



REPUBLIC OF LIBERIA



ESSENTIAL PACKAGE OF HEALTH SERVICES (EPHS-II)



Ministry of Health 2022

Foreword



The Essential Package of Health Services II. presents health interventions to be provided in Liberia for the implementation of the National Health Policy (2022-2031) and National Health Strategic Plan (2022-2026). It is built on the Basic Package of Health services of 2006 to 2010 and the Essential Package of Health Services of 2011 to 2021. This EPHS-II is an expansion of services in both the basic and Essential Service Packages. It draws on lessons from the previous packages, and was informed by the country's epidemiological profile, disease pattern, demographics, and other social determinants of health in Liberia.

The two previous packages referenced above were silent on rehabilitation and palliative care services. These two additional categories of health care have been captured, making the EPHS-II comprehensive, more inclusive and universal. It touches every disease condition in Liberia with the aim of ensuring a healthy population to facilitate economic growth and sustainable development.

This package as comprehensive as it is, will be prioritized and implemented incrementally based on available resources. One lesson learned from the EPHS-I implementation was that the package exceeded the available fiscal space, so it could not fully be implemented. With the expansion made in the EPHS-II to include additional areas with resources still limited, the best we can do as a country is to prioritize.

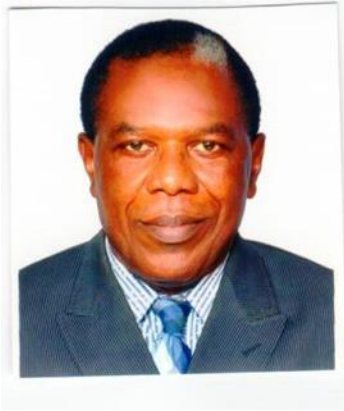
The private sector along with the secondary and tertiary facilities will have a key role to play in making these services fully available. The government will focus on the prioritized interventions to be delivered predominantly at the primary care level where majority of the poor and vulnerable people see care. Services at the secondary level of care will largely be provided on a cost sharing basis. The necessary measure will be institutes to ensure that the vulnerable populations get assistance in the interim until the Liberia Health Equity Fund- the national health insurance scheme is setup.

Finally let me appreciate all our development partners, and all other stakeholders who participated in the development of this package of health services. I am extremely grateful to all for their dedications in producing this package. I look forward to you support and the alignment of your resources to the government's priorities for health in Liberia.

A handwritten signature in black ink, appearing to be 'W. Jallah', with a horizontal line extending to the right.

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Minister of Health

Acknowledgements



I am pleased to present this Essential Package of Health Services II on behalf of the Minister of health, the senior management team of the MOH, other health agencies of government and the government. It represents the collective efforts of all actors in the health sector, and I want to thank everyone of them for their commitment demonstrated in making this health package a reality.

I want to appreciate the commitment of the health workers from the facilities, district health teams, county health teams and all the units and programs in the Ministry of Health, the National Public Health Institute of Liberia (NPHIL), the University of Liberia School of Health Sciences, the boards and regulatory authorities, our donor partners, NGOs, civil society organizations for their contributions. Many thanks to Ministry of Finance and Development Planning, the Liberia Revenue Authority, the Ministry of Gender Children and Social Protection, The National Social Security and Welfare Corporation, and the private sector for their full participation in the many consultations and working sessions and validation meeting that resulted into this package.

Many thanks go to our development partners for their financial and technical contribution towards the development of this package. Without the support of our development partners, this package would not have been possible. Thanks to our Technical Assistants/Consultants who put the pieces together.

Finally, special thanks and appreciation go to Hon. George P. Jacobs who led the technical core team that oversaw the technical aspect of this work for his outstanding leadership in making this package a reality. My appreciation to every member of the team especially Dr. Gorbee G. Logan, Assistant Minister and Deputy Chief Medical Officer for Curative Services who was the focal person for the Health Services Department in developing the EPHS-II. I look forward to working hard together with all actors to make this package accessible to the public through effective collaboration with all stakeholders including the private sector, development partners and other agencies and ministries of government in the context of the government of Liberia's development framework.

Dr. Francis Kateh

Deputy Minister of Health & Chief Medical Officer

Table of Contents

Foreword.....	i
Acknowledgements.....	ii
Introduction.....	1
1. Achievements of the EPHS I	1
2. The purpose of the EPHS II.....	2
3. The Rationale for the EPHS II	2
4. Criteria for inclusion of a technical area into the EPHS.....	3
5. Levels of Health Care and System Organization.....	4
5.1 Primary Health Care	4
5.1.1 Community health services and cadre of community health workers	4
5.1.2 Health clinics	5
5.2 Secondary Care	5
5.2.1 Health centers	5
5.2.2 District hospitals	6
5.2.3 The district health system	6
5.2.4 County hospital	6
5.2.5 The county health system.....	6
5.3 Tertiary Care.....	6
5.3.1 Regional hospitals	7
5.3.2 The National referral hospital	8
5.3.3 Private sector	8
6. Essential health interventions and services	9
6.1 Reproductive, maternal, newborn, child, adolescent health services	11
6.1.1 Maternal and Newborn Care.....	11
6.1.2 Maternal care.....	11
6.1.3 Labor and Delivery Care.....	11
6.1.4 Post-partum care.....	12
6.1.5 Neonatal care	12
6.1.6 Family Planning.....	13
6.1.6.1 Pre-conception family planning	13
6.1.6.2 Post-partum family planning.....	13
6.1.6.3 Emergency Contraception (EC).....	13

6.1.7	Comprehensive abortion care (CAC) or Post Abortion Care (CPAC)	14
6.1.8	Child Health Services	14
6.1.9	Adolescent Friendly Health Services (AFHS)	15
6.1.10	Nutrition	16
6.1.11	Sexual and Gender Based Violence (SGBV)	16
6.2	Communicable diseases	16
6.2.1	Tuberculosis	16
6.2.2	Malaria	17
6.2.3	HIV/AIDS	17
6.2.4	Neglected tropical diseases	17
6.3	Non-Communicable Diseases (NCD)	18
6.3	Mental Health and Psychosocial Support (MHPSS)	18
6.3.1	Substance abuse	19
6.4	Health Promotion	19
6.5	Management of other common diseases	19
6.5.1	Assistive Technology (AT)	19
6.5.2	Eye Health Services	20
6.6	Traditional and Complementary/Alternative Medicine (T&CAM)	20
6.7	Additional areas of priority	20
6.7.1	Emergency Health Services	20
6.7.2	Prison Health Services	21
6.7.3	Emergency Preparedness and Response	21
6.7.4	Care for the Elderly	22
6.7.5	Blood Transfusion Services	22
6.7.6	Healthcare Technology Management	22
7.	Essential Health Care Support Systems	23
7.1	Quality Assurance	23
7.2	Governance, Leadership & Management:	23
7.2.1	Community Leadership and Governance Structure	23
7.2.2	Clinic, Health Center and hospital levels	23
7.2.3	Minimum staffing requirements	24
7.2.4	Health Management Information Systems (HMIS)	24
7.2.5	Monitoring, Evaluations, Accountability and Research	25

7.2.6 Professional Health Care standards	26
8. Pharmaceutical and Supply Chain Services	28
8.1 Diagnostic Services	28
8.2 Infection Prevention and Waste Management	28
8.2.1 Financial Management	29
8.2.2 Equipment for Secondary and Tertiary Services	29
8.2.3 Essential Drug List for Secondary and Tertiary Services	30
8.2.4 Infrastructure for Health Services	30
Annex 1: Liberia’s immunization schedule	0
Annex 2: Essential Interventions	2
Annex 3: Essential diagnostic tests.....	16
Annex 4: Essential drug list	19
Required Drugs.....	19
Annex 5: Essential equipment required.....	35
Annex 5 Minimum Staffing levels Required	43

Introduction

Essential Package of Health Services (EPHS) is used as a policy statement of the health strategy for both development programming as well as for emergency humanitarian action. The EPHS also defines a set of services or interventions to be delivered, as standard, at primary, secondary and tertiary health care level, which are intended to be used for planning and accreditation. It serves as a guidance to healthcare managers on their roles, responsibilities and standards of healthcare institutions. The EPHS also serves as a basis for resource mobilization, allocation, reducing fragmentations, addressing gaps and inequities in access to healthcare. Generally, EPHS design should consider the burden of diseases, cost effectiveness of interventions, budget implications, and equity principles, with priority to the most vulnerable, as well as health emergencies and epidemics.

EPHS I largely covers all the essential elements of healthcare delivery for a healthy nation. It also enables the delivery of health services throughout the counties to community members living within 5 km radius to a health facility. Community members outside the 5 km radius of a health facility are covered by the Community Health Assistant Program (CHAP), in which the supervision is well structured. However, the CHAP is heavily donor-funded and needs to become more sustainable and owned by the communities.

The EPHS I did not include mechanism to identify emerging and re-emerging diseases of outbreak potential, such as Ebola virus disease and COVID-19. Liberia had the worst Ebola virus disease epidemic in 2014 - 2016 because the country was inadequately prepared to provide quality routine health services and respond to public health Emergencies. Key elements that did not work well in the EPHS I are the supply-chain of essential drugs, a robust surveillance system, fit for purpose health workforce, health infrastructure amongst others. Additionally, the implementation of the EPHS I at the primary, secondary and tertiary levels were weak, resulting in poor referral practices and overload at all levels.

The key principles for inclusion of services into the EPHS are based on a Primary Health Care (PHC) model with emphasis on high-impact, evidence-based interventions; integration of services; standardization of protocols and guidelines and procedures.

1. Achievements of the EPHS I

The implementation of the EPHS I during 2011-2021, provided a means of measuring achievements against plans. Through the county health teams (CHTs) services were provided at primary, secondary and tertiary levels; EPHS I achieved the following:

- Substantially addressed and managed diseases and illnesses of high burden.

- Expanded the range of essential services to include: NCD/NTDs, National Community Health, RMNCAH+N , Mental Health, BMET, eye health services among others.
- Increased knowledge and skills of mid-level healthcare workers to ensure provision of quality health services.
- Provided interventions that have been proven to be consistently effective.
- Ensured that all facilities are staffed with the necessary number of qualified staff to provide services.
- Evaluated provision of essential health services to inform decision-making, planning and performance
- Assessed various components and programs and addressed the identified gaps accordingly.

While achievements were recorded in some areas, others were not. The table shows performance of each county against county plans on key indicators and demonstrates achievements of the EPHS I (2011-2021)

2. The purpose of the EPHS II

The EPHS II will serve nine purposes:

- (1) To further expand the standardized primary, secondary and tertiary package of health services and set standards for the three levels of care.
- (2) To provide equitable access to essential health services
- (3) To strengthen the service delivery networks across the counties.
- (4) To ensure adequate and quality services during emergencies, epidemics and pandemics.
- (5) To provide the basis for operational plan development.
- (6) To standardize the referral pathway at all levels.
- (7) To set the minimum requirements for staffing, equipment, drugs and medical supplies.
- (8) To give guidance for continued medical education programs.
- (9) To improve efficiency, equity, accountability and affordability of health services.

3. The Rationale for the EPHS II

The EPHS II will built on the successes of the implementation of the EPHS I and will include additional services that were either not included in the EPHS I or were not prioritized. The EPHS II will serve as the instrument to operationalize the new 10-year National Health Policy (NP) and the 5-year national health strategy (NHS) to obtain Universal Health Coverage (UHC) and achieve Sustainable Development Goal (SDG) 3. During the implementation of the EPHS II over the next 5 years, special attention will be

given to the most vulnerable populations. At the county level, implementation of the EPHS II, will pay special attention to service delivery areas that were deemed weak as captured in the national situation analysis 2021, DHS 2019-2020 and the SARA 2018 to provide more comprehensive services. The EPHS II will also focus on strengthening key support systems that continue to perform poorly.

As a result, of Liberia's ongoing high maternal and infant mortality rates, the EPHS II will continue to emphasize all reproductive, maternal, newborn, child and adolescent health services. This will include access to facility-based delivery services, appropriate malaria prophylaxis and treatment during pregnancy, prevention of mother-to-child transmission (PMTCT) of HIV, maternal and infant nutrition, and family planning services, among others. In addition, some services that were not fully implemented during the EPHS I will be scaled-up. These services include child nutrition, response to sexual and gender based violence (SGBV), adolescent health services, health of the elderly and mental health services. Other services to be strengthened during the implementation of the EPHS II include detection and treatment of reproductive cancers, non-communicable diseases and neglected tropical diseases as well as school health, eye health and prison health.

Some public health concerns, such as the increasing substance use and abuse among youth and young adults were not addressed in the EPHS I. The prevention and management of these public health issues is critical to achieving UHC. Similarly, the public health issues surrounding road traffic accidents and emergency care were sufficiently addressed in EPHS I and require more attention in EPHS II.

In the wake of emerging persistent disease outbreaks, the epidemic preparedness, surveillance and response system will need to be strengthened. Using the Integrated Disease Surveillance and Response (IDSR) framework, Liberia will continue to collaborate with the neighboring countries to coordinate efforts across the borders. The EPHS II shall focus on improving and sustaining the quality of surveillance at all levels, to be able to detect suspect cases of epidemic-prone diseases. The National Emergency Operations Centre (EOC) and the Incident Management System (IMS) will be activated as need be. The public health laboratory network shall be enhanced as part of the Emergency Preparedness and Response system. The National Public Health Institute of Liberia (NPHIL) will continue to facilitate comprehensive disaster risk mapping and development of national strategic plans to mitigate and respond to disasters and diseases of epidemic potential.

4. Criteria for inclusion of a technical area into the EPHS

Decisions on the services to be included in the EPHS II were based on a variety of criteria, from lessons learned from the implementation of the EPHS I, proven cost-effectiveness as defined in international best practice, services already existing in the at the various

levels, to services for which support is available on a continuous basis. The services outlined in the EPHS I will remain to be taken into account in EPHS II, but some identified services will need to be strengthened.

The prioritization of some components such as the non-communicable diseases is a reflection of the burden of disease and the financial protection to population. The following five criteria were relevant during the development of the EPHS I and are still relevant for the services needed in the next five years. They include:

1. The services potential contribution to reducing the burden of morbidity and mortality in Liberia (considering both epidemiological and socio-economic burdens)
2. The availability of interventions that have been demonstrated to be high-impact, safe and effective.
3. The feasibility of implementing those interventions given Liberia's current resource envelop.
4. The potential for sustaining the activity in the medium to long-term.
5. The priorities of the secondary and tertiary care components that are to increase access to health services and improve the quality and outcome of patient care and increase operational efficiency.

The EPHS II establishes the minimum staffing, diagnostic and medication requirements for all health facilities and community health services to improve clinical and managerial performance over the next 5 to 10 years.

5. Levels of Health Care and System Organization

The Liberia Health System is based on the primary health care (PHC) principles. It is comprised of three levels: primary, secondary and tertiary, and these levels are consistent with the national health policy and strategic plan.

The composition of the various levels is as follow:

- Primary Health Care: community health services and health clinics,
- Secondary Health Care: health centers, district and county hospitals and,
- Tertiary Health Care: regional and referral hospitals.

5.1 Primary Health Care

5.1.1 Community health services and cadre of community health workers

The community health workforce is composed of community health assistants (CHAs), community health promoters (CHPs), trained traditional midwives (TTMs) and community animal health workers (CAHWs). The community selects the health workers, and they are

trained by the Ministry of Health to provide community health service packages in the community. Their selection criteria are based on the stipulations of the National Community Health Services Policy 2022-2032.

The CHAs serve catchment communities beyond 5kms or one hour or more walk to the nearest health facility, whilst the CHPs will serve catchment communities within 5kms respectively. The established ratios for the community health cadres as outlined in the Community Health Policy and are as follows:

- One CHA shall be assigned to 40 : 60 households (up to 350 Population)
- One CHP shall be assigned to 60 : 80 households (up to 500 Population)
- One TTM shall be assigned to 20 : 30 households (up to 150 -200 Population)

The Community Health Assistants (CHAs) shall provide preventive and promotive services as well as diagnosis and treatment for children under-five and 6-11 years for malaria only in remote communities (beyond 5KMs). CHAs shall be the community link to the health system—providing services in the community, assisting individuals and groups to access health services, and educating community members on health issues.

The Community Health Promoters (CHPs) serve near-facility communities (within 5KMs) and provide promotive and preventive services with emphasis on referral of patients to the health facility. CHPs provide the same services as CHAs with the exception of curative services (iCCM, Sayana Press, and other injectables). CHPs shall be the link of the community to the health system.

More details on the package provided by the community health cadres are detailed in the Community Health Policy and Strategy.

5.1.2 Health clinics

Clinic Level: The health clinic covers a catchment population of 3,500 to 12,000 people and provides outreach services to the portions of their catchment population outside of a 5km radius. Each clinic is, at minimum, expected to be open 8 hours each day from Monday to Friday and able to provide basic emergency obstetric and newborn care (BEmONC) during these hours.

5.2 Secondary Care

5.2.1 Health centers

Health centers receive referrals from the health clinics and have up to 40 beds and a laboratory capacity. Each health center shall be open 24/7. Each district in the country shall have at least one health center to ensure the availability of health services 24/7. All health centers will have the capacity to provide comprehensive emergency obstetric and newborn care (CEmONC).

5.2.2 District hospitals

District hospitals will cover areas with a dense catchment population, act as a referral to a large network of clinics and if there is no county hospital close by. Each district hospital shall be open 24/7. District hospitals provide the same services as health centers but have a higher clinical capacity comparatively. Districts with district hospitals will not necessarily require a health center. The district hospital has a catchment population of 25,000 to 40,000.

5.2.3 The district health system

The district system is the administrative structure that covers all the community and all health clinics, health centers and district hospital within the district. The district health structure coordinates and collaborate with county and tertiary hospitals in their locals but does not supervise them.

5.2.4 County hospital

The county hospital provides expanded services within the secondary level of care and serves as the referral for the health centers and district hospitals in the county. Each of the 15 counties has a county hospital. The county hospital provides general surgery, pediatrics, internal medicine, obstetrics and gynecological services, including CEmONC. It should have 100 or more beds with an intensive care unit, a laboratory and basic radiology services. To ensure that hospital services are used within a referral system, the county hospital shall have a detached outpatient facility for the provision of primary care. Each county hospital shall provide services 24/7.

5.2.5 The county health system

The county health system is the administrative and management structure of the county that covers the communities and districts within its geographical borders. It oversees the district health systems that are responsible for the implementation of programs and services at the community, district and health facility levels including the county hospitals. It will closely coordinate and collaborate with Tertiary hospital in its local but does not supervise it. A county health officer heads the county health system.

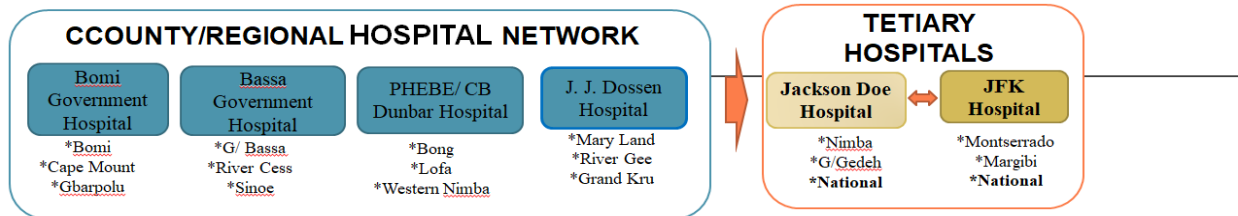
Upon completion, the new site for Redemption Hospital will serve as a model county hospital, offering all the services associated with primary and secondary health care. It will also serve as one of the teaching hospital for training institutions.

5.3 Tertiary Care

The tertiary health facilities are the regional hospitals and the National Referral Hospital (JFK).

5.3.1 Regional hospitals

Regional referral network

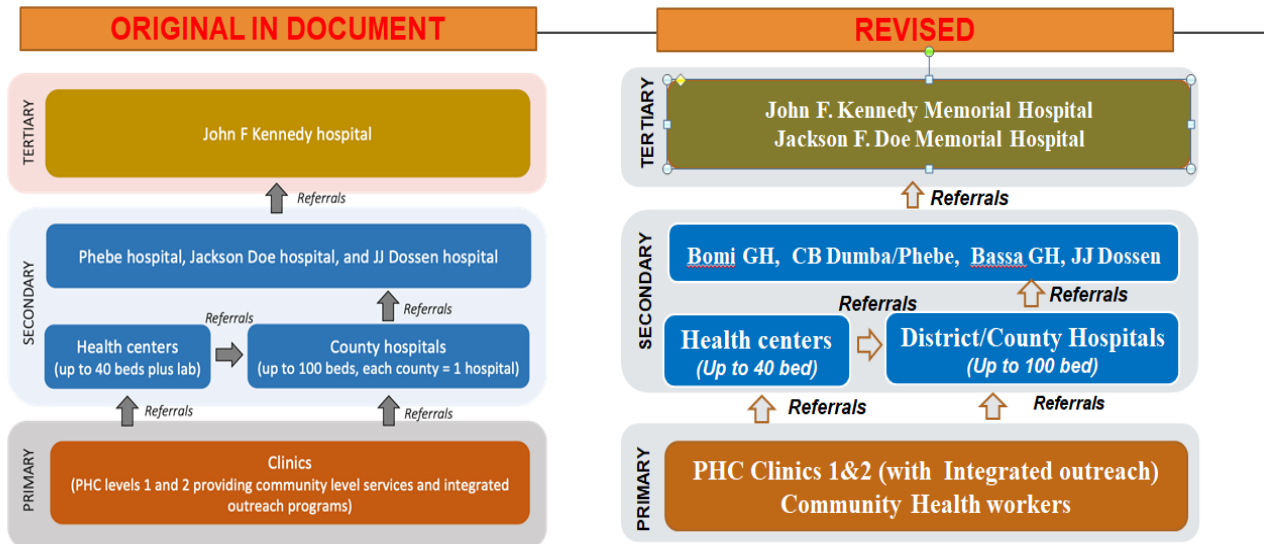


Every county has a county hospital. Health districts may have a health center or a district hospital depending on the population and the non-existence of other type of hospital. All health districts are not equal in size and population, so their needs are not the same. Regional hospital are not different from county hospitals. Some county hospital will be upgraded with higher capacities to take referral from other nearby counties based on the geographic location of a county, accessibility from nearby counties by road, population, and are largely closer to a tertiary hospital then those referring to it.*Health center in the document referrers to comprehensive health center with a General Practitioner or a Task shafting medical partitional with surgical capacity

The regional hospitals serve a geographical catchment area of 3-5 counties, serving as a referral intermediary between county hospitals and the National Referral Hospital. Each regional hospital shall have bed capacity of 100 or more and shall be staffed with specialist physicians in at least the four core specialty areas of internal medicine, general surgery, pediatrics and obstetrics/gynecology. These facilities play an active role in capacity building of the county hospitals and serve as training sites complementary to the National Referral Hospital. A county hospital may be upgraded to a regional hospital in which case they will continue to receive referrals from the district level. They shall be open 24/7. As of December 2021, the regional hospitals include:

- **J.J. Dossen Hospital:** covers Maryland, Grand Kru, River Gee and Sinoe county.
- **Jackson F. Doe Memorial Hospital:** Grand Gedeh, Nimba, River Cess and Grand Bassa county.
- **Phebe Hospital: Lofa Tellewoyan Memorial Hospital**
- **Liberia Government Hospital-Bomi:** covers Grand Cape Mount and Gbarpolu County.
- **Montserrado:** Covers Margibi covered by the national referral hospital and do not have a separate regional hospital.

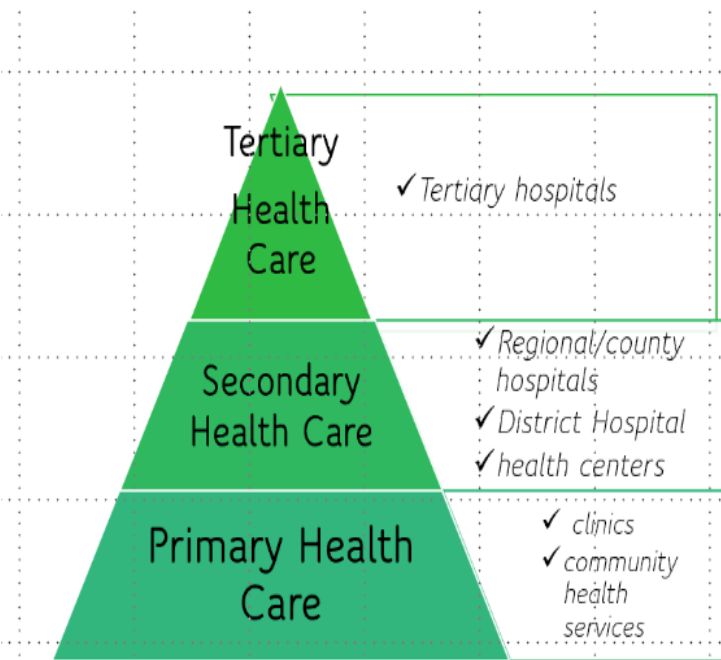
5.3.2 The National referral hospital



Source: Adapted from Gonyon, E. Liberia's COVID-19 response: Applying lessons learned from Ebola. May 2020. PowerPoint Presentation.

Source: Adapted from 'Gonyon, E. Liberia COVID-19 Response: Applying lessons learned from Ebola, May 2020, PowerPoint presentation

5.3.3 Private sector



In addition to the public sector health facilities described above, there are many health care facilities owned and managed by the private sector. The private sector, include faith-based institutions, non-for-profit health facilities and for-profit health facilities. Most of the private health facilities are clinics, which provide only outpatient services. A few private health facilities are at the level of health centers and function as such. Even fewer private facilities are at hospital level and function as such. The private sector plays a pivotal role in the Liberian health care delivery system. These health facilities cater to a sizable

portion of the Liberian population, particularly in the urban counties.

Additionally, there is a best practice arrangement between the Catholic Church of Liberia and the Ministry of Health (MOH), which other religious organizations and other private individuals shall be encouraged to emulate. The arrangement between the Catholic

Church of Liberia and the MOH entails the handover of the management of health facilities from the MOH to the Catholic Church of Liberia. Those facilities were built by the Government of Liberia (GOL) or communities and were initially meant to be operated and managed by the MOH, but are now managed by the Catholic Church of Liberia. The Cestos Hospital in River Cess and Star of the Sea Health Center in West Point Monsterrado County are examples of this and service as a model of effective public-private partnerships to ensure the delivery of the EPHS. This model shall be replicated in other parts of the country as much as possible.

Besides the management arrangement of health facilities, the private sector shall be encouraged to invest in specialized diagnostic and treatment services that are not currently available in the government facilities, such as care for the elderly, cancer services, dialysis center, etc.

6. Essential health interventions and services

All of the priority areas defined in the EPHS I, remain priority today. Some of these areas will be mainstreamed during the implementation of the EPHS II. Core services and their components include the following and some are elaborated on further in this chapter.

Reproductive, maternal, neonatal, child and adolescent health care

- Maternal and Newborn Care
 - Maternal care: pre-conception, antenatal, delivery, postnatal
 - Newborn care: during delivery, after delivery
 - Obstetric and neonatal care
 - Respectful Maternity Care
 - Eliminate Mother to Child Transmission
- Family Planning
 - Pre-conception
 - Post-partum,
 - Emergency contraceptives
- Comprehensive abortion care
 - Safe Abortion
 - Post Abortion
- Child Health
 - Integrated Management of Child Illnesses (IMCI)
 - Expanded Program of Immunization (EPI)
 - New Vaccine Intervention
 - School health
- Adolescent Health
 - Adolescent Sexual and Reproductive Health
- Nutrition
 - Child and Adolescent Nutrition

- Prevention of Stunting
 - Management of Severe Acute Malnutrition
 - Maternal Nutrition
 - Maternal, Infant and Young Child Feeding
- Sexual and Gender-Based Violence (SGBV)
 - Sexual Reproductive Health and Rights
- Blood Transfusion Services
 - Blood Donations
 - Storage and distribution of blood units
 - Management of transfusion reactions

Communicable Diseases

- Tuberculosis
- Malaria
- HIV/AIDS
- Neglected Tropical Diseases
- Other Communicable Diseases

Non-Communicable Diseases (NCD)

- Hypertension
- Diabetes Mellitus
- NCD screening and management
- Cancer
- Other NCDs

Mental Health and Psychosocial support

- Mental health conditions
- Substance abuse

Management of other common conditions

- Eye care
- Ear, Nose & throat

Additional areas of priority

- Epidemic preparedness and response
- Health care for the elderly, including palliative care
- Prevention of Road Traffic Accidents and Care of Victims
- Emergency and trauma care

6.1 Reproductive, maternal, newborn, child, adolescent health services

6.1.1 Maternal and Newborn Care

Maternal and neonatal health continues to be a high priority for the Government of Liberia due to the fact that maternal and neonatal mortality rates in Liberia are among the highest in the world. Most of these deaths are caused by conditions or situations that could have been prevented.

6.1.2 Maternal care

These services include three components and their sub-components and activities.

- **Maternal care** covers the period starting from conception to 42 days after delivery or termination of pregnancy (puerperium). Measures that were introduced to reduce maternal mortality and achieve SDG targets, such as the declaration of maternal and newborn deaths, a reportable event within 48 hours.
- **Pre-conception care** (PCC) is devoted to counseling future mothers and other users about the proper time to get pregnant, family planning, nutrition, etc., as well as to detect and prevent possible causes of complications. Most activities can be performed at all levels of the care system.
- **Antenatal Care** (ANC) includes routine consultations comprising of obstetric history taking, obstetric and fetal assessment, birth and newborn care preparedness planning, de-worming, HIV/syphilis testing and treatment, supply of iron and folic acid, IPTp and TT vaccine. ANC services may be provided at community level during outreaches by skilled providers and at higher levels in the health system. Additional investigations – blood grouping, blood sugar, hemoglobin estimation, urine analysis, or ultrasounds - are reserved for clinic, health center and hospital levels. Suspected cases and management of non-emergency complications such as malaria, anemia, urinary tract infections, are managed at clinic, health center and hospital levels depending on the severity of the condition whilst high-risk pregnancies are referred to Comprehensive Health Centers and Hospitals for management.

To ensure optimal maternal and neonatal health outcomes, high-quality antenatal care is essential. A minimum requirement of eight ANC is essential prior to delivery, with a minimum package of services during those visits. During the implementation of the EPHS II, the WHO recommended eight ANC contacts would be implemented.

6.1.3 Labor and Delivery Care

According to the current guidelines and policies, **deliveries** should only be conducted by a skilled birth attendant (SBA) only at clinic, health center and hospital levels. With the current plan for training, recruitment and deployment of midwives, all health facilities must

provide Basic Emergency Obstetric Neonatal Care (BEmONC). The primary health clinic is the first level where services are provided. Therefore, MOH makes it a mandate to use partograph with all deliveries. The Components of BEmONC include the administration of parenteral antibiotics, parenteral anticonvulsants, uterotonics, using a vacuum extractor or forceps to assist vaginal birth, Manual Vacuum Aspiration (MVA) of retained products, manual removal of a placenta, assisted vaginal delivery and neonatal resuscitation. CEmONC, are the interventions provided to pregnant women and newborns experiencing complications, including all interventions in BEmONC and the capacity to provide blood transfusion and caesarian section.

6.1.4 Post-partum care

The World Health Organization recommends two full assessments within the first 24 hours and an additional three visits on day 3, 7-14 and after 6 weeks¹. The first two assessments should focus on early identification of bleeding and infection and advice around breastfeeding (early initiation of breastfeeding within 1 hour and exclusive breastfeeding), and kangaroo care. To enforce the policy, the MOH has developed a Postpartum and Newborn Protocol, which clearly describes the care to be provided, procedures, and specific time of care during this critical period (MOH 2015c; MOH 2015d). Post-partum hemorrhage is considered the highest contributing factor to maternal death in Liberia and globally.

During the post-partum period, post-natal care (PNC) must be provided to the mother and the newborn. The prescribed standard care for the mother during this period includes check for danger signs, check vitals, serve postpartum vitamin A, provide mosquito nets serve routine Fefol,, counsel on nutrition, personal hygiene, family planning and assess general condition. Routine consultations may be performed at all levels, but complications should be treated at health facilities where there is a skilled birth attendant. PNC includes identification and early management of obstetric fistula, late sepsis and genital prolapse. More advanced care for these conditions shall be provided at health center and hospital levels.

6.1.5 Neonatal care

Neonatal care is classified according to the period when care is provided, between what happens during delivery and after delivery. Care of healthy newborns (Essential Newborn Care Package) shall be provided at all levels where deliveries are conducted. Kangaroo Care (KC) for low-weight babies can be provided at all levels, including at household level. However, early and late complications shall be referred to health centers or above. Newborn resuscitation (help baby breath) shall be attempted at all levels where deliveries are conducted within the golden minute (1 minute) followed by routine newborn care as

¹ WHO guideline (2015) – Postnatal Care for Mothers and Newborns

per The Newborn Care Guidelines. Selected clinics will be upgraded to ensure services for the newborn stabilization units (NSU) and all health centers and hospitals shall have Newborn Special Care Units. The National Referral Hospital and secondary hospital currently have a Neonatal Intensive Care Unit.

6.1.6 Family Planning

6.1.6.1 Pre-conception family planning

Pre-conception family planning is composed of history taking, clinical examination, balanced counselling, decision on the preferred method, distribution/application of family planning methods, identification and management of side effects or complications. Methods should be chosen based on couples'/client's preferences and family situation following adequate education on all available methods.

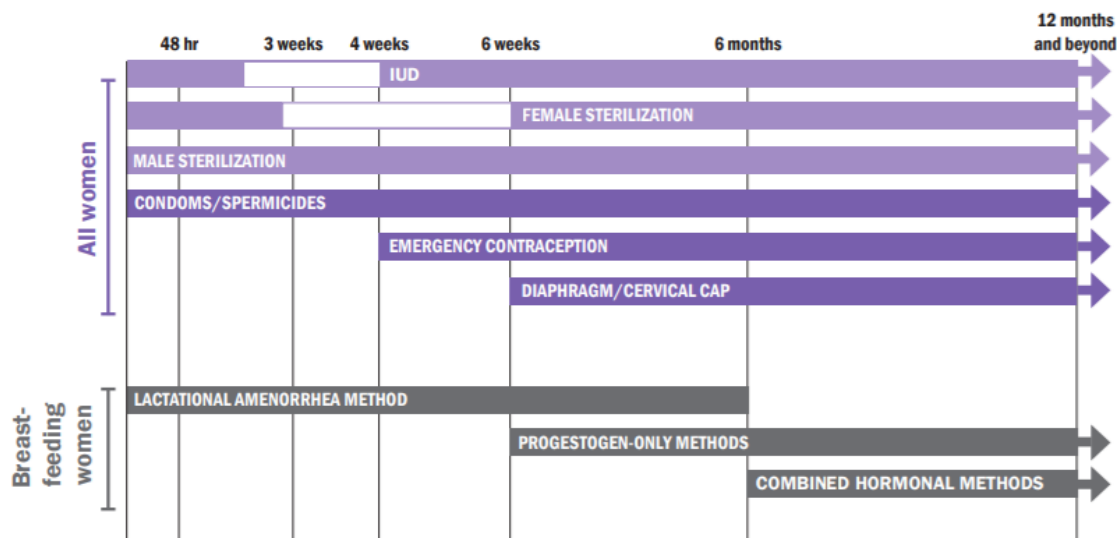


Figure 1: WHO - Programming for post-partum family planning - 2013

6.1.6.2 Post-partum family planning

Post-partum family planning starts immediately after delivery with exclusive breastfeeding and IUCD. After 6 weeks an additional progestogen-only method should be introduced.

6.1.6.3 Emergency Contraception (EC)

Emergency contraception are an effective family planning method and help to reduce unintended pregnancies among girls and women as well as reduce maternal mortality.

EC use is indicated in the following situations:

- (i) No contraceptive was used
- (ii) Contraceptive was used incorrectly,
- (iii) Contraceptive was used correctly but there is a potential risk of failure, or
- (iv) In cases of rape.

EC pills are most effective when taken preferably within 24 hours or maximum 72 hours after the incident. Whilst a copper IUD can be taken as EC within 5 days (120 hours) after the incident. The sooner EC is taken after unprotected or under-protected sexual intercourse, the more effective they are.

6.1.7 Comprehensive abortion care (CAC) or Post Abortion Care (CPAC)

The lack of access to and poor quality of comprehensive abortion care significantly contributes to maternal mortality globally. Liberia Penal Code stipulates that a safe abortion by a licensed physician is justified under any of the following provisions: 1) that it is to save the life of the woman, 2) to preserve physical and mental health, 3) in the case of rape, 4) in the case of incest, or other felonious intercourse or 5) in the case of fetal impairment. Comprehensive abortion care shall be provided at all health facilities and cases needing advance care shall be referred to the next level of care under the legal framework of the country. Comprehensive post-abortion care (CPAC) will include interventions in: a) Emergency treatment for complications of spontaneous or induced abortions to prevent or manage complication, such as shock, bleeding or hemorrhage, infection and sepsis and intra-abdominal injury, b) Family planning in which case there should be counseling and suitable method of family planning commodity used appropriate for the circumstances, c) other sexual reproductive health (SRH) services which include, STI screening, management and counseling (including contact-tracing), HIV counseling, testing, treatment and/or referral, and screening, management and/or referral for confirmed or suspected gynecological pathologies.

6.1.8 Child Health Services

Child survival and development is one of the components of the EPHS I and remains a top priority for the health sector to reduce child morbidity and mortality. The EPHS II has identified key interventions to improve access to and quality of child health services in the country. These interventions include but are not limited to well-baby clinics during which time children are be evaluated, weighed, immunization, and caretakers are given nutritional and healthy behavior counselling. Integrated Management of Childhood Illnesses (IMCI) immunization services and nutrition services are an essential component of the well-baby clinics.

To a large extent, child health services are integrated with maternal health services.

The **integrated management of childhood illnesses** (IMCI) is to be provided at all levels of the system. Starting with an assessment of danger signs and a strategic approach to management of the conditions. Sick children should be treated at different levels depending on the severity of the case. Severely ill children should be referred to a health center as soon as possible, while mild and moderate cases may be treated at community and or clinic facilities. Community IMCI (cIMCI) should be implemented at

community level by trained community health assistants, and includes provision of information on the benefits of exclusive breastfeeding, weaning foods. etc.

6.1.8.1 Expanded Program on Immunization (EPI)

To address low routine immunization coverage, the MOH has instituted programs, including the Reach Every District (RED) approach and use of the CHAs to create demand for and improve access to immunization services. These and other strategies have improved immunization access and coverage over the last decade. In addition to the vaccines in the routine immunization program, the Liberia EPI has introduced additional vaccines, these include the inactivated polio vaccine or IPV, pneumococcal, and rotavirus for the childhood vaccination and HPV vaccine for females of 9 years. Unfortunately, coverage of fully vaccinated children remain around fifty percent. Efforts will be made to identify newer strategies to create demand and utilization, while strengthening the existing strategies. The Liberian immunization schedule can be seen in Annex 1.

6.1.8.2 School Health Services

School health services are important components of the EPHS II. In a country like Liberia where most students do not have access to complete physical examination prior to school entry or annual physical examination, school health program helps in early detection of conditions in school-going children that may require immediate attention. School health services program require strong collaboration between the Ministry of Education (MOE), Parents and Teachers Association and school administration and the Ministry of Health. The school health services include, but are not limited to eye care, counselling, mental health, age-appropriate personal hygiene, reproductive health and nutrition education. The services shall be integral parts of county health services. At the moment, school health programs are either non-existent or limited in scope in schools. For mental health, seven school-based clinics (SBCs) (4 in Montserrado and 3 in Margibi) provide health and mental health care to a student population of over 10,000 students. SBCs are mini health clinics situated on school campuses and managed by trained child and adolescent mental health clinicians and healthcare workers to provide both medical and psychological services to children and adolescents. There is a need to scale up these SBCs to other schools around the country.

6.1.9 Adolescent Friendly Health Services (AFHS)

This component focuses on counselling on issues ranging from safe sexual behavior, early and child marriage to substance abuse, family planning information and services, screening and management of sexually transmitted infections (STI), trafficking and mental health. The introduction of Human Papilloma Virus (HPV) vaccine has been introduced in Liberia and will be available or information on its availability will be provided at all AFHS.

6.1.10 Nutrition

6.1.10.1 Maternal and Newborn Nutrition

The prevalence of stunting and MAM and SAM are high in Liberia. Nutrition services are being provided in the 15 counties with 21 in-patient feeding (IPF) facilities and 225 out-patient therapeutic (OTP) facilities all integrated into the routine health services. However, these services need to be strengthened and scaled up to additional facilities to make them available to more individuals who need them. Efforts will be made to scale up to all public facilities in the country by the end of the implementation period of the EPHS II.

6.1.10.2 Child nutrition

The Infant and Young Child Feeding (IYCF) Package is a global UNICEF and WHO strategy that helps to prevent malnutrition and micronutrient deficiency in under 2-year-old children, it entails exclusive breastfeeding for the first six months, after which nutritiously appropriate, adequate, and safe complementary foods should be introduced along with continuing breastfeeding to two years and beyond. Counselling on these practices is a pivotal part of the EPHS II.

6.1.11 Sexual and Gender Based Violence (SGBV)

SGBV remains a big challenge in Liberia and is of public health concern. Clinical management of rape and intimate partner violence requires a multisectoral approach that includes but is not limited to provision of emergency care, emergency contraceptives, screening and management of STIs and HIV, vaccination for Hepatitis B, wound care, mental health and protection services. This care should always be provided with a survivor-centered approach, where the survivor is in charge and lead of the services, he/she requires or needs. All levels should be able to provide the counselling and initial care and refer if needed.

6.2 Communicable diseases

This service includes interventions on the main communicable diseases globally (tuberculosis, malaria, HIV/AIDS), as well as on the so-called Neglected Tropical Diseases, a group of infectious diseases –caused by viruses, bacteria, protozoa and helminths— of variable degree of importance, and affecting mostly poor populations.

6.2.1 Tuberculosis

Diagnosis of **tuberculosis** through smear lab test is possible at county hospital, regional and national referral hospital and TB-clinics. Several other places offer GeneXpert laboratory services. Treatment for tuberculosis should be provided at all health facilities.

The country has a TB-program, the counties and districts have TB focal points, that track the implementation of the TB program.

6.2.2 Malaria

Malaria is endemic in the entire country. Diagnosis is mostly done through rapid diagnostic tests, which are available at all levels, including at the communities. Microscopy for parasite count can be done at health center level and above. Frequent national mass distributions of long-lasting insecticidal nets (LLIN) occur and the LLIN distribution is part of the antenatal care program.

6.2.3 HIV/AIDS

HIV/AIDS-related interventions are provided at various levels. Prevention-of-Mother-To-Child-Transmission of HIV (PMTCT) is available at all health facilities. Voluntary counselling and testing and routine HIV testing in pregnancy is also available at all health facilities, while provision of ART only available at all health facilities. CD4+ count should be provided at all health clinics and above, if it is not available samples can be transported via the hub. Viral load testing is done via some GeneXpert and efforts will be made to scale up the testing to all GeneXpert. Overall, the country is making efforts to achieve the new set 95-95-95 global HIV/AIDS strategy.

6.2.4 Neglected tropical diseases

County efforts for the prevention, control and elimination of Neglected tropical diseases (NTDs), are in line with new global strategy and road map for neglected tropical diseases 2021–2030 “Ending the neglect to attain the Sustainable Development Goals: In this effort, the program will revise its NTDs master plan in an integrated manner in line with the MOH health policy, plan and EPHS. Develop guidelines, training modules and tools will enhance the implementation of the NTDs guidelines. Liberia shall continue active and passive disease surveillance with focus on community case detection by CHAs/CHPs, referral of cases and support home based self-care management for priority NTDs including lymphoedema, leprosy etc. Additionally, CHAs/CHPs will be capacitated to conduct Mass Drugs Administrator Treatment to targeted population in endemic communities. Key to disease control is strengthening clinical case confirmation and health facility case management including requisite surgical procedures where required and ensure that laboratory confirmation is conducted for diseases that require lab confirmation as pre-requisite for initiation of treatment. The MOH through the NTDs program will prioritize health services integration among other strategies to maximize effective health outcomes with minimum resources. This means that the program will intensify and scale up the integration approach in all counties and integrate mental health and stigma reduction in the NTDs services delivery and promote reintegration of NTDs recovered

cases into the communities. Strengthen and continue rabies prevention and control efforts through the collaboration with in the 'one health approach' that exists with the Ministry of Agriculture, MOH, Ministry of Education and other partners. There is a need to institute programme and projects evaluation mechanisms to demonstrate intervention effectiveness and impact and value for money.

6.3 Non-Communicable Diseases (NCD)

The National NCD Policy and Strategic Plan (2016-2021) was launched and additional guiding policies, such as a National Cancer Policy and Radiation Guidelines, were completed. Clinical guidelines and protocols will offer needed guidance in provider's clinical training and enhance the quality-of-care delivery in NCDI management.

The establishment of NCD clinics at the county and district hospitals as well as selected private hospitals will be scaled up to cover all countries to make the services accessible to the population. The MOH in collaboration with partners will design care for NCDs at the primary and community level. The four major categories of NCDs (Diabetes Mellitus, Chronic Respiratory Disease, Hypertension and Cancer) will be targeted for immediate inclusion, while protocols for other NCDs will be developed and added to the clinic in phases. Screening, awareness and health education will be done at the community level by CHAs and CHPs. Patients screened and diagnosed at the community level will be referred to the nearest health facility for management. The CHAs and CHPs will help to monitor patients at the community and ensure that they show up for return visits.

For cancer emphasis will be on providing screening and care for the four prevalent types of cancer, namely cervical, breast, childhood (e.g., Burkitt's lymphoma retinoblastoma) and prostate cancer. At the NCD facilities screening and provisional diagnosis will be made, specimen collection done and sent to the pathology lab at JFK. Health education, surgical excision and palliative care will also be provided at these facilities. A national referral center for cancer will also be established at the JFK Memorial Hospital with both radio and chemotherapy capacity during the implementation of the EPHS II.

6.3 Mental Health and Psychosocial Support (MHPSS)

MHPSS is organized by MOH in collaboration with partners. The Mental Health Policy and Strategic Plan for 2016 – 2021 stipulated that each county will have a network of mental health services, including wellness units, to provide in-patient care for acutely ill patients who cannot be managed at home and this guidance will continue. Each wellness unit should be attached to the county hospitals and should have at minimum 10-bed inpatient ward, to provide specialize mental health services. Currently only four counties have a wellness unit. To bridge the limited number of specialized psychiatrists, mental health clinicians were trained, and mhGAP training by WHO was conducted throughout the country. Efforts will be made to continue the strengthening of the mental health

services. There is a need to integrate mental health and psychosocial support at all levels and routine services (for as example the “thinking healthy program” that is integrating mental health as a part of the routine ANC services).

6.3.1 Substance abuse

In light of the current substance abuse public concerns, that require specialized care, separate programs have been designed and people trained to address and manage addictions. Substance abuse needs to be mainstreamed across various sectors, including education. While the regional bodies have to set out rules and regulations on drug trafficking, patients should be supported at all levels. Having a role model or a mentor can help during rehabilitation phase. Supportive family, cognitive behavioral therapy, medication to decrease cravings or block withdrawal symptoms will be needed to treat the victims.

6.4 Health Promotion

The National Health Promotion Division coordinates all health promotion activities in collaboration with programs and partners in Liberia to create demand for health services and enhance health seeking behavior through the use of the formal health system for positive behavior change. Implementation of Health Promotion activities cut across all programs; it is at all levels of the health system. In order to meet its mandate, Health Promotion works through five subunits, namely: Messages and Materials Development; Advocacy, Community Engagement and Social Mobilization; Health Communication and Research; Communication and Resource and Risk Communication and Community Engagement.

Health Promotion seek to increase stakeholders’ participation and ownership for the attainment of better health outcomes for the population. It involves inter-sectorial collaboration and multi-disciplinary actions. Details are found in the National Policy and Strategic Plan on Health Promotion (2022-2026).

6.5 Management of other common diseases

6.5.1 Assistive Technology (AT)

Currently, Liberia has an estimated population of 4.9 million people, and recent estimates show that the prevalence of non-communicable diseases and injuries (NCDIs) are on the rise, which will also lead to an increase in persons requiring assisted technology (AT). Assistive technology (AT) such as wheelchairs, hearing aids, spectacles, prostheses, etc. help to maintain or improve a person's functioning, independence, participation in society. Persons with disabilities (PWDs) and the aging population make up a significant portion of individuals requiring AT support to enhance their living, productivity, and

independence. An organized system of AT care will be integrated into routine health facilities service delivery.

6.5.2 Eye Health Services

The burden eye diseases continue to be high in Liberia. Blindness due to cataract is completely preventable if diagnosed and managed in time. The MOH will collaborate with all eye health partners to ensure that eye health services are integrated into all county health systems including school health services. Public education on causes and management of blindness is a hallmark to prevention of blindness and will be enforced.

6.6 Traditional and Complementary/Alternative Medicine (T&CAM)

Traditional and complementary/Alternative medicine (T&CAM) is an important and often underestimated health resource with many applications invested in Improving equitable access to safe, quality and effective traditional health services that can potentially meet communities' needs and build sustainable and culturally sensitive primary health care. As the number of traditional healers in Liberia continue to increase, the division of Complementary medicine seeks to address the safety of T&CAM services with focus on mapping of T&CAM Practitioners, Capacity building, collaboration with Western Medical Practitioners (Primary Health Facility) and Community Health Workers.

The Division's **primary objective** is to strengthen the leadership and governance of traditional medicine practices, mobilization of resources, promote referrals to health facilities, protection of intellectual property rights, improving human resource planning, establishment of a National Botanical Garden and research laboratory for standardization of traditional medicine products. Further details can be obtained from the Division's policy and strategic plan.

6.7 Additional areas of priority

6.7.1 Emergency Health Services

Since the introduction of motorcycles and small *kekes* as a means of public transport, the accident rate has increased rapidly, and it has become a public concern. Many of the accidents involving motorcycles and *kekes* are very serious or even fatal. The health system at the moment is not prepared to handle these accident cases. Therefore, primary, secondary and tertiary facilities need to be equipped to handle emergencies efficiently and to refer cases quickly to the next level when needed. Our referral system needs to be strengthened in the revised EPHS II to make it effective and efficient.

The overarching objective of emergency health services is to ensure that the highest quality of emergency medical care is provided to the people of Liberia through an integrated and coordinated system of services; and to foster the medical and health resiliency of our community during disasters and emergencies. And at the same time, providing leadership that is proactively improving medical and health emergency preparedness and emergency medical services.

Activities of the emergency medical response include but not limited to providing pre-hospital care on the scene of an incident/accident, transportation of the sick and injured, training of medical and non-medical personnel on basic first aid and CPR management, providing respiratory therapy (airway management) in health facilities and regulating all ambulance services (public and private). EPHS II will continue to reinforce these activities and ensure adequate supply for the respective departments.

6.7.2 Prison Health Services

Currently, six out of the sixteen prisons have clinics. All 16 prisons should have at least a designated professional health worker that conducts weekly/twice weekly consultations in the prisons and make appropriate referrals. All of these clinicians should be trained in the area of mental health. Through the county health teams, medications are supplied to the prisons. The Monrovia Central Prison is supplied through the regular supply chain system as it is being treated as a clinic considering the number of inmates. Other prisons are supplied through the assigned clinician during visitations. Meanwhile, with coordination with partners, medications are supplied to prisons in the respective assigned areas of those partners. This process will continue during the implementation of the EPHS II.

6.7.3 Emergency Preparedness and Response

Health systems around the world, including in Liberia, are being challenged by the prevention, care and treatment of emerging and re-emerging diseases. Liberia continues to work towards strengthening the national disease surveillance system guided by the Integrated Disease Surveillance and Response [IDSR] strategies and the International Health Regulations. Its implementation is aimed at building health system capacity for case detection, case confirmation, case registration and notification, data management and analysis, outbreak preparedness and response, and feedback. The National Public Health Institute of Liberia (NPHIL) has the responsibility to lead the emergency preparedness and response efforts. They work in the areas of capacity building, epidemiology and surveillance and response, laboratory and public health diagnostics, environmental and occupational health, public health and medical research and development, and global health and partnerships.

6.7.4 Care for the Elderly

Care for the elderly is an area of concern as it involves dedicated support for elderly persons who may be living with other family members or living alone. At the moment, there is no government support system of elderly in need of additional care. Elderly citizens are left vulnerable to diseases especially non-communicable diseases. Unlike other countries, Liberia has no shelter for the elderly in need. Geriatric care management is the process of planning and coordinating care of the elderly and others with physical and/or mental impairments to meet their long-term care needs, improve their quality of life, and maintain their independence for as long as possible. And palliative care and hospice if needed and appropriate. The EPHS II includes activities that geriatric care management at all levels.

6.7.5 Blood Transfusion Services

Blood Transfusion Services encompasses various aspects and components of the transfusion chain, from the potential donor (selection of donors, blood collection, blood testing, blood processing, blood storage, blood transportation) to the potential recipient (selection and distribution of appropriate components for transfusion), and all follow-up care provided post donation and transfusion.

The service provides epidemiological or surveillance information in terms of sudden increase in occurrence of diseases by testing biomarkers. To efficiently perform this, data from all levels of the service chain need to be appropriately collected, recorded and reported. Further details can be obtained from the Blood Transfusion services National Policy, Strategic Plan and Guidelines.

6.7.6 Healthcare Technology Management

Healthcare technology management at all levels is essential for a functioning health system, medical equipment and devices in particular are crucial in the prevention, diagnosis, and treatment of illness and disease as well as in patient rehabilitation.

Biomedical Equipment Technicians at all levels of the health system shall be provided with the equipment necessary to discharge the functions assigned to them. The Ministry will ensure that all technology used is safe, secure and properly utilized through continuous staff training, routine maintenance and renewal and that adequate funds will be allocated to all levels for this purpose. The Ministry will ensure the standardization of basic equipment through the EPHS accreditation process as well as by implementing the MOH Healthcare Technology Management Framework. Moreover, a comprehensive donation policy will be maintained and enforced for medical equipment.

7. Essential Health Care Support Systems

7.1 Quality Assurance

Improving quality is a crosscutting intervention for all delivery systems. Quality assurance will therefore be a part of county planning and implementation, services delivered to clients, and management procedures that are necessary for the efficient operation of systems. The MOH will focus on four aspects of quality assurance:

1. Institutionalizing quality assurance systems.
2. Improving patient safety.
3. Enhancing clinical practice, with emphasis on WASH and infection prevention and control.
4. Improving management systems.

All government and private facilities, as well as health care training institutions, are required to establish quality improvement programs. Partnerships shall be formed with stakeholders at all levels of the health delivery system, including regulatory and governing bodies, to foster collaboration for adherence.

7.2 Governance, Leadership & Management:

7.2.1 Community Leadership and Governance Structure

The community leadership and governance of the community health program shall be institutionalized pursuant to the structure outlined in the National Community Health Policy and Strategy.

7.2.2 Clinic, Health Center and hospital levels

At clinics and health centers, the officer in Charge (OIC) is responsible for the facility and reports to the District Health Officer (DHO) who, in turn, reports to the County Health Officer (CHO).

At hospital levels, a board of directors will work with the medical director to oversee facilities. The board shall include community representation and will be appointed by the county superintendent and community leaders. Each hospital board of directors will oversee the work of the hospital management teams for routine facility operations.

To ensure effective governance, the MOH shall establish the following: (1) Clear national standards for services and treatments (2) Clear objectives for hospital services articulated through strategic and annual plans (3) Local delivery of high-quality healthcare, and (4) Effective monitoring of progress. Each level of care:

- A published hospital management policy
- An annual, costed, operational plan.
- Standards for services and treatment based on the EPHS guidelines.
- A standardized procedure for monitoring quality of care.
- A, Quality management team that conducts internal ethical review for patient safety, accountability in cases of ethical breach

7.2.3 Minimum staffing requirements

The EPHS encourages the use of flexible staffing patterns based on each facility's workload. The MOH shall conduct workload analysis every two and half years to support staffing needs across all levels of healthcare. The facilities should have the minimum staffing requirements at health centers, district, county and regional hospitals, *as detailed in annex 6*.

7.2.4 Health Management Information Systems (HMIS)

HMIS consists of sub-systems designed for data collection, processing, analysis, and reporting. It improves effectiveness and efficiency through better planning and management at all levels of the health delivery system. At the facility level, staff will be trained and supervised to review their own monthly HMIS reports so that they can more effectively monitor their own performance. At the county level, the system will generate detailed, disaggregated data to guide decision-making on programmatic and operational issues affecting the whole or parts of the county. Information will be analyzed at the central level to inform policymaking, planning, resource allocation and operational oversight.

CHTs shall ensure that healthcare forms and registries are available at all facilities and that reports from primary facilities and communities will be collected on a monthly basis while information on reportable diseases are collected on a weekly basis. An exception is maternal death, which shall be reported within 24 hours and a death audit conducted by an audit committee within 48 hours, regardless of whether the death occurs in the community or at a health facility. In addition, the MOH will ensure an electronic reporting system is institutionalized to complement data compilation and reporting in all counties.

The impact of HMIS is contingent upon its routine use by decision makers to inform programs and policies. At the facility level, further training and mentorship is required to build a culture of routine data analysis and use for action, such as budgeting, quality improvement, and patient care.

(Reference the National HMIS Guidelines for County Health Teams as well as the National HMIS Procedures Manual for Data Collection) Analysis and Use at health facilities.

The Medical Records Management System is paramount to improving patient care and treatment. The EPHS emphasizes a well-managed medical record system in accordance with the Guidelines for Improving Health System Management. To strengthen and expand medical record systems, essential equipment and staff are required across the care continuum.

7.2.5 Monitoring, Evaluations, Accountability and Research

At the core of the quest to deliver high quality, responsive and effective health services, is the need for emphasis on development and sustenance of a robust information management, Monitoring, Evaluation Research Accountability and learning system. It entails the development of a robust, evidence based, cost effective and sustainable tracking and accountability system for collecting, storing, analyzing and finally transforming data into strategic information so it can be used to make informed decisions for program management and improvement, policy formulation, and advocacy.

The Ministry of Health shall therefore adapt its Health Information System, Monitoring Evaluation and Research Policies and strategic plans to the monitoring and Evaluation needs of the EPHSII. Periodic Service Availability and Readiness Assessment, Harmonized Health Facility Assessments, etc. will be conducted to service availability, service readiness and quality as per the approved benefit packages for each level of health service delivery system. The EPHS-2 Implementation fidelity shall be assessed regularly to inform management and adaptation decision and to minimize potential implementation risks.

Service accountability is cardinal requirement at each level of the health care delivery system. Service providers shall be provided the requisite standardized, tools, knowledge and skills for recording, accountability and monitoring of services for evidenced based client management and better health outcomes. The range of options include the use of manual paper-based system, where applicable, a digital platform at the point of service delivery for transactional reporting (EMR/EHER), or a combination of a manual paper-based system and a digital solution for aggregate reporting, etc. The application and choice of option will depend on ICT infrastructural readiness and other feasibility parameters.

The Monitoring and Evaluation interventions for a successful EPHS-2 implementation shall include the development of an accountability and learning framework with due emphasis on standardization of tracking, data collection and reporting tools, procedures and processes; the building of sustainable capacity for data collection, reporting, analysis and use at each level of the health delivery and management system, the design or adaptation of simple, cost effective, tested and proven, sustainable technologies and software solutions for data automation, tracking and reporting. The system shall endeavor to maintain a balance between its dual emphasis on data collection and Information use such that each level of the service delivery system realizes benefits of their respective commitments and time investment in data collection, collation and

reporting through their respective access to timely strategic feedback. The use of innovative and efficient feedback alternatives will be explored for each level to increase visibility of actionable performance data for better planning. Such could include considerations for implementing a health facility and community score card system, the implementation of mHealth platform for a bi-directional performance dashboard system, the integrated approach to data analysis and evidence generation, etc.

The M&E policy shall articulate policy measures for assurance of client safety and confidentiality from the record management, handling, storage, archiving and disposal perspectives. It shall also specify condition for data sharing through appropriate data sharing policy statements.

7.2.6 Professional Health Care standards

Health professionals addresses the holistic wellbeing of an individual to achieve good health. Health professionals play a vital role in all Health Centers and Hospitals as the largest workforce cadre. Health Professional practice consists of assessment, diagnosis, planning, implementing and evaluating in order to promote and maintain good health, manage illness and injury and restore optimal function. The EPHS emphasizes the following professional care standards:

- To provide high quality and effective care to patients.
- To maintain ethical standards at all times.
- To promote good Health care worker - client relationships.
- To keep the patient informed and involved in his or her own care.

The EPHS requires that all hospitals shall have a healthcare workforce and communication plan. This should include:

- Established management structures and job descriptions that detail the roles and responsibilities of each healthcare professional, including reporting relationships.
- A set minimum of healthcare professional to patient ratio for each inpatient in-patient/ out-patient services taking into consideration the skill mix of the staff.
- Procedures to maintain minimum healthcare professional to patient ratios especially in priority areas;
- Identified areas of priority where the healthcare professionals count must at all times meet the minimum ratio requirement (e.g., intensive care unit).
- Written policies describing the responsibilities of all healthcare professionals;
- Established guidelines for verbal and written communication about patient care. . .

The healthcare professional is responsible to make sure that the patient's medical record is complete with all necessary information in the proper sequence.

- **Written Communication:** Refers to written documentation of all findings, progress, care and treatment provided to the patient by the medical team. It allows

immediate and comprehensive understanding of a patient's care and promotes the exchange of information among all members of the health team.

- **Verbal Communication:** Refers to the act of reporting and sharing of information with members of the health team about the patient's progress and status.
- **Standardized procedures** for the safe and proper administration of medications by healthcare professionals or designated clinical staff.

8. Pharmaceutical and Supply Chain Services

The MOH, being cognizant of the problem posed by stock-outs and realizing the need to improve supplies of medical and non-medical materials, developed a ten-year national supply chain master plan. This plan emphasizes the effective, efficient and reliable procurement and distribution of supplies vital for the delivery of the EPHS. The county pharmacist is the primary staff responsible for effective implementation of pharmaceutical services in the county. As such, s/he is responsible to design a supply chain plan to ensure that all primary facilities receive a regular supply of medical and non-medical consumables including drugs. CHTs shall disseminate and institutionalize SOPs for supply chain management, essential drug lists, treatment guidelines, management guidelines and pharmaceutical waste to all Health Centers and Hospitals. The National Supply Chain Master Plan should be the guiding tool to ensure effective, efficient, reliable procurement, distribution and utilization of drugs and medical supplies. Treatment guidelines, the essential medicine list and National formulary shall be used to strengthen secondary and tertiary pharmaceutical services. All hospitals shall establish a drug therapeutic committee to oversee the forecasting, quantification, Antimicrobial Resistance (AMR) stewardship program to inform rational use of drugs and adverse reactions. All hospitals shall have a pharmacy with qualified dispensers and pharmacists.

8.1 Diagnostic Services

Diagnostic services underpin the practice of modern medicine by providing information to clinicians to effectively assess the status of a patient's health, make accurate diagnoses, formulate treatment plans, and monitor the effects of treatment. They are also a major source of health information for epidemiological and AMR surveillance purposes and are often the first sites of confirmation for disease/ events outbreaks. To provide such functions, laboratory data must be recorded and reported through the appropriate channels in an accurate and timely manner.

The laboratory system in Liberia has recently been strengthened by the development of the National Laboratory Policy and Plan. The full implementation of this plan will systematically strengthen laboratory capacity and ensure the design and introduction of appropriate laboratory services at all levels of healthcare. At the secondary level, Health Centers will be expected to provide basic laboratory services. District Hospitals are the true entry point for diagnostic services and should offer a full set of laboratory services. County and Regional Hospitals will also provide full laboratory services as well as imaging services. High-level imaging services (e.g., MRIs, CT scans, etc.) should be referred to the national hospital- JFK MC.

8.2 Infection Prevention and Waste Management

Those providing and receiving care in a health facility are at risk of acquiring and

transmitting infections through exposure to blood, other body fluids or contaminated materials. In order to improve the effectiveness of facility infection control measures, CHTs shall ensure that all facilities have appropriate operational and technical capacities including equipment, supplies and infrastructure necessary for infection prevention and control and antimicrobial resistance (AMR). PPEs should be provided at all times in health facilities (Private or Public) to promote universal precautions.

All facilities should adhere to the MOH National Infection Prevention and Control Guidelines. All District Health Teams shall designate at least one individual who will be responsible for ensuring efficient implementation of the national SOPs for infection prevention and waste management at all district facilities. Each facility will design and implement Environmental Management and Mitigation Plans (EMMP). These guidelines are available through the Environmental Health and occupational Safety Unit. As Occupational Safety programming is being developed, the EPHS promotes occupational health by ensuring a healthy and safe workplace. This includes (a) maintaining records of work-related injuries, sicknesses, accidents and fatalities to help assess and mitigate future risks, (b) training and supervising workers in the maintenance and use of equipment and supplies to prevent accidents and reduce risks and vulnerabilities, and (c) providing HIV/AIDS prevention, post-exposure prophylaxis, treatment and care.

8.2.1 Financial Management

Having clear financial management procedures is important to efficiently deliver the EPHS. To learn more on budgeting principles, steps and formats; the organizational structure and people required for smooth financial management; accounting policies, procedures and chart of accounts and revenue collection, please contact MOHSW's Office of Financial Management. Basic budget creation and procedure guidance can also be referenced in the Guidelines for Improving Health System Management: Budgeting for Health facilities.

8.2.2 Equipment for Secondary and Tertiary Services

Equipment and medical supplies are essential inputs for quality health service delivery, and routine maintenance and proper use are key to maximizing availability and impact. Preventive maintenance, including the requisite staff and spare parts, as well as training end users, should be planned and budgeted for from the point of procurement to the point of care. Increasing the quantity and training quality of technicians will be an important step to protect investments in medical equipment. Infrastructure support is also required to ensure the lifespan of medical equipment, for example, by ensuring consistent electricity and proper storage and security. Details will be in annex 5.

8.2.3 Essential Drug List for Secondary and Tertiary Services

Drugs and other medical supplies are an essential part of delivering quality health care. Ensuring the reliability and integrity of these essential drugs is absolutely critical to the delivery of the EPHS. Strengthening the supply chain (including delivery of supplies and reporting from facilities) is a priority, as is monitoring and enforcing rational use of drugs and reducing the prevalence of counterfeit drugs.

The below essential drug list is routinely updated to align with the latest evidence and international guidelines from the WHO and USAID. As detailed in annex 4.

8.2.4 Infrastructure for Health Services

Sound Infrastructure provides an effective environment for the planning, delivering and evaluation of quality health services. Appropriately planned and designed plus well-constructed and properly maintained physical health infrastructure are vital to achieve the following outcomes:

- Equitable access to health services.
- Efficiency and effectiveness of medical care
- Improved utilization of health services
- Reduced transmission of infectious diseases
- Minimized construction, maintenance and operational costs

National Health Infrastructure shall be guided by the MOH Standards for Health Infrastructure and complemented by all National Infrastructure Regulations / Standards from other government agencies including the Ministry of Public Works (MPW), the WASH commission, the Environmental Protection Agency (EPA) and the Liberia Electricity Regulatory Commission (LERC). The CHTs shall be guided by and collaborate with the MOH Infrastructure Unit to ensure compliance in planning, executing, maintaining and monitoring health infrastructure projects or programs.

Annex 1: Liberia's immunization schedule

Immunization Schedule for children <2years					
	VACCINE	AGE	SIT	ROUTE	Dose
1	BCG	0-11 months	Upper outer right arm	Intra-dermal	0.05 ml
	OPV 0	At birth	Mouth	Oral	2 drops
2	OPV 1	6 weeks (1 month 2 weeks)	Mouth	Oral	2 drops
	Penta 1	6 weeks (1 month 2 weeks)	Outer left thigh	Intra-muscular	0.5 ml
	Pneumo 1	6 weeks (1 month 2 weeks)	Outer right thigh	Intra-muscular	0.5 ml
	Rota 1	6 weeks (1 month 2 weeks)	Mouth	Oral	1.5 ml
3	OPV 2	10 weeks (2 months 2 weeks)	Mouth	Oral	2 drops
	Penta 2	10 weeks (2 months 2 weeks)	Outer left thigh	Intra-muscular	0.5 ml
	Pneumo 2	10 weeks (2 months 2 weeks)	Outer right thigh	Intra-muscular	0.5 ml
	Rota 2	10 weeks (2 months 2 weeks)	Mouth	Oral	1.5 ml
4	OPV 3	14 weeks (3 months 2 weeks)	Mouth	Oral	2 drops
	Penta 3	14 weeks (3 months 2 weeks)	Outer left thigh	Intra-muscular	0.5 ml
	Pneumo 3	14 weeks (3 months 2 weeks)	Outer right thigh	Intra-muscular	0.5 ml
	IPV	14 weeks (3 months 2 weeks)	Outer right thigh	Intra-muscular	0.5 ml
5	Measles (MCV 1)	9 months	Upper outer left arm	Subcutaneous	0.5 ml
	Yellow Fever	9 months	Upper outer right arm	Subcutaneous	0.5 ml

	TCV	9 months	Upper outer left thigh	Subcutaneous	0.5 ml
6	Measles (MCV 2)	15 months	Upper outer left arm	Intra-muscular	0.5 ml
	Vitamin A	6-11 months	Mouth	Oral	100,000IU
	Vitamin A	12-23 months	Mouth	Oral	200,000IU
	Immunization schedule for girls 9 years and women of childbearing age				
No. of Visit	VACCINE	AGE/Time of Vaccination	SITE	ROUTE	Dose
1	TD-1	First contact at 14-49 years or pregnant (No protection)	Upper left arm	Intramuscular (IM)	0.5 ml
2	TD-2	One month after the 1st dose (6 months Protection)	Upper left arm	Intramuscular (IM)	0.5 ml
3	TD-3	Six months after the 2nd dose (3-5 years Protection)	Upper left arm	Intramuscular (IM)	0.5 ml
4	TD-4	One Year after the 3rd dose (10 years Protection)	Upper left arm	Intramuscular (IM)	0.5 ml
5	TD-5	One Year after the 4th dose (Lifetime Protection)	Upper left arm	Intramuscular (IM)	0.5 ml
	HPV 1	9 years old girls	Upper right arm	Intramuscular (IM)	0.5 ml
	HPV 2	6 months after dose 1	Upper right arm	Intramuscular (IM)	0.5 ml

Annex 2: Essential Interventions

LIBERIA ESSENTIAL PACKAGE OF HEALTH SERVICES WITH INTERVENTIONS						
Provided Services and Interventions	Healthcare Levels					
	Primary Care		Secondary Care		Tertiary Care	
	Community Level	Clinics	Health Centers	Hospitals	Regional/Referral Hospitals	
Maternal and Newborn Health						
Antenatal Care						
Diagnose pregnancy	Refer	Yes	Yes	Yes	Yes	Yes
Screen for high risk, including short height	Refer	Yes	Yes	Yes	Yes	Yes
Monitor growth of fetus (height of fundus)	Refer	Yes	Yes	Yes	Yes	Yes
Monitor mother's weight gain	Refer	Yes	Yes	Yes	Yes	Yes
Give tetanus toxoid	Refer	Yes	Yes	Yes	Yes	Yes
Give prophylactic iron, folic acid and multivitamins	Refer	Yes	Yes	Yes	Yes	Yes
Give intermittent preventative treatment for falciparum malaria	Refer	Yes	Yes	Yes	Yes	Yes
Give mebendazole for deworming	Yes	Yes	Yes	Yes	Yes	Yes
Screen for and manage pre-eclampsia or hypertension	Refer	Yes	Yes	Yes	Yes	Yes
Screen for and manage severe pre-eclampsia or hypertension	Refer	Refer	Yes	Yes	Yes	Yes
Screen for and treat anemia	Refer	Yes	Yes	Yes	Yes	Yes
Manage severe anemia (<7gm/dl) with symptoms or in the last trimester	Refer	Refer	Yes	Yes	Yes	Yes
Screen (RPR) and manage syphilis and partner	Refer	Yes	Yes	Yes	Yes	Yes
VCT for HIV	Refer	Yes	Yes	Yes	Yes	Yes
Feel for malpresentation or twins	Refer	Yes	Yes	Yes	Yes	Yes
Promote and provide ITNs for pregnant women	Yes	Yes	Yes	Yes	Yes	Yes
Conduct nutrition assessments: hemoglobin and BMI	Refer	Yes	Yes	Yes	Yes	Yes
Manage complications of pregnancy	Refer	Yes	Yes	Yes	Yes	Yes

Manage threatened or complete abortion	Refer	Yes	Yes	Yes	Yes	Yes
Manage incomplete abortion (Manual Vacuum Aspiration)	Refer	Refer	Yes	Yes	Yes	Yes
Manage complicated abortion	Refer	Refer	Yes	Yes	Yes	Yes
Manage ectopic pregnancy	Refer	Refer	Yes	Yes	Yes	Yes
Manage urinary tract infection	Refer	Yes	Yes	Yes	Yes	Yes
Manage fever/uncomplicated malaria	Yes	Yes	Yes	Yes	Yes	Yes
Ruptured membranes, not labor	Refer	Yes	Yes	Yes	Yes	Yes
No fetal movements	Refer	Yes	Yes	Yes	Yes	Yes
Encourage 4 ANC visits	Yes	Yes	Yes	Yes	Yes	Yes
Birth preparedness plan	Yes	Yes	Yes	Yes	Yes	Yes
Family planning promotion and services (non-prescriptive)	Yes	Yes	Yes	Yes	Yes	Yes
PMTCT follow-up for mothers	Yes	Yes	Yes	Yes	Yes	Yes
Immunization follow-up for mother and child	Yes	Yes	Yes	Yes	Yes	Yes
Labor and Delivery Care						
Assess and monitor progress in labor with use of partograph	Refer	Yes	Yes	Yes	Yes	Yes
Conduct a clean delivery of the baby	Refer	Yes	Yes	Yes	Yes	Yes
Active management of third stage of labor (oxytocin and controlled cord traction)	Refer	Yes	Yes	Yes	Yes	Yes
Episiotomy and repair of tears	Refer	Yes	Yes	Yes	Yes	Yes
Breech delivery	Refer	Yes	Yes	Yes	Yes	Yes
Transverse lie	Refer	Yes	Yes	Yes	Yes	Yes
Antepartum hemorrhage	Refer	Yes	Yes	Yes	Yes	Yes
Treat shock	Refer	Yes	Yes	Yes	Yes	Yes
Bimanual compression of uterus	Refer	Yes	Yes	Yes	Yes	Yes
Manual removal of retained placenta	Refer	Yes	Yes	Yes	Yes	Yes
Manage convulsions or unconsciousness: eclampsia	Refer	Yes	Yes	Yes	Yes	Yes

Manage convulsions or unconsciousness with fever: malaria/sepsis	Refer	Yes	Yes	Yes	Yes	Yes
PMTCT	Refer	Yes	Yes	Yes	Yes	Yes
Postpartum Care						
Immediate postpartum care	Refer	Yes	Yes	Yes	Yes	Yes
Monitor general conditions, vital signs, uterine contraction, bleeding	Refer	Yes	Yes	Yes	Yes	Yes
At the end of the first week and during puerperium	Yes	Yes	Yes	Yes	Yes	Yes
Give postpartum vitamin A	Refer	Yes	Yes	Yes	Yes	Yes
Give prophylactic iron and folic acid	Yes	Yes	Yes	Yes	Yes	Yes
Detect and manage puerperal sepsis	Refer	Yes	Yes	Yes	Yes	Yes
Detect and manage anemia	Refer	Yes	Yes	Yes	Yes	Yes
Detect and manage urinary tract infection	Refer	Yes	Yes	Yes	Yes	Yes
Manage nipple or breast pain	Refer	Yes	Yes	Yes	Yes	Yes
Manage constipation	Refer	Yes	Yes	Yes	Yes	Yes
Counsel on birth spacing	Yes	Yes	Yes	Yes	Yes	Yes
Newborn Care						
Immediate Care						
Keep dry and warm, clear airway if necessary	Refer	Yes	Yes	Yes	Yes	Yes
Resuscitate baby if not breathing well	Refer	Yes	Yes	Yes	Yes	Yes
Tetracycline eye ointment to prevent ophthalmia neonatorum	Refer	Yes	Yes	Yes	Yes	Yes
Initiate breast feeding within the first hour of life	Yes	Yes	Yes	Yes	Yes	Yes
During the first month						
Manage low birth weight baby (1500gms–2500gms)	Yes	Yes	Yes	Yes	Yes	Yes
Manage very low birth weight baby (<1500gms or <32 weeks gestation)	Refer	Yes	Yes	Yes	Yes	Yes
Manage neonatal jaundice	Refer	Yes	Yes	Yes	Yes	Yes
Counsel and support mother on breastfeeding	Yes	Yes	Yes	Yes	Yes	Yes
Give newborn immunizations	Refer	Yes	Yes	Yes	Yes	Yes

Treat skin pustules or cord infection	Refer	Yes	Yes	Yes	Yes	Yes
Treat neonatal sepsis/severe skin or cord infection	Refer	Yes	Yes	Yes	Yes	Yes
Treat neonatal tetanus	Refer	Refer	Yes	Yes	Yes	Yes
Infant and Young Child Nutrition						
Promote breast feeding and exclusive breast feeding for first 6 months	Yes	Yes	Yes	Yes	Yes	Yes
Promote appropriate complementary feeding	Yes	Yes	Yes	Yes	Yes	Yes
Growth monitoring and nutrition counseling	Yes	Yes	Yes	Yes	Yes	Yes
Vitamin supplementation to children 6–59 months	Yes	Yes	Yes	Yes	Yes	Yes
Iron supplementation to children 6–59 months	Yes	Yes	Yes	Yes	Yes	Yes
Deworming of children	Yes	Yes	Yes	Yes	Yes	Yes
Identification of malnutrition	Yes	Yes	Yes	Yes	Yes	Yes
Investigation and management of malnutrition	Refer	Yes	Yes	Yes	Yes	Yes
Reproductive and Adolescent Health						
Promote positive behavior on birth spacing and family planning	Yes	Yes	Yes	Yes	Yes	Yes
Counsel on informed choice & early marriage	Yes	Yes	Yes	Yes	Yes	Yes
Distribute male and female condoms; explain their use	Yes	Yes	Yes	Yes	Yes	Yes
Distribute oral contraceptive pills (non-prescriptive); explain their use	Yes	Yes	Yes	Yes	Yes	Yes
Administer DMPA; (Sayana) explain its use	Yes	Yes	Yes	Yes	Yes	Yes
Insert and remove IUD; explain its use	Refer	Yes	Yes	Yes	Yes	Yes
Permanent surgical methods	Refer	Yes	Yes	Yes	Yes	Yes
Syndromic management of STIs for women	Refer	Yes	Yes	Yes	Yes	Yes
Syndromic management of STIs for men	Refer	Yes	Yes	Yes	Yes	Yes
VCT for HIV	Refer	Yes	Yes	Yes	Yes	Yes
Infertility counseling	Refer	Yes	Yes	Yes	Yes	Yes
Promote positive behavior on ASRH, HIV and GBV	Yes	Yes	Yes	Yes	Yes	Yes
Counseling and prevention of teenage pregnancy	Yes	Yes	Yes	Yes	Yes	Yes

Child Health						
Expanded Program on Immunization (EPI)						
Promote positive behavior on Immunization	Yes	Yes	Yes	Yes	Yes	Yes
Storage of vaccines	Refer	Yes	Yes	Yes	Yes	Yes
Routine and outreach immunization	Yes	Yes	Yes	Yes	Yes	Yes
Supplemental immunization (and EPI plus)	Yes	Yes	Yes	Yes	Yes	Yes
Surveillance and case reporting of immunizable diseases	Yes	Yes	Yes	Yes	Yes	Yes
Reporting immunization activities	Yes	Yes	Yes	Yes	Yes	Yes
Routine Immunization follow-up for child	Yes	Yes	Yes	Yes	Yes	Yes
Growth monitoring	Yes	Yes	Yes	Yes	Yes	Yes
Integrated Management of Childhood Illnesses (IMCI)						
Promote positive behavior on home care for the sick child; danger signs, completing treatment	Yes	Yes	Yes	Yes	Yes	Yes
Management of severely ill child	Refer	Refer	Yes	Yes	Yes	Yes
Emergency triage assessment	Yes	Yes	Yes	Yes	Yes	Yes
Promote positive behavior on cough or cold home care and danger signs	Yes	Yes	Yes	Yes	Yes	Yes
Pneumonia	Refer	Yes	Yes	Yes	Yes	Yes
Severe pneumonia	Refer	Refer	Yes	Yes	Yes	Yes
Ear infection	Refer	Yes	Yes	Yes	Yes	Yes
Diarrhea with no dehydration	Yes	Yes	Yes	Yes	Yes	Yes
Diarrhea with some dehydration	Refer	Yes	Yes	Yes	Yes	Yes
Diarrhea with severe dehydration	Refer	Yes	Yes	Yes	Yes	Yes
Persistent diarrhea or dysentery	Refer	Yes	Yes	Yes	Yes	Yes
Measles	Refer	Yes	Yes	Yes	Yes	Yes
Complicated measles	Refer	Yes	Yes	Yes	Yes	Yes
Case management of child with fever/malaria	Yes	Yes	Yes	Yes	Yes	Yes
Management of malnutrition	Yes	Yes	Yes	Yes	Yes	Yes

Communicable Disease Control						
HIV/AIDS and Sexually Transmitted Infections						
Promote positive behavior on “ABC”	Yes	Yes	Yes	Yes	Yes	Yes
Promotion and distribution of condoms	Yes	Yes	Yes	Yes	Yes	Yes
Awareness and sensitization about VCT	Yes	Yes	Yes	Yes	Yes	Yes
VCT services	Refer	Yes	Yes	Yes	Yes	Yes
Treatment of opportunistic infections	Refer	Yes	Yes	Yes	Yes	Yes
Awareness and sensitization of pregnant mothers to VCT for PMTCT	Yes	Yes	Yes	Yes	Yes	Yes
VCT for PMTCT services	Refer	Yes	Yes	Yes	Yes	Yes
PMTCT services and follow up	Refer	Yes	Yes	Yes	Yes	Yes
Post-exposure prophylaxis (PEP)	Refer	Yes	Yes	Yes	Yes	Yes
Syndromic management of STIs without microscope	Refer	Yes	Yes	Yes	Yes	Yes
Syndromic management of STIs with microscope	Refer	Refer	Yes	Yes	Yes	Yes
RPR test for syphilis	Refer	Refer	Yes	Yes	Yes	Yes
DOTS and defaulters tracing						
Tuberculosis						
Promote positive behavior on TB; recognition of symptoms; case management	Yes	Yes	Yes	Yes	Yes	Yes
BCG immunization of all newborns	Yes	Yes	Yes	Yes	Yes	Yes
Identification of suspect cases						
Collection of sputum and microscopy for AFBs	Refer	Refer	Refer	Refer	Refer	Refer
Diagnosis of TB in sputum-negative cases	Refer		Refer	Yes	Yes	Yes
Diagnosis of TB in children	Refer	Refer	Refer	Yes	Yes	Yes
Registration and assignment to treatment regimen	Refer	Refer	Refer	Yes	Yes	Yes
Supervision of intensive phase of DOTS	Refer	Yes	Yes	Yes	Yes	Yes
Supervision of continuation phase of DOTS	Refer	Yes	Yes	Yes	Yes	Yes
Sputum examination at end of intensive and continuation phase	Refer	Yes	Yes	Yes	Yes	Yes

Treatment review at end of intensive and continuation phase	Refer	Yes	Yes	Yes	Yes	Yes
Screening of household members	Refer	Refer	Yes	Yes	Yes	Yes
Malaria						
Case management of malaria						
Promote positive behavior on case recognition and management	Yes	Yes	Yes	Yes	Yes	Yes
Treat history of fever + RDT positive or laboratory positive	Yes	Yes	Yes	Yes	Yes	Yes
Treat history of fever + RDT or laboratory negative with high index of suspicion	Yes	Yes	Yes	Yes	Yes	Yes
Laboratory confirmation in adults and children over five years	Refer	Yes	Yes	Yes	Yes	Yes
Give first line treatment (artesunate and amodiaquine)	Yes	Yes	Yes	Yes	Yes	Yes
Case management and treatment of pregnant women	Refer	Yes	Yes	Yes	Yes	Yes
Recognize treatment failure and give second line (quinine)	Refer	Yes	Yes	Yes	Yes	Yes
Manage severe complicated malaria in under five years	Refer	Yes	Yes	Yes	Yes	Yes
Manage complicated malaria in over five years	Refer	Yes	Yes	Yes	Yes	Yes
Prevention of malaria	Yes	Yes	Yes	Yes	Yes	Yes
Promote positive behavior on the prevention of malaria transmission	Yes	Yes	Yes	Yes	Yes	Yes
Intermittent preventive treatment (IPT) for pregnant women	Yes	Yes	Yes	Yes	Yes	Yes
Promote and distribute ITNs for under 5 years	Yes	Yes	Yes	Yes	Yes	Yes
Promote and distribute ITNs for pregnant women	Yes	Yes	Yes	Yes	Yes	Yes
Control and Management of Other Diseases with Epidemic Potential						
Epidemic Control						
Monthly reporting of reportable diseases	Yes	Yes	Yes	Yes	Yes	Yes

Clinical management of infectious diseases						
Treat Typhoid	Refer	Refer	Yes	Yes	Yes	Yes
Treat Meningitis	Refer	Refer	Yes	Yes	Yes	Yes
Treat Jaundice and yellow fever	Refer	Refer	Yes	Yes	Yes	Yes
Treat Acute rheumatic fever	Refer	Refer	Yes	Yes	Yes	Yes
Manage Hemorrhagic fever	Refer	Refer	Yes	Yes	Yes	Yes
Treat Measles	Refer	Refer	Yes	Yes	Yes	Yes
Treat Pertussis	Refer	Refer	Yes	Yes	Yes	Yes
Treat Acute watery diarrhea and bloody diarrhea	Refer	Refer	Yes	Yes	Yes	Yes
Treat Neonatal tetanus	Refer	Refer	Yes	Yes	Yes	Yes
Acute flaccid paralysis	Refer	Refer	Yes	Yes	Yes	Yes
Neglected Tropical Disease						
Lymphatic Filariasis						
Promote positive behavior on the spread of filariasis, symptoms and case management	Yes	Yes	Yes	Yes	Yes	Yes
Mass Drug Administration of population at risk	Yes	Yes	Yes	Yes	Yes	Yes
Lab diagnosis	Refer	Refer	Yes	Yes	Yes	Yes
Medical management of lymphedema	Refer	Yes	Yes	Yes	Yes	Yes
Management of acute attacks	Refer	Refer	Yes	Yes	Yes	Yes
Leprosy						
Promote positive behavior on the spread of leprosy, symptoms and case management	Yes	Yes	Yes	Yes	Yes	Yes
Diagnosis of leprosy	Refer	Refer	Yes	Yes	Yes	Yes
Active case detection among contacts	Yes	Yes	Yes	Yes	Yes	Yes
Treatment for leprosy with multi-drug therapy	Refer	Yes	Yes	Yes	Yes	Yes
Mental Health						
Awareness and Sensitization	Yes	Yes	Yes	Yes	Yes	Yes
Screening and assessment for suicide	Refer	Yes	Yes	Yes	Yes	Yes
Screening for major mental health conditions	Refer	Yes	Yes	Yes	Yes	Yes

Screening and assessment for trauma	Refer	Yes	Yes	Yes	Yes	Yes
Assessment and diagnosis of epilepsy	Refer	Yes	Yes	Yes	Yes	Yes
Treatment and management of major mental health conditions	Refer	Refer	Yes	Yes	Yes	Yes
Treatment and management of epilepsy	Refer	Yes	Yes	Yes	Yes	Yes
Prescribe/manage medication and provide psychotherapy for anxiety disorders	Refer	Yes	Yes	Yes	Yes	Yes
Prescribe/manage medication and provide psychotherapy for mood disorders	Refer	Yes	Yes	Yes	Yes	Yes
Prescribe/manage medication and provide psychotherapy for psychotic disorders	Refer	Yes	Yes	Yes	Yes	Yes
Prescribe/manage medication and provide psychotherapy for psychosomatic symptoms	Refer	Yes	Yes	Yes	Yes	Yes
Screening and assessment for substance abuse	Refer	Yes	Yes	Yes	Yes	Yes
Counsel and refer for substance abuse	Refer	Yes	Yes	Yes	Yes	Yes
Prescribe/manage medication for epilepsy	Refer	Yes	Yes	Yes	Yes	Yes
Prescribe/manage medication and provide psychotherapy for substance abuse	Refer	Yes	Yes	Yes	Yes	Yes
Provide psychotherapy, individual and group counseling for substance abuse Medication management	Refer	Refer	Yes	Yes	Yes	Yes
Case management for individuals with mental health conditions	Refer	Refer	Yes	Yes	Yes	Yes
Provide therapy for major mental health conditions and substance abuse	Refer	Refer	Yes	Yes	Yes	Yes
Care and counseling for domestic and interpersonal violence	Refer	Yes	Yes	Yes	Yes	Yes
Provide rape exam	Refer	Yes	Yes	Yes	Yes	Yes
Maintain register of persons on long-term medication for mental health	Refer	Yes	Yes	Yes	Yes	Yes
Supervise and supply long term medications	Refer	Yes	Yes	Yes	Yes	Yes
Psychosocial and trauma counseling	Refer	Yes	Yes	Yes	Yes	Yes
Emergency Care						

Manage shock	Refer	Yes	Yes	Yes	Yes	Yes
Blocked airway or respiratory failure	Yes	Yes	Yes	Yes	Yes	Yes
Anaphylaxis	Yes	Yes	Yes	Yes	Yes	Yes
Seizures/ Convulsions	Yes	Yes	Yes	Yes	Yes	Yes
Bites and rabies	Yes	Yes	Yes	Yes	Yes	Yes
Poisoning by mouth	Yes	Yes	Yes	Yes	Yes	Yes
Snake bite	Yes	Yes	Yes	Yes	Yes	Yes
Cardiac arrest	Yes	Yes	Yes	Yes	Yes	Yes
Head injury	Yes	Yes	Yes	Yes	Yes	Yes
Epistaxis	Refer	Yes	Yes	Yes	Yes	Yes
Foreign body in ear or nose	Refer	Yes	Yes	Yes	Yes	Yes
Eye injury	Refer	Yes	Yes	Yes	Yes	Yes
Eye infection	Yes	Yes	Yes	Yes	Yes	Yes
Burns	Yes	Yes	Yes	Yes	Yes	Yes
Wound and soft tissue injuries	Yes	Yes	Yes	Yes	Yes	Yes
Pneumothorax and hemothorax	Refer	Yes	Yes	Yes	Yes	Yes
Abdominal trauma or acute abdomen	Refer	Yes	Yes	Yes	Yes	Yes
Close fractures and dislocations of upper limb	Refer	Refer	Yes	Yes	Yes	Yes
Closed fractures of lower limb	Refer	Refer	Yes	Yes	Yes	Yes
Open fractures	Refer	Refer	Refer	Yes	Yes	Yes
Spinal injuries or pelvic fractures	Refer	Refer	Refer	Yes	Yes	Yes
Multiple injuries	Refer	Refer	Refer	Yes	Yes	Yes
Traditional and Complementary/Alternative Medicine (T&CAM)						
Promote referrals from community levels	Yes					
Management of Cases	Refer					
Diagnostic Services						
Hematology						
Hemoglobin	Refer	Yes	Yes	Yes	Yes	Yes

Interventions and services Provided	Refer	Yes	Yes	Yes	Yes	Yes
Microscopy	Refer	Yes	Yes	Yes	Yes	Yes
Malaria parasites	Refer	Yes	Yes	Yes	Yes	Yes
AFB smear	Refer	Yes	Yes	Yes	Yes	Yes
Wet mounts - stool microscopy	Refer	Yes	Yes	Yes	Yes	Yes
Clinical Chemistry	Refer	Yes	Yes	Yes	Yes	Yes
Proteinuria and glucosuria	Refer	Yes	Yes	Yes	Yes	Yes
RDT for malaria	Yes	Yes	Yes	Yes	Yes	Yes
Rapid pregnancy test	Refer	Yes	Yes	Yes	Yes	Yes
Blood glucose	Refer	Yes	Yes	Yes	Yes	Yes
RPR test for syphilis	Refer	Yes	Yes	Yes	Yes	Yes
HIV rapid test	Refer	Yes	Yes	Yes	Yes	Yes
Specimen collection procedure for dried blood spots (DBS)						
Eye Health						
Promote positive behavior for Basic eye on face washing and injuries prevention	Yes	Yes	Yes	Yes	Yes	Yes
Screening and identification common visual impairment and infections	Refer	Refer	Yes	Yes	Yes	Yes
First aid management of eye injury	Yes	Yes	Yes	Yes	Yes	Yes
Referral of eye cases	Refer	Refer	Refer	Yes	Yes	Yes
Treatment of simple eye conditions	Refer	Yes	Yes	Yes	Yes	Yes
Ivermectin distribution	Yes	Yes	Yes	--	--	--
Prison Health Service						
Entry Examinations	Yes	Yes	Yes	Yes	Yes	Yes
Opening of a confidential, unique ID patient file	Yes	Yes	Yes	Yes	Yes	Yes
Describe the medical system and request for care process at the prison	Yes	Yes	Yes	Yes	Yes	Yes
Administration of Mebendazole for deworming	Yes	Yes	Yes	Yes	Yes	Yes
Inspection for skin disease including frontal area	Yes	Yes	Yes	Yes	Yes	Yes

Mental health evaluation	Yes	Yes	Yes	Yes	Yes	Yes
Chronic disease and medication assessment and plan	Yes	Yes	Yes	Yes	Yes	Yes
Pregnancy test for female inmates (voluntary)	Yes	Yes	Yes	Yes	Yes	Yes
Malaria rapid test	Yes	Yes	Yes	Yes	Yes	Yes
Assessment of communicable disease risk including STIs	Yes	Yes	Yes	Yes	Yes	Yes
Health education on common diseases in prison and psychological impact of imprisonment	Yes	Fer	Yes	Yes	Yes	Yes
Health education						
Regular health promotion including messages dissemination	Yes	Yes	Yes	Yes	Yes	Yes
Family planning and management	Yes	Yes	Yes	Yes	Yes	Yes
Management of common illnesses and diseases	Yes	Yes	Yes	Yes	Yes	Yes
Communicable disease prevention, risks, resources	Yes	Yes	Yes	Yes	Yes	Yes
Communicable disease Control						
Malaria rapid test	Yes	Yes	Yes	Yes	Yes	Yes
Rapid diagnostic testing (RDT) for all symptomatic complaints	Yes	Yes	Yes	Yes	Yes	Yes
Tuberculosis	Yes	Refer	Yes	Yes	Yes	Yes
Active case finding at all cells	Yes	Yes	Yes	Yes	Yes	Yes
Isolate suspected cases (refer to hospital for isolation if necessary)	Refer	Yes	Yes	Yes	Yes	Yes
Refer suspected cases to hospital	Refer	Refer	Yes	Yes	Yes	Yes
Skin infections/disease	Refer	Refer	Yes	Yes	Yes	Yes
Active case finding at all cells	Refer	Refer	Yes	Yes	Yes	Yes
Pest control and disinfection of case area	Yes	Yes	Yes	Yes	Yes	Yes
HIV/sexually transmitted infections	Yes	Yes	Yes	Yes	Yes	Yes
Voluntary Confidential Testing	Yes	Yes	Yes	Yes	Yes	Yes
Curative Care						
Routine care						

Routine medical consultation including active case finding, physical examination, treatment	Refer	Yes	Yes	Yes	Yes	Yes
All consultations and referrals recorded in confidential, unique ID patient file	Refer	Yes	Yes	Yes	Yes	Yes
Control and manage acute watery and/ or bloody diarrhea	Refer	Yes	Yes	Yes	Yes	Yes
Recognition of severe hernia and referral according to needs	Refer	Refer	Refer	Yes	Yes	Yes
Recognition of severe hemorrhoids and referral according to needs	Refer	Refer	Refer			
Recognition of mental illness and referral to specialist/hospital						
Recognition of respiratory illness and referral						
Emergency Care						
24-hour emergency first aid available	Yes	Yes	Yes	Yes	Yes	Yes
Manage shock	Yes	Yes	Yes	Yes	Yes	Yes
Manage seizures/convulsions including epilepsy	Yes	Yes	Yes	Yes	Yes	Yes
Manage closed and open fractures	Yes	Yes	Yes	Yes	Yes	Yes
manage anaphylaxis	Yes	Yes	Yes	Yes	Yes	Yes
manage wound and soft tissue injuries	Yes	Yes	Yes	Yes	Yes	Yes
Specialist Care						
Recognition of mental illness and referral to specialist/hospital	Yes	Yes	Yes	Yes	Yes	Yes
Visiting specialist consultations	Refer	Refer	Refer	Yes	Yes	Yes
Visiting specialist consultations	Refer	Refer	Refer	Yes	Yes	Yes
Healthcare for Women						
Test for pregnancy (voluntary)	Refer	Yes	Yes	Yes	Yes	Yes
RPR syphilis testing and treatment	Refer	Refer	Yes	Yes	Yes	Yes
Identify high risk pregnancies	Refer	Yes	Yes	Yes	Yes	Yes
Regular ANC case management of pregnant women	Refer	Yes	Yes	Yes	Yes	Yes
Preparedness for Labor and Delivery	Yes	Yes	Yes	Yes	Yes	Yes

Screen for and manage pre-eclampsia or hypertension	Refer	Yes	Yes	Yes	Yes	Yes
Regular malaria screening and prevention with RDT	Yes	Yes	Yes	Yes	Yes	Yes
Treatment of malaria in pregnant women	Yes	Yes	Yes	Yes	Yes	Yes

Annex 3: Essential diagnostic tests

Diagnostic Test				
Laboratory Test	Secondary Care		Tertiary Care	
	Health Centers	Hospitals	Regional/Referral Hospitals	
Hematology	Yes	Yes	Yes	Yes
Bleeding and clotting times	Yes	Yes	Yes	Yes
Blood typing and cross matching	Yes	Yes	Yes	Yes
Erythrocyte Sedimentation Rate (ESR)	Refer	Yes	Yes	Yes
Full blood count	Refer	Yes	Yes	Yes
Hematocrit	Yes	Yes	Yes	Yes
Microscopy				
CSF cell count	Refer	Yes	Yes	Yes
Gram stain for discharges, pus	Refer			
Sputum for acid fast bacilli (Ziehl Nielsen Stain)	Refer			
Urine microscopy	Yes	Yes	Yes	Yes
Microscopy for filariasis	Yes	Yes	Yes	Yes
Clinical Chemistry				
Hepatitis B & C rapid tests	Yes	Yes	Yes	Yes
Blood glucose	Yes	Yes	Yes	Yes
CD4 testing	Yes	Yes	Yes	Yes
Clinical chemistry panels (Automated analyzer)	Refer	Yes	Yes	Yes
Culture and sensitivity testing	Refer	Yes	Yes	Yes
HIV rapid testing	Yes	Yes	Yes	Yes
Proteinuria and Glucosuria	Yes	Yes	Yes	Yes
Rapid pregnancy testing	Yes	Yes	Yes	Yes
RPR test for Syphilis	Yes	Yes	Yes	Yes

Serum bilirubin	Yes	Yes	Yes	Yes
Human Leucocyte Antigen (HLA) Test	Refer	Yes	Yes	Yes
Human Neutrophil Antigen (HNA) Test	Refer	Yes	Yes	Yes
Direct Antiglobulin Test (DAT)	Refer	Yes	Yes	Yes
Imaging				
CT Scan	Refer	Refer	Refer	Yes
Echocardiography	Refer	Refer	Refer	Yes
Fluoroscopy	Refer	Refer	Refer	Yes
Intravenous Pyelogram (IVP)	Refer	Refer	Refer	Yes
Mammography	Refer	Refer	Refer	Yes
Ultrasound	Refer	Refer	Refer	Yes
X-Ray	Refer	Refer	Refer	Yes
Neurology Services				
Electroencephalography (EEG)	Refer	Refer	Refer	Yes
Cardiology Services				
Electrocardiogram (EKG)	Refer	Refer	Refer	Yes
Endoscopic Procedures				
Anoscopy	Refer	Refer	Refer	Yes
Bronchoscopy	Refer	Refer	Refer	Yes
Colonoscopy	Refer	Refer	Refer	Yes
Gastroscopy	Refer	Refer	Refer	Yes
Sigmoidoscopy	Refer	Refer	Refer	Yes

Provided Services and Interventions	Healthcare Levels					
	Primary Care		Secondary Care	Tertiary Care		
	Community Level	Clinics	Health Centers	Hospitals	Regional/ Referral Hospitals	Regional Blood Centers
Blood Transfusion Services						
Promoting Positive Behavior for voluntary non-paid blood donations	YES	YES	YES	YES	YES	YES
Determine Hemoglobin	NO	YES	YES	YES	YES	YES
Determine Blood Group	NO	YES	YES	YES	YES	YES
Pre donation counseling	NO	NO	YES	YES	YES	YES
Testing for biomarkers	NO	NO	YES	YES	YES	YES
Post testing counseling	NO	NO	YES	YES	YES	YES
Bleeding the Blood Donor	NO	NO	YES	YES	YES	YES
Post donation care/ counseling	NO	NO	YES	YES	YES	YES
Distribution of Safe Blood Units	NO	NO	NO	NO	NO	YES
Cross matching of blood unit	NO	NO	YES	YES	YES	NO
Transfusion of unit into recipient	NO	NO	YES	YES	YES	NO
Management of transfusion reactions	NO	NO	YES	YES	YES	NO

Annex 4: Essential drug list

LIBERIA ESSENTIAL SERVICE PACKAGE WITH INTERVENTIONS						
Required Drugs	Healthcare Levels					
	Primary Care		Secondary Care		Tertiary Care	
	Community Level	Clinics	Health Centers	Hospitals	Regional/Referral Hospitals	
Anesthetics						
General						
Halothane	NO	NO	NO	NO	YES	YES
Ketamine injection 50mg/ml	NO	NO	YES	YES	YES	YES
Nitrous Oxide	NO	NO	NO	NO	YES	YES
Oxygen	NO	YES	YES	YES	YES	YES
Thiopental injection 1g	NO	NO	NO	YES	YES	YES
Local						
Lidocaine injection (with epinephrine) 2%	NO	NO	YES	YES	YES	YES
Lidocaine injection, spinal (with glucose) 5% & 7.5%	NO	NO	NO	YES	YES	YES
Lidocaine injection (plain) 2%	YES	YES	YES	YES	YES	YES
Lidocaine injection (plain) 1%	YES	YES	YES	YES	YES	YES
Preoperative and sedation						
Atropine 1mg/ml	NO	NO	YES	YES	YES	YES
Diazepam 5mg/ml	NO	YES	YES	YES	YES	YES
Morphine Sulphate 10mg/ml	NO	NO	NO	YES	YES	YES
Analgesics, antipyretics, non-steroidal anti-inflammatories						
Non-opioids and non-steroidal anti-inflammatory analgesics						
Acetylsalicylic acid 300mg	YES	YES	YES	YES	YES	YES
Diclofenac sodium, 25mg/ml; 3ml	NO	YES	YES	YES	YES	YES
Diclofenac tablets 50mg	NO	YES	YES	YES	YES	YES
Ibuprofen 200mg	NO	YES	YES	YES	YES	YES

Indomethacin 25mg	NO	YES	YES	YES	YES	YES
Paracetamol 100mg	Yes	Yes	Yes	Yes	Yes	Yes
Paracetamol 125mg/5ml (syrup)	Yes	Yes	Yes	Yes	Yes	Yes
Paracetamol 500mg	Yes	Yes	Yes	Yes	Yes	Yes
Opioid Analgesics						
Morphine oral solution	No	No	NO	Yes	Yes	Yes
Morphine Sulphate or Hydrochloride 10mg/ml	No	No	NO	Yes	Yes	Yes
Pethidine 50mg/ml	No	No	NO	Yes	Yes	Yes
Medicines to treat Gout						
Allopurinol 100mg	No	No	NO	Yes	Yes	Yes
Colchicine 300microgram	No	No	NO	Yes	Yes	Yes
Indomethacin 25mg	No	NO	Yes	Yes	Yes	Yes
Antiallergics and medicines used in anaphylaxis						
Chlorpheniramine 4mg	No	Yes	Yes	Yes	Yes	Yes
Chlorpheniramine 10mg/ml	No	Yes	Yes	Yes	Yes	Yes
Dexamethasone 0.5mg	No	Yes	Yes	Yes	Yes	Yes
Dexamethasone 4mg/ml	No	Yes	Yes	Yes	Yes	Yes
Epinephrine 1mg/ml	No	No	Yes	Yes	Yes	Yes
Hydrocortisone 100mg	No	Yes	Yes	Yes	Yes	Yes
Prednisolone 5mg	No	Yes	Yes	Yes	Yes	Yes
Promethazine 25mg	No	Yes	Yes	Yes	Yes	Yes
Antidotes and other substances used in poisoning						
Acetylcysteine 200mg/ml in 10-ml ampoule	No	No	Yes	Yes	Yes	Yes
Atropine 1mg/ml	No	No	Yes	Yes	Yes	Yes
Benztropine 1mg/ml	No	No	Yes	Yes	Yes	Yes
Calcium folinate (folinic acid) 15mg	No	No	Yes	Yes	Yes	Yes
Calcium folinate (folinic acid) 3mg/ml	No	No	Yes	Yes	Yes	Yes

Calcium gluconate	No	No	Yes	Yes	Yes	Yes
Charcoal activated 250mg	No	No	Yes	Yes	Yes	Yes
Deferoxamine 500mg (PFR)	No	No	Yes	Yes	Yes	Yes
Dimercaprol 50mg/ml	No	No	Yes	Yes	Yes	Yes
Methylthioninium chloride (methylene blue) 10mg/ml	No	No	Yes	Yes	Yes	Yes
Naloxone 400mcg/1ml	No	No	Yes	Yes	Yes	Yes
Penicillamine 250mg	No	No	Yes	Yes	Yes	Yes
Pralidoxime 200mg/ml	No	No	Yes	Yes	Yes	Yes
Anticonvulsants and antiepileptics						
Carbamazepine 200mg	No	Yes	Yes	Yes	Yes	Yes
Diazepam 2mg	No	Yes	Yes	Yes	Yes	Yes
Diazepam 5mg	No	Yes	Yes	Yes	Yes	Yes
Diazepam 5mg/ml	No	Yes	Yes	Yes	Yes	Yes
Ethosuximide 250mg	No	Yes	Yes	Yes	Yes	Yes
Magnesium sulphate 50%	No	Yes	Yes	Yes	Yes	Yes
Phenobarbitone 100mg/ml	No	Yes	Yes	Yes	Yes	Yes
Phenobarbitone 60mg	No	Yes	Yes	Yes	Yes	Yes
Phenytoin 100mg	No	Yes	Yes	Yes	Yes	Yes
Sodium valproate 100mg	No	Yes	Yes	Yes	Yes	Yes
Anti-infectives						
Intestinal infestations						
Mebendazole 500mg	YES	YES	YES	YES	YES	YES
Niclosamide 500mg	NO	NO	YES	YES	YES	YES
Mebendazole 100mg	YES	YES	YES	YES	YES	YES
Albendazole 200mg	YES	YES	YES	YES	YES	YES
Albendazole 400mg	YES	YES	YES	YES	YES	YES
Anti-filariasis						
Ivermectin 6mg	NO	YES	YES	YES	YES	YES

Anti-schistosomiasis medicines						
Praziquantel 600mg	NO	YES	YES	YES	YES	YES
Antibacterials						
Amoxicillin 1 g, IM/IV, (PFR)	NO	YES	YES	YES	YES	YES
Amoxicillin 125mg/ml	YES	YES	YES	YES	YES	YES
Amoxicillin 250 + Clavulanic acid 125mg	YES	YES	YES	YES	YES	YES
Amoxicillin 250mg/ml	YES	YES	YES	YES	YES	YES
Azithromycin	Yes	Yes	Yes	Yes	Yes	Yes
Benzathine Benzylpenicillin 2.4mu	NO	NO	YES	YES	YES	YES
Benzyl penicillin, 1mu (600mg)	NO	NO	YES	YES	YES	YES
Ceftriaxone, 250mg / 1g vial	NO	NO	YES	YES	YES	YES
Cefuroxime 125mg/5ml (PFR)	NO	NO	YES	YES	YES	YES
Cefuroxime acetyl 250mg	NO	NO	YES	YES	YES	YES
Cefuroxime sodium 750mg IV/IM	NO	NO	YES	YES	YES	YES
Chloramphenicol 1g (Parenteral)	NO	NO	YES	YES	YES	YES
Chloramphenicol 250mg	YES	YES	YES	YES	YES	YES
Ciprofloxacin 500mg	NO	YES	YES	YES	YES	YES
Cloxacillin 250mg	NO	YES	YES	YES	YES	YES
Cloxacillin 500mg	NO	YES	YES	YES	YES	YES
Co-trimoxazole 100 + 20mg	YES	YES	YES	YES	YES	YES
Co-trimoxazole 200 + 40mg/5ml (suspension)	YES	YES	YES	YES	YES	YES
Co-trimoxazole 400 + 80mg	YES	YES	YES	YES	YES	YES
Doxycycline 100mg	NO	YES	YES	YES	YES	YES
Erythromycin 250mg	NO	YES	YES	YES	YES	YES
Gentamicin 40mg/ml	NO	YES	YES	YES	YES	YES
Metronidazole 125mg/5ml (suspension)	NO	YES	YES	YES	YES	YES
Metronidazole 200mg	NO	YES	YES	YES	YES	YES

Nalidixic acid 500mg	NO	YES	YES	YES	YES	YES
Nitrofurantoin 100mg	NO	YES	YES	YES	YES	YES
Phenoxymethyl penicillin 250mg	NO	YES	YES	YES	YES	YES
Procaine benzyl penicillin fortified 4mu	NO	YES	YES	YES	YES	YES
Antileprosy medicines						
Clofazimine 100mg	NO	NO	NO	YES	YES	YES
Dapsone 100mg	NO	NO	NO	YES	YES	YES
Rifampicin 150mg	NO	NO	NO	YES	YES	YES
Antituberculosis medicines						
Ethambutol 100mg	NO	NO	NO	YES	YES	YES
Ethambutol 400mg	NO	NO	NO	YES	YES	YES
Isoniazid 100mg	NO	NO	NO	YES	YES	YES
Isoniazid 300mg	NO	NO	NO	YES	YES	YES
Pyrazinamide 500mg	NO	NO	NO	YES	YES	YES
Pyridoxine 50mg	NO	NO	NO	YES	YES	YES
Rifampicin/isoniazid /pyrazinamide/ethambutol 150mg/75mg/400mg/27mg	NO	NO	NO	YES	YES	YES
Rifampicin/Isoniazid 150mg/75mg	NO	NO	NO	YES	YES	YES
Rifampicin/isoniazid 60mg/30mg	NO	NO	NO	YES	YES	YES
Rifampicin/isoniazid 60mg/60mg	NO	NO	NO	YES	YES	YES
Rifampicin/Isoniazid/Ethambutol 150mg/75mg/275mg	NO	NO	NO	YES	YES	YES
Rifampicin/isoniazid/pyrazinamide 60mg/30mg/150mg	NO	NO	NO	YES	YES	YES
Streptomycin 1gm	NO	NO	NO	YES	YES	YES
Antifungals						
Amphotericin B 50mg, IV	NO	NO	NO	YES	YES	YES
Clotrimazole 400 mg pessary	YES	YES	YES	YES	YES	YES
Fluconazole 100mg	NO	YES	YES	YES	YES	YES

Fluconazole 200mg	NO	YES	YES	YES	YES	YES
Flucytosine 10mg/ml IV	NO	NO	NO	YES	YES	YES
Griseofulvin 500mg	NO	YES	YES	YES	YES	YES
Griseofulvin 125mg	NO	YES	YES	YES	YES	YES
Miconazole 100mg	NO	YES	YES	YES	YES	YES
Nystatin 100,000 IU	NO	YES	YES	YES	YES	YES
Nystatin 100,000 IU/ml	NO	YES	YES	YES	YES	YES
Nystatin 500,000 IU oral use	NO	YES	YES	YES	YES	YES
Anti-retrovirals, subject to current National AIDS Control Program protocols						
Abacavir 300mg	NO	NO	NO	YES	YES	YES
Abacavir60mg	NO	NO	NO	YES	YES	YES
Abacaviroralsolution20mg/ml,240ml	NO	NO	NO	YES	YES	YES
Atazanavir300mg	NO	NO	NO	YES	YES	YES
Didanosine125mg	NO	NO	NO	YES	YES	YES
Didanosine250mg	NO	NO	NO	YES	YES	YES
Didanosine400mg	NO	NO	NO	YES	YES	YES
Effavirenz200mg	NO	NO	NO	YES	YES	YES
Effavirenz600mg	NO	NO	NO	YES	YES	YES
Lamivudine+stavudine+nevirapine150+30+200	NO	NO	NO	YES	YES	YES
Lamivudine+stavudine+nevirapine30+6+50	NO	NO	NO	YES	YES	YES
Lamivudine+stavudine+nevirapine60+12+100	NO	NO	NO	YES	YES	YES
Lamivudine+stavudine150+30	NO	NO	NO	YES	YES	YES
Lamivudine+stavudine30+6	NO	NO	NO	YES	YES	YES
Lamivudine+stavudine60+12	NO	NO	NO	YES	YES	YES
Lamivudine+tenofovir300+300	NO	NO	NO	YES	YES	YES

Lamivudine+zidovudine+nevirapine150+300+200	NO	NO	NO	YES	YES	YES
Lamivudine+zidovudine+nevirapine30+60+50	NO	NO	NO	YES	YES	YES
Lamivudine+zidovudine30+60	NO	NO	NO	YES	YES	YES
Lamivudineoralsolution,10mg/ml,100ml	NO	NO	NO	YES	YES	YES
Lopinavir+Ritonavir200+50	NO	NO	NO	YES	YES	YES
Lopinavir+Ritonaviroralsolution80+20mg/ml	NO	NO	NO	YES	YES	YES
Ritonavir100mg	NO	NO	NO	YES	YES	YES
Lamivudine + zidovudine 150+300	NO	NO	NO	YES	YES	YES
Lamivudine 150mg	NO	NO	NO	YES	YES	YES
Nevirapine 200mg	NO	NO	NO	YES	YES	YES
Nevirapine syrup, 10mg/ml	NO	NO	NO	YES	YES	YES
Zidovudine 300mg	NO	NO	NO	YES	YES	YES
Zidovudine oral solution, 10mg/ml, 100ml	NO	NO	NO	YES	YES	YES
Anti-amoebic and anti-giardiasis medicines						
Metronidazole 125mg/5ml	NO	YES	YES	YES	YES	YES
Metronidazole 250mg	NO	YES	YES	YES	YES	YES
Tinidazole 500mg	NO	NO	YES	YES	YES	YES
Antimalarials						
Artemether 200mg +lumefantrine 120mg	YES	YES	YES	YES	YES	YES
Artemether 20mg/ml	NO	YES	YES	YES	YES	YES
Artemether 80mg/ml	NO	YES	YES	YES	YES	YES
Artesunate 100mg+amodiaquine 270mg	YES	YES	YES	YES	YES	YES
Artesunate 50mg+amodiaquine 135mg	YES	YES	YES	YES	YES	YES
Primaquine 15mg	YES	YES	YES	YES	YES	YES
Quinine dihydrochloride 300mg/ml (parenteral)	NO	YES	YES	YES	YES	YES
Quinine sulphate 300mg	YES	YES	YES	YES	YES	YES

Sulfadoxine/pyrimethamine 500+25mg	YES	YES	YES	YES	YES	YES
Anti-pneumocystosis						
Pentamidine 300mg (PFR)IV	NO	NO	NO	YES	YES	YES
Antineoplastic and Immunosuppressive Medicines						
Azathioprine 50mg	NO	NO	NO	NO	YES	YES
Cyclophosphamide 25mg	NO	NO	NO	NO	YES	YES
Dexamethasone 1mg/ml	NO	NO	YES	YES	YES	YES
Dexamethasone 4mg	NO	YES	YES	YES	YES	YES
Hydrocortisone 100mg	NO	YES	YES	YES	YES	YES
Methotrexate 2.5mg	NO	NO	NO	NO	YES	YES
Prednisolone 5mg	YES	YES	YES	YES	YES	YES
Tamoxifen 10mg	NO	NO	NO	NO	YES	YES
Vincristine 1mg	NO	NO	NO	NO	YES	YES
Anti-Parkinsonism Medicines						
Benzhexol 2mg	NO	NO	NO	YES	YES	YES
Levodopa 100mg + Carbidopa 10mg	NO	NO	NO	YES	YES	YES
Medicines Affecting the Blood						
Antianaemia Medicines						
Ferrous Fumarate 20mg/ml (suspension)	YES	YES	YES	YES	YES	YES
Ferrous salt 200mg+folic acid 0.25mg	YES	YES	YES	YES	YES	YES
Ferrous sulphate 200mg coated (65mg iron)	YES	YES	YES	YES	YES	YES
Folic acid 5mg	YES	YES	YES	YES	YES	YES
Cardiovascular Medicines						
Anti-angina Medicines						
Atenolol 100mg	NO	NO	NO	YES	YES	YES
Glyceryl trinitrate 500mg sublingual	NO	NO	NO	YES	YES	YES
Propranolol 20mg	NO	NO	NO	YES	YES	YES

Propranolol 40mg	NO	NO	NO	YES	YES	YES
Anti-arrhythmic Medicines						
Atenolol 100mg	NO	NO	NO	YES	YES	YES
Digoxin 0.25mg	NO	NO	NO	NO	YES	YES
Lidocaine (plain) 2% IV	NO	NO	NO	NO	YES	YES
Procainamide 1%	NO	NO	NO	NO	YES	YES
Propranolol 40mg	NO	NO	NO	YES	YES	YES
Antihypertensive Medicines						
Atenolol 50mg	NO	NO	NO	YES	YES	YES
Captopril	NO	NO	NO	YES	YES	YES
Enalapril 10mg	NO	NO	NO	YES	YES	YES
Hydralazine 20mg/ml	NO	NO	NO	YES	YES	YES
Hydrochlorothiazide 25mg	NO	NO	NO	YES	YES	YES
Labetalol	NO	NO	NO	YES	YES	YES
Lisinopril	NO	NO	NO	YES	YES	YES
Magnesium sulfate 500mg/ml	NO	NO	NO	YES	YES	YES
Nifedipine 10mg	NO	NO	NO	YES	YES	YES
Propranolol 40mg	NO	NO	NO	YES	YES	YES
Propranolol 80mg	NO	NO	NO	YES	YES	YES
Medicines Used in Heart Failure						
Captopril 12.5mg	NO	NO	NO	YES	YES	YES
Digoxin 0.25mg	NO	NO	NO	NO	YES	YES
Digoxin 0.25mg/ml	NO	NO	NO	NO	YES	YES
Furosemide 10mg/ml	NO	YES	YES	YES	YES	YES
Furosemide 40mg	NO	YES	YES	YES	YES	YES
Metolazone	NO	YES	YES	YES	YES	YES
Medicines Used in Vascular Shock						
Adrenaline (epinephrine) 1mg/ml	NO	NO	YES	YES	YES	YES
Dobutamine	NO	NO	YES	YES	YES	YES

Dopamine	NO	NO	YES	YES	YES	YES
Hydrocortisone sodium succinate 100mg	NO	NO	YES	YES	YES	YES
Norepinephrine	NO	NO	YES	YES	YES	YES
Dermatological Medicines						
Benzoic acid + Salicylic acid	YES	YES	YES	YES	YES	YES
Coal Tar 1%	YES	YES	YES	YES	YES	YES
Hydrocortisone 1%	YES	YES	YES	YES	YES	YES
Neomycin 5mg + bacitracin 500iu	YES	YES	YES	YES	YES	YES
Benzyl Benzoate 25%	YES	YES	YES	YES	YES	YES
Calamine lotion 15%	YES	YES	YES	YES	YES	YES
Clotrimazole 1% (20g cream)	YES	YES	YES	YES	YES	YES
Disinfectants and Antiseptics						
Chlorhexidine + Cetrimeide 1.5% +15%	YES	YES	YES	YES	YES	YES
Povidone Iodine	YES	YES	YES	YES	YES	YES
Sodium hypochlorite 5% solution	YES	YES	YES	YES	YES	YES
Chlorhexidine gluconate 5%	YES	YES	YES	YES	YES	YES
Surgical Spirit	YES	YES	YES	YES	YES	YES
Diuretics						
Furosemide 10mg/ml	NO	NO	NO	YES	YES	YES
Furosemide 40mg	NO	NO	NO	YES	YES	YES
Mannitol 20%	NO	NO	NO	YES	YES	YES
Spironolactone 25mg	NO	NO	NO	YES	YES	YES
Hydrochlorothiazide 50mg	NO	NO	NO	YES	YES	YES
Gastrointestinal Medicines						
Bismuth subgallate compound	YES	YES	YES	YES	YES	YES
Loperamide 2mg	YES	YES	YES	YES	YES	YES
Magnesium trisilicate 500mg	YES	YES	YES	YES	YES	YES
Promethazine 25mg/ml	NO	YES	YES	YES	YES	YES

Promethazine 25mg/ml, 2ml (parenteral)	NO	NO	YES	YES	YES	YES
Ranitidine 150mg	NO	YES	YES	YES	YES	YES
Ranitidine 25mg/ml	NO	NO	YES	YES	YES	YES
Aluminum hydrox. + Magnesium trisil, 400mg	YES	YES	YES	YES	YES	YES
Bisacodyl 5mg (paediatric)	NO	YES	YES	YES	YES	YES
Metoclopramide 10mg	NO	NO	YES	YES	YES	YES
Metoclopramide 5mg/ml (parenteral)	NO	NO	NO	YES	YES	YES
Oral rehydration salt	YES	YES	YES	YES	YES	YES
Zinc sulphate 20mg	YES	YES	YES	YES	YES	YES
Hormones and Other Endocrine Medicine						
Carbimazole 5mg	NO	NO	NO	YES	YES	YES
Dexamethasone 4mg/ml (parenteral)	NO	NO	YES	YES	YES	YES
Dexamethasone 0.5mg	NO	NO	YES	YES	YES	YES
Ethinylestradiol	NO	NO	YES	YES	YES	YES
Glibenclamide 5mg	NO	NO	NO	YES	YES	YES
Hydrocortisone 100mg inj	NO	NO	YES	YES	YES	YES
Insulin Isophane NPH 100IU/ml, 10ml	NO	NO	YES	YES	YES	YES
Insulin soluble 100iu/ml 10ml	NO	NO	NO	YES	YES	YES
Insulin Zinc Suspension 100IU/ml	NO	NO	NO	YES	YES	YES
Iodine 5% + potassium iodide 10% (Lugol's iodine)	NO	NO	NO	YES	YES	YES
Levothyroxine 100microgm	NO	NO	NO	YES	YES	YES
Metformin 500mg	NO	NO	NO	YES	YES	YES
Methyltestosterone 5mg	NO	NO	YES	YES	YES	YES
Prednisolone 5mg	YES	YES	YES	YES	YES	YES
Tamoxifen	NO	NO	NO	YES	YES	YES
Testosterone enanthate 250mg/ml	NO	NO	NO	YES	YES	YES
Contraceptives						

Diaphragms	NO	NO	NO	YES	YES	YES
Ethinylestradiol 30 ug +norethisterone 1mg	YES	YES	YES	YES	YES	YES
Ethinylestradiol 30 ug +levonorgestrel 150ug	YES	YES	YES	YES	YES	YES
Ethinylestradiol 30 ug + levonorgestrel 300 ug	YES	YES	YES	YES	YES	YES
Ethinylestradiol 30 ug + levonorgestrel 250ug	YES	YES	YES	YES	YES	YES
Female condom	YES	YES	YES	YES	YES	YES
Intrauterine device	NO	NO	NO	YES	YES	YES
Levonorgestrel	NO	YES	YES	YES	YES	YES
Male condom	YES	YES	YES	YES	YES	YES
Medroxyprogesterone acetate 150mg depot	NO	NO	YES	YES	YES	YES
Norethisterone	NO	YES	YES	YES	YES	YES
Norgestrel 75ug	NO	YES	YES	YES	YES	YES
Immunologicals						
Anti-snake venom (polyvalent)	NO	YES	YES	YES	YES	YES
Tetanus anti-toxic, human 1,500u	NO	YES	YES	YES	YES	YES
Vaccines						
BCG vaccine dried	YES	YES	YES	YES	YES	YES
DPT Vaccine	YES	YES	YES	YES	YES	YES
DPT – HepB + Hib	YES	YES	YES	YES	YES	YES
Measles vaccine	YES	YES	YES	YES	YES	YES
Polio vaccine oral soln.	YES	YES	YES	YES	YES	YES
Rabies vaccine	YES	YES	YES	YES	YES	YES
TCV	YES	YES	YES	YES	YES	YES
Tetanus toxoid	YES	YES	YES	YES	YES	YES
Yellow Fever vaccine	YES	YES	YES	YES	YES	YES

Muscle relaxants (peripherally acting) and cholinesterase inhibitors						
Neostigmine 0.5mg/ml	NO	NO	NO	NO	YES	YES
Suxamethonium 50mg/ml	NO	NO	NO	NO	YES	YES
Ophthalmological Preparations						
Acetazolamide 250mg	NO	NO	NO	YES	YES	YES
Acyclovir eye ointment	NO	NO	NO	YES	YES	YES
Atropine Sulphate 1% eye drops	NO	NO	NO	YES	YES	YES
Dexamethasone eye oint	NO	NO	NO	YES	YES	YES
Dexamethasone sodium eye drop 1mg	NO	NO	NO	YES	YES	YES
Pilocarpine hydrochloride 2% eye drops	NO	NO	NO	YES	YES	YES
Chloramphenicol 0.5% eye drops	YES	YES	YES	YES	YES	YES
Gentamicin eye drops 0.3%	YES	YES	YES	YES	YES	YES
Tetracaine eye drops 0.5%	NO	NO	NO	YES	YES	YES
Tetracaine eye oint 1%	NO	NO	NO	YES	YES	YES
Timolol maleate 0.25% eye drops	NO	NO	NO	YES	YES	YES
Tetracycline 1% eye ointment	YES	YES	YES	YES	YES	YES
Oxytocics and Antioxytocics						
Ergometrine maleate, 0.5mg	YES	YES	YES	YES	YES	YES
Ergometrine 0.5mg/ml	YES	YES	YES	YES	YES	YES
Misoprostol 200microgram	YES	YES	YES	YES	YES	YES
Oxytocin 10 iu./ml	NO	YES	YES	YES	YES	YES
Salbutamol 0.5mg/ml	NO	NO	YES	YES	YES	YES
Salbutamol 2mg	YES	YES	YES	YES	YES	YES
Peritoneal Dialysis Solution						
Electrolyte solutions for dialysis	NO	NO	NO	NO	YES	YES
Psychotherapeutic Medicine						
Benztropine 1mg	NO	NO	YES	YES	YES	YES
Benzhexol 10mg/5ml	NO	NO	YES	YES	YES	YES

Benzhexol 5mg	NO	NO	YES	YES	YES	YES
Chlorpromazine 100mg	NO	NO	NO	YES	YES	YES
Chlorpromazine 50mg/2ml	NO	NO	NO	YES	YES	YES
Fluphenazine 25mg/1ml	NO	NO	NO	YES	YES	YES
Haloperidol 5mg/ml	NO	NO	NO	YES	YES	YES
Haloperidol 10mg/ml	NO	NO	NO	YES	YES	YES
Risperidone 2mg	NO	NO	NO	YES	YES	YES
Medicines used in depressive disorders						
Amitriptyline 25mg	NO	NO	NO	YES	YES	YES
Imipramine 25mg	NO	NO	NO	YES	YES	YES
Fluoxetine 20mg	NO	NO	NO	YES	YES	YES
Medicines Used in Bipolar Disorders						
Carbamazepine 200mg	NO	NO	NO	YES	YES	YES
Lithium carbonate 250/300mg	NO	NO	NO	NO	YES	YES
Valproic acid 200mg/500mg	NO	NO	NO	YES	YES	YES
Medicines Used in Generalized Anxiety and Sleep Disorders						
Diazepam 5mg	NO	YES	YES	YES	YES	YES
Lorazepam 1mg	NO	YES	YES	YES	YES	YES
Medicines Used for Substance (Alcohol/Opioid Dependence)						
Buprenorphine 2mg/8mg	NO	NO	NO	NO	YES	YES
Medicines acting on the Respiratory Tract						
Aminophylline 25mg/ml, 10ml	NO	NO	NO	YES	YES	YES
Beclomethasone aerosol	NO	NO	NO	YES	YES	YES
Epinephrine 1mg/ml	NO	NO	NO	YES	YES	YES
Hydrocortisone 100mg/ml	NO	NO	YES	YES	YES	YES
Prednisolone 5mg	NO	NO	YES	YES	YES	YES
Salbutamol 10.5mg/ml	YES	YES	YES	YES	YES	YES

Salbutamol 4mg	YES	YES	YES	YES	YES	YES
Salbutamol aerosol inhaler	NO	NO	YES	YES	YES	YES
Medicines used in the Management of Transfusion Reactions						
Acetaminophen	NO	NO	YES	YES	YES	YES
Diphenhydramine	NO	NO	YES	YES	YES	YES
Corticosteroids	NO	NO	YES	YES	YES	YES
Diuretics	NO	NO	YES	YES	YES	YES
Oxygen	NO	NO	YES	YES	YES	YES
Recombinant Erythropoietin	NO	NO	YES	YES	YES	YES
Intravenous Immunoglobulins	NO	NO	YES	YES	YES	YES
Solutions Correcting Water, Electrolyte and Acid-Based Disturbances						
Sodium Bicarbonate 8.4%, 10ml	NO	NO	NO	YES	YES	YES
Potassium Chloride 600mg (slow release)	NO	NO	NO	YES	YES	YES
Dextrose 50%	YES	YES	YES	YES	YES	YES
Dextrose 5%	YES	YES	YES	YES	YES	YES
Dextrose 5% in normal saline	YES	YES	YES	YES	YES	YES
Normal saline 0.9% NS	YES	YES	YES	YES	YES	YES
Ringer's lactate 500ml	YES	YES	YES	YES	YES	YES
Half-strength Ringer's lactate 500ml	YES	YES	YES	YES	YES	YES
Water for injection	YES	YES	YES	YES	YES	YES
Vitamins and Minerals						
Ascorbic acid 250mg	YES	YES	YES	YES	YES	YES
Calcium gluconate 10mg/ml, 10ml	NO	NO	NO	YES	YES	YES
Calcium lactate 300mg	YES	YES	YES	YES	YES	YES
Ergocalciferol 1.25mg	YES	YES	YES	YES	YES	YES
Multivitamin	YES	YES	YES	YES	YES	YES

Pyridoxine (B6) 25mg	YES	YES	YES	YES	YES	YES
Retinol (Vit A) 200,000IU	YES	YES	YES	YES	YES	YES
Retinol (Vit A) 500,000I. U	YES	YES	YES	YES	YES	YES
Vitamin B-compound	YES	YES	YES	YES	YES	YES
Vitamin B-compound 2ml	YES	YES	YES	YES	YES	YES
Ear, Nose and Oropharyngeal Preparations						
Betamethasone 0.1% ear/eyedrops	YES	YES	YES	YES	YES	YES
Clotrimazole 1%soln	YES	YES	YES	YES	YES	YES
Ephedrine 1% nasal drops	YES	YES	YES	YES	YES	YES
Gentamicin 0.3% eardrops	YES	YES	YES	YES	YES	YES
Lignocaine + Adrenaline 2% + 1:100,000 nasal drops	NO	NO	YES	YES	YES	YES
Miconazole 2% oral gel	NO	NO	YES	YES	YES	YES

Annex 5: Essential equipment required

LIBERIA ESSENTIAL SERVICE PACKAGE WITH INTERVENTIONS						
Required Equipment	Healthcare Levels					
	Primary Care		Secondary Care		Tertiary Care	
	Community Level	Clinics	Health Centers	Hospitals	Regional/Referral Hospitals	
Medical						
All Outpatient Rooms						
Blood pressure machine and stethoscope	Yes	Yes	Yes	Yes	Yes	Yes
Container for sharps disposal	Yes	Yes	Yes	Yes	Yes	Yes
Desk and chairs	No	Yes	Yes	Yes	Yes	Yes
Examination gloves	No	Yes	Yes	Yes	Yes	Yes
Examination table	No	Yes	Yes	Yes	Yes	Yes
Handwashing facilities	Yes	Yes	Yes	Yes	Yes	Yes
Light source	Yes	Yes	Yes	Yes	Yes	Yes
Minor surgical instruments	No	Yes	Yes	Yes	Yes	Yes
Ophthalmoscope	No	Yes	Yes	Yes	Yes	Yes
Otoscope	No	Yes	Yes	Yes	Yes	Yes
Patellar hammer	No	Yes	Yes	Yes	Yes	Yes
Receptacle for soiled pads, dressings, etc	No	Yes	Yes	Yes	Yes	Yes
Separate biohazard disposal	No	Yes	Yes	Yes	Yes	Yes
Sterile equipment storage	No	Yes	Yes	Yes	Yes	Yes
Sutures	Yes	Yes	Yes	Yes	Yes	Yes
Thermometer	Yes	Yes	Yes	Yes	Yes	Yes
Torch with extra batteries	Yes	Yes	Yes	Yes	Yes	Yes
Wall clock with second hand	Yes	Yes	Yes	Yes	Yes	Yes
Weighing scale	Yes	Yes	Yes	Yes	Yes	Yes
Women's Reproductive Health						
Bp machine and stethoscope	Yes	Yes	Yes	Yes	Yes	Yes

Contraceptive supplies		Yes	Yes	Yes	Yes	Yes
Doppler	No	Yes	Yes	Yes	Yes	Yes
Examination gloves	Yes	Yes	Yes	Yes	Yes	Yes
Examination table		Yes	Yes	Yes	Yes	Yes
Family Planning cards	Yes	Yes	Yes	Yes	Yes	Yes
Fetral stethoscope	Yes	Yes	Yes	Yes	Yes	Yes
Hand washing facility	Yes	Yes	Yes	Yes	Yes	Yes
Height measure	Yes	Yes	Yes	Yes	Yes	Yes
Height measure	Yes	Yes	Yes	Yes	Yes	Yes
Home-based mother's cards	Yes	Yes	Yes	Yes	Yes	Yes
IEC/BCC flipcharts, posters, models	Yes	Yes	Yes	Yes	Yes	Yes
Immunization cards	Yes	Yes	Yes	Yes	Yes	Yes
IUD insertion set	No	Yes	Yes	Yes	Yes	Yes
MVA syringe and cannulas	No	Yes	Yes	Yes	Yes	Yes
Register	Yes	Yes	Yes	Yes	Yes	Yes
Speculum and vaginal examination kit	No	Yes	Yes	Yes	Yes	Yes
Syringes and needles	Yes	Yes	Yes	Yes	Yes	Yes
Tape measure	Yes	Yes	Yes	Yes	Yes	Yes
Thermometer	Yes	Yes	Yes	Yes	Yes	Yes
Tococardiograph		Yes	Yes	Yes	Yes	Yes
Weighing scale	Yes	Yes	Yes	Yes	Yes	Yes
Child Health						
Baby scales	Yes	Yes	Yes	Yes	Yes	Yes
Hanging scales	Yes	Yes	Yes	Yes	Yes	Yes
MUAC tape	Yes	Yes	Yes	Yes	Yes	Yes
Register	Yes	Yes	Yes	Yes	Yes	Yes
Road to Health cards (immunization card)	Yes	Yes	Yes	Yes	Yes	Yes
Tape line	Yes	Yes	Yes	Yes	Yes	Yes
Thermometer	Yes	Yes	Yes	Yes	Yes	Yes

Expanded Program on Immunization						
Cold box	Yes	Yes	Yes	Yes	Yes	Yes
Refrigerator	Yes	Yes	Yes	Yes	Yes	Yes
Safety box	Yes	Yes	Yes	Yes	Yes	Yes
Syringes, needles and swabs	Yes	Yes	Yes	Yes	Yes	Yes
Temperature monitoring charts	Yes	Yes	Yes	Yes	Yes	Yes
Labor and Delivery						
Baby scales	No	Yes	Yes	Yes	Yes	Yes
Bp machine and stethoscope	No	Yes	Yes	Yes	Yes	Yes
Clean delivery kits and cord ties	No	Yes	Yes	Yes	Yes	Yes
Delivery bed and bed linen	No	Yes	Yes	Yes	Yes	Yes
Feral stethoscope	No	Yes	Yes	Yes	Yes	Yes
Instrument trolley	No	Yes	Yes	Yes	Yes	Yes
IV giving sets, cannulas, infusion bottles	No	Yes	Yes	Yes	Yes	Yes
IV stand	No	Yes	Yes	Yes	Yes	Yes
Latex gloves and protective clothing	No	Yes	Yes	Yes	Yes	Yes
Mucus extractor	No	Yes	Yes	Yes	Yes	Yes
Oral airways, various sizes	No	Yes	Yes	Yes	Yes	Yes
Oxygen tank and concentrator	No	Yes	Yes	Yes	Yes	Yes
Partograph charts	No	Yes	Yes	Yes	Yes	Yes
Self- inflating bag and mask, adult and neonatal size	No	Yes	Yes	Yes	Yes	Yes
Suction machine	No	Yes	Yes	Yes	Yes	Yes
Suturing set	No	Yes	Yes	Yes	Yes	Yes
Thermometer	No	Yes	Yes	Yes	Yes	Yes
Towel and blankets for newborn	No	Yes	Yes	Yes	Yes	Yes
Tray with routine and emergency drugs, syringes, and needles	No	Yes	Yes	Yes	Yes	Yes
urinary catheter and collection bag	No	Yes	Yes	Yes	Yes	Yes

Work surface near bed for newborn resuscitation	No	Yes	Yes	Yes	Yes	Yes
Short Stay						
Basic examination equipment		Yes	Yes	Yes	Yes	Yes
Beds, washable mattresses and linen		Yes	Yes	Yes	Yes	Yes
Dressing trolley/ medicine trolley		Yes	Yes	Yes	Yes	Yes
IV stands		Yes	Yes	Yes	Yes	Yes
Patient trolley on wheels		Yes	Yes	Yes	Yes	Yes
Urinals and bedpans		Yes	Yes	Yes	Yes	Yes
Treatment						
Ambu resuscitation set with adult and child masks	Yes	Yes	Yes	Yes	Yes	Yes
Container for sharps disposal	Yes	Yes	Yes	Yes	Yes	Yes
Dressings	Yes	Yes	Yes	Yes	Yes	Yes
Examination table	No	Yes	Yes	Yes	Yes	Yes
Hand washing facilities	Yes	Yes	Yes	Yes	Yes	Yes
Instrument sterilizer	Yes	Yes	Yes	Yes	Yes	Yes
Instrument tray	Yes	Yes	Yes	Yes	Yes	Yes
Instrument /dressing trolley	Yes	Yes	Yes	Yes	Yes	Yes
IV stand	Yes	Yes	Yes	Yes	Yes	Yes
Light source	Yes	Yes	Yes	Yes	Yes	Yes
Oral airways, various sizes	Yes	Yes	Yes	Yes	Yes	Yes
PPE kits	Yes	Yes	Yes	Yes	Yes	Yes
Splints and slings	Yes	Yes	Yes	Yes	Yes	Yes
Sterile gloves	Yes	Yes	Yes	Yes	Yes	Yes
Stool, adjustable height	Yes	Yes	Yes	Yes	Yes	Yes
Storage cabinet for drugs	Yes	Yes	Yes	Yes	Yes	Yes
Suturing set	Yes	Yes	Yes	Yes	Yes	Yes
Syringes and needles	Yes	Yes	Yes	Yes	Yes	Yes
Wall clock with second hand	Yes	Yes	Yes	Yes	Yes	Yes

Wound dressing set	Yes	Yes	Yes	Yes	Yes	Yes
Diagnostics						
Hemoglobinometer	No	Yes	Yes	Yes	Yes	Yes
Laboratory scale and weights	No	Yes	Yes	Yes	Yes	Yes
Measuring jars, beakers, test tubes	No	Yes	Yes	Yes	Yes	Yes
Micropipette and tips	No	Yes	Yes	Yes	Yes	Yes
Microscope slides and cover slips	No	Yes	Yes	Yes	Yes	Yes
Pipettes and stand	No	Yes	Yes	Yes	Yes	Yes
Reagents, stains and test kits as appropriated	No	Yes	Yes	Yes	Yes	Yes
Safety equipment (eyewash, fire extinguisher, etc.)	No	Yes	Yes	Yes	Yes	Yes
Slide rack	No	Yes	Yes	Yes	Yes	Yes
Specimen collection cups, tubes and capillary tubes	No	Yes	Yes	Yes	Yes	Yes
Spirit Lamp	No	Yes	Yes	Yes	Yes	Yes
Strain jars	No	Yes	Yes	Yes	Yes	Yes
Timer	Yes	Yes	Yes	Yes	Yes	Yes
Eye Health Care						
Ophthalmoscope	Yes	Yes	Yes	Yes	Yes	Yes
Visual acuity charts: Snellen and E-Charts	Yes	Yes	Yes	Yes	Yes	Yes
Non-Medical						
Administration						
Office equipment	No	Yes	Yes	Yes	Yes	Yes
Office furniture	No	Yes	Yes	Yes	Yes	Yes
Electricity						
Emergency lights	Yes	Yes	Yes	Yes	Yes	Yes
Water supply						
Hand - washing sinks/taps/bowls on stand in all areas	No	Yes	Yes	Yes	Yes	Yes
Storage tank	Yes	Yes	Yes	Yes	Yes	Yes

Water purification chemicals or filter	Yes	Yes	Yes	Yes	Yes	Yes
Water source for drinking water	Yes	Yes	Yes	Yes	Yes	Yes
Waste Disposal						
Buckets for contaminated waste in all treatment areas	No	Yes	Yes	Yes	Yes	Yes
Incinerator or burial pit	No	Yes	Yes	Yes	Yes	Yes
Protective boots and utility gloves	No	Yes	Yes	Yes	Yes	Yes
Rubbish bins in all rooms	No	Yes	Yes	Yes	Yes	Yes
Sanitation facilities for patients	No	Yes	Yes	Yes	Yes	Yes
Drainage system	No	Yes	Yes	Yes	Yes	Yes
Separate Biohazard disposal	No	Yes	Yes	Yes	Yes	Yes
Septic tanks	No	Yes	Yes	Yes	Yes	Yes
	No	Yes	Yes	Yes	Yes	Yes
Sharps containers in all treatment areas	No	Yes	Yes	Yes	Yes	Yes
Safety						
Fire extinguisher	No	Yes	Yes	Yes	Yes	Yes
Vehicle						
Vehicle 4--wheel drive	No	No	Yes	Yes	Yes	Yes
Motorbike	Yes	Yes	Yes	Yes	Yes	Yes
Ambulance 4-wheel drive	No	No	No	No	No	No
Kitchen						
Cooking pots and utensils	No	Yes	Yes	Yes	Yes	Yes
Cooking stove	No	Yes	Yes	Yes	Yes	Yes
Food refrigeration	No	Yes	Yes	Yes	Yes	Yes
Plates, cups & cutlery	No	Yes	Yes	Yes	Yes	Yes
Storage	No	Yes	Yes	Yes	Yes	Yes
Washing and drying area facilities	No	Yes	Yes	Yes	Yes	Yes
Laundry						
Detergent/Soap	No	Yes	Yes	Yes	Yes	Yes

Iron	No	Yes	Yes	Yes	Yes	Yes
Washing and rinsing equipment/bowl	No	Yes	Yes	Yes	Yes	Yes
Water heater	No	No	Yes	Yes	Yes	Yes
Medical Storage						
Lockable storage						
Refrigeration	Yes	Yes	Yes	Yes	Yes	Yes
Cool boxes and vaccine carriers	Yes	Yes	Yes	Yes	Yes	Yes
Refrigerator	No	Yes	Yes	Yes	Yes	
Shelves and stock cards	Yes	Yes	Yes	Yes	Yes	
Housekeeping						
Brooms, brushes and mops	Yes	Yes	Yes	Yes	Yes	
Buckets	Yes	Yes	Yes	Yes	Yes	
Soap and disinfectan	Yes	Yes	Yes	Yes	Yes	

Required Equipment	Healthcare Levels					
	Primary Care		Secondary Care		Tertiary Care	Regional Blood Centers
	Community Level	Clinics	Health Centers	Hospitals	Regional/Referral Hospitals	
Medical						
Blood Transfusion Services						
Hemocue 301 Analyzer	NO	YES	YES	YES	YES	YES
BP cuff/machine	YES	YES	YES	YES	YES	YES
Infrared Thermometer	YES	YES	YES	YES	YES	YES
Donor scale	NO	NO	YES	YES	YES	YES

Serofuge	NO	NO	YES	YES	YES	YES
Doner Bed or Couch	NO	NO	YES	YES	YES	YES
Stress/Squeeze balls	NO	NO	YES	YES	YES	YES
Blood collection monitor/Scale	NO	NO	YES	YES	YES	YES
Tube Stripper	NO	NO	YES	YES	YES	YES
Blood Bank Refrigerator (Solar/Electricity)	NO	NO	YES	YES	YES	YES
Water Bath	NO	NO	NO	NO	NO	YES
Water Distiller	NO	NO	NO	NO	NO	YES
Refrigerators (Solar/Electricity)	NO	NO	YES	YES	YES	YES
Artery Forceps	NO	NO	YES	YES	YES	YES
Microscope	NO	NO	YES	YES	YES	YES
Chemistry Analyzers	NO	NO	YES	YES	YES	YES
ELIZA Analyzers	NO	NO	NO	NO	NO	YES
Blood Bag Clip	NO	NO	YES	YES	YES	YES
Table-top stopwatch	NO	NO	YES	YES	YES	YES
Sharps disposal	YES	YES	YES	YES	YES	YES
Biohazard waste bins	YES	YES	YES	YES	YES	YES
Weighing Scale	YES	YES	YES	YES	YES	YES
Test Tube Racks	NO	YES	YES	YES	YES	YES

Agglutination Viewers	NO	NO	YES	YES	YES	YES
Cool Boxes	NO	NO	NO	NO	NO	YES
Camp Beds	NO	NO	NO	NO	NO	YES
First Aid Kits	YES	YES				YES
Automatic Pipettes	NO	NO	YES	YES	YES	YES

Annex 5 Minimum Staffing levels Required

No	Cadre	STAFFING LEVELS REQUIRED											
		Primary Care				Secondary Care				Tertiary Care			
		Community Level		Clinic Level		Health Center Level		Hospitals		Regional Hospitals		Referrals Hospitals	
		Min Staff	Max Staff	Min Staff	Max Staff	Min Staff	Max Staff	Min Staff	Max Staff	Min Staff	Max Staff	Min Staff	Max Staff
1	Community Health Assistant	1	1	0	0	0	0	0	0	0	0	0	0
2	Community Health Promoter	1	1	0	0	0	0	0	0	0	0	0	0
3	Community Health Supervisor	1	1	0	0	0	0	0	0	0	0	0	0
5	Medical Doctor/GP	0	0	0	0	1	2	3	6	4	5	6	8
6	Physician Assistant	0	0	1	1	2	3	2	4	3	3	5	7
7	Dental Assistant	0	0	0	0	0	0	1	2	2	2	3	4
8	Pharmacist	0	0	0	0	1	1	2	3	1	1	3	4
9	Dispenser	0	0	1	1	2	3	3	3	3	3	4	5
10	X-ray technician	0	0	0	0	0	0	1	2	2	2	3	5
11	Lab Technician	0	0	1	1	1	2	2	3	2	3	4	6
12	Lab Assistant	0	0	1	1	3	4	3	3	3	4	4	6
13	Nurse Anesthetist	0	0	0	0	0	2	2	2	2	3	5	6
14	Registered nurse	0	0	1	2	6	8	12	14	17	23	35	40

15	Midwife	0	0	1	2	3	6	4	6	6	8	15	19
16	Nurse Assistant	0	0	1	1	4	5	5	7	6	8	10	15
17	Environmental Health Technician	0	0	0	0	1	1	1	1	1	1	2	2
18	Social worker	0	0	0	0	1	1	1	1	1	1	2	2
19	Logistic Officer	0	0	0	0	1	1	1	1	1	1	1	1
20	Medical Director	0	0	0	0	0	0	1	1	1	1	1	1
21	Assistant/Deputy Medical Director	0	0	0	0	0	0	0	0	1	1	1	1
22	General Internist	0	0	0	0	0	0	0	0	1	1	1	1
23	General surgeon	0	0	0	0	1	1	2	3	2	2	3	3
24	Obstetrician/Gynecologist	0	0	0	0	0	0	1	2	1	1	4	4
25	General Pediatrician	0	0	0	0	0	0	1	1	2	2	3	3
26	Family Physician	0	0	0	0	0	0	1	1	2	2	3	3
27	Cardiologist	0	0	0	0	0	0	0	0	0	1	1	2
28	Nephrologist	0	0	0	0	0	0	0	0	1	1	1	2
29	Neurologist	0	0	0	0	0	0	0	0	1	1	1	2
30	Neurosurgeon	0	0	0	0	0	0	0	0	1	1	1	2
31	Urologist	0	0	0	0	0	0	0	0	1	0	2	2

32	ENT specialist	0	0	0	0	0	0	0	0	0	1	2	2
33	Medical Oncologist	0	0	0	0	0	0	0	0	0	0	1	1
34	Orthopedic surgeon	0	0	0	0	0	0	0	1	1	1	2	3
35	Ophthalmologist	0	0	0	0	0	0	0	0	1	2	2	3
36	Radiologist	0	0	0	0	0	0	0	0	1	3	2	3
37	Accountant	0	0	0	0	1	1	1	1	1	1	2	2
38	Biomedical Technician	0	0	0	0	0	0	1	1	1	1	1	1
39	Administrator	0	0	0	0	1	1	1	1	1	1	1	1
40	Driver	0	0	0	0	2	2	3	4	3	4	5	6
41	Security	0	0	1	1	3	4	4	6	4	6	7	10
42	Janitor	0	0	1	1	4	5	5	7	5	6	11	13
43	Registrar/Recorder	0	0	1	1	2	3	2	3	3	4	5	6
44	Scrub Nurse	0	0	0	0	1	2	2	2	2	2	3	3
45	OR Technician	0	0	0	0	0	0	1	1	1	1	2	2
46	Human Resource Officer	0	0	0	0	0	0	1	1	1	1	1	1
47	HIS Data Clerk	0	0	0	0	0	0	1	1	1	1	1	1
48	ICT Officer	0	0	0	0	0	0	1	1	1	1	1	1
49	Maintenance Staff	0	0	0	0	0	0	1	1	2	2	3	3

50	Mechanic	0	0	0	0	0	0	1	1	1	1	2	2
51	Mental Health Nurse	0	0	0	0	1	1	1	1	2	2	2	2
52	Mortician	0	0	0	0	0	0	2	3	2	2	3	3
53	Plumber	0	0	0	0	0	0	1	1	1	1	1	1
54	Powerhouse Operator	0	0	0	0	1	1	1	1	2	2	3	3
55	Radio Operator	0	0	0	0	1	1	0	1	1	1	2	2
56	Cook	0	0	0	0	2	2	2	3	2	3	3	3
57	Vaccinator	0	0	1	2	2	2	2	3	2	2	3	3
	Total	3	3	11	14	48	65	83	111	110	134	195	237

No.	Staffing for Regional Blood transfusion Centres	MINIMUM STAFF	MAXIMUM STAFF
1	Laboratory Technologists/Lab Technicians	4	6
2	Laboratory Assistants	2	2
3	Nurse Counselors	4	6
4	Social Workers	2	3
5	Registrar/Receptionist	1	1
6	Secretary	1	1
7	Data Clerks	1	1
8	Janitors	2	3
8	Security Personnel	4	6
9	Maintenance Personnel: Plumber; Generator Technician/ Electrician	2	2
10	Drivers	2	3