mortality rates. The high rate of poverty in the country limits access to health care, particularly for women and children. The FHCI was introduced in 2010 as a measure to reduce the high maternal and child mortality rate by removing user fees for access to health care for pregnant, lactating mothers and children under the age of 5.

Some progress has been made in reducing maternal and child mortality over this period. The UNICEF Sierra Leone Multiple Indicator Cluster Survey (MICS) 2 (2000), 3 (2005/6), and 4 (2010) results show that there had been a consistent decline in infant and under five mortality rates from 2000 to 2010, and the DHS 2013 results show increases in that same indicators between 2008 and 2013. These results are illustrated in Table 6.

Table 6: Performance of key MNCAH indicators in Sierra Leone between 2000 and 2013 based on independent surveys

Indicator	2000 (MICS 2)	2005 (MICS 3)	2010 (MICS 4)	2008 (DHS 2008)	2013 (DHS 2013)	2015 MDG target
Impact indicators						
Infant mortality rate (/1,000 live births)	170	158	128	89	92	50
U5 mortality rate (/1,000 live births)	286	267	217	140	156	95
Maternal mortality ratio (/100,000 live births)	1,800 (+/- 800)	457	-	857	1,165	450
HIV prevalence (% aged 15-49)	-	-	-	1.5%	1.5%	0%
Outcome and output indicators						
% births attended by SBA (public and private)	-	43%	62%	42%	54%	100%
% pregnant women making 4 ANC visits	-	-	75%	>50%	76%	90%
% women 15-49 using contraceptives	3.9%	5%	11%	14%	16%	30%
Unmet need for FP among married women	-	-	27%	28%	25%	-
% children <1 fully vaccinated	-	35%	-	40%	58%	100%

According to the MDG Report 2010, with sustained effort, Sierra Leone was on target to meet the MDG targets for improved maternal health, reduced child mortality and combating HIV. But the gains that have been made were reversed by the negative health impact of the EVD outbreak which stretched a fragile health system to almost breaking point and degraded essential health care provision. As noted, this was accompanied by decreased utilisation of services, particularly maternal and child health services.

An assessment conducted by MoHS in March 2015, with support from UNICEF, showed that health facility delivery declined by 23%; children treated for malaria in health facilities decreased by 39%; childhood immunisation dropped by 21%; and 45% of females were not seeking health services in health facilities due to fear of contracting EVD. Based on these observations, it was estimated that maternal and under five mortality rates will increase by 19% and 20% respectively.

The Facility Improvement Team (FIT) assessment conducted by the MoHS at the start of 2015 to determine status of enablers for the provision of emergency obstetric care, showed that no health facility met all compliance criteria for the provision of comprehensive (CEmONC) or basic emergency obstetric care (BEmONC). This implies that all of these facilities had deficiencies in one or more of: adequate WATSAN, electricity, referral systems, drugs and medical supplies, laboratory diagnostics, and trained staff.

The specific objectives of the composite programmes within the directorate of RCH include the following:

1. To reduce maternal and neonatal morbidity and mortality due to pregnancy and childbirth
2. To reduce the level of unwanted pregnancies in all women of reproductive age
3. To reduce the incidence of unsafe abortions and effectively treat all cases of complications from unsafe abortions
4. To reduce the incidence and prevalence of sexually transmitted infections including HIV
5. To ensure the provision of comprehensive adolescent friendly sexual reproductive health services
6. To limit all forms of gender based violence and other practices that are harmful to the health of women and children
7. To reduce the incidence and prevalence of reproductive cancers and other non-infectious conditions of the reproductive health system.

Activities and achievements related to reproductive and child health in 2015

Family planning

Family planning is one of the strategies used in the reduction of maternal and newborn mortality and morbidity. Despite the challenges of working in an Ebola outbreak environment, the following achievements were made in 2015:

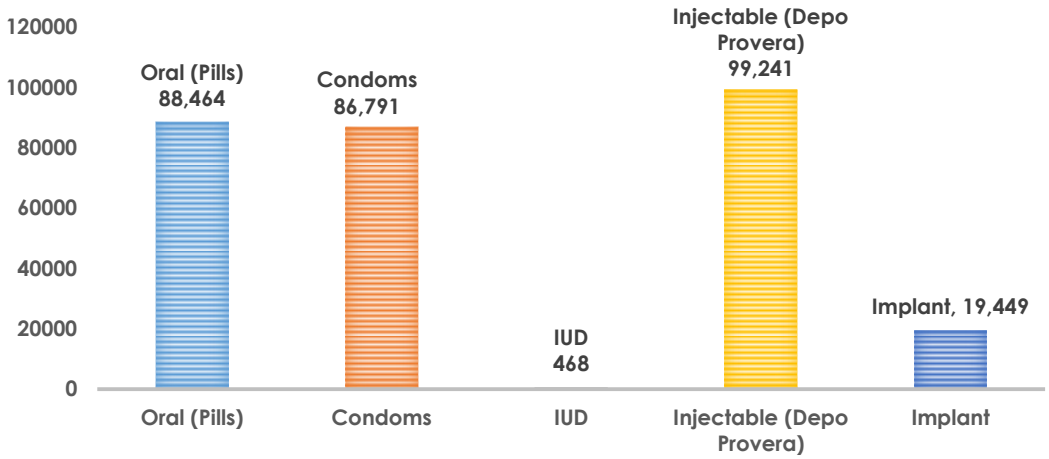
- **Training of service providers on insertion and removal of implant**: Factors that contribute to the low contraceptive prevalence rates, high fertility rates and high unmet need for family planning include: inadequate numbers of staff trained in FP service delivery and counselling; and low male involvement and

participation. In order to increase the uptake of family planning services, the MoHS, with technical and financial support from UNFPA, conducted a 7 days training programme for family planning providers on the insertion and removal of the implant (Jadelle). A total of 160 service providers including midwives, CHOs, CHAs and SECHNs selected from the government hospitals and the primary health care units offering family planning services (in Bombali, Pujehun, Bonthe, Koinadugu, Kenema, Tonkolili districts and Western Area) were trained. The training emphasised the insertion and removal of the Jadelle implant, and focused on IPC during the procedure. About 974 new acceptors had a Jadelle implant inserted.

With support from Helen Keller International (HKI), training was conducted in 5 additional Districts on long term family planning: 65 service providers were trained on insertion and removal of the Jadelle implant in Moyamba, Kailahun, Kambia Port Loko and Bo Districts. A total of 409 new cases had a Jadelle implant inserted following that training (123 in Kenema,132 in Kambia, and 144 in Bo).

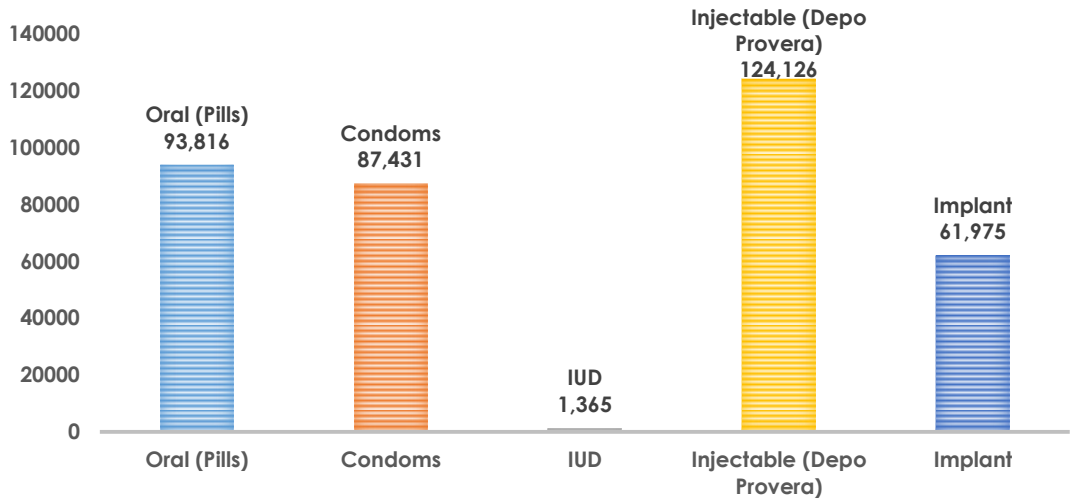
- **Supportive Supervision on Family Planning**: HKI also supported the Family Planning Programme to conduct supportive supervision in Kenema, Bonth, Pujehun, Bombali, Koinadugu and Western area. The main challenges identified were: stock-outs of female condoms and implants in about 50% of health facilities visited; absence of family planning counselling services in some health facilities; and the inadequate supply of information, education and communication (IEC) materials. Appropriate steps were taken to address some of these challenges.
- **Uptake of Family Planning Services**: A steady flow of new clients that accept family planning methods indicates that the programme is achieving its set objectives, particularly as clients are choosing effective methods of contraception. A total of 294,413 new clients utilised various family planning services in 2015, of which 88,464 used oral pills, 86,791 used condoms, 468 used IUDs, 99,241 used injectables (Depo Provera), and 19,449 used implants. These figures are shown in Figure 5.

Figure 5: New acceptors of family planning by method



Couple years of protection is a measure that estimates the protection from pregnancy provided by a contraceptive method over a one-year period, and the total couple years of protection (CYP) provided by the various methods used was estimated at 368,713, distributed as shown in Figure 6.

Figure 6: Couple years of protection (CYP) by method



The family planning services offered in 2015 categorised into new acceptors and continuing clients is illustrated in Table 7.

Table 7: Family planning services offered in 2015 for new and continuing clients distributed by month and type of service (Source: Reproductive health and family planning programme data, 2015)

Month	Condom			IUD			Implant			Injectable			Oral pills		
	N	C	CYP	N	C	CYP	N	C	CYP	N	C	CYP	N	C	CYP
Jan	8170	6635	8225	44	34	200	1415	1134	5724	10122	10192	12670	8375	8433	8937
Feb	9082	7486	9144	26	16	100	1486	1275	6331	8713	9325	11044	8598	7818	9119
Mar	8650	7262	8711	5	7	37	1441	1364	6624	7906	8969	10148	9936	7530	10438
Apr	7392	6608	7447	52	23	158	1450	933	4995	8548	8219	10603	7009	7074	7481
May	8809	6484	8863	23	20	115	1500	871	4810	7534	7740	9469	6713	6294	7133
Jun	8827	5579	8873	36	15	105	1783	941	5359	8312	8020	10317	6293	5686	6672
Jul	9204	7088	9263	48	17	126	1655	458	3395	8971	8197	11020	6816	5911	7210
Aug	6407	5851	6456	19	9	60	1826	305	2985	7580	6337	9164	5053	4208	5334
Sep	3017	3727	3048	121	25	236	1218	508	3148	8738	5148	10025	5707	2619	5882
Oct	5564	5649	5611	34	19	121	1815	964	5478	9122	11092	11895	7376	7948	7906
Nov	6082	7643	6146	21	10	67	1986	1175	6451	6713	8345	8799	7589	8352	8146
Dec	5587	6744	5643	39	0	39	1874	1263	6673	6982	7957	8971	8999	8424	9561
Total	86791	76756	87431	468	195	1365	19449	11191	61975	99241	99541	124126	88464	80297	93817

N: new; C: continuing; CYP: couple years of protection

When analysed by month, family planning services for new acceptors were up in the first two quarters of the month, but declined significantly in July, August and September (except for injectables, which declined in July, picked up in August, and declined sharply in October). This may be due to the effect of the rainy season which limits accessibility of health facilities. The largest proportion of new acceptors and continuing users in 2015 were for injectable and oral pills, which are both effective birth control measures. Demand for reversible implants, one of the most effective birth control measures, is also increasing.

Emergency Obstetric and Neonatal Care

A key intervention during the early recovery phase was to upgrade selected CHCs and hospitals to ensure that they can provide quality emergency and neonatal care. Before the outbreak, the MoHS was focused on certifying 13 hospitals (at least one per district) and 5 CHCs per district to provide CEmONC and BEmONC services respectively. According to the Facility Assessment Report (FIT) conducted in 2014, overall FIT assessment scores for CHCs dropped from 67.5% in July 2013 to 25.5% in July 2014. Scores for hospitals have dropped from 88.5% in July 2013 to 81.5% in July 2014.

As at the beginning of 2015, no facility met the standard for EmONC. This means that all CEmONC and BEmONC facilities lacked one or more of: adequate water and sanitation facilities; sufficient supply of essential drugs; electricity; blood storage and laboratory facilities; adequate staffing; equipment for special procedures; and a functional referral system.

Health facilities with BEmONC / CEmONC upgrade projects: To restore essential obstetric and neonatal care during the early recovery, the MoHS set a target of upgrading 12 CHCs and 9 hospitals to ensure they are BEmONC and CEmONC compliant respectively. Table 8 shows the EmONC upgrade projects undertaken by the MoHS with support from UNFPA.

Table 8: BEmONC and CEmONC upgrade projects during the early recovery phase

District	Facility type	Facility name	Type of upgrade					
			Rehab/ extension	Rehab/ solar power	Rehab/ staff quarters	Borehole and solar pump	Water reticulation	New incinerator
Western area	CEmONC	PCMH	X	-	-	X	X	-
	CEmONC	Lungi Hospital maternity ward and theatre	X	-	X	X	X	X
	CEmONC	Lungi Hospital blood bank & laboratory	X	-	-	-	-	-
Kono	CEmONC	Kono Hospital maternity unit	X			X	X	X
Kenema	CEmONC	Kenema Hospital maternity unit	X	-	-	-	-	-
Bo	CEmONC	Bo Hospital maternity unit	X	-	-	-	-	-
Western area	BEmONC	Waterloo CHC	-	X	X	X	X	X
Kambia	BEmONC	Mapotolon CHC	-	X	X	X	X	X
Kenema	BEmONC	Baoma Koya CHC	-	X	X	X	X	X
Kailahun	BEmONC	Pendembu CHC	-	X	X	X	X	
Bonthe	BEmONC	Benducha CHC	-	X	-	-	-	-
Moyamba	BEmONC	Tiama CHC	-	X	X	-	-	-

A 6-day joint supportive supervision visit was conducted by MoHS staff to monitor the progress of the construction/ rehabilitation projects. Including the ones listed above, a total of 21 upgrade projects were undertaken. By December 2015, 6 were completed, 4 were near completion and the rehabilitation of 11 was underway.

Outreach to improve uptake of sexual and reproductive health services

Outreach activities were revitalised in 2015, targeting the catchment population of one BEmONC centre each in Bo, Bonthe, Bombali, Kenema, Kailahun, Koinadugu districts and Western Area. The aim was to increase access and utilisation of sexual reproductive health (SRH) services in these communities and restore the confidence of the communities after the end of the Ebola epidemic. All outreach teams offered integrated health services, including focused ANC, postnatal care, family planning, and immunisation.

A total of 555 pregnant women attended the outreach in the selected districts. 363 postnatal cases were seen and 330 infants given routine vaccination (BCG, Penta, measles and yellow fever). Family planning counselling was introduced to

postnatal mothers during their visits, to prepare their minds for contraception after 6 weeks if they decided to choose any method after 6 months.

Family planning commodities were also available at all outreach points for lactating mothers, adolescents, and continuing clients. A total of 645 clients were seen. No deliveries were done during the outreach visits, but women who were due to deliver were referred to PHUs for a clean and safe delivery.

Primary Health Care Units across the country were supported through their DHMTs to provide quarterly outreach ANC, PNC and family planning services in their outreach communities. As shown in Table 9, a total of 26,749 women were provided with their first antenatal care appointment through outreach conducted by PHU staff, while 135,902 were provide with first ANC appointment at a health facility.

Table 9: Provision of ANC services, excluding data from implementing partners (Source: reproductive health and family planning programme data, 2015)

	ANC 1		ANC 2		ANC 3		ANC 4		TOTAL	
	Fixed	O/reach	Fixed	O/reach	Fixed	O/reach	Fixed	O/reach	Fixed	O/reach
Bo	9,063	2,194	7,451	1,739	6,426	1,464	9,059	2,085	31,999	7,482
Bombali	9,234	3,300	7,918	3,191	6,975	2,784	6,641	2,605	30,768	11,880
Bonthe	3,272	411	2,909	367	2,340	293	2,213	284	10,734	1,355
Kailahun	8,785	1,430	7,254	1,299	6,294	1,204	7,786	1,297	30,119	5,230
Kambia	7,555	2,222	5,636	1,668	4,551	1,437	4,916	1,462	22,658	6,789
Kenema	14,922	2,871	13,572	2,937	12,273	3,411	9,852	2,538	50,619	11,757
Koinadugu	5,305	2,877	4,480	2,356	3,821	2,159	3,660	2,181	17,266	9,573
Kono	6,177	1,593	5,587	1,557	4,278	1,245	3,432	934	19,474	5,329
Moyamba	9,001	2,672	8,326	2,626	7,603	2,475	7,436	2,144	32,366	9,917
Port Loko	13,255	3,146	10,918	2,696	9,414	2,379	7,826	2,215	41,413	10,436
Pujehun	1,972	519	1,819	518	1,661	494	1,494	479	6,946	2,010
Tonkolili	15,755	2,974	13,494	2,703	11,440	2,371	9,721	2,526	50,410	10,574
Western Area	31,606	540	23,368	336	17,343	337	15,546	302	87,863	1,515
Total	**135,902**	**26,749**	**112,732**	**23,993**	**94,419**	**22,053**	**89,582**	**21,052**	**432,635**	**93,847**

Youth and adolescent health services

The high maternal mortality rate in Sierra Leone is attributed in part to the high rate of teenage pregnancy in the country. According to the DHS 2013, maternal deaths accounted for 36% of all deaths among women of child bearing age. The maternal mortality ratio was estimated at 1,165 maternal deaths per 100,000 live births. It was estimated that at this rate, six percent of women in Sierra Leone will die from maternal causes during their reproductive life.

Teenage pregnancy is also a major contributor to maternal mortality in Sierra Leone, accounting for 40% of the maternal deaths (MICS 2010). The median age at first sexual intercourse was estimated at 16.4 years for women. Overall, 28% of

adolescents aged 15-19 have begun child rearing, and 22% have had a live birth.

The significant contribution of teenage pregnancy to maternal deaths and the associated adverse social consequences has galvanised stakeholders to action. A multi-sector committee was set up under the leadership of the President, involving 5 Ministries and stakeholders including UN Agencies, NGOs, and civil society, to develop a comprehensive strategy. A strategic plan was developed covering, education, health, social protection and gender and youth employment and empowerment. The plan was launched on May 13th 2013 by the President. Teenage pregnancy was adopted as a flagship project of the MoHS, and a Secretariat was created in the Ministry to manage the implementation of the various interventions identified in the plan.

The School and Adolescent Health Programme and Teenage Pregnancy Secretariat within the Directorate of Reproductive and Child Health (DRCH) in the MoHS is responsible for implementing interventions aimed at reducing teenage pregnancy in Sierra Leone. The strategic objectives of the program for 2015 were closely related to the deliverables identified in the National Strategy for the Reduction of Teenage Pregnancy (2013-2015).

Key achievements in 2015 were as follows:

Increasing awareness on the availability of school and adolescent health services: With support from UNFPA and WHO, 420 Adolescents were reached in four districts (Moyamba, Kenema, Bo, and Bombali) with sexual reproductive health messages. 1,226 community stakeholders attended advocacy meetings in Port Loko and Pujehun districts on Adolescent Health and Teenage Pregnancy issues

Increasing access to adequate and age appropriate SRH information: The programme has actively promoted peer education as a means to provide age appropriate education for adolescents, and has promoted school health clubs. In 2015, one hundred peer educators were trained with support from WHO to provide outreach services in 4 districts – namely Kenema, Bo, Bombali and Moyamba. 3,000 posters and 25 CDs with jingles were produced and distributed. Jingles on SRH information were aired nationwide on 4 radio stations (SLBC 99.9, Citizen 103.7, AYV 101.6, and Radio Democracy 98.1).

Building the capacity of health care service providers to deliver adolescent and youth friendly health services: In 2014, 5 health facilities were upgraded to provide youth friendly facilities. The programme has as one of its main deliverables in 2015 the upgrading of 50 health facilities to provide youth friendly facilities. 4 regional youth friendly centres equipped with youth friendly facilities were planned to be built in Makeni, Bo, Kenema and Freetown. Contracts for the construction of the centres were awarded, but progress was hindered by funding constraints. Nevertheless, 21 health centres in the Western Area, Bombali, Kambia, Kono, Kailahun, Tonkolili, Port Loko and Pujehun, were upgraded to provide youth friendly facilities, and 2 facilities (National School for the Blind and Cheshire Home, Freetown) were refurbished and supported with logistics.

Provision of comprehensive health services to school going children: One of the consequences of the EVD outbreak was restrictions on civil liberties arising from

the need to contain the spread of the virus. Restrictions were imposed on travel and non-Ebola related gatherings, and schools were closed. To facilitate the reopening of schools, 1,617 schools were cleaned up and 40 schools in the Western Area, previously used as Ebola treatment centres or holding centres were decontaminated. The School and Adolescent Health and Teenage Pregnancy Programme in the MoHS developed and produced guidance notes and protocols for teachers to operate in a safe and protective learning environment in an Ebola outbreak context. 13 DHMTs and District Ebola Resource Centres were orientated on the school re-opening guidance note and protocols. 600 teachers were trained nationwide on IPC at school and the reopening protocols. Additionally, 400 teachers were trained on sexual, reproductive and adolescent health issues, and over 1,000 female adolescents, teachers and parents were sensitised on the ''No Sex for Grades" campaign.

De-worming: With support from UNICEF and HKI, the School Children De-worming campaign was conducted in 12 districts in 2015.

Improving the policy and legal environment to protect adolescents and young people's rights: To meet the new health needs arising from the EVD outbreak, the program started the process of reviewing the Adolescent Health Policy. A consultant was recruited and desk reviewed started before the end of 2015.

Improving access to quality SRH, protection and education services for adolescents and young people: With support from UNFPA, 1,500 monthly summary reporting forms were developed, printed and distributed to all health facilities countrywide. 65 health professionals were trained on the monthly summary data collection forms. Participants were mainly district health sisters, monitoring and evaluation officers and data collection clerks drawn from the 12 districts.

Empowering communities, adolescents and young people to prevent and respond to teenage pregnancy: With support from UNICEF, WHO and Save the Children, regional consultative meetings were held with stakeholders on the impact of Ebola on teenage pregnancy. 400 participants (100 per region) comprising of adults and adolescents attended the meetings. A week long campaign was launched with the theme 'No sex for Grades' in the Western Area, Pujehun and Kailahun Districts.

Sector Coordination and Management of the Strategy: Ten multi-sectoral coordinating committee meetings were held in 2015, which were two short of the target. The programme monitoring and evaluation strategy was reviewed and updated, and mapping of operational areas of implementing partners to identify teenage pregnancy activities being implemented was done.

Immunisation and child health

One of the aims of the FHCI is to reduce maternal and child mortality rates in Sierra Leone, which are among the highest in the world. The Expanded Programme of Immunisation (EPI) has served as a key preventive intervention of the MoHS to address childhood diseases that are the leading causes of child morality in the country, including tuberculosis, diphtheria, pertussis, tetanus, poliomyelitis and measles.

Over the years, several new vaccines have been introduced into the routine immunization (RI) schedule. The yellow fever (YF) vaccine was first introduced in 1975 as a nationwide campaign against an established outbreak at the time. Later, yellow fever was officially introduced into the RI schedule in 2003 with support from GAVI. Subsequently, with support from GAVI, Sierra Leone introduced: the pentavalent vaccine (2007); pneumococcal vaccine (2011); and rotavirus vaccine (2014). Currently, the RI schedule has 8 vaccines targeting a range of 12 childhood killer diseases.

During the first year of life, children in Sierra Leone are expected to receive a BCG vaccination against TB, three doses of the polio vaccine, measles vaccine, rotavirus vaccine to prevent severe gastroenteritis, and the pentavalent vaccine which is five individual vaccines combined into one to prevent against Hepatitis B, Haemophilus influenza type B, diphtheria, pertussis, and tetanus.

The main goal of the EPI programme, as stated in the EPI Multi-Year Plan 2012-2016, is to achieve at least 95% coverage for fully immunised children, and 90% coverage for TT2+ in pregnant women in order to reduce maternal and child morbidity and mortality attributable to vaccine preventable diseases. Over the past decade and before the outbreak of EVD, the MoHS had made significant progress towards meeting the RI coverage targets. The proportion of children fully immunised against the common killer diseases increased from 31% in 2008 to 58% in 2013, and only 4% of children did not receive any type of vaccination. Coverage for certain vaccines such as BCG (95%), Measles (68%), first dose of DPT (92%) and Polio (91%) were very high. 90% of women aged 15-49 at their last birth received two or more doses of Tetanus Toxoid vaccine (TT2+) to protect against neonatal tetanus.

Following the EVD outbreak, immunisation coverage declined significantly, increasing the risk of vaccine preventable diseases including polio. After May 2014, there was a decline in visits to PHUs for ANC (14%), Penta3 (17%), and deliveries (7%), with larger and significant decreases observed in highly affected districts (Port Loko, Bombalili and Western Area). The percentage of under five children treated for malaria declined nationally by 31% and the number of children who attended growth monitoring programmes declined by 28%. The decline in MCH service utilisation was projected to increase the under-five mortality rate from 161 per 1,000 live births in 2013 to 193 per 1,000 live births in 2014 (MOHS/UNICEF Facility Assessment Report 2015).

The aim of the EPI programme in 2015 was to restore the impressive gains in EPI coverage over the years by maintaining RI, intensifying supplementary immunisation campaigns, and observing national immunization days. The expected outcomes for the EPI program that guided the 2015 work programme were:

1. All children under one year of age will be fully protected against vaccine preventable diseases
2. Poliomyelitis will be eradicated
3. Neonatal tetanus will be eliminated
4. Measles mortality will be reduced by 95% and morbidity will be reduced by 90%
5. The cold chain system will be fully functional and effective

To achieve these performance targets, the EPI programme, with support from partners, intensified routine immunisation services in 2015 to restore pre-Ebola immunisation rates. Table 10 shows the immunisation performance for 2015.

Table 10: Immunisation performance by District, January – December 2015 (Source: EPI programme data, 2015)

IMMUNIZATION PERFORMANCE JANUARY- DECEMBER 2015 BY DISTRICT																	
DISTRICT	NO. REPORT	BCG	MEAS	YFV	PENTA1	PENTA3	OPV1	OPV3	PNEUMO1	PNEUMO3	ROTA1	ROTA2	FIC	TT2+NPRG	TT2+Preg	VIT A1	VIT A2
BO	12	24882	20428	20421	23203	21353	22798	20965	23203	21353	23166	20212	20291	2792	37844	20180	18836
		85%	70%	70%	79%	73%	78%	72%	79%	73%	79%	69%	69%	10%	129%	69%	64%
MOYAMBA	12	14996	14607	14820	15609	14963	15616	14965	15609	14963	15617	15213	14567	587	23388	14994	15499
		120%	117%	119%	125%	120%	125%	120%	125%	120%	125%	122%	117%	5%	188%	120%	124%
KENEMA	12	22329	21432	21409	23898	20386	23896	20380	23891	20538	23271	20778	21274	7198	43423	21345	22106
		76%	73%	73%	82%	70%	82%	70%	82%	70%	80%	71%	73%	25%	148%	73%	76%
PUJEHUN	12	11945	11614	11567	12395	11667	12395	11667	12395	11667	12367	12011	11567	7454	18216	14062	17923
		79%	77%	77%	82%	78%	82%	78%	82%	78%	82%	80%	77%	50%	121%	94%	119%
W / URBAN	12	31962	23976	23899	26424	24413	26362	24337	26433	24378	26372	23811	23845	3802	25480	22280	21947
		69%	51%	51%	57%	52%	57%	52%	57%	52%	57%	51%	51%	8%	55%	48%	47%
W / RURAL	12	17134	12618	12618	15396	13628	15378	13614	15396	13628	15279	13495	12607	2325	16619	13494	13046
		145%	107%	107%	130%	115%	130%	115%	130%	115%	129%	114%	107%	20%	141%	114%	110%
BONTHE	12	6743	5317	5339	6748	5544	6716	5486	6755	5532	6571	5666	5294	911	11152	4918	4516
		84%	67%	67%	85%	69%	84%	69%	85%	69%	82%	71%	66%	11%	140%	62%	57%
KAILAHUN	12	15716	14515	14517	15778	14452	15743	14329	15779	14301	15714	14439	14235	9785	23972	17643	24252
		75%	70%	70%	76%	69%	76%	69%	76%	69%	75%	69%	68%	47%	115%	85%	116%
KONO	12	13070	10462	10468	12897	11151	12897	11151	12897	11151	12897	12152	9679	10583	15377	11170	12208
		90%	72%	72%	89%	77%	89%	77%	89%	77%	89%	83%	66%	73%	106%	77%	84%
KAMBIA	12	13082	10326	10326	12744	11316	12740	11316	12740	11316	12740	11957	10326	4233	14692	11274	14652
		85%	67%	67%	83%	74%	83%	74%	83%	74%	83%	78%	67%	28%	96%	74%	96%
PORT LOKO	12	21193	17734	17362	20735	18676	20760	18668	21389	18575	19741	18000	16765	6179	26159	21061	29784
		85%	71%	69%	83%	75%	83%	75%	86%	74%	79%	72%	67%	25%	105%	84%	119%
BOMBALI	12	19600	15280	16503	19445	17673	19448	17664	19445	17661	19401	18547	16329	13036	23729	14204	20426
		89%	69%	75%	88%	80%	88%	80%	88%	80%	88%	84%	74%	59%	107%	64%	92%
KOINADUGU	12	18373	14592	14622	18251	14292	18226	14295	18259	14294	17788	13694	14622	4193	21238	18929	24808
		122%	97%	97%	121%	95%	121%	95%	121%	95%	118%	91%	97%	28%	141%	126%	165%
TONKOLILI	12	22707	20014	19961	24137	21938	24064	21884	24130	22330	21462	21462	19464	5857	27697	21838	28100
		117%	103%	102%	124%	113%	123%	112%	124%	115%	110%	110%	100%	30%	142%	112%	144%
CUMM. TOTAL	100%	253,732	212,915	213,832	247,660	221,456	247,039	220,721	248,321	221,160	242,386	219,192	210,865	78,935	328,986	227,392	268,103
THLY CUMM TOT %		89%	82%	83%	96%	86%	96%	85%	96%	86%	94%	85%	82%	6%	105%	160%	27%
TAL POPULATION		284,829	258,625	258,625	258,625	258,625	258,625	258,625	258,625	258,625	258,625	258,625	258,625	1,267,489	313,312	142,414	975,539

Significant progress was made in routine immunisation coverage in 2015. 221,456 (86%) received three doses of the Penta vaccine (Penta3), 220,721 (87%) were vaccinated with OPV3, 258,625 (86%) were vaccinated with Rota2, and 258,625 (82%) were vaccinated against measles. As of December 2015, 151,062 children out of a target of 258,625 children have been fully immunised against the childhood killer diseases. About 206,229 women of child-bearing age (66% of the annual target) had received at least two doses of tetanus toxoid vaccine to protect against neonatal tetanus.

A comprehensive Cold Chain Assessment conducted in 2014 revealed that 65% of the existing cold chain equipment nationwide were functional. To address the gap, 1,500 vaccine carriers were procured and distributed nationwide. 155 solar refrigerators were donated by the World Bank (57), JICA (86), and Polish NATCOM (12). These were installed at PHU level, and one negative walk-in cold room was installed at national level. These were significant boosts to the programme, as the availability of functional cold chain equipment is important in effective EPI service delivery.

To ensure that all health facilities have at least two HCWs trained on Immunisation in Practice, training was conducted in all districts targeting over 1,000 PHU staff (one staff per PHU was trained). A measles assessment was conducted in six districts (Western Area, Port Loko, Bombali, Tonkolili, Koinadugu and Bo). The

measles second dose vaccination was introduced in November 2015, with the national launch illustrated in Figure 7.

Figure 7: Photos from the national launch of the measles second dose in Kambia

Following the completion of the round one polio and measles campaign in the second quarter of 2015, the programme conducted a measles campaign coverage survey. The GAVI Joint Appraisal Report and the annual progress report were prepared and submitted.

The programme, in collaboration with partners and other stakeholders, intensified supplementary immunisation in order to restore the pre-EVD immunisation coverage rates through Maternal Child Health Weeks (MCHWs) in April and November 2015, and the observance of national immunisation days. In line with the World Immunisation Days/Africa Vaccination Week, Sierra Leone conducted the first MCHW on the 24th – 27th April 2015.

Table 11 shows the distribution of the number of pregnant women counselled and tested for HIV infection during the April week of the MCHW campaign. A total of 62,628 pregnant women (56% of the target) were referred for HIV counselling and testing, with 0.5% tested positive for HIV.

Table 12 shows vitamin A supplementation and deworming coverage during both April and November weeks of the MCHW campaign in 2015. The data shows that coverage was impressive, with administrative coverage for Vitamin A (6-59 months) and Albendazole (12 - 59 months) at 98.5% and 96.0% respectively. Additionally, administrative coverage for mid-upper arm circumference (MUAC) assessment in children 6 – 11 months was 85.4%, and for children 12-59 months was 90.8%, with a total of 10.2% and 3.3% referred respectively.

Table 11: Number of women counselled and tested for HIV during the MCHW, 24-27 April 2015

District	40% women target	No. referred for testing	No. counselled and tested	No. testing +ve (HIV-1)	No. testing +ve (HIV-2)	No. testing +ve (HIV-1 & HIV-2)	Total no. testing +ve for HIV	Total no. testing -ve for HIV
Port Loko	11,513	5,885	4,250	14	4	4	22	4,228
Kambia	5,904	3,457	2,785	4	0	0	4	2,781
Bombali	11,493	4,572	4,509	9	0	1	10	4,499
Tonkolili	2,970	1,186	1,162	11	0	0	11	1,151
Koinadugu	7,655	4,573	4,113	4	0	2	6	4,107
Kono	9,820	3,271	3,097	7	0	1	8	3,089
Moyamba	5,906	5,051	3,641	23	0	3	26	3,615
Bo	8,185	6,834	3,788	43	28	15	86	3,702
Pujehun	4,895	3,683	2,743	19	2	4	25	2,718
Bonthe	5,720	2,372	1,520	0	0	0	0	1,520
Kenema	8,697	8,037	7,625	24	2	1	27	7,598
Kailahun	6,014	7,580	6,533	10	1	0	11	6,522
Western Urban	18,320	2,971	2,018	12	0	2	14	2,004
Western Rural	4,640	3,156	3,080	16	0	3	19	3,061
Total	111,732	62,628	50,864	196	37	36	269	50,595
Total percentage of all women in each category				0.4%	0.1%	0.1%	0.5%	99.5%

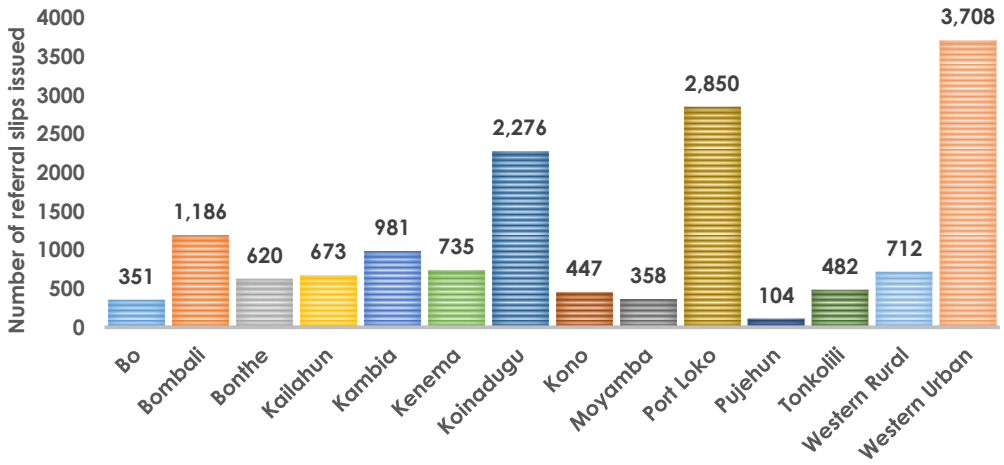
Table 12: Number of children receiving Vitamin A supplementation and deworming in both MCHWs in 2015

Intervention	Month (MCHW)	Target population	Achieved population	
			Number	Percent
Vitamin A (6-59 months)	April	1,324,995	1,305,021	98.5%
	November		1,285,637	97.0%
Albendazole (12-59 months)	April	1,156,207	1,110,311	96.0%
	November		1,130,041	97.7%

The first national immunisation day was observed from June 5th -10th 2015. Five key interventions were delivered: vitamin A distribution, MUAC assessment, EPI defaulter tracing, vaccination for children of various age groups, and prevention of mother-to-child transmission (PMTCT) of HIV for pregnant women.

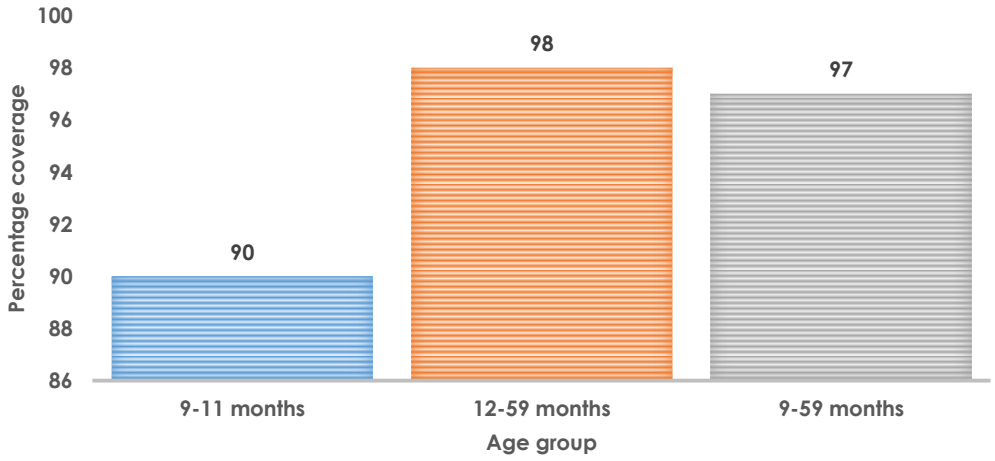
Total number of referral slips issued for long-lasting insecticidal nets (LLINs) and focused ANC during the June campaign was 15,483. Figure 8 shows the distribution of referral slips issued for LLINs and focused ANC by district. The largest proportion of referral slips were distributed in Western Area - Urban (3708), Port Loko (2850), Koinadugu (2276) and Bombali (1186).

Figure 8: Total number of referral slips issued for LLINs and focused ANC during the first national immunisation day (5th – 10th June 2015)



During the campaign, a total of 1,475,856 children 0-59 months were vaccinated against polio, representing 98.8% coverage. Coverage for measles was 90% for 9-11 months, 98% for 12-59 months and 97% for 9-59 months old children, illustrated in Figure 9.

Figure 9: Percentage coverage for measles during the first national immunisation day (5th – 10th June 2015)



In July, polio and birth registration supplementary immunisation activities (SIAs) were conducted, also involving defaulter tracing for RI. Using a house-to-house strategy, a total of 1,380,732 children (0-59 months) were vaccinated against polio, representing 92.4% coverage. Birth registration was done for 1,756,692 children (0-59 months). Due to the significant decline in service utilisation, particularly for children and mothers during the EVD epidemic, the EPI dropout rate for various immunisations was quite high at the start of the year. Accordingly, EPI defaulter identification and vaccination was a key component of each campaign, to ensure the full series of vaccinations were provided to children and restoring coverage to pre-EVD levels.

7. Food and nutrition

Overview

As in other developing countries, malnutrition continues to be a serious problem among children under five years of age in Sierra Leone, despite some improvements reported over the years. The Sierra Leone National Nutrition Survey (SLNNS) 2014 report reveals that levels of malnutrition among children under five were lower in 2014 than in 2010. Among children under five, prevalence of underweight decreased from 18.7 to 12.1%, prevalence of stunting from 34.1% to 28.8%, and prevalence of wasting from 6.9% to 4.7%.

Exclusive breastfeeding increased from 32% to 58.8% among children 0-6 months. However, the Sierra Leone Micronutrient Survey (SLMS) 2013 report shows that rates of anaemia have not changed over the years. Both the DHS 2013 and the SLMN 2013 indicate high prevalence of anaemia in children 6-59 months and women of child bearing age. The overall prevalence of anaemia in children under five years is above 75% in both these surveys. The prevalence of anaemia in non-pregnant women of child bearing age is relatively similar between the two surveys, but the prevalence of anaemia in pregnant women was 54% in the 2013 DHS and 70% in the 2013 SLMN. Activities implemented in 2015 are categorised into the programme components listed below.

Maternal and infant and young child feeding (M-IYCF)

The M-IYCF programme is intended to improve the health, nutritional status, and subsequent growth and development of infants and young children by promoting: early initiation of breastfeeding; exclusive breastfeeding; complementary feeding; and maternal nutrition and food hygiene. At the community level, IYCF was promoted by mother-to-mother support groups; mass campaigns two times every year; radio and TV messages during antenatal and MCHWs; and routine services rendered at primary health units (PHU).

The priority in IYCF in 2015 was to ensure that infants, young children (0-24 months) and mothers have access to quality maternal, infant and young child nutrition services. To achieve this objective, the MoHS through the Directorate of Food and Nutrition (DFN) planned the following activities:

1. Train at least one member of staff on IYCF counselling skills in all 1,200 PHUs
2. Scale up mother-to-mother support groups
3. Produce and disseminate appropriate IEC/BCC messages to raise awareness and encourage adoption of IYCF practices in the country
4. Disseminate appropriate recipes for improving complementary feeding
5. Develop food-based nutrition guidelines
6. Develop a code for the marketing of breastmilk substitutes
7. Develop the national IYCF strategy.

Capacity building and training of health facility staff on M-IYCF counselling skills: To increase IYCF counselling skills and the uptake of quality nutrition services, a total of 788 health staff were trained in M-IYCF. The training was delivered in 10 districts: Kenema, Bo, Port Loko, Bombali, Western Area, Kailahun, Kono, Moyamba, Pujehun, and Bonthe districts. Training in the remaining 3 districts (Koinadugu, Tonkolili and Kambia districts) was deferred for 2016. The intention is to ensure that there is at least one member of staff trained in M-IYCF in each of the peripheral health units (PHUs) countrywide.

Mother support groups trained to take a proactive role in counselling: 2,840 mother support groups were formed to take proactive role in counselling, making a total of 5,994 mother support groups active in the country. Mother support groups were trained on community IYCF to provide proactive peer counselling for pregnant women/lactating mothers with children up to 24 months of age. Counselling services were provided for a total of 3,154 target beneficiaries across the country on maternal nutrition, early initiation and exclusive breastfeeding, continued breastfeeding, and introduction of complementary foods at 6 months.

Mother Support Group lead mothers also conducted quarterly active screening at community level using MUAC tape, and referrals to health facilities were made for children identified as moderate acute malnutrition (MAM) and severe acute malnutrition (SAM). However, these activities were only done in 8 districts with UNICEF-funded nutrition implementing partners (Kenema, Kono, Moyamba, Bombali, Tonkolili, Kambia, Port Loko and Western Area).

IEC/BCC materials developed for IYCF: With support from UNICEF, ACF and other partners, 4-minute television/video clips and radio jingles were developed on exclusive breastfeeding for the first 6 months and complementary feeding between 6-24 months. These clips were aired by the Sierra Leone Broadcasting Cooperation (SLBC) for a period of 45 days. The IYCF promotion jingles were reproduced in 4 local languages- Krio, Temne, Limba and Mende. These were disseminated nationwide and aired in all district community radio stations throughout the year.

IEC/BCC messages disseminated for awareness and adoption of IYCF practices: The DFN together with its key nutrition partners developed and distributed nationwide standardised breastfeeding promotion materials based on WHO recommended IYCF practices. This was aimed at increasing and sustaining mass awareness (through print, electronic media, radio and television) to promote, protect and support breastfeeding for the first 6 months of life and complementary feeding from 6 months onwards. The materials will serve as a nudge to caregivers to make informed decisions on age-appropriate feeding practices. It is anticipated that these materials will contribute to improved feeding practices amongst this very vulnerable group of children.

Development of locally improved recipes for improving complementary feeding: Complementary feeding is the transition from exclusive breastfeeding to family foods. It starts when breast milk alone is no longer sufficient to meet the nutritional requirements of infants, and therefore other foods and liquids are needed alongside breast milk. This transition from exclusive breastfeeding to family foods typically covers the period from 6 - 23 months of age, with continued breastfeeding to two years of age and beyond. This is a critical period of growth during which nutrient deficiencies and illnesses contribute globally to higher rates of undernutrition among children under five years of age.

The 'National Complementary Feeding Recipe Booklet' was developed to promote appropriate foods for infants 6-23 months of age through the use of locally produced nutrient-dense foods available in every part of the country. The recipes were collected from the communities and developed and field-tested in communities in the Western Area and Bo District by staff from the DFN and key nutrition partners in Sierra Leone. The recipes are aligned to follow the World

Health Organization (WHO) guidelines on Complementary Feeding Family Foods for Breastfed Children (WHO, 2000).

Recommended complementary feeding porridge recipes include:

- Rice flour and sesame (benni) seeds powder
- Rice flour, groundnut paste and fish powder
- Rice flour and broad-beans powder
- Rice flour and black-eye beans
- Cassava flour, broad-beans and fish powder
- Cassava flour, sesame (benni) seed and fish powder
- Sweet potato flour and groundnut paste

These recipes each include finely shredded dark green leafy vegetables, vegetable oil or palm oil, a pinch of salt and sugar to taste. It is important that each recipe contains one starchy food, at least one protein-based food, legumes and vegetables. Salt and sugar should be used sparingly.

Institutionalisation of the six-month contact point (6mcp) strategy at PHU level: The MoHS 6mcp strategy is an innovative, integrated approach to improve the uptake of essential nutrition actions at six months, including vitamin A supplementation, complementary feeding, and family planning services. The DFN, in collaboration with HKI and UNICEF, trained 788 health workers in 10 out of the 13 districts on the 6mcp strategy. Following the training, quarterly monitoring and supportive supervision at national level and monthly supervision at district level commenced from October 2015 to ensure proper and effective institutionalisation of the interventions into routine MNCH services at PHU level. National level supportive supervision was conducted in six districts (Kenema, Bonthe, Pujehun, Koinadugu, Bombali and Western Area).

114 PHUs with certified staff providing family planning services were provided with Sierra Mix and local foods. They used these to conduct complementary food and cooking demonstrations for mothers with children 6-23 months of age for improved IYCF practices, especially complementary feeding.

Supportive supervision reports relating to 114 PHUs supervised within the 6 districts were posted through the m-health technology provided by HKI to the DFN. 6mcp is now being institutionalised within all of the 114 PHUs, including regular supportive supervision visits. All PHUs visited were provided with on-the-job training on:

- Correct filling of the 'New Child Health Card', plotting and interpretation
- Correct interpretation of the WHO reference table (z-scores)
- IYCF counselling skills, with an emphasis on complementary feeding

Feedback was provided to the DHMT on the key findings from the field, particularly for those areas requiring their prompt attention

Development and finalisation of the National IYCF Strategy: According to the SLNNS 2014 report, 58.8% of infants were exclusively breastfed for the first six months of life and 54.9% of infants initiated breastfeeding within the first hour after birth. This shows an increase in exclusive breast feeding rates from 11% in 2008 to 58.8% in 2014. Furthermore, the SLDHS 2013 reported an estimated 62% of infants 6-9 months were breastfed and received complementary foods. However, only 7% of breastfed children in Sierra Leone are receiving the minimum acceptable

diet, and just 6% of non-breastfed children are being fed in accordance with IYCF recommendations.

Against this backdrop, the need for an improvement in IYCF was evident. To ensure a coordinated approach to improving IYCF, a National IYCF Strategy was developed in 2015.The strategy was validated and finalised through a one-day stakeholder workshop. The document is now ready for printing, after which it will be disseminated as a reference document for implementation of IYCF in Sierra Leone.

Growth Monitoring and Promotion (GMP) national cascade training: The DFN, in collaboration with WHO, conducted training to support effective data collection, recording and reporting of accurate nutrition data necessary for monitoring and promoting child nutritional status. A total of 7 national officers and 52 district staff (with five trainers per district and seven from the central level) were trained as trainers.

The training was cascaded at district level. 676 health staff in PHUs nationwide were trained. This activity was key as health facilities were challenged with conducting growth monitoring and promotion activities at the peak of the epidemic. In a bid to improve patient and staff safety, an IPC component was integrated into this training.

Training was conducted to ensure that the data used to assess the nutritional status of children was accurate, with staff following the right procedures consistently. PHU staff were trained on how to: correctly plot the weight and age on the new child growth card, interpret growth monitoring data and organise monthly returns, calculate nutrition prevalence from growth monitoring data, and correctly take and record anthropometric measurements.

Integrated Management of Acute Malnutrition (IMAM)

The goal of the IMAM program is to prevent malnutrition in infants and children below the age of five by early identification and treatment of acute malnutrition to reduce mortality and morbidity. To ensure that health workers in all districts (including Western Area) have the capacity to provide equitable and quality integrated management of SAM services to children under the age of five, the MoHS planned to intensify community mobilisation, provide supplementary feeding, and scale up outpatient therapeutic feeding in 2015. Some of the key achievements in IMAM are outlined below.

Community mobilisation: Throughout the year, mothers/caregivers were taught by appointed monitors, lead mothers and CHWs to conduct self-screening of all under-fives for malnutrition using colour coded MUAC tapes. Mothers across the 13 districts were given MUAC tapes and leaflets with picture instructions on how to use the MUAC tapes. Mothers were taught that all children with yellow and red MUAC must be referred immediately to the nearest clinic for onward confirmation and treatment.

Targeted Supplementary Feeding Programme (TSFP): In response to the outbreak of EVD, food for supplementary feeding was diverted to support quarantined communities and households, holding and treatment centres. However, 47,000 children under five years identified with MAM during the MCHW conducted in April were given blanket feeding for 90 days in all districts.

In November 2015, WFP resumed its normal country programme (the TSFP) in 4 districts: Kenema, Kambia, Port Loko and Bonthe. All facilities in these districts had the TSFP programme instituted as the prevalence of global acute malnutrition (GAM) in these districts is very close to or above 5% (SMART 2014). Training was conducted for the proper management of the TSFP in these districts with IP and WFP staff for a total of 78 participants for the respective DHMTs. A total of 57,451 beneficiaries (children under-5 with MAM) were enrolled in the program in November 2015.

Outpatient Therapeutic Programme (OTP) and In-Patient Facility (IPF) Programme: In the 3rd quarter of 2015, the Directorate scaled up its OTP programme:

- A total of 232 health workers in old existing OTPs received refresher training on the revised IMAM protocol in 7 districts.
- A total of 179 new OTPs were established in these 7 districts, bringing the total number of OTP centres to 603 nationwide.
- A total of 370 health workers were trained in newly scaled up facilities.

The national geographic coverage of the programme increased from 36% to 50% by end of 2015. A total of 29,385 children with SAM were treated with the following average rates countrywide:

- Cure rate: 96%
- Death rate: 1.7%
- Defaulter rate: 3.3%.

Based on this data the programme met the international SPHERE standards.

Verification of High Case Loads in OTPs: A verification of high caseloads in OTP facilities was conducted by independent monitors in 7 districts in May 2015 (Bo, Bonthe, Bombali, Kailahun, Koinadugu, Kono and Tonkolili). Findings revealed issues of quality of implementation and management of the programme.

To address this, an action plan and accountability matrix for the monitoring of ready-to-use therapeutic foods (RUTF) was developed to improve on the quality of implementation and management of the IMAM programme. The findings of the verification exercise were discussed with key stakeholders including DHMTs.

Micronutrient and nutrition surveillance programmes

The micronutrient programme aimed to scale up nutrition interventions to prevent and control micronutrient deficiencies, especially in vulnerable and marginalised children and women. Children below 5 years received vitamin A and are dewormed routinely and during mass campaigns. Pregnant and lactating women get vitamin A, iron folate, and deworming during antenatal care, and the programme carries out home fortification of complementary foods for children aged 6-23 months. During the period under review, coverage of micronutrient supplementation was increased from 90% to 96%, and coverage of deworming of children between 1 and 5 years was increased from 90% to 94%.

A feasibility study for the introduction of micronutrient powders (MNPs) and formative research on the use of MNPs for home fortification were conducted. A cabinet paper on the establishment of the National Food Fortification Alliance was completed and submitted to top management for review and action.

MNP programme: The goal of the MNP programme is to use home fortification of complementary foods with MNP to improve the nutrient content of food for children aged 6-23 months in Sierra Leone. In 2015, the DFN implemented the MNP pilot programme in three districts: Pujehun, Kono and Tonkolili districts. These districts were selected because they have the highest prevalence of stunting.

The objectives of the MNP pilot phase and gradual scale-up are as follows:

1. To determine the optimal communication and delivery mechanism of the MNPs to inform the overall scale-up strategy
2. To test a national delivery system and cascade training for MNP in Sierra Leone
3. To refine and revise the MNP monitoring and evaluation framework and tools
4. To finalise a MNP communication strategy and BCC materials for national scale up
5. To evaluate the effectiveness of an integrated MNP and community M-IYCF Programme for improving nutritional status and growth among children 6-23 months of age
6. To develop a national plan and policy recommendations for the scale-up and integration of MNP into M-IYCF

African Vaccination Week/Maternal and Child Health Week with rapid nutritional status screening of under 5s: In April and November, the DFN in collaboration with the EPI program observed the MCH Week. Vitamin A supplementation capsules and albendazole tablets were distributed to 53,702 and 36,515 children aged 6-59 months respectively.

A major achievement in April was the inclusion of nutritional screening of all U5s using MUAC tape to identify acutely malnourished children. Of the 1,247,144 children screened nationwide, 3.3 % (43,504) and 0.8% (10,198) were identified with moderate and severe malnutrition respectively. The children identified were sent to the nearest facility for follow-up assessment and treatment. Counselling of mothers was done on appropriate feeding and care of U5s

Sierra Leone Micronutrient Survey Report (SLMS): Following the completion of the data collection for the SLMS 2013 and completion of analysis and report writing in 2014, the report was validated, printed and launched by the Deputy Minister (II) of Health and Sanitation Ms. Madina Rahman in 2015. The occasion was attended by Irish Aid, the UN Family, DMOs and nutrition implementing partners. The report was disseminated to all implementing partners.

The survey report shows that anaemia prevalence in Sierra Leone is high in children aged 6–59 months (76%) and women of reproductive age (45%), and there has been little to no improvement in the last decade. It is a matter of urgency that Sierra Leone considers anaemia as a severe public health problem, because the minimum threshold (40%) as defined by the World Health Organization has been reached.

Further research is recommended to gain a full understanding of why the prevalence of anaemia has been stagnant between 2008 and 2013. A high prevalence of anaemia is likely to be the result of malaria, other infections, and general inflammation rather than nutritional deficiencies. Infections alone are unlikely to be the only cause of anaemia. Micronutrient deficiencies may play

less of a role in Sierra Leone's prevalence of anaemia due to the low levels of iron deficiency found in this population (SLMNS 2013).

Some of the recommendations made in the report to improve the micronutrient status of vulnerable groups include:

1. Conduct a situation analysis to increase the coverage of adequately iodised salt to areas with currently low coverage (northwest and coastal areas)
2. Continue to regularly monitor salt intake and iodine intake
3. Future iodine intake assessments should also investigate iodine intake from sources other than table salt, e.g. industrially processed foods, such as bouillon cubes, tomato purée concentrate, etc.
4. Continue biannual vitamin A supplementation of children U5 during MCHWs
5. The MoHS' "six-month contact point" strategy is an innovative approach to maintain high vitamin A supplementation coverage
6. Improve coordination with Ministry of Agriculture Forestry and Food Security (MAFFS) on dietary diversification
7. Exclusive breastfeeding in the first 6 months of life should be promoted
8. The consumption of healthy, diversified diets in the complementary feeding period (6-23 months) should also be promoted to consistently improve the diversity and quality of diet for young children.

The survey report led to the establishment of a multi-sectoral 'National Anaemia Working Group' to address the high levels of anaemia through the development and implementation of preventive and control strategies

Clinical nutrition

Clinical nutrition is the aspect of nutrition that deals with the nutritional management of patients (in- and outpatients). The main responsibilities of clinical nutrition unit within the DFN are:

1. To provide patients in hospitals with optimum dietary services to complement their clinical management
2. To ensure functional nutrition units in hospitals and that catering staff maintain a high quality of meal preparation and service to patients
3. To conduct capacity building for the catering staff in hospital kitchens
4. To increase awareness on the prevention, control and effective management of NCDs

Meal service in government hospitals for inpatients: The MoHS, through the DFN, ensured that clinical nutrition services were provided at all hospitals for management of in- and out-patients in 2015. Three daily meals were prepared and served to inpatients by staff in the hospital kitchens. These were supervised by the nutritionists to ensure quality appropriate meals were served to patients to support their clinical management, early recovery and discharge. Dietary guidelines were also provided to hospitals.

Establishment of non-communicable disease (NCD) clinics: In collaboration with the medical superintendents, NCD clinics were established in all the regional hospitals. Weekly clinic sessions were conducted, and patients were monitored and counselled on the management of their disease. Prior to the establishment of these clinics, orientations were conducted for nutritionists and tools were developed and disseminated for the effective management of the clinics.

National monitoring and supervision was done for diabetic clinics in the regional hospitals.

655 patients admitted in secondary and regional government hospitals identified with NCDs [Diabetes, Hypertension, Heart Disease and other NCDs) benefited from the nutritional counselling. Of these patients 42% had diabetes, 46% had hypertension, 31% had heart disease, and 47% other NCDs. Bo (28), Kenema (25), Kono (18) and Bombali (26) districts reported more cases of diabetes and hypertension compared to the other districts.

Operational research: A pilot study was conducted in the Western Area to develop a height-for-age measuring tool using the WHO growth standards for children (6-59 months), in the context of Ebola which calls for the implementation of a 'no touch policy'. The pilot study was used to collect data on the prevalence of stunting among children 6-36 months in the target communities.

The involvement of the community and mothers in the screening process raised awareness of the importance of growth monitoring, enhanced community ownership, built confidence of mothers as they participated in the process, and facilitated timely referral for treatment at the service delivery level. Key findings included:

1. The prevalence of stunting was high in Goderich and Hastings. Of 330 children screened, 21 (6.4%) were severely stunted [11 boys (6.5%) and 10 girls (6.3%)]
2. Stunting rates were alarming (below -4 SD) for some of the children screened
3. The height-for-age measuring tool for monitoring stunting at community level can be readily utilised by mothers and caregivers as mothers participated in the screening of their children
4. The tool is user friendly with children familiar with the tool after first screening
5. Mothers and caregivers demonstrated eagerness in the use of the tool to measure the length/height of their own children.

Nutrition response during the EVD outbreak and the early recovery plan

In 2015, the SOP for the nutrition response during the EVD outbreak was revised to include dietary management of patients with special clinical conditions such as diabetes and hypertension in treatment, and those in quarantine. The nutrition emergency coordination committee was tasked with the key responsibility to give technical guidance and support on food and nutrition in response to the EVD outbreak, and continued to meet weekly. It coordinated the nutrition response by giving direction to the planning, implementation, and monitoring of the emergency response. This committee was co-chaired by UNICEF and the MoHS. Members included partners, both technical nutrition experts and non-technical, at the national and district level. A newsletter was produced by the taskforce which outlined its activities, plans and achievements.

In the 6-9 month early recovery plan, the nutrition response was aligned to improving the essential service activities delivered by the health sector. This included the training of health staff and the scale-up of treatment sites. As such, by the end of 2015 80% of the activities in the nutrition early response plan were achieved.

8. Promoting the fight against HIV/ AIDS

Overview

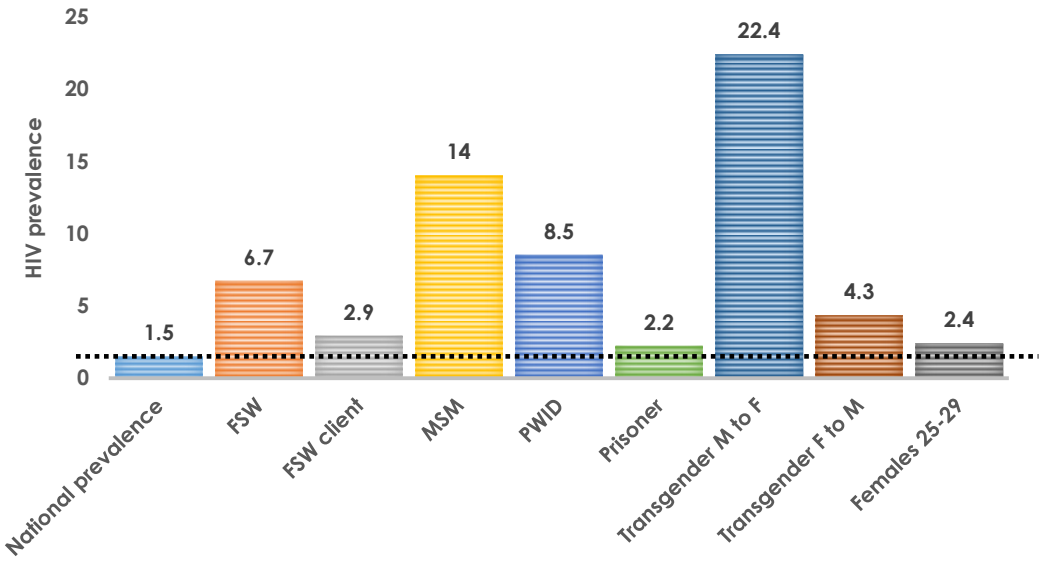
In Sierra Leone, the first case of AIDS was reported in 1987. By the end of December 2002, 1,028 cumulative cases of AIDS have been confirmed, of which 510 died. In April 2002, the country's first HIV seroprevalence survey was conducted. The report showed an overall HIV prevalence of 0.9%: 2.1% in the capital city, Freetown, and 0.7% in the provinces. By 2013, the estimated HIV prevalence was 1.5% (DHS 2013).

Over the past five years, the national prevalence of HIV among the adult population remains stable at 1.5%, with prevalence among females aged 15-49 slightly higher at 1.7% than among males of the same age range at 1.3% (DHS 2013). The prevalence of the disease varies from district to district, with Kono (3.6%), Western Rural (3.3%), Western Urban (2.1%), and Bo (1.8%) recording prevalence rates above the national average.

An estimated 54,000 Sierra Leoneans were living with HIV in 2015; out of which 29,000 are women aged 15 years and above; 20,700 are adult males within the same age group; and 4,300 are children aged 0-14 years. UNAIDS estimates for 2014 indicated 4,079 new infections occur every year, and annual AIDS deaths were estimated at 3,055 (UNAIDS 2012). The survival rate is high at 93.2%. Transmission from mother to child has dropped from 9% to 3.2% among pregnant women (2010 ANC survey in 20 sites).

Although the HIV epidemic was considered as generalised and mixed; recent trends have shown that the epidemic is assuming a concentrated nature, affecting key populations and with a higher burden in specific geographical locations as shown in Figure 10.

Figure 10: HIV prevalence amongst key populations (Source: NAS Programme Data and DHS 2013)



FSW: female sex worker; MSM: men who have sex with men; PWID: people who inject drugs

The key populations together constitute about 4% of the total population and account for 44% of the total new HIV infections in the country. An estimated total of 1,000 new cases of HIV which have occurred in Sierra Leone in 2015 are directly linked to these key population groups. Districts carrying the heaviest burden in terms of numbers are: Western Area, Kenema and Port Loko, with a HIV burden ratio greater than 10%; and Bombali, Tonkolili and Bo, with a HIV burden ratio between 7-10%.

Activities and achievements related to tackling HIV/AIDS in 2015

Sierra Leone continued to implement a multi-sectoral AIDS control approach due to the social, economic and legal implications of HIV/AIDS that extend beyond the mandate of the health sector. Thus, the National HIV/AIDS Secretariat (NAS) continues to coordinate and provide leadership to the national HIV and AIDS response in Sierra Leone. Various stakeholders, both individually and collectively, government and non-governmental, as well as public-private partnerships are involved in the HIV/AIDS response. This results in a strong response, guided by the multi-sectoral policy and strategy adopted in 2002.

In line with the National AIDS Commission Act of 2011, the country continued to implement various policies and national guidelines that include:

- HIV counselling and testing (HCT)
- Anti-Retroviral Therapy (ART)
- Prevention of mother-to-child transmission (PMTCT)
- Condom promotion as part of prevention
- Care of orphans and vulnerable children

HIV Programmatic interventions, activities and achievements in the last 12 months (January – December, 2015) include:

Prevention: The HIV Prevention Strategy (2010-2015) provided the overall framework and guidance for all prevention interventions in 2015. During the reporting period, the Programme, in collaboration with NAS, adopted a new strategy focusing on the delivery of HIV prevention interventions to specific high risk groups, and incorporated ART as one of the prevention strategies.

Key non-biomedical interventions implemented in 2015 included: community sensitisation and mobilisation for HIV prevention through various IEC approaches and behavioural change activities including life skills education for out-of-school youths; promotion of condoms; and addressing stigma and discrimination and harmful cultural practices. These interventions were spearheaded by NGOs and CBOs, whose major role in their implementation was to attempt to link demand creation with service provision. IEC materials were produced and distributed. These materials focused on themes such as: sex and sexuality, HIV counselling and testing (HCT), ART, PMTCT and condom use. The electronic media (Radio and Television) was used to air programmes, slots and jingles on HIV/AIDS.

In an effort to increase the target audience, various national and community radio stations were involved in disseminating information on HIV and AIDS in local languages. The radio messages covered a wide range of HIV/AIDS related themes. To increase coverage of HIV prevention messages, interactive outreach audio-visual shows were organised. The sessions were conducted in communities, schools and places of entertainment/hotspots targeting the general and at-risk populations. To increase the effectiveness of this outreach, targeted audiences

were linked to HIV preventive service provision including condom distribution and HCT.

HIV Testing and Counselling (HCT): HCT is the entry point to HIV services and therefore an essential service. By the end of December 2015, a total of 704 static sites were offering HCT services. With support from the Global Fund and other partners, 90 HCWs received training in 'Provider Initiated HIV Counselling and Testing'. Table 13 shows that in 2015, 183,315 people were tested for HIV, excluding the pregnant women tested.

Table 13: HIV counselling and testing by district, Jan – Dec 2015 (Source: NACP data, 2015)

District	Males tested	Males HIV +ve	Females tested	Females HIV +ve	Total tested	Total HIV +ve	Total enrolled on ART
Bo	5,448	188	4,581	311	10,029	499	1,586
Bombali	13,296	170	17,584	319	30,880	489	370
Bonthe	1,565	28	2,360	45	3,925	73	69
Kailahun	2,204	21	3,114	56	5,318	77	139
Kambia	3,977	23	4,667	71	8,644	94	208
Kenema	7,473	135	8,969	229	16,442	364	507
Koinadugu	4,011	33	6,035	48	10,046	81	144
Kono	3,775	108	6,565	216	10,340	324	411
Moyamba	1,483	35	2,341	76	3,824	111	197
Port Loko	5,613	126	6,459	215	12,072	341	340
Pujehun	3,139	17	3,901	49	7,040	66	47
Tonkolili	3,918	51	5,768	118	9,686	169	220
Western Rural	4,453	150	5,674	300	10,127	450	749
Western Urban	18,670	1,388	26,272	2,183	44,942	3,571	3,253
Total	79,025	2,040	104,290	3,512	183,315	5,552	8,240

A marked gender difference in the numbers tested is clear from the data, with females accounting for 56.9% of those tested. Of those tested, 3.0% (5,552) were positive. Females accounted for 63.3% (5,552) of the positive cases, with males accounted for 36.7% (2,040).

The mismatch in the positive totals by districts as against total enrolled on treatment is as a result of the change from the 2010 WHO Guidelines with a CD4 cut-off point of less than 350 cell/mm^3 to the 2013 WHO Guidelines that increased the CD4 cut-off point to less than 500. This made those who were ineligible for treatment before now eligible and enrolled on ART.

The EVD outbreak adversely affected testing, and therefore only 52% of the targeted population for testing was achieved in the one-year period. However, there was marked increase in testing when compared to 2014.

Elimination of mother-to-child transmission of HIV (EMTCT): An integrated treatment/EMTCT program was implemented in 2015 with the scaling-up of Option B+ introduced in 2014. Guidelines were revised and validated, and EMTCT/treatment services were fully integrated into antenatal care services. By 31st December 2015, there were 691 health facilities providing EMTCT services across the country.

Table 14: HIV counselling and testing for pregnant women by district, Jan – Dec 2015 (Source: NACP data, 2015)

District	Total number of pregnant women tested	Total number of pregnant women testing HIV +ve	Number of pregnant women receiving ART	% PMTCT Coverage
Bo	18,650	155	147	95.0
Bombali	18,066	115	119	104.0
Bonthe	7,137	18	15	83.0
Kailahun	9,579	51	50	98.0
Kambia	9,871	108	34	32.0
Kenema	21,074	102	60	59.0
Koinadugu	8,637	39	32	82.0
Kono	9,873	93	94	101.0
Moyamba	7,747	48	45	94.0
Port Loko	20,072	165	152	92.0
Pujehun	8,719	62	54	87.0
Tonkolili	24,176	135	107	79.0
Western Rural	10,212	300	241	80.0
Western Urban	31,512	1,042	1,090	105.0
Total	205,325	2,433	2,240	92.0

Table 14 shows HIV counselling and testing results among pregnant women in 2015. A total of 205,325 pregnant women were tested for HIV at antenatal clinics, out of which 2,433 (1.2%) were HIV positive; and 2,240 (92.1%) of the 2,433 were enrolled on treatment. However, the 2015 UNAIDS spectrum estimates pregnant women in need of ART at 3,031; thus giving a PMTCT coverage of 73%.

Antiretroviral Treatment: Provision of ART remains a key component of the national response. In April 2005, Sierra Leone started the ART programme. For the past 5 years, the national response applied the 2010 WHO Guidelines. These guidelines indicate a cut-off point of CD4 count less than 350 cells/mm^3 for a

patient to start treatment. The estimated number of people requiring treatment at this cut-off point was 29,323. The programme has recently adopted the 2013 WHO Treatment Guidelines with CD4 cut-off point of 500 cells/mm^3 in the last quarter of 2015. At this cut-off point, an estimated 31,782 Sierra Leoneans will require treatment.

As at end December 2015, 136 static sites were providing integrated ART services. Of these facilities, 9 were private, 9 faith-based and 118 were government facilities. A total of 11 medical doctors and another 350 HCWs have been trained on the use of the revised ART guidelines.

Table 15: Adults and children receiving ARVs as at the end of December 2015 (Source: NACP data, 2015)

District	Adults	Children	Total
Bo	814	35	849
Bombali	1,127	64	1,191
Bonthe	202	0	202
Kailahun	279	5	284
Kambia	700	26	726
Kenema	1,177	66	1,243
Koinadugu	323	8	331
Kono	367	16	383
Moyamba	205	0	205
Port Loko	518	4	522
Pujehun	212	0	212
Tonkolili	306	0	306
Western Rural	800	19	819
Western Urban	6,436	332	6,768
Total	13,466	575	14,041

Table 15 shows the number of adult males and females newly enrolled on treatment for the reporting period. This represents a slight increase (7.5%) from the 10,672 initiated in 2013. Western Urban, Kenema and Bombali Districts recorded the highest increase in number of patients on ART. Over 50% of those enrolled are males.

The mismatch in the positive totals by districts as against total enrolled on treatment is again as a result of the change in the treatment initiation criteria from CD4 cut-off point of <350 cell/mm^3 to CD4 cut-off point of 500, making those who were ineligible for treatment before now eligible and enrolled on ART.

As at the end of December 2015, a total of 14,041 clients, including 575 children and 13,466 adults, were receiving ARVs for HIV. This represents 44.2% of the estimated number of patients in need of ART based on the new treatment guidelines. This is far below the 85% universal access target.

Early infant diagnosis (EID) and paediatric treatment: In 2015, a total of 2,734 HIV-exposed children were tested for HIV nationwide, and 5.2% (143) were confirmed positive for HIV. Of those tested positive, 89.5% (128) were initiated on treatment. During the one-year period, 92 HCWs received training in EID which still poses a challenge in the national response. Table 16 below presents paediatric HIV testing and treatment for the period under review.

Table 16: Paediatric HIV testing and treatment, January – December 2015 (Source: NACP data, 2015)

District	Children tested			Children testing HIV +ve			Newly enrolled on ARVs		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Bo	60	81	141	9	13	22	8	11	19
Bombali	88	78	166	10	9	19	15	20	35
Bonthe	18	14	32	0	0	0	0	0	0
Kailahun	0	0	0	0	0	0	1	1	2
Kambia	40	31	71	3	3	6	5	1	6
Kenema	131	114	245	13	11	24	5	6	11
Koinadugu	102	78	180	0	0	0	0	0	0
Kono	20	41	61	-	4	4	2	5	7
Moyamba	19	13	32	4	1	5	6	0	6
Port Loko	34	27	61	7	6	13	5	4	9
Western Rural	198	230	428	0	0	0	1	1	2
Western Urban	629	631	1,260	36	14	50	29	13	42
Total	1,443	1,291	2,734	90	53	143	77	51	128

Stock outs of reagents, test kits and consumables for EID create delays in analysing samples at the national public health reference laboratory. New laboratory techniques such as the use of Gene X-pert will be explored as we move forward in the new year.

TB and HIV co-Management: TB remains one of the major opportunistic infections among the people living with HIV in Sierra Leone. In 2015, a total of 2,762 HIV positive patients were screened for TB and 413 (15.0%) were found to be positive for TB. The weak synergies between the TB and HIV programmes have seen marked improvement in terms of effective collaboration. The country used these strategies as reference points during the preparation of the Joint HIV/TB concept note which was submitted to the Global Fund in 2015 under the 'Simplified Application Process'. With support from the new Global Fund grant (2016), joint collaborative activities such as one stop shop diagnosis and management of patients, sharing of similar monitoring indicators for both diseases, and joint monitoring of field activities will be implemented to further strengthen collaboration. Details of screening of HIV patients for TB are shown in Table 17.

Table 17: HIV/TB coinfection rates, January – December 2015 (Source: NACP data, 2015)

DISTRICT	Number of people living with HIV tested for TB (sputum/x-ray)			Number of people living with HIV testing +ve for TB		
	Male	Female	Total	Male	Female	Total
Bo	34	50	84	11	6	17
Bombali	55	101	156	5	5	10
Bonthe	0	1	1	0	0	0
Kailahun	15	37	52	0	1	1
Kambia	9	24	33	3	1	4
Kenema	35	64	99	11	11	22
Koinadugu	3	5	8	1	7	8
Kono	76	139	215	9	14	23
Moyamba	31	46	77	6	3	9
Port Loko	46	92	138	8	15	23
Pujehun	4	14	18	1	1	2
Tonkolili	55	76	131	6	6	12
Western rural	63	148	211	12	23	35
Western urban	474	1065	1539	120	127	247
Total	900	1862	2762	193	220	413

Laboratory Services: The laboratory provides support to HIV testing and treatment through quality assurance. Quality control is provided by the national reference laboratory at Lakka. During 2015, much was done with support from CDC, WHO and UNICEF to build up the capacity of the laboratory in terms of structures as well as human resources. The laboratory now provides confirmatory tests not only for HIV, but also for measles, yellow fever and influenza. The staff had benefited from proficiency training at the CDC laboratory in Atlanta, USA.

In 2015, a total of 12 CD4 count pieces of equipment were functional and located in various laboratories within the country: 5 in the western area (Connaught hospital, Ola During children's hospital, 34 military hospital and Waterloo CHC) and 7 in the district hospitals (Bo, Moyamba, Mattru UBC, Kailahun, Kambia, Port Loko and Kono).

Program Monitoring and Supervision: Over the past 12 months, 4 quarterly supervision visits were conducted in selected facilities across the 13 districts. This was backed by mentoring activities by a team of program coordinators and supervisors in 200 PHUs in order to sharpen the competence of HCWs in the delivery of HIV care services. Fuel support was also provided on quarterly basis to 12 district and 4 regional supervisors to augment supervision and supplementary data collection.

9. Malaria

Overview

Malaria is a major threat to the socioeconomic development of the country, with an estimated 7-12 days lost on average per episode of malaria. It imposes substantial costs to individuals, households and governments. The cost to individuals and their family includes purchase of drugs for treating malaria at home; expenses to travel to and seek treatment at dispensaries and clinics; lost days of work; absence from school; expenses for preventive measures; and expenses for burials in case of deaths. Severe malaria impairs children's learning and cognitive abilities by as much as 60%, affecting the performance of Sierra Leone's universal primary and secondary education programmes.

Malaria is endemic in Sierra Leone with stable and perennial transmission in all parts of the country. Malaria is presently the leading cause of morbidity and mortality amongst children under five years of age. Although pregnant women and children under 5 are the groups most affected, the entire population is risk of malaria. Malaria accounts for 40.3% of outpatient morbidity for all ages, 47% of outpatient morbidity for children under-five years, and 37.6% of hospital admissions, with a case fatality of 17.6% (Malaria Situational Analysis 2004).

Activities and achievements related to tackling malaria in 2015

In 2015, the following activities were undertaken and achievements made:

Development of the 2016-2020 Malaria Control Strategic Plan: In a bid to reduce these unacceptable statistics, the National Malaria Control Programme of the MoHS developed the Malaria Strategic Plan in 2015, covering the period 2016-2020. The plan stipulates priority interventions, and outlines the strategic direction and the investments required for achieving the 2020 national goals. Further, it outlines how stakeholders in malaria control will organise themselves in achieving the set objectives and goals of the plan.

Mass Drug Administration: To reduce malaria transmission and reduce the number of febrile cases which otherwise would have been suspected as EVD, the MoHS in collaboration with its partners (WHO, UNICEF, MSF-Spain, the Global Fund and RBM partners) undertook two mass drug administrations (MDAs) using first-line antimalarials (a 3-day course of artesunate/amodiaquine in EVD hotspots as recommended by Global Malaria Program/WHO. The Global Fund, MSF-Spain, DFiD and UNICEF provided the financial and logistic support required for the MDAs, while WHO provided technical support during the preparation and implementation of the MDAs. The malaria MDA was undertaken as an emergency measure to curb transmission in the context of an Ebola outbreak. The scale of the operation was unprecedented in Africa with significant investments and resources deployed.

Two cycles of MDA (with five weeks interval) were implemented: the first round during 5-8 December 2014; and the second round during 16-19 January 2015. Administration of the medicine required directly observed treatment (DOT) of the first dose, with strict adherence to 'no touch' policy, and continuation of treatment at home based on counselling and hand-outs showing pictorial diagrams with age-specific dosing regimens.

All the targeted 18 chiefdoms in 6 districts and 30 zones in the Western Area (10 zones in Rural and 20 in Urban) were covered. Overall, 96% of the targeted population received ASAQ during MDA cycle 2. Nationally, the coverage for the first cycle was high (87%) with a total of 2,524,500 ASAQs distributed, while the national coverage for the second cycle was even higher (96.4%), with a total of 2,933,463 ASAQs distributed.

Rapid Impact Assessment of the Mass Drug Administration (MDA) cycles: Following the MDA, a study was conducted to assess the impact of MDA on confirmed cases of malaria attending the health facilities in the districts benefiting from MDA, and the number of febrile cases suspected as Ebola presenting to holding centres and Viral Haemorrhagic Fever (VHF) laboratories.

The study involved an analysis of trends in malaria confirmed cases and positivity rate from health facility surveillance data (including the Ebola holding centres and VHF laboratories). Due to the high risks of infection by EVD, large scale use of blood testing for malaria with either Rapid Diagnostic Test or microscopy for prevalence surveys was not recommended.

Study results showed that the MDA with first-line, long-acting antimalarial medicines implemented as a temporary measure in response to the Ebola outbreak in Sierra Leone resulted in significant reduction of morbidity of febrile cases and possibly associated mortality. The intervention also helped reduce the outpatient case load to the health system at the peak of the Ebola outbreak. The study results also show that the effect of the MDA in such high malaria transmission settings wanes quickly, and the prevalence or intensity of malaria returns to the pre-MDA level in a matter of few months. Other key findings of the study were as follows (*significant decrease only after the 2nd MDA):

- Outpatient consultations declined by 31%* in the MDA PHUs; whereas there was no change in the non-MDA PHUs
- RDT tested cases decreased significantly by 40%* in MDA PHUs compared with 37% in the non-MDA PHUs
- RDT positive cases decreased significantly by 55%*in MDA PHUs compared with 38%* in the non-MDA PHUs
- Proportion of malaria in all outpatient cases decreased by 47%* in MDA PHUs compared with 22% in non-MDA PHUs
- Total malaria (clinical + confirmed) cases decreased by 44%* in MDA PHUs compared with 23% in non-MDA PHUs
- Malaria inpatient cases decreased by 29% in the MDA PHUs
- Malaria admissions as a proportion of all inpatient cases decreased by 49%* in MDA PHUs
- During the 3rd week after the 1st MDA, trends in Ebola alerts reduced 28% in the 1st MDA and 73% the 2nd MDA compared with 7% in the non-MDA PHUs;
- During the 1st - 4th week after the 2nd MDA, trends in Ebola alerts decreased >70%* in the MDA PHUs compared with an increase in the non-MDA PHUs

Community education, sensitisation, and mobilisation for environmental sanitation: In 2015, the Malaria Control program embarked on intensive advocacy. Advocacy meetings were conducted at national, regional and chiefdom levels. IEC/BCC materials on malaria control and prevention such as flyers, brochures, posters, etc. were printed and disseminated.

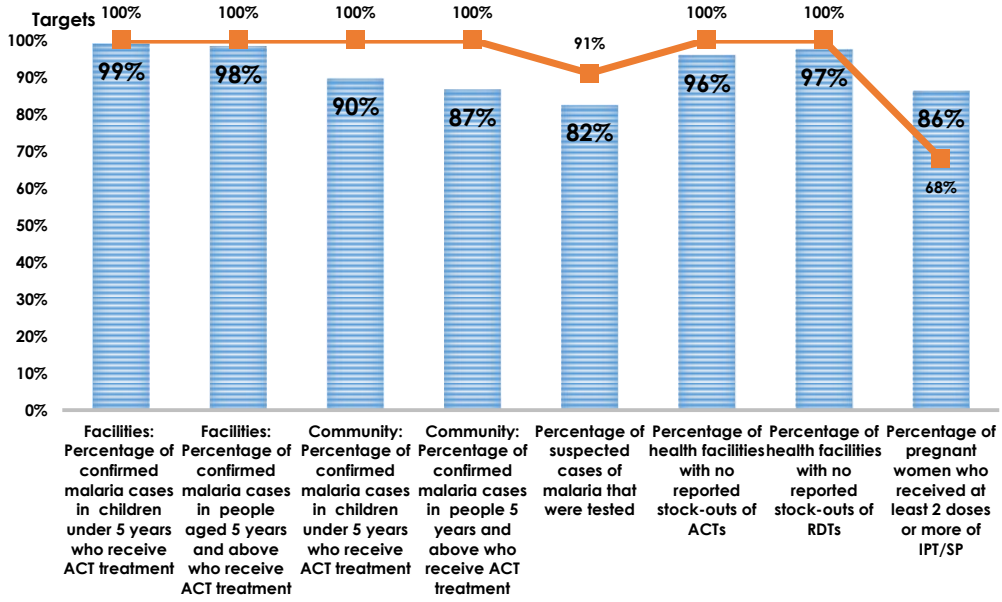
Malaria drug availability for malaria treatment: During 2015, the Programme monitored and ensured that 98% of health facilities offering anti-malarial treatment reported no stock out of ACTs. Quarterly distribution of malaria drugs was done on schedule.

Treatment of malaria patients: In 2015, there were 281 confirmed malaria cases per 1,000 tested against a target of 299 per 1,000 tested. This was a significant improvement when compared with the 2012 baseline of 255 per 1,000 tested.

About 499,250 malaria positive children under five years were treated with ACTs. This represents an achievement of 88.9% against the early recovery target which ended in March 2016. To improve on the proportion of children under 5 years and pregnant women who slept under an ITN the previous night, LLINs were procured and distributed. 212,723 children (against a target of 257,494 children) and 132,338 pregnant women (against a target of 211,119) were provided with LLINs through routine distribution.

Performance against KPIs: As displayed in Figure 11; the malaria programme fell slightly short of meeting its targets against many indicators in 2015, except for the percentage of women who receive at least 2 doses or more of intermittent preventative therapy with sulfadoxine/pyrimethamine which was surpassed by 18%. 99% of confirmed malaria cases at health facilities in children under-fives received an ACT against the programme target of 100%.

Figure 11: Malaria programme performance in 2015 against KPIs

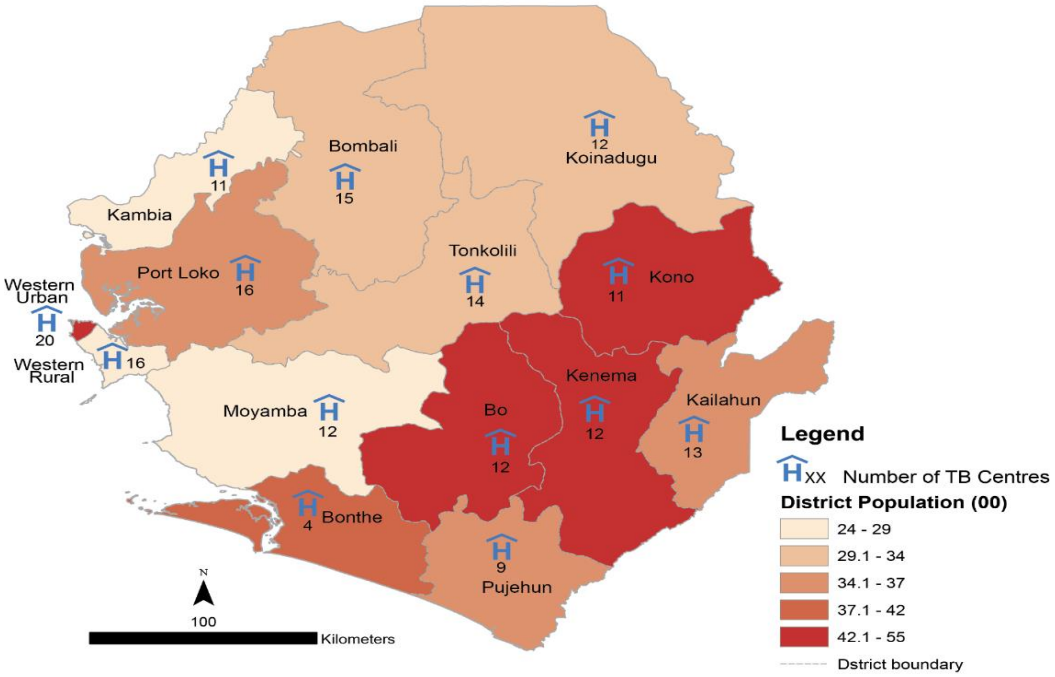


10. TB and leprosy

Overview

The National Tuberculosis Programme was introduced in 1973, and was transformed into the National Leprosy and Tuberculosis Programme in 1990. The global strategy recommended by the World Health Organization known as Directly Observed Treatment (DOT) commenced implementation in 1992. Tuberculosis services are currently delivered in 170 service delivery points at hospital and primary care levels illustrated in Figure 12.

Figure 12: Number of TB service delivery points by district



The Leprosy and TB Programme is located within the Directorate of Disease Prevention and Control (DDPC). The expected outcomes that guided the work program for 2015 were divided into 4 main areas which are:

1. Case notification
2. Ensuring availability of drugs (treatment success)
3. Defaulter rates
4. HIV/TB collaboration

The TB program was funded mainly by Global Fund with technical support from the World Health Organization, CDC Association of Public Health Laboratories and the German Leprosy and TB Relief Association.

Activities and achievements relating to tackling TB and leprosy in 2015

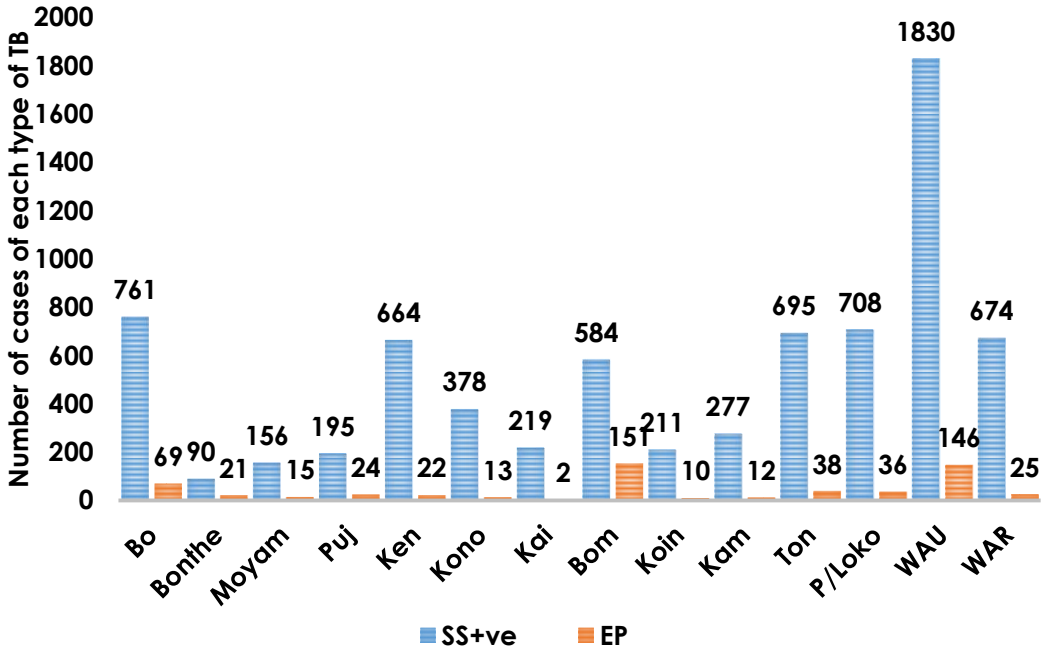
The achievements of the programme in 2015 are outlined below.

Case Notification: The pattern of notification for TB cases was noted to be 13,195 in 2010, increasing to 15,243 in 2012, followed by drops in 2013 (12,334), 2014 (12,724), and finally reaching the lowest point in 2015 (12,103). 12,103 cases of all forms of TB were reported in 2015 from the service delivery points. This means the

programme achieved 67% of the targeted 18,000 number of notified cases for 2015.

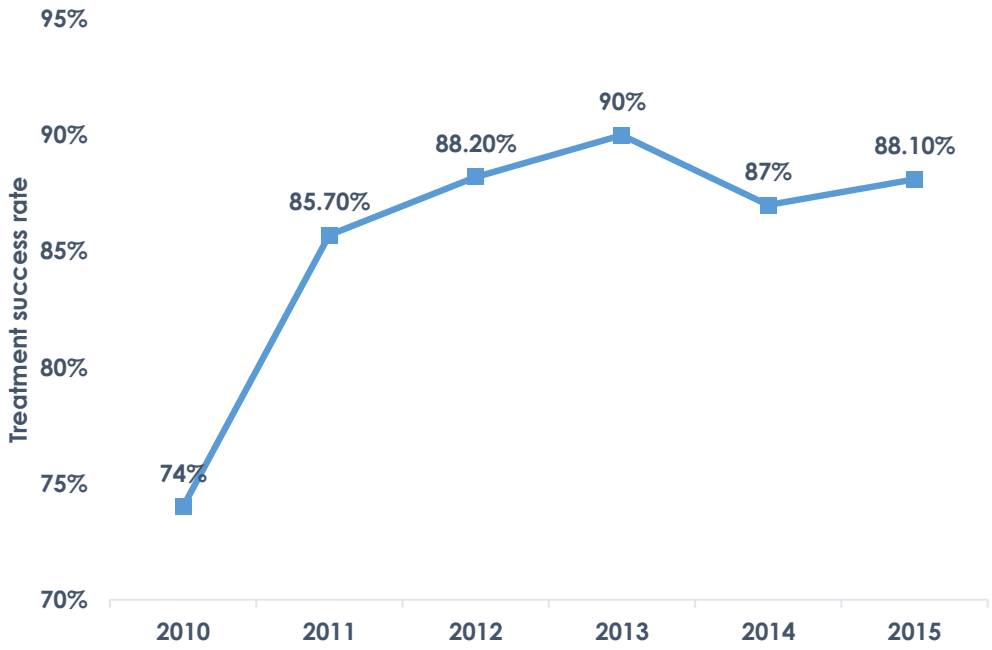
As shown on Figure 13, 61% of the cases (7,442) were sputum positive for the tuberculosis bacteria, which indicates that they are very infective and can transmit the disease, and which is accordingly a major public health concern. Although the bulk of the TB cases were pulmonary (involving the lungs), a few cases of extrapulmonary TB (cases in which the infection has spread outside the lungs) were reported in all districts.

Figure 13: Diagnoses of sputum positive (blue) and extrapulmonary (red) cases of TB



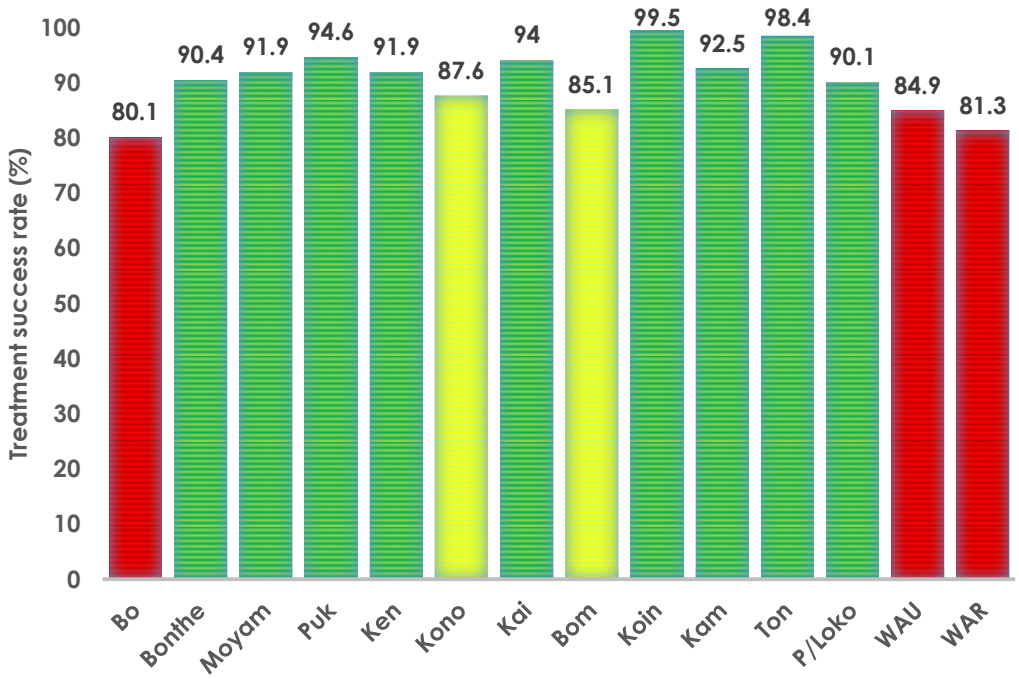
Treatment Success: In 2015, 12,103 patients were put on treatment and there were no stock-outs of drugs nationwide. In addition, the treatment guideline was updated based on new recommendations, also incorporating HIV/TB co-infection issues. A new strategic plan was developed which is being costed. The treatment success rate in Sierra Leone has being improving as shown in Figure 14.

Figure 14: Treatment success rate trend 2010 - 2015



The national treatment success rate in 2015 was 88.1%, exceeding the WHO standard of 85%. Figure 15 shows that the treatment success rate by district ranges from 81.3% - 99.5%. Notably, 11 districts had a treatment rate greater than 85%, and 9 districts had treatment rates greater than 90% (Bonthe, Moyamba, Pujehun, Kenema, Kambia, Kailahun, Tonkolili and Port Loko). Only 2 districts (Bo and Western area) had a success rate of less than 85%.

Figure 15: TB treatment success rate by district



Defaulter rates: The national defaulter rates have been decreasing overall from 9.8% in 2010 to 5.9% in 2015, with a target 'acceptable' value of 5% (see Figure 16). The lowest pre-Ebola rate occurred in 2013, following which it started increasing slightly in 2014 and 2015. The high defaulter rate in 2015 compared to 2013 may be due to the impact of Ebola on the health system. Due to the high rate of nosocomial infections, there was mutual distrust between HCWs and patients. Health service utilisation generally decline impacting heavily on care seeking behaviour for TB which is usually associated with stigma.

Figure 16: Trend in TB defaulter rates, 2010 - 2015

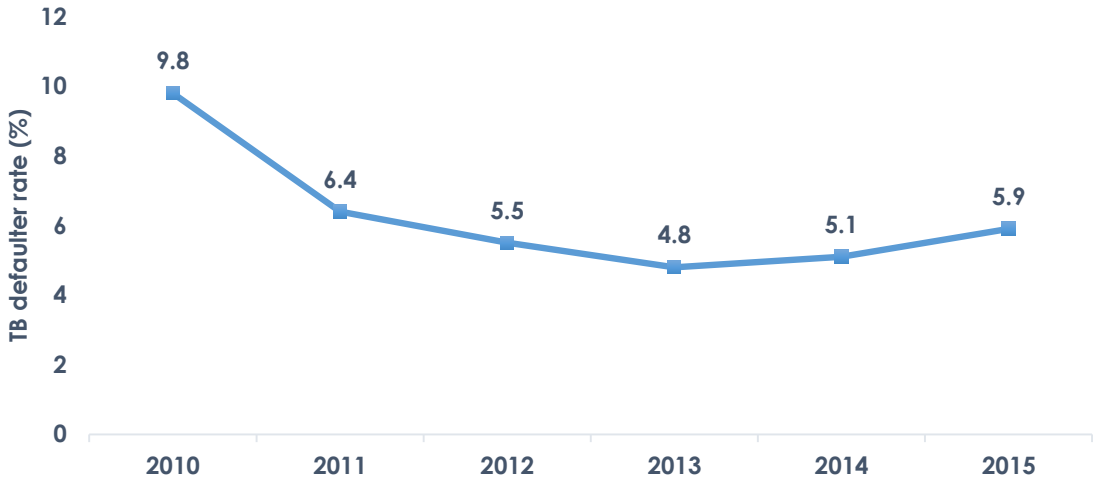
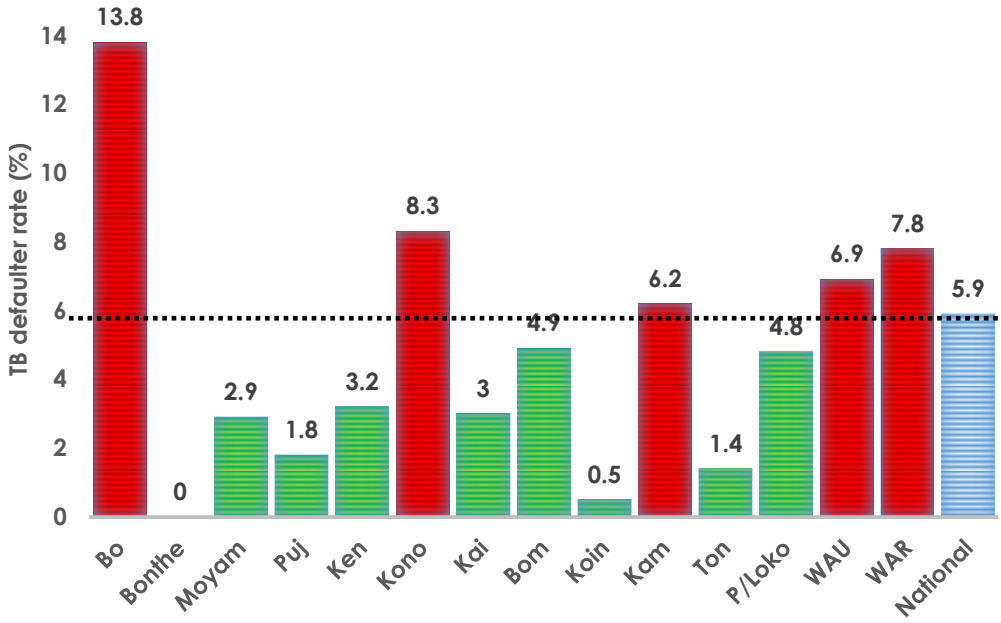


Figure 17 shows that defaulter rates in five districts, namely Bo (13.8%), Kono (8.3%), Kambia (6.2%), Western Urban (6.9%), and Western Rural (7.8%) are higher than the national average.

Figure 17: TB defaulter rates in 2015 by district



The increase defaulter rates may be due to the following factors:

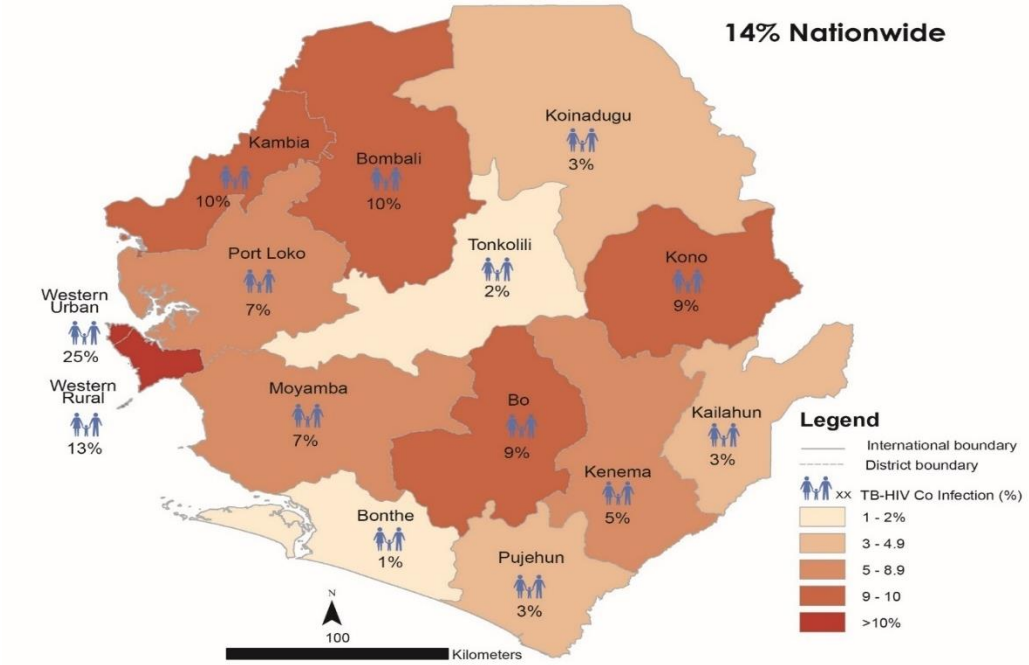
- Weak information and education activities relating to TB
- Myths relating to Ebola, decreasing the number of clients in service delivery points
- Lost cases of transfer into another district
- No existence of defaulter tracing within communities

The level of defaulters is indicative of the number of drug resistant cases.

TB-HIV Collaboration: 95% of TB patients were tested for HIV (11,475), of which 14% (1,573) were found to be HIV+ve nationwide. The rates of TB/HIV coinfection ranged from 1% to 25%. 71% (1,118) were put on ARVs against a national programme target of 90%, while 67% (1,047) were put on prophylaxis.

Figure 18 shows the distribution of TB/HIV coinfection by district for 2015. Nationally, the coinfection rate has increased from 12% in 2014 to 14% in 2015. The highest rates of coinfection were in Western Urban (25%), Western Rural (13%), Kambia (10%), Bombali (10%), Bo (9%) and Kono (9%). Coinfection rates were lower in Bonthe (1%), Tonkolili (2 %) Kailahun (3%) and Pujehun (3%).

Figure 18: Distribution of TB/HIV coinfections in 2015 by district



11. Health workforce

Overview

The availability of adequate numbers of skilled human resources for health (HRH) has been one of the most critical constraints for achieving the objectives set in the HRH strategic plan. The development of the HRH Strategic Plan was challenged by a lack of accurate and up-to-date information on the number, characteristics and distribution of Sierra Leone's health workforce. This section of the report gives an overview of the different HR activities implemented in 2015 within the context of the early recovery plan.

Activities and achievements relating to HRH in 2015

Activities and achievements in 2015 include:

Payroll Verification: One of the key HRH objectives of the 6-9 month early recovery plan relating to HRH was to produce cleaned payroll dataset of all active MoHS employees. The payroll verification was part of the Directorate of HRH's (DHRH) work to improve data quality and availability around the health workforce, and complements activities related to the DHRH Human Resource Information System (HRIS) exercise.

The payroll verification was implemented in collaboration with the Clinton Health Access Initiative (CHAI) and the local data collection firm Nest Builders International (NBI, and is funded by the UK Department for International Development (DFID). At the start of the payroll verification exercise in 2015 there were 10,242 records in the payroll database to be verified. The target output of the activity was a total of 8,194 (or 80%) records verified. However, the expected output was expanded to include:

1. A cleaned payroll dataset of all MoHS staff to be delivered to HRMO
2. A comprehensive overview of the current health workforce, with gap analyses to be used in HRH policy and strategy development
3. Guidelines and SOPs to keep the payroll clean on an ongoing basis

Data collection teams interviewed all public sector health workers in the country at their posts, meaning that data collection teams visited all health facilities, district health offices, health training institutions, and other health administrative offices to speak with workers directly. The electronic payroll verification survey was administered to health workers via smartphones to allow for real time data submission and monitoring to the MoHS.

The survey was successfully tested in two pilots in December 2015, in Western Area and in Port Loko, before beginning the main data collection activities in January 2016. The first period of data collection concluded in all districts on March 5th 2016. Over 20,700 total surveys were completed at approximately 1,300 health facilities, offices, and training institutions.

Of the present health workers interviewed in their workstations, roughly 50% were on the payroll and 50% were unsalaried. Health workers on payroll but not initially found in their workstations were further investigated at the DHMT level in each district. Over 500 surveys were completed for these absent workers in collaboration with DHMT and hospital supervisory and M&E staff. Absent workers

were classified as on authorised leave, on unauthorised leave, transferred, dead, or retired.

This activity was not completed in 2015 and was rolled over to 2016. As at the time of writing, data collected on initially absent health workers was being cross referenced with information from the records office in the DHRH to support planning of a brief second period of data collection. Secondary data collection was planned to last no more than one week in March 2016, targeting health workers who were temporarily absent for health or business reasons, health workers who were initially unable to present proper documentation, and health workers from large training institutions.

Approximately 3,000 health workers were surveyed twice as part of a back check procedure for data quality assurance. Key data points were cross-referenced between duplicated surveys as a means to ensure data quality was satisfactory.

Communication between relevant HR management bodies at both the district and national level was a key opportunity throughout this exercise. Before data collection activities, DHRH, CHAI, and NBI employed a comprehensive communication strategy to notify health workers of the upcoming payroll verification, consisting of calls and meetings with DMOs and other DHMT staff; informational posters circulated to health facilities; and explanatory letters from high level MoHS staff.

Strong emphasis was placed on communication and cooperation between central level and district level MoHS staff. District M&E officers and hospital secretaries were heavily engaged in coordinating the visits and following up on the status of health workers that were absent during data collection. A DHRH representative also accompanied each data collection team to address any high level questions. Lastly, as the HRMO is the body ultimately responsible for removing individuals from the payroll, DHRH and CHAI coordinated with both the HRMO and the Public Financial Management Improvement and Consolidation Programme (PFMICP), who recently completed an overall payroll cleansing exercise for the civil service. In the interest of using resources efficiently and avoiding duplication of efforts, an agreement was reached through which PFMICP chose to focus on all civil servants except MoHS employees.

Population of the Human Resource Information System (HRIS): Updating the existing HRIS was highlighted as part of the Presidential level key performance indicators in the Ebola Recovery Plan in 2015 in order to increase access to data for strategic planning of the health workforce. The HRIS was first created in 2012 with financial and technical support from the World Health Organization (WHO). However, the initial HRIS population activities in 2012 were met with many challenges, resulting in an incomplete database that was not kept up-to-date.

The HRIS database contained a baseline of 4,020 entries at the start of data collection in December 2015, which consisted only of health workers working in Western Area. The target for this presidential KPI was an 80% populated database for the total 10,242 MoHS employees on the payroll. In addition, the DHRH decided to create an instance in iHRIS for unsalaried workers.

A paper-based survey was created with the help of a WHO consultant to collect health workers' personal information, including name, address, date of birth, contact information, family status; key numerical information including employee

pin code and NASSIT number; and updated employment information, including workstation, designation and salary grade, qualification of training, appointment and promotion details, and other details.

Data collection for all staff and volunteers of the MoHS as well as private sector workers was completed in December 2015. A total of 87 data collectors and 17 supervisors took part in data collection activities across all 14 districts. The following is a summary of the data collected:

- MoHS Staff: 9,485
- Volunteers: 9,334
- Private sector workers: 457

Data was added to the system by 24 data entry clerks and 6 supervisors, consisting of a combination of DHRH staff and additional non-Directorate temporary staff. Data entry into the system was completed in March 2016.

Revision of the attendance monitoring system for the MoHS: With support from partners, the DHRH was able to revise attendance monitoring system and tools with the objectives of:

1. Providing an accurate and complete health worker payroll database
2. Designing a more robust district and peripheral health worker monitoring tool
3. Strengthening the collaborative link between HRMO, AGD and MoHS
4. Establishing a single electronic database for health workers
5. Strengthening attendance monitoring at DHMT and HR-MoHS levels.

The revisions have brought about improvements on the management of the staff list, but with no changes on the attendance data entry. With these improvements, in-charges can report on attendance for some staff by SMS and district staff can send requests for changes in workstation and designation through an electronic survey available on a smart phone, which has also been distributed.

To ensure the sustainability of the revised tools, the DHRH worked with CGA to trained DHRH staff to become trainers; they then trained all district and hospital M&Es on the use of the tool.

Review and validation of various HRH policy documents and strengthening of information sharing amongst partners and stakeholders: The DHRH has worked with its technical partners to update the HRH country profile. In 2015, a significant amount of work was done in realising this objective. This includes the development and validation of a HCW cadre mapping, and development and validation of health worker flowcharts. These documents will be used to update the HRH country profile that will inform the HRH policy and strategy.

Pipeline model development: In order to curb one of the most critical problems of health workforce planning affecting the MoHS, the DHRH worked with CHAI to develop a health workforce pipeline model. The model is a tool that forecasts the future size of the Sierra Leone health workforce and assesses the impact of potential workforce interventions. In developing the tool, CHAI collected health worker production data from all health training institutions in the country. The

finalised model will be used by DHRH to identify where the most critical staffing gaps are, and then model out the impact of proposed interventions to expand the workforce to determine how the MoHS could scale-up annual production (training and recruitment) of essential programmes across public and private health training institutions.

Cadre mapping validation: Working with the HRH Policy sub-group, DHRH with the technical support of CHAI collected data from various stakeholders including HTIs and other MoHS Directorates for the purpose of visualizing the process through which all cadres of health workforce are produced, and the career pathways that are available for health workers. This information was then translated into a cadre mapping that will help the MoHS understand the different processes of cadre career pathways.

Upon finalising the first draft of this document, it was presented to stakeholders including representatives of the various Directorates of the MoHS, HTIs, and other partners, in a one day workshop. Good discussions and feedback came out of this workshop which were useful for finalising the document. The finalised document will be one of the components of the revised HRH situation analysis (HRH Country Profile) that will inform the HRH policy and strategy.

Flow chart development and validation: With technical support from the Clinton Health Access Initiative (CHAI), the DHRH completed the mapping of the HR management processes involved in the different phases of a health worker's pathway through the civil service, including: hiring, leave, reassignment and separation.

A validation meeting was held involving the Health Service Commission, the Human Resource Management Office (HRMO) and the DHRH to ensure that all information contained in the flowchart document is correct. This document clearly maps out the step-by-step processes by which a health worker passes through the system. With the development of these aides, health workers will have a clearer sense of the processes that govern their livelihoods. For example, understanding the step-by-step process whereby they receive a PIN code and acquire leave, will lessen the time that should have been spent by DHRH staff in disseminating this information. This will allow them to concentrate on more strategic and policy questions.

Man power planning: In October 2015, the DHRH developed and submitted a man power plan and budget to the HRMO that included the recruitment of health workers into the civil service. This plan was later approved by HRMO in November 2015. The plan made provisions for the promotion of 638 staff to senior positions, and the appointment of 3,594 staff to various positions within the MoHS. As part of the plan, the DHRH also advocated for the absorption of 549 Ebola response workers. Following approval from the MOFED, the DHRH in collaboration with the HSC started the recruitment process of 500 MCH Aides.

Health worker induction: The DHRH submitted and obtained funding from Voluntary Service Overseas (VSO) for the induction of health workers. Upon granting of the funding, the Directorate developed an induction plan targeting health workers in all the four regions of Sierra Leone. Thusfar, induction of health workers has been carried out in three of the four regions. These include the Western Area, Bombali and Bo, where by 375 health workers went through the process. Knowledge acquired from these workshops will help the health workers

understand the Civil Service Code, as well as their roles and responsibilities as MoHS civil servants. Depending on the availability of funding, it is expected that this process will continue in 2016 and will target all health workers.

Coordination and management of stakeholders involved in the HRH space: With technical support from the Clinton Health Access Initiative (CHAI), the DHRH has been coordinating the HRH working group and its two sub-groups on a regular basis. The overall purpose of the WG is to serve as a coordinating function amongst government and partners; provide a venue in which to discuss issues critical to the HRH landscape; and review implementation and monitoring arrangements linked to the 9-month plan.

There are two subgroups each dealing with specific areas of focus in the realisation of the 9 month plan. The first is the Analytics and Research Sub-Group that focuses on the urgent need for evidence-based research that is policy driven and relevant to guide the MoHS to effectively plan, manage and utilise its valuable human resources (health workforce enumeration, data collection and collation-HRIS, Payroll verification). The second is the policy subgroup that focuses on driving policy discussions around health worker retention, HR governance, and policy development.

From June 2015 until the time of writing, seven main HRH working group meetings were held during which technical matters related to the overall HRH space were discussed and key decisions taken. For instance, a HRH working group dropbox was created for the working group to facilitate the sharing of information. The Directorate also started an inventory process to map out key partners who intervene in the HRH space for better coordination.

12. Environmental health and sanitation

Overview

Progress in the improvement of water and sanitation was below the MDG targets. DHS 2008 and 2013 results displayed in Table 18 show that while some progress was made between 2008 and 2013 in improving access to safe drinking water, little progress was made in improving sanitation in the country. Although updated data need to be collected to determine whether these targets were met in 2015, the available data show that Sierra Leone was off track in 2013 to meet these MDG targets. About 40% of the population has no access to safe drinking water (i.e either from household connection pipes, public standpipes, boreholes, protected dug wells, or spring or rain water collection). Similarly, 51.2% of the population had no access to improved sanitary facilities. Only 10.6% of the country's population has access to improved non-shared sanitation facilities such as flush toilet, ventilated improved pit, or traditional pit latrine with a slab.

The improvement in water and sanitation, particularly at the household level, requires a multisectoral approach. To respond to the new health challenges brought to the fore by the EVD outbreak, the MoHS has prioritised improvements in water and sanitation at all health facilities in the post EVD early recovery plan.

Table 18: Progress on WASH indicators against the MDG targets (Source: MICS and DHS surveys)

Indicator	MICS 2000	MICS 2005	DHS 2008	MICS 2010	DHS 2013	MDG target
% of population with access to safe drinking water	54%	47%	50.3%	57%	59.5%	73%
% of households with access to improved sanitation (not shared)	-	-	13%	-	10.6%	-
% of households with access to improved sanitation (shared and not shared)	63.1%	30%	50.3%	40%	48.8%	65%
% safe disposal of child's faeces	-	41%	-	54%	-	-

The main goal of the environmental health and sanitation programme in the MoHS is to ensure that there is a healthy, clean and hazard-free urban and rural environment everywhere in Sierra Leone.

The expected outputs of the 2015 Environmental Health and Sanitation programme were as follows:

1. Environmental Health and Sanitation Directorate (EHSD) upgraded and restructured
2. Environmental Health and Sanitation Policy and Strategy documents reviewed and updated
3. Capacity of EHSD strengthened to monitor and supervise the implementation of environmental health and sanitation policies and guidelines

4. Expanded Sanitary Inspection Compliance and Enforcement (ESICOME) launched
5. Integrated waste management
6. Port health services strengthened
7. Food safety enforced and all industries inspected for occupational and safety hazards identification

Activities and achievements relating to environmental health and sanitation in 2015

The following achievements were made in 2015:

EHSD established: The EHSD was set up to execute preventative public health measures and to protect the contamination of the environment. Until 2015, the department operated as a division under the leadership of a manager with a lean staff and certain key positions such as Chief and Deputy Chief Environmental Health Officers vacant. To strengthen the department to effectively formulate environmental health and sanitation policies, guidelines, standard operational procedures, and to coordinate, monitor and supervise all environmental health interventions in the country, the department was upgraded to a directorate in 2015 with six operational components. These components are: leadership and governance; housing and integrated vector management; water, sanitation and hygiene (WASH); port health and industrial safety; food safety; integrated waste management (clinical waste management); and monitoring and evaluation

Environmental health and sanitation policies and strategic documents reviewed: Two consultants (one international and one local) were hired to review the Public Health Ordinance (PHO). A Law Working Group comprising of members from MDAs was set up to work on the ordinance. To help facilitate the process, the draft copies of the ordinance were distributed to stakeholders including MoHS directors and programme managers for their inputs. Consultative workshops were held at provincial level to raise awareness and solicit feedback on the ordinance.

Draft regulations on sachet water were created, and continuous community sensitisation on hygiene, safety and quality of sachet water was conducted in 2015. To facilitate the monitoring of sachet water companies, a database of sachet water companies was created.

The Environmental Social Management Framework and the Environmental Management Plan were developed, validated and disclosed. The ESMF and EMP will be used as working documents to mitigate/address risks associated with health care activities prior to the construction of any facility in the country.

The Food Safety Law was drafted, awaiting consultations and validation.

Capacity of EHSD strengthened: The newly upgraded Directorate received logistical support from UNICEF in the form of vehicles (2), motorbikes (4), laptops (2) and a printer to scale up monitoring and supervision of WASH activities in the country. Personal protective equipment (PPE) meant for the implementation of the ESICOME program were supplied by the Central Medical Store to the Directorate.

Twelve public health graduates were recruited and posted to 12 districts in including Freetown. A total of 223 Public Health Aides (PHAs) were recruited, absorbed into the pensionable and permanent public service, and trained and deployed in all districts to support the implementation of the ESICOME project in the country. Before deployment, the 223 PHAs (18% female, 82% male) were trained to Certificate Level in Environmental Health.

Waste management strengthened: The Integrated National Waste Management Policy, strategy and roadmaps were launched in 2015. To ensure proper transportation and disposal of waste, the process for procuring a septic tank emptier was initiated due to be completed in 2016. The Kingtom landfill site was rehabilitated, while a new landfill site was identified at Waterloo and a suitability assessment was conducted

Port health services strengthened: To limit the spread of public health risks and implement international health regulations, border health activities were implemented at sea, airport and land crossings nationally. There was continuous inspection of all international calling vessels into the country, including screening of passengers and crew, and inspection of imported and exported food items. Passengers and visitors at land crossings and airports were screened for Ebola, and where required, isolated.

Food safety and industrial safety inspections conducted: In 2015, the MoHS through the EHSD trained 20 industrial establishment staff on industrial health and safety. Other achievements during the year were as follows:

- The hygiene and sanitation status of fishing companies, vessels and ice plants were continuously inspected to ensure they conform to SL Fishery Products Regulation (2007)
- Water samples were collected from fishing establishments and ice plants for chemical and bacteriological analysis
- Food processing establishments were inspected to assess hygiene and sanitation standards for food safety. Meat slaughter houses and food storage and retail facilities were inspected to assess the fitness of the food sold for human consumption

Preparation for the launch of the expanded sanitary inspection compliance and enforcement (ESICOME) programme finalised: With support from DFID/Adam Smith International, MoHS made significant progress towards the full implementation of the ESICOME programme in 2016. The housing and integrated vector control programme developed plans on the intensification of premises inspection. In addition to the recruitment, training and deployment of 223 PHAs, stakeholder consultations on the Public Health Ordinance that will guide the work of the PHAs were conducted, and IEC materials were developed for community sensitisation. At the end of 2015, a cadre of staff to implement the ESICOME program was in place. The ESICOME program will re-establish front-line sanitary monitoring across the country and sanitary courts for prosecution of non-compliance.

13. Health education and health promotion

Overview

The Health Education Division (HED) under the Directorate of Primary Health Care (DPHC) in the MoHS is responsible for the provision of health education and health promotion through BCC. In order to provide policy direction in health education and health promotion in Sierra Leone, a Health Education Policy was developed in 2000 and revised in 2010; and a National Health Promotion Policy was developed to shift from health education to the broader concept of health promotion. The vision is to place health promotion high on the national agenda through mainstreaming of activities across programmes, populations, and disease specific issues, thereby promoting and protecting the health of all people in Sierra Leone.

Activities and achievements relating to health education and promotion in 2015

The key activities and achievements of the health education programme in 2015 were as follows:

Social mobilisation on Ebola Virus Disease (EVD) prevention: HED provided continued technical leadership, coordination, and oversight in the management and dissemination of information on EVD. Coordination of partners was done through weekly pillar meetings to discuss strategies and plans for action. Reports from districts were compiled and presented weekly at 'inter-Pillar Action and Coordinating Team' meetings and evening briefings organised by the National Ebola Response Centre (NERC).

To enhance efficiency and better coordination of the social mobilisation pillar, sub-committees were established within the pillar, including: messaging and dissemination; capacity building; coordination; monitoring and evaluation; and special needs. These sub-committees met weekly on Wednesdays to address special tasks assigned as per their respective terms of reference.

Media engagement: Realising the importance role of the media in reaching the wider public with information on the EVD, HED collaborated with the 'Sierra Leone Association of Journalists' in daily radio programmes including airing of jingles, public notices and discussion programmes.

To ensure that community members have comprehensive knowledge on EVD prevention, HED and the public relations office, with the support of partners, conducted daily radio programmes including airing of jingles, public notices and discussion programmes. A daily radio programme titled 'Dreb Ebola' was broadcast on 52 radio stations nationwide.

The MoHS participates in the daily 'SLBC Have your Say' using specialists to discuss and address key issues including misconceptions, rumours, fears and panic from the general public. In addition to radio programming, the MoHS undertook intensive community engagement of traditional and opinion leaders (paramount chiefs, district administrators, traditional birth attenders etc.).

Messaging: With support from social mobilisation pillar members, and especially the messaging and dissemination sub-committee, several communication materials were developed and reviewed by the messaging sub-committee to

address emerging behaviour challenges on EVD. Posters, banner messages, fact sheets, flyers on key messages, frequently asked questions, and jingle and radio spots were developed and disseminated through diverse channels in communities. The MoHS held press briefings and orientations with media houses to facilitate reporting of health events. This gave the MoHS an opportunity to give information not only on Ebola but also on other health interventions.

Community Engagement: The major activity of the health education programme within the MoHS in 2014 and 2015 was to improve community knowledge on the prevention of EVD in order to reduce misconceptions about the disease. At the onset of the EVD outbreak, there were widespread misconceptions about the diseases and strongly entrenched cultural practices, particularly relating to the burial of the dead, were widespread. The KAP survey of December 2014 showed that only 56% of the population had comprehensive knowledge or accurately rejected at least three misconceptions and identified three means of prevention of EVD.

With support from UNFPA, 300 traditional and opinion leaders were engaged in hotspot districts (Western Area, Port Loko and Kambia). This contributed to community ownership and enforcement of bye-laws on EVD in these districts.

Figure 19: Participants at community engagement meetings in Kambia and Western Area

With support from WHO, the MoHS conducted training for frontline EVD response staff to integrate community engagement into service delivery using surveillance, contact tracing and case investigation as entry points. The aims of this were to:

1. Restore confidence and trust in health services and response operation
2. Build relationships between communities and service providers
3. Partner with communities to hunt the virus and not penalise communities

The training improved relationships between families, their communities and key front line staff in areas where there was ongoing transmission. It improved the abilities and confidence of contact tracers to engage with families and communities and to do their work effectively.

The KAP survey conducted in July 2015 showed that community knowledge on EVD increased from 56% in 2014 to 90% in July 2015 (KAP 4, July 2015). The survey results showed that misconceptions were reduced, objections to ride in an ambulance were reduced, acceptance of burial teams increased, sickness and deaths alerts increased, and hand washing with soap and community participation in disease surveillance both increased. Community ownership of the

EVD response increased with the active involvement of traditional leaders, and a network of community watch groups, youth organisations, women's groups, and religious leaders. To further close the gap between knowledge and practice, the MoHS embarked on deepening community engagement as part of the 'getting to resilient zero' strategic plan.

Figure 20: Participants at community engagement meeting in Tonko-Limba Chiefdom, Kambia District

With support from Voluntary Services Overseas (VSO), a series of interventions were implemented aimed at improving the adoption of practices that prevent the spread of EVD:

- 2 days trust building and communication training was conducted for 400 HCWs and community volunteers in hotspot districts: Western Area, Kambia, Port Loko and Tonkolili. The goal of the training was to build the capacity of frontline staff to engage with communities in ways that build trust and contribute to Ebola prevention and control.
- 1 day community engagement meetings were organised for 400 community leaders in Kambia, Port Loko, Tonkolili and Western Area to promote community dialogue on EVD prevention and control.

Figure 21: Participants at community engagement meeting in Kholifa Rowala Chiefdom, Tonkolili District

As the EVD cases continued to drop to zero, the role of local community leaders and community ownership was identified as the cornerstone of 'Resilient Zero-EVD' in the country. During this phase of the transition, community engagement focused particularly on the paramount chiefs, section chiefs, village headmen and village development committees for enhanced ownership and support. With support from UNICEF, workshops were organised on community engagement at district and chiefdom/ward levels to share experiences among district partners and paramount chiefs on community engagement activities so far, and develop the way forward for district wide community engagement focused on local leaders and community ownership. 40 participants including district social mobilisation partners, traditional leaders (paramount chiefs, section chiefs etc.), ward councillors, village headmen, women's leaders, religious leaders and traditional healers participated in the meetings.

Social mobilisation through health campaigns: In 2015, the MoHS conducted social mobilisation, health education, and health promotion during the following health campaigns:

- Maternal and Child Health Week (MCHW), April and November 2015
- Integrated Measles and Polio Campaign, June 5 - 10, 2015
- Integrated Polio Supplementary Immunisation and Births Registration Campaign, July 10 - 13, 2015

Community sensitisation and mobilisation through mass media: Intensive radio programming and press briefings were cross-cutting activities undertaken during all of these campaigns.

A total of 7 radio spots in 11 local languages (Krio, Mende, Temne, Limba, Fula, Kono, Kissi, Mandingo, Susu, Sherbro, Yalunka) were developed and aired on 12 radio stations in Western Area for 14 days during each campaign (May 21 – June 3, 2015) through the Independent Radio Network. Copies of the spots were also distributed to the DHMTs and aired on the respective district radio stations before and during the campaign period. Jingles were developed and aired through the IRN, both nationally and at district levels.

A total of 30 radio discussion (10 during each campaign) and phone-in programmes were conducted in Western Area to compliment interpersonal channels undertaken at district level. Panellists from HED, Child Health/EPI, HKI, UNICEF, WHO, UNCT, Focus 1000, and the Western Area DHMT participated in the discussions.

In order to promote correct reporting and wide publicity of the campaign by the mass media, 30 print and electronic media houses were briefed on the campaign dates, strategies and interventions during each campaign. The briefings were organised in collaboration with the public relations unit of the MoHS. The programme managers CH/EPI and HED, HKI, UNICEF and WHO addressed questions and concerns raised by participants.

In each MCHW campaign, 788 cotton banners and 20,000 campaign flyers were printed and distributed to districts to support sensitisation activities at districts and community level. The banners were distributed and displayed at ward level by community volunteers recruited by the DHMTs (see Figure 22).

Figure 22: Participants in a MCHW briefing session (left) and a sample MCHW banner on display (right)

Prior to each campaign, multiple channels including print and electronic, advocacy meetings, and sensitisation meetings were used to appeal to the general public to solicit their participation and compliance with the campaigns. 4 cotton banners and 20,000 Flyers on the Integrated Measles and Polio campaign and the SIA were printed and distributed to districts to support sensitisation activities at community level. The banners were distributed and displayed at ward level by community volunteers recruited by the DHMTs.

National launch of Maternal and Child Health Weeks (MCHWs) campaigns and health fair: The MCHWs are a twice yearly integrated health event conducted nationwide by the MoHS in collaboration with development partners. In 2015, two events were observed in April (24 – 27) and November (26 – 30). The MCHW campaigns normally kick off with a national launch on the first day of each campaign. However, because of the intensity of the EVD outbreak in early 2015, only one national launch was done in November 2015 in Kambia Town.

Figure 23: Dignitaries at the national MCHW launch in Kambia

Integrated Measles and Polio Campaign (June 5 - 10, 2015): The second round of the supplementary immunisation activities (SIAs) for 2015 was conducted in conjunction with an integrated follow-up to the measles and polio supplementary immunisation from June 5 - 10, 2015.

In order to solicit commitment of traditional leaders in the campaign, a one-day sensitisation meeting was held at regional level for paramount chiefs and district administrators on June 1 – 3, 2015. During these meetings, PowerPoint presentations on campaign interventions and strategies were made, followed by discussions on the way forward for a successful campaign at community level.

Figure 24: Cross section of paramount chiefs at a regional sensitisation meeting in the Eastern Region

A national launch of the measles and polio campaign was conducted in Freetown on June 5, 2015. The Honourable Vice President Victor Bockarie Foh officially launched the campaign at the Murray Town Community Health Centre, in the west end of Freetown.

Figure 25: Cross section of the high table (L-R): Health and Sanitation Minister, Dr. Abu Bakarr Fofanah, Vice President, Victor Bockarie Foh, and Minister of State, Vice President's Office

District and chiefdom level advocacy meetings, radio discussion programmes, community engagement meetings, and street to street announcements were also undertaken by DHMTs to increase community awareness and participation in the campaign.

Integrated polio supplementary immunisation and births registration campaign (July 10 - July 13, 2015): The July supplementary immunisation campaign was conducted in conjunction with an integrated follow up polio immunisation and birth registration from June 10 - 13, 2015 to improve access to oral polio vaccine (OPV) and birth registration. During this period, free OPV and birth certificates were given to all children 0-59 months. Also, routine vaccines were administered to all children aged 0 -23 months who have missed any other doses.

Due to the public health state of emergency in the country at the time, no official launch was conducted for the May/June campaign. However, symbolic launches (speeches on radio, announcements, public notices, etc.) were done at national, district and chiefdom/ward levels. Communication channels including radio jingles, radio discussion programmes, press briefing, and print materials (local cotton banners, flyers and FAQs) formed part of the strategy for this campaign.

National family planning campaign launch: The national family planning campaign was launched on 8th September 2015 at Miata Conference Centre in Freetown. The ceremony was attended by top MoHS officers including the Deputy Minister 2 of Health and Sanitation – Madam Madina Rahman, and Directors and Programme Managers. Other participants included UNFPA and family planning implementing partners, line Ministries, civil society, health training institutions and media personnel.

Figure 26: Participants at National Family Planning Launch ceremony

Family Planning Promotional Materials: Promotional materials including 19 nillboards, 55,000 brochures, 14,000 posters, 3500 female and 2,500 male umbrellas, 2,000 spiral notepads, 2,000 wrist band, and 1,800 hand fans, were also produced and distributed during the national launch at service delivery points established by UNFPA and PPASL.

Figure 27: Sample of posters produced and distributed

Figure 28: Sample of billboards produced and erected

Radio/TV programmes and theme songs: 5 radio and 2 TV panel discussion and phone-in programmes were also conducted during the campaign launch

period. A theme song was also developed by "All Female Musicians" and a live performance of the song was done during the launch.

Support to the flood response in Freetown: In response to the flood disaster in Western Area in September 2015, the Ministry with support from UNICEF and Christian Aid:

- Developed and aired a cholera preparedness jingle through Public Address systems and SLRCS volunteers.
- Orientated and deployed 100 social mobilisers to intensify community engagement in the two stadiums. The key messages disseminated during this period included EVD, cholera prevention, WASH, immunisation, ANC, family planning and psychosocial services.

14. Neglected tropical diseases (NTDs)

Overview

The NTD control programme (NTDs) functions directly under the supervision of the Directorate of Disease Prevention and Control (DDPC) in the MoHS. The NTD programme is responsible for the prevention/control and elimination of specifically targeted neglected diseases in Sierra Leone, namely: onchocerciasis, lymphatic filariasis (LF), soil transmitted helminths, and schistosomiasis.

In addressing the situation, the main strategy being used by the program is Community Directed Intervention (CDI). CDI is pro-poor and owned by the community, therefore mass drug administration for onchocerciasis, LF, and soil transmitted helminths is done by Community Directed Distributors (CDDs) selected by the community, trained and supervised by health personnel.

The 2005 mapping results for LF in Table 19 shows that all areas of Sierra Leone are endemic for LF and soil transmitted helminths.

Table 19: Endemicity of NTDs in Sierra Leone

No	Disease	Number of districts	Baseline prevalence	At-risk population
1	Onchocerciasis	12	68.7%	2,958,034
2	Lymphatic Filariasis	14	2.4%	6,127,338
3	Soil transmitted helminths	14	20-50%	6,127,338
4	Schistosomiasis	7	10-50%	1,748,694

The drugs ivermectin (Mectizan) and albendazole are co-administered for the control/elimination of onchocerciasis, LF and Soil Transmitted Helminths. Two NTDs, human African trypanosomiasis and dracunculiasis, have not been identified in any health districts, while 7 positive cases of Buruli ulcer were recorded in two health districts in 2011.

The goal of the programme is to control/eliminate the burden of the NTDs in affected communities throughout Sierra Leone by treating at least 80% of people at risk of contracting the disease by 2020.

Considerable progress has been made in the elimination of the burden of the three main NTDs. Nationally, the prevalence of LF has been reduced from 2.4% in 2007 to about 0.3% in 2011. However, the pre-transmission assessment survey (PreTAS) of 2013 shows that prevalence was at 0.5%, which is slightly above the 2011 rate. PreTAS results showed that the diseases were almost eliminated in five districts: Bonthe, Kambia, Kenema, Moyamba and Tonkolili districts as of 2013.

The prevalence of schistosomiasis was drastically reduced from 45.1% in 2009 to 15.2% in 2012. These drastic reductions were observed in all districts. Similar reductions were recorded for onchocerciasis as illustrated in Table 20.

Table 20: Progress in the elimination of the three main NTDs (Source: NTD programme data)

District	LF			Schistosomiasis		Onchocerciasis	
	Baseline 2007/8 (%)	Impact 2011 (%)	PreTAS 2013 (%)	Baseline 2009 (%)	Impact 2012 (%)	Baseline 2002-4 (%)	Impact 2010 (%)
Bo	2.0	0.0	0.3	25.2	0.5	16.84 – 68.9	26
Bombali	6.9	1.5	1.4	27.5	17.6	18.3 – 77.0	17
Bonthe	1.2	0.2	0.0	-	-	3.7 – 69.1	27
Kailahun	2.6	0.0	1.6	60	16.8	19.0 – 50.3	24
Kambia	2.1	0.4	0.0	-	-	10.3 – 61.6	23
Kenema	0.6	0.0	0.0	60.5	17.3	24.1 – 54.9	21
Koinadugu	5.7	0.5	1.0	83.3	36	34.7 – 56.3	19
Kono	2.4	0.0	0.6	65	20.8	35.0 – 68.0	9
Moyamba	1.0	0.0	0.0	-	-	21.9 – 67.8	28
Port Loko	4.4	0.2	0.3	-	-	41.6 – 67.2	27
Pujehun	0.0	0.0	0.3	-	-	46.9 – 87.2	8
Tonkolili	2.4	0.2	0.0	35	12.3	37.2 – 67.8	17
National	2.4	0.3	0.5	45.1	15.2	-	-

The key program objectives in 2015 were as follows:

1. To conduct two Mass Drug Administrations for onchocerciasis, LF, soil transmitted helminths, and schistosomiasis
2. To conduct surveys on onchocerciasis, LF, soil transmitted helminths, and schistosomiasis
3. To conduct integrated training for health workers and community drug distributors
4. To conduct social mobilisation to all targeted communities for MDAs

Activities and achievements relating to tackling NTDs in 2015

The NTD Programme was unable to conduct some of its planned activities due to the EVD outbreak in the country. Nevertheless, significant achievements were made, particularly in mass drug administration (MDA). Two MDAs were

conducted in 2015. A total of 1,117 PHU staff were trained as trainers on the management of NTDs and the concept of the CDI approach. They in turn trained 29,741 community directed distributors (CDD) in the 12 districts.

Immediately after the CDD training, CDDs conducted a community census by updating their community/village registers. The updated population figures were used to request for drugs (ivermectin and albendazole) which were then supplied to PHUs for distribution. The MDA was conducted by CDDs in their individual communities. During this process integrated supportive supervision was conducted jointly by PHU staff, DHMTs, NSAHP, NTDP, Sightsavers, HKI, and FHI 360. The supervision was not only to observe the MDA, but also to ensure that both the CDDs and community members adhered to IPC protocols as sensitised during social mobilisation activities.

MDAs in the 14 districts were successfully implemented with no reported adverse events. The minor side effects reported were handled by either CDDs or PHU staff at community level through the use of antihelmintics, paracetamol, ORS, or water as appropriate.

Table 21: Treatment coverage for target NTDs in 2015

Disease	Population target		Population treated		Treat. Cov.	Tablets used		
	Males	Females	Males	Females		Ivermectin	Albendazole	Praziquantel
LF	2,345,685	2,866,935	2,611,659	2,786,824	77.4%	4,065,938	11,587,924	-
Oncho	1,522,045	1,852,281	1,265,644	1,376,549	78.3%	7,530,251	-	-
Soil transmitted helminths	2,345,685	2,866,935	2,611,659	2,786,824	77.4%	-	11,587,924	-
Schisto	1,309,601	1,600,378	1,039,165	1,270,110	79.4%	-	-	5,027,461

Coverage for onchocerciasis and LF were 78.3% and 77.4% respectively, while coverage for schistosomiasis was 80.6% in schools and 77.8% for at-risk communities. During both integrated treatments, the NTDP was able to cover all targeted communities as planned therefore geographic coverage was 100% for the two MDAs conducted in 2015.

15. DPPI 2015 performance report

Overview

The Directorate of Policy Planning & Information (DPPI) has the responsibility of providing reliable and standardised health information in Sierra Leone. An integrated and properly functioning health information system (HIS) is a prerequisite for sound decision making and planning through provision of timely, reliable and relevant information. Routine health data in Sierra Leone is collected through a network of some 1,250 PHUs and 30 hospitals that are unevenly distributed throughout the country, across 13 health districts, coordinated by monitoring and evaluation (M&E) officers and data entry clerks.

DPPI comprises of 4 units: the M&E Unit, the Health Planning Unit, the Health Financing Unit, and the Research & Publication unit.

Activities and achievements of DPPI in 2015

Activities and achievements of DPPI in 2015 include:

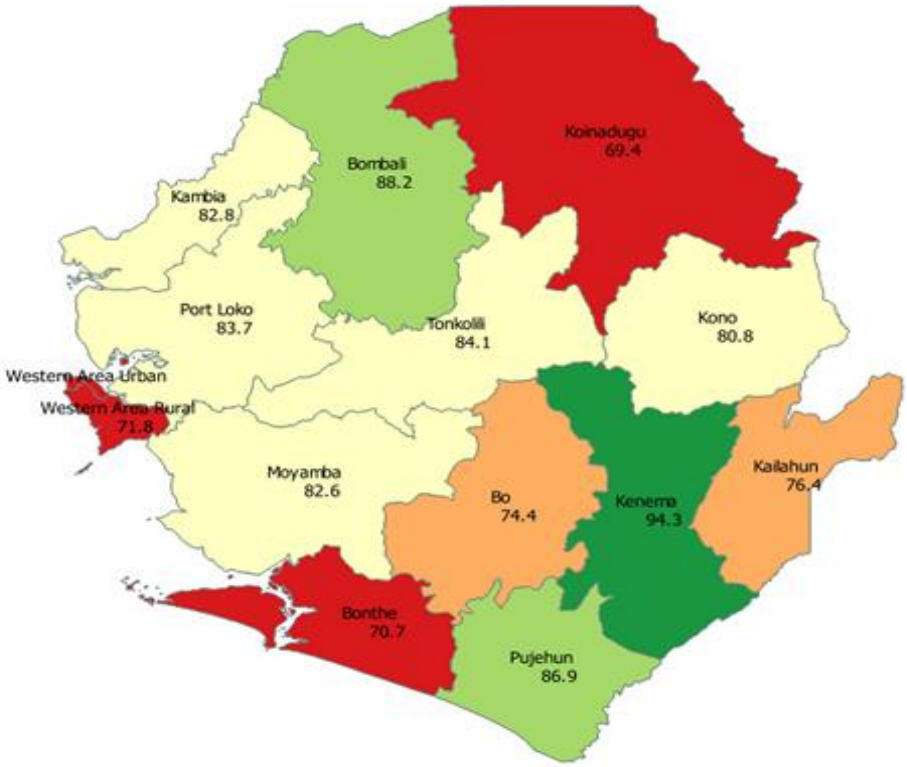
Capacity building of staff on DHIS-2: Following a skill assessment of the designated M&E officers within the DHMTs and hospitals on the use of the DHIS-2 software, it was clear that the staff had limited knowledge and skills in the use of the software. This accounts, among other factors, for the challenges around timeliness, completeness and reliability of health data in the MoHS. The programme of training conducted included on-the-job coaching and heightened supervision. All of these staff benefited from the range of training and coaching on the software. Also, staff inputting primary data, drawn from all levels of PHUs, were also trained in the use of the revised data tools in 2015.

This has had a positive impact on the improving data reporting. The designated M&E staff can now use the software to extract and analyse data specific to their districts and PHUs. The respective district M&E officers can now analyse reporting rates even down to facility levels. As such, these officers can tell which facilities are underperforming and which ones are not. This is an innovation as that used to be done only at central level.

Improved data reporting at DHMT Level: Undoubtedly the EVD outbreak has had an impact at national level on the flow of data from facility to district, and district to the National HMIS. EVD has impacted on the timeliness with which data has moved through the system and completeness of data in terms of the proportion of facilities for which any data has been submitted to the HMIS. According to an assessment on the impact of EVD on the country's HMIS, it was revealed that the proportion of facilities for which data is captured by the HMIS dropped in the last quarter of 2014, from 80% in April to 56% in November, as EVD spread across the country and as efforts to contain it covered all districts.

A series of measures, in addition to the sustained capacity building of DHMT and Hospital M&E officers, improved both the timeliness and completeness of reporting in all districts. The district data reporting performance in 2015 is illustrated in Figure 29 below.

Figure 29: Proportion of facilities from which data was captured by district in 2015



Re-activation of the M&E Technical Working Group: The defunct M&E Technical Working Group (M&E TWG), which was established years ago to bring in key stakeholders on HIS on a quarterly basis to discuss measures on improving the quality of health data in Sierra Leone, was re-activated in Q4 2015. The new reformed M&E TWG comprises of 4 working groups: infrastructure; data integration & interoperability; data analysis and use; and governance & policy. These groups meet on a monthly basis to discern the challenges and discuss feasible approaches to overhaul the country's HIS.

Production of Health Bulletin: The availability of a quarterly health bulletin is important in informing partners and the public alike on the performance on key health indicators. The bulletin is also meant to help programmes, directorates and partners in planning their activities as it gives an idea on what to emphasise or de-emphasise, as the case may be. The last health bulletin was produced in 2010. In 2015, the DPPI rejuvenated the initiative and produced a half-year health information bulletin for 2015. This generated interest from partners and the public as the bulletin captured key health indicators.

Conduct of Health Sector Reviews: The period of the EVD outbreak prevented MoHS from conducting performance reviews on the status of implementation of MoHS activities. Two reviews (mid- and end-of year reviews) were conducted in 2015 with the wider participation of all stakeholders including related Ministries, Departments and Agencies such as Local Councils and MoFED. Those reviews informed the production of the 2015 Health Sector Performance Report.

Figure 30: 2015 mid-year review (left) and end-of-year review (right)

Conduct of National Health Accounts (NHA): During this reporting period, DPPI conducted the fourth NHA 2014. The National Health Accounts are a vital source of information for making evidence-based decisions and understanding the shortcomings and strengths of the health sector. The NHA studies the pattern and flow of funds in the health sector, as well as assessing the extent to which the Government complies with international commitments relating to health expenditure (e.g. the Abuja declaration targeting 15% of Government expenditures to be spent on health). It further helps the Government to assess where there are financial shortfalls and bottlenecks, as well as highlight particular parts of the sector that are working more efficiently.

Establishment of a research ethics committee within the MoHS: In order to enhance MoHS stewardship and management of information generated from the numerous research endeavours following the EVD outbreak, a Research & Publication Unit was established within DPPI. This was followed by the reconstitution of the Sierra Leone Ethics and Scientific Review Committee (SLESRC) with its secretariat within DPPI. The SLESRC's primary function is to regulate all health related research involving human subjects. The reconstituted SLESRC has now reviewed some of its key documents like the application guidelines; and made some key changes including the introduction of electronic applications for researchers who are resident outside of Sierra Leone and real-time response to queries.

Review of the implementation of the NHSSP (2010-2015): The goal of NHSSP was to reduce inequalities and improve the health of the people, especially mothers and children, through strengthening national health systems to enhance health related outcomes and impact indicators. It was been developed to provide a common strategic framework to guide ALL interventions by ALL parties at ALL levels of the national health system in Sierra Leone for the period covering 1st January 2010 to 31st December 2015.

As part of DPPI mandate to lead the development of policies of the MoHS, and in recognition of the fact that the current NHSSP (2010-2015) was close to expiration, a review on the implementation of the interventions was done; and the findings widely disseminated among MoHS stakeholders. The next step is to revise the NHSSP to reflect the recommendations of the review; the emerging health challenges in Sierra Leone; and the Sustainable Development Goals (SDGs) among other international initiatives.

Implementation of the Performance Based Financing (PBF) Scheme: During the year 2015, DPPI members completed payments requests for all PHUs in Sierra

Leone and the 2 recipient hospitals (ODCH and PCMH) for the year 2014. These requests were later sent to members from the Local Government Finance department at the Ministry of Finance in order to expedite the payment process. Members of the directorate carried out quarterly monitoring and supervision exercises for the two hospitals in 2015. Additionally, weekly stakeholders meetings were conducted to discuss how to improve the efficiency of implementing this scheme.

16. Looking forwards to 2016

Challenges for the health sector

Challenges for the health sector going forwards include:

- The unprecedented EVD epidemic posed unanticipated challenges for the health sector, calling for a 'Marshall Plan' approach to ensure full recovery. Almost all the gains in service utilisation achieved since the introduction of the FHCI were reversed following the outbreak of EVD. High rates of EVD infection in the community and health facility acquired infections resulted in suspicion/uneasiness and mistrust of the health system.
- There is increased demand on limited health care resources and the health care system to provide services it is ill prepared to provide. The health system is challenged to maintain rigorous IPC, implement integrated disease surveillance and response (IDSR), improve health management information systems (HMIS), improve supply change management, provide health technologies, restore essential health services, and institute health sector reforms to improve governance of the sector and improve the quality and quantity of the health workforce. All of these require government contributions to health care financing to increase beyond the 15% of GDP target.
- Our maternal and child health indicators are still among the worst in the region, and teenage pregnancy is still very high.
- We have inadequate human resources both in quantity and quality to ensure quality health service delivery.
- The capacity of the health system to provide general health services is weak. There is lack of basic equipment, laboratory diagnostic capacity, medicines and commodities, inadequate health technologies (medicines, supplies, and laboratory), and weak supply chain management.

  The IDSR system in place is still rudimentary.
- There is no national medical emergency service and the referral system is weak.

Health sector plans for 2016

Health sector plans for 2016 include:

- In 2016 and 2017 the MoHS will prioritise maintaining resilient zero cases of EVD and drastically reducing maternal and child mortality. Using the Sierra Leone Health Sector Recovery Plan (HSRP) as a guiding document, we will develop a two-year operational plan for full recovery, using a consultative process, predicating all our interventions on achieving these goals.
- We will continue to provide the necessary equipment, intensify monitoring, and improve medical waste management and WASH in health facilities to ensure zero health facility acquired infections.
- We will continue to implement the FHCI, focusing on reproductive, neonatal and child health, family planning and nutrition services within the context of the revised basic package of essential health services.
- We will strengthen district capacity to deliver quality services by: bringing in senior health professionals from the African Union and Sierra Leoneans in the diaspora

to the public hospitals; strengthening community outreach through the implementation of the CHW programme; and building the capacity of DHMTs to manage programmes within their localities.

- We will establish a Postgraduate Medical Training Institute to train specialist medical doctors locally. The Act for the establishment of a Postgraduate Medical Training College will soon be presented to Parliament for ratification. The Act will make provision for the establishment and operations of the Postgraduate College of Medical Specialties Board to expedite the commencement of local training, the new Postgraduate Medical Training College structures, and the Teaching Hospital Board.
- We will continue to implement the Service Level Agreement (SLA) approach. Launched by President of the Republic of Sierra Leone in June 2015, the SLA ensures that we know who does what, where, and with how much.
- We will establish the National Emergency Medical Services (EMS) to provide pre-hospital care and transportation of patients to hospital, and strengthen the referral system using a public private partnership approach. Emergency Medical Service standards will be developed and paramedics will be trained. An open and transparent process to recruit the supporting partners for national EMS will be used.
- We will intensify training of medical professionals domestically focusing on middle level cadres. The School of Health Sciences in Makeni, which was previously used as Ebola treatment centre, has been decontaminated. The construction will be completed, and the full complement of staff will be recruited. The aim is to train Community Health Officers (CHOs) primarily with a possibility to extend to other disciplines.
- We will strengthen the capacity of the Directorate of Environmental Health and Sanitation to monitor environmental safeguards. We will revise the Public Health Ordinance of 1960, and re-establish front-line sanitary monitoring across the country, as well as sanitary courts for prosecution of non-compliance.
- We will establish a functional national laboratory network with increased capacity for quality assessment, information system, and supervision.

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Table 22: Notable partners supporting MoHS programmes and directorates

Programme/Directorate	Supporting donors/partners
Directorate of Policy, Planning & Information	UNICEF, WHO, UNFPA, GAVI, World Bank, Global Fund, USAID, Options Consultancy Services, JICA
Directorate of Disease Prevention & Control	WHO, CDC, World Bank
Directorate of Human Resources for Health	WHO, CHAI, Charlie Goldsmith, IntraHealth
Directorate of Reproductive & Child Health	UNICEF, WHO, UNFPA, World Bank, Options Consultancy Services, IDB, VSO, LSTM
Directorate of Hospitals & Laboratory Services	WHO, CDC-USA, APHL, Options Consultancy, PHE, DFID, CDC-China
Directorate of Environmental Health & Sanitation	UNICEF, WHO, DFID
Directorate of Drugs & Medical Supplies	UNICEF, UNFPA, WHO, Global Fund, USAID, DFID
Directorate of Food & Nutrition	UNICEF,WHO,HKI, Irish AID, USAID, WFP
RH/FP Programme	UNICEF, WHO, UNFPA, HKI, Marie Stopes Sierra Leone, PPASL, Life For African Mothers, JSI,
School & Adolescent Health Programme	UNICEF, WHO, UNFPA, VSO, Save the Children, PLAN-SL; HKI
Child Health/EPI Programme	WHO, UNICEF, CDC, DFID, World Bank, GAVI, SABIN, ROTARY, JICA
National AIDS Programme	Global Fund, KFW, WHO, UNICEF, UNFPA, APHL, AHS, SOLTHIS
Neglected Tropical Disease Programme	HKI, SSI, APOC, WHO
Infection Prevention & Control Unit	WHO, CDC, DFID
Civil Registration Unit	UNICEF, PLAN-SL
National TB and Leprosy Control Programme	Global Fund, WHO, GLRA, APHL,CDC, SOLTHIS
National Safe Blood Services	Global Fund

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