

ESSENTIAL PACKAGE OF HEALTH SERVICES

Secondary & Tertiary Care:
The District, County & National Health Systems



Ministry of Health & Social Welfare
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Abbreviations

ACT	Artemisinin-based Combination Therapy
AFP	Acute Flaccid Paralysis
ANC	Antenatal Care
ART	Anti-Retroviral Therapy
BEmONC	Basic Emergency Obstetric & Neonatal Care
BPHS	Basic Package of Health Services
CEmONC	Comprehensive Emergency Obstetric & Neonatal Care
CHO	County Health Officer
CHSWT	County Health & Social Welfare Team
CHV	Community Health Volunteer
DHO	District Health Officer
DOTS	Directly Observed Treatment Short Course
EmONC	Emergency Obstetric & Neonatal Care
ENT	Ear, Nose and Throat
EPHS	Essential Package of Health Services
gCHV	general Community Health Volunteer
HCT	HIV Counseling and Testing
HHP	Household Health Promoter
HIPC	Heavily Indebted Poor Countries
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
IMF	International Monetary Fund
JFK-MC	John F Kennedy - Medical Center
MCH	Maternal and Child Health
MDA	Mass Drug Administration
MDG	Millennium Development Goal
MOHSW	Ministry of Health & Social Welfare
MPHP	Multi-Purpose Health Professional
NACP	National AIDS Control Program
NCDs	Non Communicable Diseases
NGO	Non-Governmental Organization
NHSWPP	National Health and Social Welfare Policy and Plan (2011-2021)
NLTCP	National Leprosy and Tuberculosis Control Program
NMCP	National Malaria Control Program
NTDs	Neglected Tropical Diseases
OIC	Officer in Charge
PEP	Post Exposure Prophylaxis
PHC	Primary Health Care
PMTCT	Prevention of Mother-to-Child Transmission
SGBV	Sexual and Gender-Based Violence
SOP	Standard Operating Procedure
STIs	Sexually Transmitted Infections
TB	Tuberculosis
TTM	Trained Traditional Midwife

Foreword

The Ministry of Health and Social Welfare has launched the Essential Package of Health Services (EPHS). In 2007 the Ministry established the Basic Package of Health Services (BPHS) with the ultimate intention of jumpstarting a health care delivery system for all Liberians. The BPHS became the cornerstone of the National Health Policy and Plan that was drafted and made operational in 2007. The BPHS established basic preventive and curative services needed to improve access and health care. By 2010, BPHS implementation demonstrated significant successes. For the first time in many years, Liberia's clinics, health centers and hospitals were given a set of standard services that they were expected to provide. The BPHS Accreditation, which measured the provision of all required services and systems, found consistent improvement in both government and partner-managed facilities. In 2009, approximately 35% of Liberia's government health facilities were implementing the BPHS. In 2010, this number increased to 80%, surpassing the national and Heavily Indebted Poor Countries (HIPC) targets by 10%. In 2011, this number again increased to 84%.

Over the past four years, we have established stronger delivery systems and seen great improvements in all counties in service delivery, especially in historically lower performing southeastern counties. There has been massive improvement in standardized medical services, health human resource development and supply chain management systems to ensure the acceleration of health care for all in Liberia.

I congratulate all of the organizations and individuals that were instrumental in attaining these achievements. There remains much to be done. As part of the 2011–2021 National Health Policy and Plan, it is critical that our long-term view not only expands the services available to all Liberians but also continue to improve and standardize our health care delivery systems in order to ensure quality health care for all Liberians. The Essential Package of Health Services (EPHS), which becomes the cornerstone of the new National Health and Social Welfare Policy and Plan (NHSWPP), builds upon the successes of the BPHS implementation. It provides a more comprehensive set of services that strengthen key areas that continue to perform poorly in the current system and adds new services necessary to address needs at all levels of the health care system.

This EPHS is in two phases- the first phase covers the period 2011- 2013, after which there will be a review and modification based on progress. The EPHS Primary Care places an increased emphasis on all maternal and child health services including child nutrition, adolescent health services, emergency services and communicable disease control. To ensure all Liberians are able to live healthy, productive lives, new services have been included focusing on early interventions (e.g., school health services) and vulnerable populations (e.g., prison health services, sexual and gender-based violence services, mental health services).

As a first step in rebuilding the health system, the BPHS focused heavily on the primary care system. This year, we congratulate all stakeholders on how far we have come but stress that we must go further. It is time to develop our secondary and tertiary care systems: to improve our referral networks and raise the availability of services and quality of care at all Health Centers and Hospitals. This EPHS Secondary and Tertiary Care is an ambitious plan for the next ten years. This document sets forth the standards for all government and private Health Centers and Hospitals for which, all stakeholders, including central MOHSW, will be held accountable. We therefore call on all stakeholders to be ambitious and work together to ensure the successful implementation of the EPHS.

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1.0 Introduction

The mission of the Ministry of Health and Social Welfare (MOHSW) is to *reform and manage the sector to*

effectively and efficiently deliver comprehensive, quality health and social welfare services that are equitable, accessible and sustainable for all people in Liberia. One of the key tools to fulfill this mission has been the Basic Package of Health Services (BPHS). Developed in 2007, the BPHS was the first set of standardized criteria for healthcare provision in post-conflict Liberia. While significant progress has been made against the current package as defined by the BPHS, it is now time to strive for more comprehensive healthcare delivery in Liberia. The MOHSW therefore puts forth the following Essential Package of Health Services (EPHS) as part of the 10-year National Health and Social Welfare Policy and Plan (NHSWPP).

In 2009, Accreditation scores showed that only 35% of the 349 government health facilities were implementing the BPHS, meaning that only 35% of government healthcare facilities had appropriate services, drugs and equipment to provide basic healthcare to the population. Detailed accreditation findings were used to target system and service improvements resulting in a significant improvement in 2010. Eighty percent of government facilities had implemented the BPHS, surpassing the 2010 national and International Monetary Fund (IMF) Heavily Indebted Poor Countries (HIPC) completion point target by 10%. In 2011, this number reached 84%.

While the implementation of the BPHS has been successful in achieving an agreed upon package of services, it has proved incomplete for the full needs of healthcare delivery. The BPHS does not take into account people presenting at health facilities for treatment of some common illnesses such as non-communicable and neglected tropical diseases, amongst others. Additionally, recent studies show that approximately 40% of the population still lives more than one hour walk from a health facility. Therefore, 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, guidelines and procedures; phased expansion of services towards a more comprehensive package; and consideration of urban and rural differences.

The EPHS sets ambitious goals for service availability and access over a 10-year period. It will be rolled out initially for a 3-year period, giving specific attention to the most critical morbidity issues facing Liberia. After this introductory period, the package implementation will be evaluated for further expansion and strengthening. The EPHS will provide an improved referral system between primary, secondary and tertiary care health facilities to create a more holistic healthcare system that provides higher quality services to all Liberians. Health promotion, being a crosscutting issue, shall be strengthened at all levels through improved coordination between the Health Promotion Division of the MOHSW and the County Health and Social Welfare Teams (CHSWTs).

The Secondary and Tertiary Care component of the EPHS considers Health Centers to be the entry point for secondary care and focuses on a strong, sequential referral system to the tertiary level. Currently, Liberia's hospitals have different capacities resulting in:

- Inadequate access to secondary care services;
- Inadequate clinical care standards affecting the quality of health services;
- Weak hospital management capacity resulting in inefficient management of meager resources;
- A fragmented secondary and tertiary care system with weak referral services;
- Limited financial support to ensure optimal coverage of services and sustainability;
- Inadequate qualified human resources;
- No standards for hospital bed capacity among counties.

As part of the 2011-2021 NHSWPP, the Essential Package of Secondary and Tertiary Health Services sets forth the standards to strengthen services at the secondary and tertiary levels of care and ensure quality healthcare for all Liberians.

1.1 Purpose of the EPHS

The EPHS serves four basic purposes:

- (1) To expand the standardized primary package of health services;
- (2) To provide equitable access to essential health center and hospital services;
- (3) To strengthen the service delivery network;
- (4) To provide the basis for operational plan development.

As part of the EPHS, the Secondary and Tertiary Component has the following purposes:

- (1) To establish a prioritized package of secondary and tertiary health service standards for all government and private health facilities;
- (2) To improve the referral system at all levels;
- (3) To set the minimum requirements for: staffing, equipment, drugs and medical supplies;
- (4) To give guidance for training programs;
- (5) To improve efficiency, equity, accountability and affordability.

1.2 The Relationship Between the BPHS and EPHS

The BPHS established the framework to begin improving basic facility health service provision in a post-conflict setting. Building upon successful BPHS implementation and strong health sector development, the EPHS now includes scaled-up and additional services for all levels of healthcare delivery to provide more comprehensive services to the Liberian people. The EPHS also focuses on strengthening certain key areas that continue to perform weakly in the current system.

As a result of Liberia's ongoing high maternal and infant mortality rates, the EPHS places a stronger emphasis on all maternal and child health services. This includes: access to skilled, 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. Additional services to be scaled-up include child nutrition, response to sexual and gender based violence (SGBV), adolescent health services and mental health services. New services include the detection and treatment of reproductive cancers, non-communicable diseases and neglected tropical diseases as well as school health, eye health and prison health. This more comprehensive approach addresses healthcare needs at all levels of the healthcare system.

The BPHS focused on the primary health system and did not adequately address services and standards at the secondary and tertiary levels. The EPHS, therefore, includes the minimum standards required at all secondary and tertiary facilities. All hospitals will be expected to use this package of standards to develop individual, annual hospital plans for which they will be held accountable.

1.3 Levels of Care and System Organization

Consistent with the national health policy, the EPHS will maintain three levels of care: primary, secondary and tertiary. These will be provided through four healthcare sub-systems as described below. CHSWTs and implementing Non Governmental Organization (NGO) partners are responsible to staff facilities based on each facility's workload. Secondary and Tertiary level staffing should consider reasonable, weekly shift requirements and ensure the appropriate number of clinicians and general health providers to 24 hour quality services every day.

Health Centers and District Hospitals are the entry point for referrals from Primary Health Care (PHC) Clinics and bring professional inpatient and emergency services closer to the population in rural areas. Hospitals play a crucial role in Liberia's health sector reform and have been re-categorized into District, County, Regional and National Hospitals in order to strengthen access to services through expanded services and enhanced quality of care. As compared to Health Centers and District Hospitals, County Hospitals provide more sophisticated services for diagnosing and treating various conditions and provide the first level of outpatient and inpatient care for patients who have been referred by Health Centers or District Hospitals. Regional Hospitals receive referrals from the County Hospitals and are expected to provide more advanced specialized care as well as play an active role in capacity building of the County Hospitals. At the highest level of the tertiary care system is John F Kennedy Medical Center (JFK-MC), which is currently Liberia's only specialized hospital. It is the national referral hospital and the main teaching hospital for A.M. Dogglioti Medical College.

Primary Care:

The Community Health System:

This system is the main primary care provider. It includes:

a. Community Level Services:

A standard set of outreach, health promotion and referral services will be provided for communities more than one hour walk (5km) from the nearest health facility by: Community

Health Volunteers (CHVs). CHVs include: (Household Health Promoters (HHPs), Trained Traditional Midwives (TTMs) and general Community Health Volunteers (gCHVs).

- b. PHC Clinic Level 1:
The PHC Level 1 Clinic covers isolated clustered communities with a population of up to 3500. Each PHC Level 1 is, at minimum, expected to be open 8 hours each day between Monday and Friday.
- c. PHC Clinic Level 2:
The PHC Level 2 Clinic covers a catchment population of 3,500 to 12,000 and provides outreach services (see d) to the portions of their catchment population outside of a 5km radius. Each PHC Level 2 is, at minimum, expected to be open 8 hours each day between Monday and Friday.
- d. Integrated Outreach Programs:
Based at the PHC Level 2 Clinic, they provide basic primary care, at least weekly; to isolated catchment communities that are more than one hour walk (5km) from the clinic.

Secondary Care:

The District Health System:

This system is the first provider of secondary care, focusing on maternal and child health care. It receives referrals from the Community System. The Health District System has a catchment population of 25,000 to 40,000 and has either of the following:

- e. Health Centers:
Health Centers receive referrals from PHC Level 1 and 2 clinics in the district; have up to 40 beds and a laboratory. Each Health Center is expected to be open 24 hours every day.
- f. District Hospitals:
Where a dense catchment population, large network of clinics and far distance from a county hospital warrants it, Health Centers may upgrade to District Hospitals with higher clinical capacity, including emergency surgery and Comprehensive Emergency Obstetric and Neonatal Care (CEmONC). Each District Hospital is expected to be open 24 hours every day.

The County Health System:

This system provides expanded services within the secondary level of care. It consists of:

- g. County Hospitals:
Each of the 15 counties has a County Hospital that will receive referrals from the Community and District Health Systems. The County Hospital provides general surgery, pediatrics, general medicine, obstetrics and gynecologic 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 should have a detached outpatient facility for the provision of primary care. Each County Hospital is expected to be open 24 hours every day.

Tertiary Care:

The National Health System:

This system is the main provider of tertiary level care. It consists of two types of hospitals: Regional Hospitals and the National Hospital, John F. Kennedy Medical Center (JFK-MC).

- h. Regional Hospitals:
Regional Hospitals will serve a catchment area of 3-5 counties and receive referrals from County Hospitals. Each Regional Hospital will have a bed capacity of 100 or more. These facilities will play an active role in capacity building of the County Hospitals and serve as training sites complementary to the National Referral Hospital. They may upgrade from a County Hospital, in which case they will continue to receive referrals from the district level. Regional Hospitals provide additional specialized services and are expected to be open 24 hours every day.

- i. John F. Kennedy Medical Center:
JFK-MC, the national referral hospital, is the specialized and teaching hospital - in collaboration with Regional Hospitals - for physicians, sub-specialists and allied health professionals. It will have 500 or more beds with advanced specialists, laboratory and radiology capabilities.

1.4 Criteria for Inclusion

Representatives from community, district, county, national and international organizations contributed to determining the priority service delivery areas and concepts detailed within this document. The MOHSW ultimately applied four criteria to all of the services suggested for the EPHS:

- (1) Their 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 resources and constraints as well as those forecasted for the next ten years;
- (4) The potential for sustaining the activity in the medium to long-term.

The priorities of the Secondary and Tertiary Care component are to increase access to health services, improve the quality and outcome of patient care and increase operational efficiency. The EPHS establishes the minimum requirements for all Health Centers and Hospitals to improve clinical and managerial performance over the next three years in order to:

- (1) Address diseases and illnesses with high burdens on the population;
- (2) Provide interventions that have been proven to be consistently effective;
- (3) Ensure all facilities are staffed with the necessary number of qualified staff to provide services;
- (4) Ensure all facilities have the necessary drugs, supplies and equipment.

1.5 Phased Implementation Approach

The 10 year EPHS will be implemented in two phases. Hospitals are expected to create annual plans that capture all of the minimum requirements as well as the priorities for each phase of implementation:

Phase 1 (Years 1-3):

- Strengthening and expansion of:
 - General Medical, Emergency Medical, Obstetric & Gynecological and Pediatric health services at all levels;
 - Ear, Nose & Throat (ENT) and surgical services in all County Hospitals;
 - Orthopedic, surgical and dental services in Regional Hospitals;
- Introduction of:
 - Surgical and Obstetric & Gynecological departments in identified District Hospitals;
 - Specialized services in identified Regional Hospitals;
 - X-Ray, Ultrasound, Echocardiograph and EKG services in County and Regional Hospitals.
- Strengthening facility administration and essential support services including:
 - Infrastructure (facility and staff accommodations);
 - Equipment, drugs and medical supplies;
 - Referrals;
 - Infection prevention and control including waste management;
 - Diagnostic and blood safety services;
 - Imaging services;
 - Deployment and retention of General Practitioners in County Hospitals and Specialists in Regional Hospitals;
 - Hospital management.

Phase 2 (Years 4-10):

In phase two, the following health services will be added to priorities identified in phase one:

- Strengthening and expansion of the following:
 - Specialist services in all Regional Hospitals and at JFK-MC;
 - ENT services in all hospitals;
 - Dental services in all hospitals.

- Strengthen Human Resources: Specialists replacing General Practitioners/Physician Assistants:
 - Deploy General Practitioners and Laboratory Technicians in all District and County Hospitals;
 - Deploy Specialists including Laboratory Technologists in all Regional Hospitals.
- Strengthen diagnostic and essential support services including:
 - Diagnostic services in all District and County Hospitals;
 - Imaging services in all County Hospitals;
 - Referral systems at all levels.

1.6 The Secondary and Tertiary Care System: Program Areas & Components

CHSWT operational plans will define the series of programs and activities that will be necessary to address the infrastructure, human resource, equipment and supply, and management needs of the system. The EPHS Secondary and Tertiary Care System for Liberia consists of the following service delivery areas:

Health Centers and District Hospitals

- Obstetrics
- Gynecology
- Pediatrics
- Internal Medicine
- Emergency Care
- Diagnostic Laboratory Services
- Subspecialties such as ENT and Dental Services
- Basic Surgical Procedures

County Hospitals

All of the above areas with expanded services and:

- General Surgery
- Emergency Surgery
- Diagnostic Imaging Services

Regional Hospitals and JFK-MC

All of the above areas with expanded services and:

- Specialist services

Support Systems

- Leadership & Management
- Health Management Information Systems (HMIS)
- Nursing Care Standards
- Pharmaceutical and Supply Chain Services
- Laboratory and Diagnostic Services
- Facility Infection Prevention & Management
- Financial Management

2.0 Essential Secondary & Tertiary Care Support Systems

2.1 Quality Assurance

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

- (1) Institutionalizing quality assurance systems;
- (2) Improving patient safety;
- (3) Enhancing clinical practice;

(4) Improving management systems.

All government and private facilities, as well as social welfare 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.

2.2 Leadership & Management

At 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 Hospitals, a Board of Directors will work with the Medical Director to oversee facilities. The Board should always include community representation and will be appointed by the County Superintendent. Each Hospital Board of Directors will oversee the work of the Hospital Management Teams for routine facility operations. A well functioning Board of Directors, that includes representatives from the hospital's community, can have a significant impact on the quality and efficiency of the hospital and its daily performance; enabling two essential characteristics of good hospitals:

- Autonomy to do what is necessary to provide good care, and
- Accountability to those served for the results of that care.

Effective hospital governance requires: (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 hospital is, therefore, expected to have:

- 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.

For more information on creating a Board of Directors and hospital governance, please reference the *Hospital Leadership and Governance Guidelines*.

2.2.1 Minimum Staffing Requirements:

The EPHS encourages the use of flexible staffing patterns based on each facility's workload. Please see the tables in 3.0 for the minimum staffing requirements at Health Centers, District, County and Regional Hospitals.

2.3 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 consolidated and aggregated at the central level to inform policy-making, planning, resource allocation and operational oversight.

CHSWTs 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.

For more information, please reference the *National HMIS Guidelines for County Health & Social Welfare 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: A Medical Record Toolkit*.

2.4 Nursing Care Standards

Nursing is a profession that addresses the holistic wellbeing of an individual to achieve good health. Nurses play a vital role in all Health Centers and Hospitals as the largest workforce cadre. Nursing 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 nursing care standards:

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

The EPHS requires that all Hospitals shall have a Nursing Workforce and Communication Plan. This should include:

- Established management structures and job descriptions that detail the roles and responsibilities of each nursing professional, including reporting relationships;
- A set minimum nurse to patient ratio for each inpatient ward/service taking into consideration the skill mix of the staff;
- Procedures to maintain minimum nurse to patient ratios especially in priority areas;
- Identified areas of priority where the nurse count must at all times meet the minimum ratio requirement (e.g., intensive care unit);
- Written policies describing the responsibilities of nurses for all aspects of the nursing process;
- Established guidelines for verbal and written communication about patient care that involves nurses, including verbal orders. The nurse is responsible to make sure that the patient's medical record is complete with all necessary forms 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 nurses or designated clinical staff.

For more information on developing a Nursing Workforce and Communication Plan, please reference the *Nursing Care Standards Guidelines*.

2.5 Pharmaceutical and Supply Chain Services

MOHSW, being cognizant of the problem posed by stock-outs and realizing the need to improve supplies (medical and non-medical), 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. CHSWTs 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, rational use of drugs and adverse reactions. All hospitals shall have a Pharmacy with qualified Dispensers and Pharmacists.

2.6 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 surveillance purposes and are often the first sites of confirmation for disease 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 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.

2.7 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, body fluids or contaminated materials. In order to improve the effectiveness of facility infection control measures, CHSWTs shall ensure that all facilities have appropriate operational and technical capacities including equipment, supplies and infrastructure necessary for infection prevention and control. All facilities should adhere to the *MOHSW Practical Guidelines for Infection Control in Health Facilities*. All District Health Teams shall designate at least one Environmental Health Technician (EHT) 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.

2.8 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*.

3.0 Secondary & Tertiary Care Summaries

3.1 Health Center and District Hospital Summary

The staffing pattern will be based on facility utilization and workload

S/N	Cadre	Phase One (1-3 years)				Phase Two (4-10 years)			
		Health Center		District Hospital		Health Center		District Hospital	
		Minnimum staffing	Maximum staffing	Minnimum staffing	Maximum staffing	Minnimum staffing	Maximum staffing	Minnimum staffing	Maximum staffing
1	Medical Director				1	1	1	1	1
2	General Practitioner			1	1	1	2	3	4
3	Physician	1	2	4	5	3	4	4	6

S/N	Cadre	Phase One (1-3 years)				Phase Two (4-10 years)			
		Health Center		District Hospital		Health Center		District Hospital	
		Minnimum staffing	Maximum staffing	Minnimum staffing	Maximum staffing	Minnimum staffing	Maximum staffing	Minnimum staffing	Maximum staffing
	Assistant								
4	Dental Assistant		1	2	3	2	3	3	5
5	Pharmacist				1		1	1	2
6	Pharmacist Assistant			1	2	1	1	2	3
7	Dispenser	1	2	2	3	2	3	3	5
8	X-ray Technician			1	2	1	2	2	3
9	Lab Technician			1	2	1	2	2	4
10	Lab Assistant	1	2	2	4	2	3	3	5
11	Lab Aide	1	2	2	4	2	3	3	5
12	Anesthetist							1	2
13	Anesthetic Assistant			1	2		1	2	3
14	Registered nurse	2	4	6	10	6	8	8	12
16	Nurse Midwife	1	2	4	8	4	6	8	10
17	Mid wife	4	6	8	12	8	15	12	18
18	Nurse Aide	4	8	10	15	8	12	15	20
19	Environmental health Tech	1	2	2	4	2	3	3	5
20	Social worker	1	2	2	4	2	3	3	5
21	Administrative Assistant		1	1	2	1	2	2	2
22	Finance Assistant		1	1	2	1	2	2	2
23	Supplies		1	1	2	1	2	2	2
24	Medical records	1	2	2	3	2	3	3	4
25	Utilities/ Transport			1	2	1	2	2	3
26	House keeping			2	4	2	4	4	6
27	Laundry			2	5	2	4	5	7
28	Maintenance		2	2	4	2	4	4	6
29	Security/Guard	1	3	4	5	3	5	5	7
	Total	19	43	65	112	61	101	108	157

3.2 County Hospital Summary

S/N	Cadre	Phase One (1-3 years)		Phase Two (4-10 years)	
		County Hospital		County Hospital	
		Minnimum staffing	Maximum staffing	Minnimum staffing	Maximum staffing
1	Medical Director	1	1	1	1
2	Assistant Medical Director		1	1	1
3	Specialist services				
	Surgeon			1	2
	Oobsetrician			1	2
	Pediatrician			1	2
	Internal Medicine			1	2
	ENT			1	2
	Dentist			1	2
	Orthpedic surgeon			1	2
	Ophthalmologist			1	2
	Laboratory specialist			1	2
	Radiologist			1	2
4	General Practitioner	1	2	3	4
	Physician Assistant	10	15	15	20
	Dental Assistant	2	3	4	6
	Pharmacist	1	1	2	2
	Pharmacist Assistant		1	1	2
	Dispenser	4	5	6	8
	X-ray Technician	1	1	2	3
	Lab Technician	1	1	2	3
10	Lab Assistant	2	4	4	6
11	Lab Aide	3	4	4	6
12	Anesthetist	1	2	2	3
13	Anesthetic Assistant	2	3	3	6
	Nutritionist	1	2	2	3
14	Registered nurse	36	45	60	80
16	Nurse Midwife	30	36	50	80
17	Mid wife	36	45	60	80
18	Nurse Aide	30	36	36	24
19	Environmental health Tech	2	3	4	5
	Psychologist	1	1	2	3
20	Social worker	3	4	5	6
	Administrator	1	1	1	1
21	Administrative Assistant	1	1	1	1
22	Finance Assistant	1	1	2	3
23	Supplies	1	1	2	3
24	Medical records	3	4	4	5
25	Utilities/ Transport	1	1	2	3
26	House keeping	6	8	10	15
27	Laundry	6	8	10	15
28	Maintenance	3	5	8	12
29	Security/Guard	3	8	8	12
	Total	194	254	327	442

3.3 Regional Hospital Summary

S/N	Cadre	Phase One (1-3 years)		Phase Two (4-10 years)	
		Regional Hospital		Regional Hospital	
		Minnimum staffing	Maximum staffing	Minnimum staffing	Maximum staffing
1	Medical Director	1	1	1	1
2	Assistant Medical Director		1	1	1
3	Specialist services				
	Surgeon	1	2	3	4
	Oobsetrician	1	2	3	4
	Pediatrician	1	2	3	4
	Internal Medicine	1	2	3	4
	ENT	1	2	3	4
	Dentist	1	2	3	4
	Orthpedic surgeon	1	2	3	4
	Ophthalmologist	1	2	3	4
	Laboratory specialist	1	2	3	4
	Radiologist	1	2	3	4
4	General Practitioner	3	4	5	8
	Physician Assistant	15	20	20	15
	Dental Assistant	6	8	8	12
	Pharmacist	2	3	3	4
	Pharmacist Assistant	2	3	3	4
	Dispenser	6	8	10	12
	X-ray Technician	3	4	5	6
	Lab Technician	2	3	4	6
10	Lab Assistant	4	8	10	15
11	Lab Aide	5	8	10	12
12	Anesthetist	3	4	4	6
13	Anesthetic Assistant	4	6	6	8
	Nutritionist	2	3	3	4
14	Registered nurse	50	75	80	100
16	Nurse Midwife	45	70	80	100
17	Mid wife	50	75	80	100
18	Nurse Aide	36	30	30	24
19	Environmental health Tech	3	5	6	8
	Psychologist	1	2	2	4
20	Social worker	3	4	6	8
	Administrator	1	1	1	1
21	Administrative Assistant	1	1	1	1
22	Finance Assistant	1	2	2	3
23	Supplies	1	2	2	3
24	Medical records	4	5	5	7
25	Utilities/ Transport	2	3	3	5
26	House keeping	10	12	12	18
27	Laundry	10	12	12	18
28	Maintenance	4	8	10	18
29	Security/Guard	6	9	9	12
	Total	296	420	464	584

4.0 Secondary & Tertiary Care Service Detail

For all outpatient services, refer to the EPHS: Primary Care Package. Health Centers and all Hospitals are expected to provide all Primary Care services in addition to the below services

4.1 Diagnostics

ASSUMPTIONS:

- These services represent a ten-year plan.
- During Phase One: Laboratory services will be expanded to Health Centers and Laboratory Technicians will be deployed at all Hospitals.
- During Phase Two: Specialist Laboratory Technicians will be deployed at all Regional Hospitals and diagnostic services to ensure safe surgery will be established at all County and Regional Hospitals.
- A pathologist will be deployed during Phase One at JFK Hospital. During Phase Two, pathologists will be deployed at Regional Hospitals.

	SECONDARY			TERTIARY
	HC	DH	CH	RH
DIAGNOSTIC TESTS				
Laboratory				
Hematology				
Bleeding and clotting times	Refer	Yes	Yes	Yes
Blood typing and cross matching	Refer	Yes	Yes	Yes
Erythrocyte Sedimentation Rate (ESR)	Refer	Yes	Yes	Yes
Full blood count	Refer	Yes	Yes	Yes
Hematocrit	Refer	Yes	Yes	Yes
Microscopy				
CSF cell count	Refer	Yes	Yes	Yes
Gram stain for discharges, pus	Yes	Yes	Yes	Yes
Sputum for acid fast bacilli (Ziehl-Neelsen stain)	Refer	Yes	Yes	Yes
Urine microscopy	Yes	Yes	Yes	Yes
Clinical Chemistry				
Hepatitis B & C rapid tests	Refer	Yes	Yes	Yes
Blood glucose	Refer	Yes	Yes	Yes
CD4 testing	Refer	Refer	Yes	Yes
Clinical chemistry panels (Automated analyzer)	Refer	Yes	Yes	Yes
Culture and sensitivity testing	Refer	Refer	Refer	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	Refer	Yes	Yes	Yes
Imaging				
CT scan	Refer	Refer	Refer	Refer
Echocardiography	Refer	Refer	Refer	Yes
Fluroscopy	Refer	Refer	Refer	Yes
Intravenous Pyelogram (IVP)	Refer	Refer	Refer	Yes
Mammography	Refer	Refer	Yes	Yes
Ultrasound	Refer	Refer	Yes	Yes
X-Ray	Refer	Refer	Yes	Yes
Neurology Services				
Electroencephalography (EEG)	Refer	Refer	Yes	Yes
Cardiology Services				
Electrocardiogram (EKG)	Refer	Refer	Yes	Yes
Endoscopic Procedures				
Anoscopy	Refer	Refer	Refer	Yes
Bronchoscopy	Refer	Refer	Refer	Yes
Colonoscopy	Refer	Refer	Refer	Yes
Gastrosocopy	Refer	Refer	Refer	Yes
Sigmoidoscopy	Refer	Refer	Refer	Yes

4.2 Surgery and Anesthesia

ASSUMPTIONS:

- These services represent a ten-year plan.
- During Phase One: General surgeons will be available at all County and Regional Hospitals.
- During Phase Two: Specialists will be hired in Regional Hospitals, followed by County Hospitals. Only specialists will perform specialized services. A pathologist will be available.
- Advanced procedures, not included in this package, will be referred to JFK-MC or out of country as needed. All neurological trauma procedures will be done at JFK-MC.
- Pediatric Intensive Care Units will be available at all County and Regional Hospitals.
- Anesthesia services are available at District Hospitals and higher.

	SECONDARY			TERTIARY
	HC	DH	CH	RH
SURGICAL PROCEDURES				
Neurosurgery				
Burr Holes to relieve intracranial pressure	Refer	Refer	Bilateral/Refer	Yes
Removal of foreign bodies if life threatening	Refer	Refer	Refer	Yes
Ventriculo-peritoneal shunts	Refer	Refer	Refer	Yes
Ophthalmology				
Basic Procedures:				
Cataracts	Refer	Refer	Refer	Yes
Detached retina	Refer	Refer	Refer	Yes
Glaucoma	Refer	Refer	Refer	Yes
Simple foreign bodies	Yes	Yes	Yes	Yes
Ocular Trauma Procedures:				
Dislocated lens	Refer	Refer	Refer	Yes
Enucleation	Refer	Refer	Refer	Yes
Minor injuries	Yes/Refer	Yes	Yes	Yes
Orbital injuries	Refer	Refer	Refer	Yes
Penetrating foreign bodies	Refer	Refer	Refer	Yes
Ear, Nose & Throat (ENT)				
Adenoidectomy	Refer	Refer	Refer	Yes
Diagnosis and management of ENT tumors	Refer	Refer	Refer	Yes
Mastoidectomy	Refer	Refer	Refer	Yes
Maxillofacial conditions and injuries	Refer	Refer	Refer	Yes
Remove foreign body in ear, nose or airway	Yes/Refer	Yes/Refer	Yes	Yes
Repair ear, oral cavity, nasal lacerations	Yes/Refer	Yes	Yes	Yes
Repair hearing loss injuries	Refer	Refer	Refer	Yes
Repair perforated eardrum	Refer	Refer	Refer	Yes
Tonsillectomy	Refer	Refer	Refer	Yes
General				
Amputation	Refer	Refer	Yes	Yes
Cellulitis and abscess	Yes	Yes	Yes	Yes
Cholecystectomy	Refer	Refer	Yes	Yes
Cyst-enterostomy	Refer	Refer	Refer	Yes
Elective abdominal conditions	Refer	Refer	Yes	Yes
Elective hernias (all)	Refer	Refer	Yes	Yes
Elective common duct	Refer	Refer	Refer	Yes
Emergency abdominal conditions	Refer	Yes/Refer	Yes	Yes
Emergency common duct	Refer	Refer	Yes	Yes
Foreign body removal	Yes/Refer	Yes/Refer	Yes	Yes

	SECONDARY			TERTIARY
	HC	DH	CH	RH
SURGICAL PROCEDURES				
General				
Hemorrhoid Removal	Refer	Refer	Yes	Yes
Intra-abdominal Abscess Drainage	Refer	Refer	Refer	Yes
Ischio-rectal	Refer	Refer	Yes	Yes
Laparoscopic Procedures	Refer	Refer	Refer	Yes
Lumpectomy/Mastectomy	Refer	Refer	Yes	Yes
Pancreatectomy	Refer	Refer	Refer	Yes
Perirectal Abscess	Yes/Refer	Yes/Refer	Yes	Yes
Rectal Prolapse Repair	Refer	Refer	Yes	Yes
Thyroid and Parathyroid (elective)	Refer	Refer	Yes	Yes
Tracheostomy	Refer	Refer	Yes	Yes
Wound/Laceration Repair	Yes/Refer	Yes	Yes	Yes
Fasciotomy	Refer	Refer	Yes	Yes
Incisional and Fine Needle Biopsies	Yes	Yes	Yes	Yes
Thoracic				
Bronchoscopy	Refer	Refer	Yes	Yes
Emergency Chest Tube Insertion	Yes	Yes	Yes	Yes
Emergency Stabilization of flail chest	Yes	Yes	Yes	Yes
Empyema	Refer	Refer	Yes	Yes
Open Thoracotomy	Refer	Refer	Yes	Yes
Pleuroscopy	Refer	Refer	Yes	Yes
Thoracentesis (elective)	Refer	Yes	Yes	Yes
Cardiovascular				
Elective Pericardiocentesis	Refer	Refer	Refer	Yes
Emergency Pericardiocentesis	Yes	Yes	Yes	Yes
Emergency Vascular Repairs	Refer	Refer	Yes	Yes
Elective Vascular Repairs	Refer	Refer	Refer	Yes
Genitourinary				
Catheterization (urethral or bladder)	Yes	Yes	Yes	Yes
Bladder/incontinence	Refer	Refer	Yes	Yes
Elective Bowel	Refer	Refer	Refer	Yes
Elective Nephrectomy	Refer	Refer	Refer	Yes
Emergency Bowel	Refer	Refer	Yes	Yes
Emergency Nephrectomy	Refer	Refer	Yes	Yes
Emergency Suprapubic Puncture	Yes	Yes	Yes	Yes
Kidney Stone Removal	Refer	Refer	Refer	Yes
Percutaneous Nephrolithotomy	Refer	Refer	Yes	Yes
Prostatectomy	Refer	Refer	Refer	Yes
Pyloplasty	Refer	Refer	Refer	Yes
Suprapubic Cystostomy	Refer	Refer	Yes	Yes
Urethral Stricture/dilatation	Refer	Refer	Yes	Yes
Male Non-emergent				
Circumcision	Yes	Yes	Yes	Yes
Prostatectomy	Refer	Refer	Yes	Yes
Scrotal Hydrocele	Refer	Refer	Yes	Yes
Vasectomy	Refer	Refer	Yes	Yes
Male Emergent				
Paraphimosis	Refer	Yes	Yes	Yes
Priapasm	Refer	Refer	Yes	Yes
Torsion of the Testis	Refer	Refer	Yes	Yes

	SECONDARY			TERTIARY
	HC	DH	CH	RH
SURGICAL PROCEDURES				
Genitourinary				
Female				
Genital injury repair	Yes/Refer	Yes/Refer	Yes	Yes
Obstetric-Gynecological				
Caesarean Section	Refer	Yes	Yes	Yes
Dilatation and curettage	Refer	Refer	Yes	Yes
Hysterectomy	Refer	Refer	Yes	Yes
Myomectomy	Refer	Refer	Yes	Yes
Oophorectomy/Salpingectomy	Refer	Yes	Yes	Yes
Post-partum fistula repair	Refer	Refer	Yes	Yes
Prolapse and transvaginal operations	Refer	Refer	Yes	Yes
Repair bladder injury	Refer	Refer	Yes	Yes
Repair cervical laceration	Refer	Yes/Refer	Yes	Yes
Repair 3rd & 4th degree lacerations	Refer	Yes	Yes	Yes
Repair ruptured uterus	Refer	Refer	Refer	Yes
Tubal sterilization	Refer	Yes	Yes	Yes
Pediatric				
Caustic ingestion	Refer	Refer	Yes	Yes
Congenital malformations	Refer	Refer	Refer	Yes
Intussusception	Refer	Refer	Yes	Yes
Pyloric stenosis	Refer	Refer	Refer	Yes
Skin burns	Refer	Refer	Yes	Yes
ANESTHESIA				
Resuscitation and preparation for anaesthesia				
Assess and manage patient with anemia for surgery	Refer	Yes	Yes	Yes
Assess and manage the unconscious patient for/under	Refer	Yes	Yes	Yes
Cardiac life support	Refer	Yes	Yes	Yes
Hemorrhage	Refer	Yes	Yes	Yes
Manage cardiac arrest and inadequate circulation	Refer	Yes	Yes	Yes
Manage convulsions	Refer	Yes	Yes	Yes
Manage emergencies and cardiopulmonary resuscitation	Refer	Yes	Yes	Yes
Manage shock	Refer	Yes	Yes	Yes
Ventilation and intubation	Refer	Yes	Yes	Yes
Intravenous Access				
Administer general or regional anaesthesia	Refer	Yes	Yes	Yes
Intraosseous puncture	Refer	Yes	Yes	Yes
IV access in the antecubital fossa	Yes	Yes	Yes	Yes
IV access in the femoral vein fossa	Refer	Refer	Yes	Yes
IV access in the internal jugular vein	Refer	Refer	Yes	Yes
IV access to the following in children:	Yes	Yes	Yes	Yes
Back of the hand (on the ulna side)				
Scalp	Yes	Yes	Yes	Yes
Ventral surface of the wrist (very small veins)	Yes	Yes	Yes	Yes
Femoral vein	Yes	Yes	Yes	Yes
Saphenous vein	Refer	Yes	Yes	Yes
Manage anaesthetic risk	Refer	Yes	Yes	Yes
Monitor the anaesthetized patient	Refer	Yes	Yes	Yes
Postoperative management	Refer	Yes	Yes	Yes
Venous cutdown	Refer	Refer	Yes	Yes

	SECONDARY			TERTIARY
	HC	DH	CH	RH
ANESTHESIA				
Preoperative Assessment & Investigation				
Preoperative assessment and investigations	Refer	Yes	Yes	Yes
Explain expectations and obtain informed consent	Refer	Yes	Yes	Yes
Administer premedications	Refer	Yes	Yes	Yes
Obtain routine and required investigations	Refer	Yes	Yes	Yes
Make management plan with surgeon	Refer	Yes	Yes	Yes

4.3 Internal Medicine

ASSUMPTIONS:

- These services represent a ten-year plan.

	SECONDARY			TERTIARY
	HC	DH	CH	RH
INTERNAL MEDICINE				
Respiratory Diseases				
Acute Bronchitis	Yes	Yes	Yes	Yes
Asthma	Refer	Refer	Yes	Yes
Bronchiectasis	Refer	Refer	Yes	Yes
Chronic Obstructive Pulmonary Disease (COPD)	Refer	Refer	Refer	Yes
Epiglottitis	Refer	Refer	Yes	Yes
Pneumonitis	Refer	Refer	Yes	Yes
Lung Abscess	Refer	Refer	Yes	Yes
Lung Cancer	Refer	Refer	Refer	Yes
Pleural Effusion	Refer	Refer	Yes	Yes
Pneumonia	Yes	Yes	Yes	Yes
Pulmonary Emboli	Refer	Yes	Yes	Yes
Tonsillitis	Yes	Yes	Yes	Yes
Tuberculosis				
Collection of sputums and microscopy for AFBs	Yes	Yes	Yes	Yes
Diagnosis of B in sputum negative cases	Refer	Refer	Yes	Yes
Diagnosis of B in children	Refer	Refer	Yes	Yes
Registration and assignment to treatment regimen	Yes	Yes	Yes	Yes
Supervision of intensive phase of DOTS	Yes	Yes	Yes	Yes
Supervision of continuation phase of DOTS	Yes	Yes	Yes	Yes
Sputum examination/treatment review	Yes	Yes	Yes	Yes
Management of complications and suspected drug-resistant	Refer	Yes/With TB Unit	Yes/With TB Unit	Yes/With TB Unit
Whooping Cough	Yes	Yes	Yes	Yes
Dermatology				
Basic dermatological services	Yes	Yes	Yes	Yes
Eczema	Yes	Yes	Yes	Yes
Herpes Zoster	Yes	Yes	Yes	Yes
Impetigo	Yes	Yes	Yes	Yes
Scabies	Yes	Yes	Yes	Yes
Tinea (Ringworm)	Yes	Yes	Yes	Yes
Sexually Transmitted Infections and HIV/AIDS				
Management of genital discharge	Yes	Yes	Yes	Yes
Management of urethral discharge	Yes	Yes	Yes	Yes
Diagnose and manage the following STIs:				
Anogenital Herpes Simplex	Synd Mgmt/Refer	Yes	Yes	Yes
Atrophic Vaginitis	Synd Mgmt/Refer	Yes	Yes	Yes
Balanitis	Synd Mgmt/Refer	Yes	Yes	Yes
Genital Warts	Synd Mgmt/Refer	Yes	Yes	Yes
Gonorrhea	Synd Mgmt/Refer	Yes	Yes	Yes
Hepatitis B	Synd Mgmt/Refer	Yes	Yes	Yes

	SECONDARY			TERTIARY
	HC	DH	CH	RH
INTERNAL MEDICINE				
Sexually Transmitted Infections and HIV/AIDS				
HIV	Yes/Refer	Yes	Yes	Yes
Supervision of ARV therapy, including home-based care	Yes/Refer	Yes	Yes	Yes
Supervision of Co-trimoxazole and/or isoniazid	Yes	Yes	Yes	Yes
Treatment of opportunistic infections	Yes	Yes	Yes	Yes
PMTCT services and follow up	Yes	Yes	Yes	Yes
Post-Exposure Prophylaxis (PEP)	Yes	Yes	Yes	Yes
Infective candidiasis	Synd Mgmt/Refer	Yes	Yes	Yes
Non-infective vaginitis	Synd Mgmt/Refer	Yes	Yes	Yes
Nongonococcal infections	Synd Mgmt/Refer	Yes	Yes	Yes
Syphilis	Synd Mgmt/Refer	Yes	Yes	Yes
Trichomoniasis	Synd Mgmt/Refer	Yes	Yes	Yes
Control & Management of Diseases with Epidemic Potential				
Acute flaccid paralysis	Refer	Refer	Yes	Yes
Acute rheumatic fever	Refer	Refer	Yes	Yes
Acute watery diarrhea and bloody diarrhea	Yes	Yes	Yes	Yes
Hemorrhagic fever (Lassa fever)	Refer	Refer	Yes	Yes
Jaundice and yellow fever	Refer	Refer	Yes	Yes
Measles	Yes	Yes	Yes	Yes
Meningitis	Refer	Refer	Yes	Yes
Pertussis	Yes	Yes	Yes	Yes
Poliomyelitis	Initiate/Refer	Initiate/Refer	Yes	Yes
Rabies	Yes	Yes	Yes	Yes
Shigellosis	Yes	Yes	Yes	Yes
Tetanus	Yes	Yes	Yes	Yes
Typhoid	Yes	Yes	Yes	Yes
Neglected Tropical Diseases				
Leprosy	Specialist Hospital	Specialist Hospital	Specialist Hospital	Specialist Hospital
Lymphatic filariasis	Yes	Yes	Yes	Yes
Onchocerciasis	Yes	Yes	Yes	Yes
Schistosomiasis	Yes	Yes	Yes	Yes
Cardiovascular Diseases				
Acute Aneurysm	Refer	Refer	Yes	Yes
Angina pectoris (Unstable)	Refer	Initiate/Refer	Yes	Yes
Cardiac Tumors	Refer	Initiate/Refer	Refer	Yes
Cardiomyopathy	Refer	Initiate/Refer	Yes	Yes
Congenital Heart Disease	Refer	Refer	Yes	Yes
Cor pulmonale	Refer	Refer	Yes	Yes
Deep Vein Thrombosis	Refer	Initiate/Refer	Refer	Yes
Disorder of rhythm				
Braharrhythmia	Refer	Initiate/Refer	Yes	Yes
Tachyarrhythmia	Refer	Initiate/Refer	Yes	Yes
Atrial fibrillation	Refer	Initiate/Refer	Yes	Yes
Heart Failure	Refer	Yes	Yes	Yes
Hypertension	Yes	Yes	Yes	Yes
Hypertensive Vascular Disease	Refer	Refer	Yes	Yes
Ischemic Heart Disease	Refer	Refer	Refer	Yes
Myocardial infarction	Refer	Initiate/Refer	Yes	Yes
Myocarditis	Refer	Initiate/Refer	Yes	Yes
Pericarditis	Refer	Refer	Refer	Yes
Prevention and treatment of Atherosclerosis	Refer	Refer	Refer	Yes
Rheumatic fever	Refer	Initiate/Refer	Yes	Yes
Sickle Cell Disease	Refer	Refer	Yes	Yes
Traumatic Cardiac Injury	Refer	Refer	Refer	Yes
Neurological Diseases				
Encephalitis	Refer	Refer	Yes	Yes
Epilepsy	Yes	Yes	Yes	Yes
Meningitis	Refer	Refer	Yes	Yes
Other Seizure Disorders	Refer	Refer	Yes	Yes

	SECONDARY			TERTIARY
	HC	DH	CH	RH
INTERNAL MEDICINE				
Cardiovascular Diseases				
Acute Aneurysm	Refer	Refer	Yes	Yes
Angina pectoris (Unstable)	Refer	Initiate/Refer	Yes	Yes
Cardiac Tumors	Refer	Initiate/Refer	Refer	Yes
Cardiomyopathy	Refer	Initiate/Refer	Yes	Yes
Congenital Heart Disease	Refer	Refer	Yes	Yes
Copulmonale	Refer	Refer	Yes	Yes
Deep Vein Thrombosis	Refer	Initiate/Refer	Refer	Yes
Disorder of rhythm				
Braharrhythmia	Refer	Initiate/Refer	Yes	Yes
Tacharrhythmia	Refer	Initiate/Refer	Yes	Yes
Atrial Fibrillation	Refer	Initiate/Refer	Yes	Yes
Heart Failure	Refer	Yes	Yes	Yes
Hypertension	Yes	Yes	Yes	Yes
Hypertensive Vascular Disease	Refer	Refer	Yes	Yes
Ischemic Heart Disease	Refer	Refer	Refer	Yes
Myocardial Infarction	Refer	Initiate/Refer	Yes	Yes
Myocarditis	Refer	Initiate/Refer	Yes	Yes
Pericarditis	Refer	Refer	Refer	Yes
Prevention and treatment of Atherosclerosis	Refer	Refer	Refer	Yes
Rheumatic fever	Refer	Initiate/Refer	Yes	Yes
Sickle Cell Disease	Refer	Refer	Yes	Yes
Traumatic Cardiac Injury	Refer	Refer	Refer	Yes
Neurological Diseases				
Encephalitis	Refer	Refer	Yes	Yes
Epilepsy	Yes	Yes	Yes	Yes
Meningitis	Refer	Refer	Yes	Yes
Other Seizure Disorders	Refer	Refer	Yes	Yes
Ophthalmology				
Injuries	Refer	Refer	Refer	Refer
Glaucoma	Refer	Refer	Refer	Yes
Removal of cataracts	Refer	Refer	Refer	Refer
Ear, Nose & Throat				
Chronic Otitis media	Yes	Yes	Yes	Yes
Foreign body in Ear or Nose or Airway	Refer	Refer	Yes	Yes
Mastoiditis	Refer	Initiate/Refer	Yes	Yes
Otitis externa	Yes	Yes	Yes	Yes
Wax in the Ear	Yes	Yes	Yes	Yes
Dental and Oral Conditions				
Peripheral Abscess	Yes	Yes	Yes	Yes
Acute Ulcerative Gingivitis	Yes	Yes	Yes	Yes
Cellulitis	Yes	Yes	Yes	Yes
Dental extraction	Refer	Refer	Yes	Yes
Dental filling	Refer	Refer	Refer	Yes
Gingivitis	Yes	Yes	Yes	Yes
Periodontis	Refer	Refer	Refer	Yes
Pulpitis	Refer	Refer	Refer	Yes
Mental Health (screening, Assessment, Diagnosis, Counsel, psychotherapy, treatment and care management)				
Anxiety and Stress-related disorders	Yes/Refer	Yes	Yes	Yes
Bi-polar disease	Yes/Refer	Yes	Yes	Yes
Depression and Mood disorders	Yes/Refer	Yes	Yes	Yes
Domestic and Interpersonal violence	Yes/Refer to SW	Yes/Refer to SW	Yes/Refer to SW	Yes
Family psychoeducation and support	Yes	Yes	Yes	Yes
Major mental health conditions	Yes/Refer	Yes	Yes	Yes
Mania	Yes/Refer	Yes	Yes	Yes
Psychosomatic symptoms	Yes/Refer	Yes	Yes	Yes
Psychotic disorders	Yes/Refer	Yes	Yes	Yes
Schizophrenia	Yes/Refer	Yes	Yes	Yes
Substance Abuse and Dependancy	Yes/Refer	Yes	Yes	Yes
Suicidal Ideation	Yes/Refer	Yes	Yes	Yes
Trauma and post-traumatic stress syndrome	Yes/Refer	Yes	Yes	Yes
Victim of Rape	Yes/Refer to SW	Yes/Refer to SW	Yes/Refer to SW	Yes

	SECONDARY			TERTIARY
	HC	DH	CH	RH
INTERNAL MEDICINE				
Diseases of the Endocrine				
Diabetes Mellitus	Refer	Refer	Yes	Yes
Diabetic Ketoacidosis	Refer	Refer	Yes	Yes
Diabetic Neuropathy	Refer	Refer	Yes	Yes
Hypoglycemia	Yes	Yes	Yes	Yes
Osteoporosis	Refer	Refer	Yes	Yes
Thyroid Diseases	Refer	Refer	Yes	Yes
Renal Conditions and Diseases				
Acute Renal Failure	Refer	Initiate/Refer	Yes	Yes
Chronic Renal Failure	Refer	Refer	Initiate/Refer	Yes
Glomerulonephritis	Refer	Initiate/Refer	Yes	Yes
Tubulonecrosis	Refer	Initiate/Refer	Refer	Yes
Urinary Tract Infection	Yes	Yes	Yes	Yes
Urinary Tract Obstruction	Refer	Refer	Initiate/Refer	Yes
Gastrointestinal Tract Conditions and Diseases				
Amoebiasis	Yes	Yes	Yes	Yes
Diarrhea	Yes	Yes	Yes	Yes
Esophageal Candidiasis	Refer	Yes	Yes	Yes
Esophageal Varices	Refer	Refer	Refer	Yes
Esophagitis	Yes	Yes	Yes	Yes
Gastritis	Yes	Yes	Yes	Yes
Hepatitis	Refer	Yes	Yes	Yes
Inflammatory Bowel Disease	Refer	Refer	Yes	Yes
Liver Abscess	Refer	Refer	Refer	Yes
Pancreatitis	Refer	Refer	Refer	Yes
Peptic Ulcer Disease	Yes	Yes	Yes	Yes
Worms				
Ascariasis	Yes	Yes	Yes	Yes
Gardiasis	Yes	Yes	Yes	Yes
Hookworm	Yes	Yes	Yes	Yes
Pinworm (Enterobius Vermicularis)	Yes	Yes	Yes	Yes
Schistosomiasis	Yes	Yes	Yes	Yes
Rheumatology				
Allergic Reaction	Initiate/Refer	Yes	Yes	Yes
Auto-immune Diseases	Refer	Refer	Refer	Yes
Gout	Yes	Yes	Yes	Yes
Osteoarthritis	Yes	Yes	Yes	Yes
Rheumatoid Arthritis	Refer	Yes	Yes	Yes
Cardinal Manifestations and Presentations of Diseases				
Abdominal Pain	Initiate/Refer	Initiate/Refer	Yes	Yes
Back and Neck Pain	Initiate/Refer	Initiate/Refer	Yes	Yes
Chest Pain	Initiate/Refer	Initiate/Refer	Yes	Yes
Headache	Initiate/Refer	Initiate/Refer	Yes	Yes
Critical Care				
ARDS- Acute Respiratory Distress Syndrome	Refer	Refer	Yes	Yes
Asthma Attack	Yes	Yes	Yes	Yes
Diabetic Ketoacidosis	Refer	Refer	Yes	Yes
Pulmonary Edema	Refer	Refer	Yes	Yes
Respiratory Failure	Refer	Refer	Yes	Yes
Severe Anemia	Refer	Yes	Yes	Yes
Severe Malaria	Yes	Yes	Yes	Yes
Shock				
Cardiogenic	Initiate/Refer	Yes	Yes	Yes
Septic	Initiate/Refer	Yes	Yes	Yes
Hypovolemic	Initiate/Refer	Yes	Yes	Yes
Neurogenic	Initiate/Refer	Yes	Yes	Yes
Rehabilitation				
Occupational Therapy	Refer	Refer	Refer	Yes
Physiotherapy	Refer	Refer	Refer	Yes
Prosthetics	Refer	Refer	Refer	Yes

	SECONDARY			TERTIARY
	HC	DH	CH	RH
INTERNAL MEDICINE				
Orthopedics				
Apply cast	Refer	Yes	Yes	Yes
Apply splint	Yes	Yes	Yes	Yes
Bone tumors	Refer	Refer	Yes	Yes
Congenital and developmental problems	Refer	Refer	Yes	Yes
Degenerative conditions	Refer	Refer	Yes	Yes
Dislocations	Initiate/Refer	Yes	Yes	Yes
Fat embolism syndrome (following long bone trauma)	Refer	Refer	Yes	Yes
Fractures (adult)	Initiate/Refer	Yes	Yes	Yes
Fractures (children)	Initiate/Refer	Initiate/Refer	Yes	Yes
Infections of the bone	Refer	Refer	Yes	Yes
Joint dislocation	Initiate/Refer	Yes	Yes	Yes
Manage complications due to application of cast	Initiate/Refer	Yes	Yes	Yes
Manage talipes equinovarus (clubfoot)	Refer	Refer	Yes	Yes
Osteomyelitis	Refer	Refer	Yes	Yes
Remove cast	Refer	Yes	Yes	Yes
Traction	Yes/Refer	Yes/Refer	Yes	Yes

4.4 Obstetric-Gynecology

ASSUMPTIONS:

- These services represent a ten-year plan.

	SECONDARY			TERTIARY
	HC	DH	CH	RH
OBSTETRIC-GYNECOLOGY PROCEDURES (see also Surgical Procedures)				
Co-trimoxazole preventative therapy (CPT)	Yes	Yes	Yes	Yes
Colpotomy	No	Yes	Yes	Yes
Culdocentesis	No	Yes	Yes	Yes
Give blood transfusion	Refer	Yes	Yes	Yes
Give magnesium	Yes	Yes	Yes	Yes
Incubation	Yes	Yes	Yes	Yes
Induce and augment labour	Yes	Yes	Yes	Yes
Instrumental delivery (forceps delivery)	No	No	Yes	Yes
Instrumental delivery (vacuum extraction)	Yes	Yes	Yes	Yes
Manage shoulder dystocia	Yes	Yes	Yes	Yes
Manual vacuum aspiration	Yes	Yes	Yes	Yes
Oxygen therapy	Yes	Yes	Yes	Yes
Phototherapy	Yes	Yes	Yes	Yes
PMTCT services and follow-up	Yes	Yes	Yes	Yes
Removal of retained placenta and placental fragments	Yes	Yes	Yes	Yes
VCT for PMTCT services	Yes	Yes	Yes	Yes

Diagnosis, management and/or supervision of

OBSTETRIC CONDITIONS				
Pregnancy/Labor				
Artificial rupture of membranes (arm presentation)	Refer	Yes	Yes	Yes
Bleeding in early, late pregnancy and labour	Yes/Refer	Yes/Refer	Yes	Yes
Chorioamnionitis (fever in labor)	Yes/Refer	Yes	Yes	Yes
Coagulopathy (clotting failure)	No	Yes/Refer	Yes	Yes
Complicated abortion	Refer	Yes	Yes	Yes
Convulsions or unconsciousness with fever: malaria/sepsis	Initiate/Refer	Yes	Yes	Yes
Convulsions or unconsciousness: eclampsia	Initiate/Refer	Yes	Yes	Yes
Ectopic pregnancy	Refer	Yes	Yes	Yes
Gestational Diabetes	Refer	Yes	Yes	Yes
Hypertension	Yes/Refer	Yes	Yes	Yes

	SECONDARY			TERTIARY
	HC	DH	CH	RH
Diagnosis, Management and/or Supervision of				
OBSTETRIC CONDITIONS				
Pregnancy/Labor				
Inverted Uterus	Refer	Yes	Yes	Yes
Malaria (Uncomplicated)	Yes	Yes	Yes	Yes
Malpresentation or twins	Refer	Yes	Yes	Yes
No fetal movements	Refer	Yes	Yes	Yes
Placenta Previa	Initiate/Refer	Yes/Refer	Yes	Yes
Pre-eclampsia and eclampsia	Refer immediately	Yes	Yes	Yes
Preterm Labor	Initiate/Refer	Yes	Yes	Yes
Progress in Labor/Recognized delay	Partograph/Refer	Partograph/Manage	Partograph/Manage	Partograph/Manage
Pyelonephritis	Refer	Yes	Yes	Yes
Ruptured membranes, not in labor	Refer	Yes	Yes	Yes
Shock	Yes	Yes	Yes	Yes
Tears of cervix, vagina or perineum	Yes/Refer	Yes/Refer	Yes	Yes
Thromboembolic event (PE, DVT)	Refer	Refer	Yes/Refer	Yes
Trial of labor after cesarean section (TOLAC/VBAC)	Refer	Yes/Refer	Yes	Yes
Postpartum				
Anemia	Yes/Refer	Yes	Yes	Yes
Mastitis	Yes	Yes	Yes	Yes
Postpartum hemorrhage	Refer	Yes/Refer	Yes	Yes
Postpartum infections (endometritis/wound infections)	Initiate/Refer	Yes	Yes	Yes
Postpartum psychosis	Refer	Yes/Refer	Yes	Yes
Puerperal sepsis	Initiate/Refer	Yes	Yes	Yes
Newborn				
Anemia	Initiate/Refer	Yes	Yes	Yes
Bilirubin encephalopathy (kernicterus)	Initiate/Refer	Initiate/Refer	Yes	Yes
Breathing difficulties	Initiate/Refer	Yes	Yes	Yes
Convulsions or spasms	Initiate/Refer	Yes	Yes	Yes
Feeding difficulties and fluid volume	Initiate/Refer	Yes	Yes	Yes
Hemolytic jaundice	Initiate/Refer	Yes	Yes	Yes
Hypothermia	Initiate/Refer	Yes	Yes	Yes
Intraventricular bleeding	Initiate/Refer	Yes	Yes	Yes
Jaundice of prematurity	Initiate/Refer	Yes	Yes	Yes
Lethargy and other non-specific signs	Initiate/Refer	Yes	Yes	Yes
Low birth weight baby (1500gms-2500gms)	Initiate/Refer	Yes	Yes	Yes
Low blood glucose	Initiate/Refer	Yes	Yes	Yes
Nasogastric feeding	Initiate/Refer	Yes	Yes	Yes
Necrotizing enterocolitis	Initiate/Refer	Yes	Yes	Yes
Neonatal asphyxia and resuscitation	Initiate/Refer	Yes	Yes	Yes
Neonatal sepsis/severe skin or cord infection	Yes	Yes	Yes	Yes
Very low birth weight baby (<1500gms or <32 weeks gestation)	Refer immediately	Yes	Yes	Yes
GYNECOLOGY CONDITIONS				
Routine				
Anogenital Herpes Simplex	Synd Mgmt/Refer	Yes	Yes	Yes
Atrophic vaginitis	Synd Mgmt/Refer	Yes	Yes	Yes
Breast cancer (screen/treat)	Yes/Refer	Yes/Refer	Yes/Refer	Yes
Genital Warts	Synd Mgmt/Refer	Yes	Yes	Yes
Gnorrhoea	Synd Mgmt/Refer	Yes	Yes	Yes
Hepatitis B	Synd Mgmt/Refer	Yes	Yes	Yes
HIV	Yes/Refer	Yes	Yes	Yes
Infective candidiasis	Synd Mgmt/Refer	Yes	Yes	Yes
Molar pregnancy	Refer	Refer	Yes	Yes

Diagnosis, Management and/or Supervision of	SECONDARY			TERTIARY
	HC	DH	CH	RH
GYNECOLOGY CONDITIONS				
Routine				
Nongonococcal Infections	Synd Mgmt/Refer	Yes	Yes	Yes
Screen/treat for cervical cancer	Yes/Refer	Yes/Refer	Yes/Refer	Yes
Syphilis	Synd Mgmt/Refer	Yes	Yes	Yes
Trichomoniasis	Synd Mgmt/Refer	Yes	Yes	Yes
Urinary Tract Infection (uncomplicated)	Yes	Yes	Yes	Yes
Vaginitis	Synd Mgmt/Refer	Yes	Yes	Yes
Complications				
Abscesses	Refer	Refer	Yes	Yes
Complicated Obstetric Fistula	Refer	Refer	Refer	Yes
Dysfunctional Uterine Bleeding (DUB)	Yes	Yes	Yes	Yes
Fibroids	Refer	Yes	Yes	Yes
Menstrual Abnormality	Refer	Yes	Yes	Yes
Pelvic Inflammatory Disease (PID)	Yes	Yes	Yes	Yes
Pelvic Masses	Refer	Refer	Yes	Yes
Sexual Assault	Yes/Refer	Yes/Refer	Yes	Yes
Simple Obstetric Fistula	Refer	Refer	Yes	Yes

4.5 Pediatrics

ASSUMPTIONS:

- These services represent a ten-year plan.
- Pediatric Intensive Care Units will be available at all County and Regional Hospitals.

Diagnosis, Management, Supervision of	SECONDARY			TERTIARY
	HC	DH	CH	RH
PEDIATRIC CONDITIONS				
ARV Therapy	Yes/Refer	Yes	Yes	Yes
Burkitt's Lymphoma	Refer	Refer	Yes	Yes
Co-trimoxazole Preventative Therapy (CPT)	Yes	Yes	Yes	Yes
Complicated Measles	Yes	Yes	Yes	Yes
Congenital Heart Abnormalities	Refer	Refer	Yes	Yes
Congenital Syphilis	Refer	Refer	Yes	Yes
Diarrhea with Severe Dehydration	Yes	Yes	Yes	Yes
Early Infant Diagnosis (EID) of HIV	Yes/Refer	Yes	Yes	Yes
Emergency Triage Assessment and Treatment	Yes	Yes	Yes	Yes
Meningitis	Refer	Initiate/Refer	Yes	Yes
Neonatal Tetanus	Initiate/Refer	Yes	Yes	Yes
Pediatric Tumors	Refer	Refer	Refer	Yes
Physical and/or Mental Disability	Yes/Refer	Yes/Refer	Yes	Yes
PMTCT Services and Follow Up	Yes	Yes	Yes	Yes
Respiratory Disease	Yes	Yes	Yes	Yes
Severe Malnutrition	Initiate/Refer	Initiate/Refer	Yes	Yes
Severely Ill Child	Initiate/Refer	Initiate/Refer	Yes	Yes
Skin Infections	Yes	Yes	Yes	Yes
Tuberculosis	Refer	Yes/With TB Unit	Yes/With TB Unit	Yes/With TB Unit

4.6 Trauma and Emergency

ASSUMPTIONS:

- These services represent a ten-year plan.
-

Diagnosis, management and/or supervision of	SECONDARY			TERTIARY
	HC	DH	CH	RH
TRAUMA AND EMERGENCY CONDITIONS				
Abdominal trauma or acute abdomen	Initiate/Refer	Yes	Yes	Yes
Airways andambu-bag breath	Yes	Yes	Yes	Yes
Anaphylaxis	Yes	Yes	Yes	Yes
Bites and rabies	Initiate/Refer	Yes	Yes	Yes
Burns				
Uncomplicated and less than 15% adult/10% child	Yes	Yes	Yes	Yes
Complicated and greater than 15% adult/10% child	Initiate/Refer	Initiate/Refer	Yes	Yes
Cardiac arrest	Initiate/Refer	Yes	Yes	Yes
Closed fracture and dislocation	Immobilize/refer	Refer	Yes	Yes
Closed fracture and no dislocation	Immobilize/refer	Yes	Yes	Yes
Eye injury	Initiate/Refer	Yes	Yes	Yes
Femur fracture	Stabilize/Refer	Stabilize/Refer	Yes	Yes
Fluid and electrolyte balance	Yes	Yes	Yes	Yes
Foreign body in ear/nose	Yes	Yes	Yes	Yes
Head injury	Initiate/Refer	Yes	Yes	Yes
Multiple injuries	Initiate/Refer	Yes	Yes	Yes
Open fractures	Initiate/Refer	Initiate/Refer	Yes	Yes
Pelvic fracture	Stabilize/Refer	Stabilize/Refer	Stabilize/Refer	Yes
Pneumothorax and hemothorax	Refer	Yes	Yes	Yes
Poisoning by mouth	Initiate/Refer	Yes	Yes	Yes
Seizures/convulsions	Yes	Yes	Yes	Yes
Shock	Yes	Yes	Yes	Yes
Snake bite	Initiate/Refer	Yes	Yes	Yes
Soft tissue injuries	Refer	Initiate/Refer	Yes	Yes
Spinal injuries	Stabilize/Refer	Stabilize/Refer	Stabilize/Refer	Yes
Status asthmaticus	Stabilize/Refer	Yes	Yes	Yes
Tendon injuries	Stabilize/Refer	Stabilize/Refer	Stabilize/Refer	Yes
Tracheotomy	No	Yes	Yes	Yes

5.0 Essential Equipment List

Equipment	SECONDARY			TERTIARY
	HC	DH	CH	RH
NON-MEDICAL				
Administration				
Office equipment	Yes	Yes	Yes	Yes
Office furniture	Yes	Yes	Yes	Yes
Electricity				
Emergency lights	Yes	Yes	Yes	Yes
Water Supply				
Hand-washing sinks/taps/bowls on stands in all areas	Yes	Yes	Yes	Yes
Storage tank	Yes	Yes	Yes	Yes
Water purification chemicals or filter	Yes	Yes	Yes	Yes
Water source for drinking water	Yes	Yes	Yes	Yes
Waste Disposal				
Buckets for contaminated waste in all treatment areas	Yes	Yes	Yes	Yes
Drainage system	Yes	Yes	Yes	Yes
Incinerator or burial pit	Yes	Yes	Yes	Yes
Protective boots and utility gloves	Yes	Yes	Yes	Yes
Rubbish bins in all rooms	Yes	Yes	Yes	Yes
Sanitation facilities for patients	Yes	Yes	Yes	Yes
Separate biohazard disposal	Yes	Yes	Yes	Yes
Septic tanks	Yes	Yes	Yes	Yes
Sharps containers in all treatment areas	Yes	Yes	Yes	Yes
Safety				
Fire extinguisher	Yes	Yes	Yes	Yes
Vehicle				
Vehicle 2--wheel drive	No	Yes	Yes	Yes
Ambulance 2-wheel drive	Yes	Yes	Yes	Yes
Medical Stores				
Cool boxes and vaccine carriers	Yes	Yes	Yes	Yes
Lockable storage	Yes	Yes	Yes	Yes
Refrigeration	Yes	Yes	Yes	Yes
Kitchen				
Cooking pots and utensils	Yes	Yes	Yes	Yes
Cooking stove	Yes	Yes	Yes	Yes
Food refrigeration	No	Yes	Yes	Yes
Plates, cups & cutlery	Yes	Yes	Yes	Yes
Storage	Yes	Yes	Yes	Yes
Washing and drying area facilities	Yes	Yes	Yes	Yes
Laundry				
Detergent/soap	Yes	Yes	Yes	Yes
Iron	Yes	Yes	Yes	Yes
Washing and rinsing equipment/bowls	Yes	Yes	Yes	Yes
Water heater	Yes	Yes	Yes	Yes
Housekeeping				
Brooms, brushes and mops	Yes	Yes	Yes	Yes
Buckets	Yes	Yes	Yes	Yes
Soap and disinfectant	Yes	Yes	Yes	Yes

Equipment	SECONDARY			TERTIARY
	HC	DH	CH	RH
MEDICAL				
All Outpatient Rooms				
Blood pressure machine and stethoscope	Yes	Yes	Yes	Yes
Container for sharps disposal	Yes	Yes	Yes	Yes
Desk and chairs	Yes	Yes	Yes	Yes
Examination gloves	Yes	Yes	Yes	Yes
Examination table	Yes	Yes	Yes	Yes
Hand washing facilities	Yes	Yes	Yes	Yes
Light source	Yes	Yes	Yes	Yes
Minor surgical instruments	No	Yes	Yes	Yes
Ophthalmoscope	Yes	Yes	Yes	Yes
Otoscope	Yes	Yes	Yes	Yes
Patellar hammer	Yes	Yes	Yes	Yes
Receptacle for soiled pads, dressings, etc	Yes	Yes	Yes	Yes
Separate biohazard disposal	Yes	Yes	Yes	Yes
Sterile equipment storage	Yes	Yes	Yes	Yes
Sutures	Yes	Yes	Yes	Yes
Thermometer	Yes	Yes	Yes	Yes
Torch with extra batteries	Yes	Yes	Yes	Yes
Wall clock with second hand	Yes	Yes	Yes	Yes
Weighing scale	Yes	Yes	Yes	Yes
Women's Reproductive Health Room				
BP machine and stethoscope	Yes	Yes	Yes	Yes
Contraceptive supplies	Yes	Yes	Yes	Yes
Doppler	Yes	Yes	Yes	Yes
Examination gloves	Yes	Yes	Yes	Yes
Examination table with stirrups	Yes	Yes	Yes	Yes
Family Planning cards	Yes	Yes	Yes	Yes
Fetal stethoscope	Yes	Yes	Yes	Yes
Hand washing facility	Yes	Yes	Yes	Yes
Height measure	Yes	Yes	Yes	Yes
IEC/BCC flip charts, posters, models	Yes	Yes	Yes	Yes
IUD insertion set	Yes	Yes	Yes	Yes
MVA syringe and canulas	Yes	Yes	Yes	Yes
Pregnant woman cards	Yes	Yes	Yes	Yes
Register	Yes	Yes	Yes	Yes
Speculum and vaginal examination kit	Yes	Yes	Yes	Yes
Syringes and needles	Yes	Yes	Yes	Yes
Tape measure	Yes	Yes	Yes	Yes
Tocardiograph	no	Yes	Yes	Yes
Child Health Area				
Baby/hanging scales	Yes	Yes	Yes	Yes
Child Health cards	Yes	Yes	Yes	Yes
Height measure/Measuring board	Yes	Yes	Yes	Yes
MUAC tape	Yes	Yes	Yes	Yes
Register	Yes	Yes	Yes	Yes
Tape measure	Yes	Yes	Yes	Yes
Thermometer	Yes	Yes	Yes	Yes

Equipment	SECONDARY			TERTIARY
	HC	DH	CH	RH
MEDICAL				
Expanded Program on Immunization Area				
Cold Box	Yes	Yes	Yes	Yes
Refrigerator	Yes	Yes	Yes	Yes
Safety Box	Yes	Yes	Yes	Yes
Syringes, needles and swabs	Yes	Yes	Yes	Yes
Temperature monitoring charts	Yes	Yes	Yes	Yes
Delivery Room				
Baby scales	Yes	Yes	Yes	Yes
BP machine and stethoscope	Yes	Yes	Yes	Yes
Clean delivery kits and cord ties	Yes	Yes	Yes	Yes
Curtains if more than one bed	Yes	Yes	Yes	Yes
Delivery bed and bedding	Yes	Yes	Yes	Yes
Fetal stethoscope	Yes	Yes	Yes	Yes
Hand washing facility	Yes	Yes	Yes	Yes
Instrument trolley	Yes	Yes	Yes	Yes
IV treatment sets	Yes	Yes	Yes	Yes
Latex gloves and protective clothing	Yes	Yes	Yes	Yes
Linens for newborns	Yes	Yes	Yes	Yes
Mucus extractor	Yes	Yes	Yes	Yes
Oral airways, various sizes	Yes	Yes	Yes	Yes
Oxygen tank and concentrator	Yes	Yes	Yes	Yes
Partograph charts	Yes	Yes	Yes	Yes
Safety box	Yes	Yes	Yes	Yes
Self-inflating bag and mask adult and neonatal size	Yes	Yes	Yes	Yes
Suction machine	Yes	Yes	Yes	Yes
Suturing sets	Yes	Yes	Yes	Yes
Thermometer	Yes	Yes	Yes	Yes
Tray with routine & emergency drugs, syringes and needles	Yes	Yes	Yes	Yes
Urinary catheters and collection bags	Yes	Yes	Yes	Yes
Vacuum extractor set	Yes	Yes	Yes	Yes
Work surface near bed for newborn resuscitation	Yes	Yes	Yes	Yes
Inpatient Wards				
Basic examination equipment (stethoscope, BP machine, etc)	Yes	Yes	Yes	Yes
Beds, washable mattresses and linen	Yes	Yes	Yes	Yes
Curtains	Yes	Yes	Yes	Yes
Dressing sets	Yes	Yes	Yes	Yes
Dressing trolley/medicine trolley	Yes	Yes	Yes	Yes
Gloves	Yes	Yes	Yes	Yes
IV stands	Yes	Yes	Yes	Yes
Medicine storage cabinet	Yes	Yes	Yes	Yes
Oxygen tank and concentrator	Yes	Yes	Yes	Yes
Patient trolley on wheels	Yes	Yes	Yes	Yes
PPE kits	Yes	Yes	Yes	Yes
Suction machine	Yes	Yes	Yes	Yes
Urinals and bedpans	Yes	Yes	Yes	Yes

Equipment	SECONDARY			TERTIARY
	HC	DH	CH	RH
MEDICAL				
Treatment Room				
Handwashing facility	Yes	Yes	Yes	Yes
AmbuResuscitation Set with adult and child masks	Yes	Yes	Yes	Yes
Dressings materials	Yes	Yes	Yes	Yes
Examination table	Yes	Yes	Yes	Yes
Instrument tray	Yes	Yes	Yes	Yes
Instrument/dressing trolley	Yes	Yes	Yes	Yes
IV stand	Yes	Yes	Yes	Yes
Ophthalmoscope	No	No	Yes	Yes
Oral Airways, various sizes	Yes	Yes	Yes	Yes
Otoscope	Yes	Yes	Yes	Yes
Plaster bandages for casts	Yes	Yes	Yes	Yes
Rhinoscope	No	No	Yes	Yes
Safety Box	Yes	Yes	Yes	Yes
Splints and slings	Yes	Yes	Yes	Yes
Sterile gloves	Yes	Yes	Yes	Yes
Stool, adjustable height	Yes	Yes	Yes	Yes
Storage Cabinet for drugs and supplies	Yes	Yes	Yes	Yes
Suturing set	Yes	Yes	Yes	Yes
Syringes and needles	Yes	Yes	Yes	Yes
Wound dressing set	Yes	Yes	Yes	Yes
Operating Theater				
Room Set-Up				
1) Negatoscope (X-Ray Film Viewer)	No	No	Yes	Yes
Adequate storage	Yes	Yes	Yes	Yes
AmbuResuscitation Set with adult and child masks	Yes	Yes	Yes	Yes
Defibrillator	No	No	Yes	Yes
Electrocautery	No	Yes	Yes	Yes
Fixed operating lights	No	No	Yes	Yes
Fixed suction machine	No	No	Yes	Yes
Handwashing facilities	Yes	Yes	Yes	Yes
Instrument tray	Yes	Yes	Yes	Yes
Instrument trolley	Yes	Yes	Yes	Yes
Laryngoscope set	Yes	Yes	Yes	Yes
Mayo stand	Yes	Yes	Yes	Yes
Mobile operating light	Yes	Yes	Yes	Yes
Ophthalmic Operating Microscope	No	No	No	Yes
Oral Airways, various sizes	Yes	Yes	Yes	Yes
Oxygen tank and concentrator	Yes	Yes	Yes	Yes
Patient trolley on wheels	Yes	Yes	Yes	Yes
Portable suction machine	Yes	Yes	Yes	Yes
Safety Box	Yes	Yes	Yes	Yes
Sphygmomanometer and stethoscope	Yes	Yes	Yes	Yes
Stool, adjustable height	Yes	Yes	Yes	Yes
Universal operating table	Yes	Yes	Yes	Yes
WHO Operative Poster	Yes	Yes	Yes	Yes

Equipment	SECONDARY			TERTIARY
	HC	DH	CH	RH
MEDICAL				
Operating Theater				
IV Therapy Equipment	Yes	Yes	Yes	Yes
Anesthesia Equipment				
Anesthetic Trolley/machine	No	Yes	Yes	Yes
Endtidle CO2 Monitor	No	Yes	Yes	Yes
SaO2 Monitor	No	Yes	Yes	Yes
Endoscopic Equipment and necessary accessories:				
Bronchoscope	No	No	Yes	Yes
Colonoscope	No	No	Yes	Yes
Endoscope	No	No	Yes	Yes
Ercpscope	No	No	No	Yes
Fiber Optic Laryngoscope	No	No	Yes	Yes
Central Supply				
Amputation Set	No	No	Yes	Yes
Caesarean/hysterectomy Set	No	Yes	Yes	Yes
Dilatation and Curettage Set	No	Yes	Yes	Yes
Endoscopic Instrument Cleaning machines and Solutions	No	No	Yes	Yes
Hernia Set	No	No	Yes	Yes
Laparotomy Set	No	Yes	Yes	Yes
Linens	Yes	Yes	Yes	Yes
Locked Storage	Yes	Yes	Yes	Yes
Operating Drapes	No	Yes	Yes	Yes
Ophthalmic Instrument	Yes	Yes	Yes	Yes
Pelvic/fistula Repair Set	No	No	No	Yes
Protective Hats, Aprons, Shoes and Gowns etc	Yes	Yes	Yes	Yes
Sterile Gloves	Yes	Yes	Yes	Yes
Sterilization Equipment for Instruments and Linens	Yes	Yes	Yes	Yes
Surgical Supplies (e.g., Sutures, Dressings, etc)	Yes	Yes	Yes	Yes
Thoracentesis Set	No	No	Yes	Yes
Thoracostomy Set with appropriate tubes and water seal bottle	No	No	Yes	Yes
Thoracotomy Set	No	No	Yes	Yes
Thyroid/Parathyroid Set	No	No	Yes	Yes
Tracheostomy Set	Yes	Yes	Yes	Yes
Tubaligation Set	No	Yes	Yes	Yes
Vascular Repair Set	No	No	Yes	Yes
Laboratory				
Autoclave	Yes	Yes	Yes	Yes
Automated Analyzers (chemistry, Hematology, CD4 etc.)	Yes	Yes	Yes	Yes
Bio Safety Cabinets	No	Yes	Yes	Yes
Blood Storage compartment and Supplies	No	Yes	Yes	Yes
cabinets for Equipment and Supplies	Yes	Yes	Yes	Yes
Cold Box and Ice Bag	Yes	Yes	Yes	Yes
Culture and Sensitivity reagents and Supplies	No	Yes	Yes	Yes
Electrical Centrifuge	Yes	Yes	Yes	Yes
ELISA Reader	Yes	Yes	Yes	Yes
Freezers	Yes	Yes	Yes	Yes
Hand Centrifuge	Yes	Yes	Yes	Yes
Hand Washing Facilities	Yes	Yes	Yes	Yes

Equipment	SECONDARY			TERTIARY
	HC	DH	CH	RH
MEDICAL				
Laboratory				
Hematocrit centrifuge	Yes	Yes	Yes	Yes
Hemoglobinometer	Yes	Yes	Yes	Yes
Incubators	Yes	Yes	Yes	Yes
Laboratory scale and weights	Yes	Yes	Yes	Yes
Lancet and other supplies	Yes	Yes	Yes	Yes
Measuring jars, beakers, test tubes	Yes	Yes	Yes	Yes
Micropipet and tips	Yes	Yes	Yes	Yes
Microscope and lens oil (compound)	Yes	Yes	Yes	Yes
Microscope and lens oil (light)	Yes	Yes	Yes	Yes
Microscope slides and cover slips	Yes	Yes	Yes	Yes
Pipettes and stand	Yes	Yes	Yes	Yes
Protective gloves	Yes	Yes	Yes	Yes
Reagents, stains and test kits as appropriate	Yes	Yes	Yes	Yes
Refrigerator	Yes	Yes	Yes	Yes
Safety equipment (eyewash, fire extinguisher, etc.)	Yes	Yes	Yes	Yes
Slide rack	Yes	Yes	Yes	Yes
Specimen collection cups, tubes and capillary tubes	Yes	Yes	Yes	Yes
Spirit lamp	Yes	Yes	Yes	Yes
Stain jars	Yes	Yes	Yes	Yes
Test kits (RPR, HIV, Paracheck, etc.)	Yes	Yes	Yes	Yes
Timer	Yes	Yes	Yes	Yes
Vortex mixer	Yes	Yes	Yes	Yes
Water distiller	Yes	Yes	Yes	Yes
White cell differential counter	Yes	Yes	Yes	Yes
Imaging Services				
CT scan	No	No	No	Yes
Echocardiogram	No	No	No	Yes
EKG machine, small portable	Yes	Yes	Yes	Yes
Fluoroscope, fixed	No	No	No	Yes
Fluoroscope, portable	No	No	Yes	Yes
Mammogram	No	No	Yes	Yes
Negatoscope (X-Ray film viewer)	No	No	Yes	Yes
Ultrasound machine, permanent	No	No	No	Yes
Ultrasound machine, small portable	No	No	Yes	Yes
Voltage stabilizer for X-Ray machine	No	No	Yes	Yes
X-Ray developing machine and darkroom equipment	No	No	Yes	Yes
X-Ray machine (fixed or portable)	No	No	Yes	Yes
X-ray protective materials	No	No	Yes	Yes
Ophthalmology				
Applanation tonometer	Yes	Yes	Yes	Yes
Hot point cautery	Yes	Yes	Yes	Yes
Minor surgical instruments (e.g., for foreign body, sty, etc.)	Yes	Yes	Yes	Yes
Ophthalmoscope	Yes	Yes	Yes	Yes
Slit lamp	Yes	Yes	Yes	Yes
Tonometer	Yes	Yes	Yes	Yes

6.0 Essential Drug List

Drugs	SECONDARY			TERTIARY
	HC	DH	CH	RH
Anesthetics				
General				
Halothane	No	Yes	Yes	Yes
Ketamine Injection 50mg/ml	No	Yes	Yes	Yes
Nitrous Oxide	No	No	No	Yes
Oxygen	Yes	Yes	Yes	Yes
Thiopental Injection 1g	No	Yes	Yes	Yes
Local				
Lidocaine Injection (plain) 2%	Yes	Yes	Yes	Yes
Lidocaine Injection (plain) 1%	Yes	Yes	Yes	Yes
Lidocaine Injection (with epinephrine) 2%	No	Yes	Yes	Yes
Lidocaine Injection, Spinal (with glucose) 5% & 7.5%	No	Yes	Yes	Yes
Preoperative and Sedation				
Atropine 1mg/ml	Yes	Yes	Yes	Yes
Diazepam 5mg/ml	Yes	Yes	Yes	Yes
Morphine Sulphate 10mg/ml	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
Diclofenac Sodium, 25mg/ml; 3ml	Yes	Yes	Yes	Yes
Diclofenac Tablets 50mg	Yes	Yes	Yes	Yes
Ibuprofen 200mg	Yes	Yes	Yes	Yes
Paracetamol 125mg/5ml	Yes	Yes	Yes	Yes
Paracetamol 100mg	Yes	Yes	Yes	Yes
Paracetamol 500mg	Yes	Yes	Yes	Yes
Opioid Analgesics				
Morphine Oral Solution	Yes	Yes	Yes	Yes
Morphine Sulphate or Hydrochloride 10mg/ml	No	Yes	Yes	Yes
Pethidine 50mg/ml	No	Yes	Yes	Yes
Medicines to Treat Gout				
Allopurinol 100mg	Yes	Yes	Yes	Yes
Colchicine 300microgram	No	Yes	Yes	Yes
Indomethacin 25mg	Yes	Yes	Yes	Yes
Antiallergics and Medicines used in Anaphylaxis				
Chlorpheniramine 10mg/ml	Yes	Yes	Yes	Yes
Chlorpheniramine 4mg	Yes	Yes	Yes	Yes
Dexamethasone 0.5mg	Yes	Yes	Yes	Yes
Dexamethasone 4mg/ml	Yes	Yes	Yes	Yes
Epinephrine 1mg/ml	Yes	Yes	Yes	Yes
Hydrocortisone 100mg	Yes	Yes	Yes	Yes
Prednisolone 5mg	Yes	Yes	Yes	Yes
Promethazine 25mg	Yes	Yes	Yes	Yes

Drugs	SECONDARY			TERTIARY
	HC	DH	CH	RH
Antidotes and Other Substances Used in Poisoning				
Acetylcysteine 200mg/ml in 10-ml ampoule.	No	Yes	Yes	Yes
Atropine 1mg/ml	Yes	Yes	Yes	Yes
Benzotropine 1mg/ml	No	Yes	Yes	Yes
Calcium folinate (folic acid) 1.5mg	Yes	Yes	Yes	Yes
Calcium folinate (folic acid) 3mg/ml	Yes	Yes	Yes	Yes
Calcium gluconate	Yes	Yes	Yes	Yes
Charcoal activated 250mg	Yes	Yes	Yes	Yes
Desferrioxamine 500mg (PFR)	No	Yes	Yes	Yes
Dimecaprol 50mg/ml	No	Yes	Yes	Yes
Methylthioninium chloride (methylene blue) 10mg/ml	No	Yes	Yes	Yes
Naloxone 400mcg/1ml	No	Yes	Yes	Yes
Penicillamine 250mg	No	Yes	Yes	Yes
Pralidoxime 200mg/ml	No	Yes	Yes	Yes
Anticonvulsants and Antiepileptics				
Carbamazepine 200mg	Yes	Yes	Yes	Yes
Diazepam 2mg	Yes	Yes	Yes	Yes
Diazepam 5mg	Yes	Yes	Yes	Yes
Diazepam 5mg/ml	Yes	Yes	Yes	Yes
Ethosuximide 250mg	No	Yes	Yes	Yes
Magnesium Sulphate 50%	Yes	Yes	Yes	Yes
Phenobarbitone 100mg/ml	No	Yes	Yes	Yes
Phenobarbitone 50mg	Yes	Yes	Yes	Yes
Phenytoin 100mg	Yes	Yes	Yes	Yes
Sodium Valproate 100mg	No	Yes	Yes	Yes
Anti-Infectives				
Intestinal Infestations				
Mebendazole 100mg	Yes	Yes	Yes	Yes
Mebendazole 500mg	Yes	Yes	Yes	Yes
Niclosamide 500mg	No	Yes	Yes	Yes
Anti-filariasis				
Ivermectin 6mg	Yes	Yes	Yes	Yes
Anti-schistosomiasis Medicines				
Praziquantel 500mg	Yes	Yes	Yes	Yes
Antibacterials				
Amoxicillin 1g, IM/IV, (PFR)	Yes	Yes	Yes	Yes
Amoxicillin 125mg/ml	Yes	Yes	Yes	Yes
Amoxicillin 250mg + Clavulanic acid 125mg	No	No	No	Yes
Amoxicillin 250mg	Yes	Yes	Yes	Yes
Benzathine Benzyl Penicillin 2.4mu	Yes	Yes	Yes	Yes
Benzyl Penicillin, 1MU (600mg)	Yes	Yes	Yes	Yes
Ceftriaxone, 250mg/1g vial	No	Yes	Yes	Yes
Cefuroxime 125mg/5ml (PFR)	No	Yes	Yes	Yes
Cefuroxime axetil 250mg	No	Yes	Yes	Yes
Cefuroxime sodium 750mg IV/IM	No	Yes	Yes	Yes
Chloramphenicol 1g	No	Yes	Yes	Yes
Chloramphenicol 250mg	Yes	Yes	Yes	Yes
Ciprofloxacin 500mg	Yes	Yes	Yes	Yes
Cloxacillin 250mg	Yes	Yes	Yes	Yes

Drugs	SECONDARY			TERTIARY
	HC	DH	CH	RH
Anti-Infectives				
Antibacterials				
Cloxacillin 250mg/vial	No	Yes	Yes	Yes
Cloxacillin 500mg	Yes	Yes	Yes	Yes
Co-trimoxazole 100+20mg	Yes	Yes	Yes	Yes
Co-trimoxazole 200+40mg/5ml	Yes	Yes	Yes	Yes
Co-trimoxazole 400+80mg	Yes	Yes	Yes	Yes
Doxycycline 100mg	Yes	Yes	Yes	Yes
Erythromycin 250mg	Yes	Yes	Yes	Yes
Gentamicin 40mg/ml	Yes	Yes	Yes	Yes
Metronidazole 125mg/5ml	Yes	Yes	Yes	Yes
Metronidazole 200mg	Yes	Yes	Yes	Yes
Metronidazole 500mg/100ml infusion	Yes	Yes	Yes	Yes
Nalidixic acid 500mg	Yes	Yes	Yes	Yes
Nitrofurantoin 100mg	Yes	Yes	Yes	Yes
Phenoxyethyl Penicillin 250mg	Yes	Yes	Yes	Yes
Procaine Benzyl Penicillin Fortified 4mu	Yes	Yes	Yes	Yes
Antileprosy medicines				
Clofazimine 100mg	Yes	Yes	Yes	Yes
Dapsone 100mg	Yes	Yes	Yes	Yes
Rifampicin 150mg	Yes	Yes	Yes	Yes
Antituberculosis Medicines				
Ethambutol 400mg	Yes	Yes	Yes	Yes
Ethambutol 100mg	Yes	Yes	Yes	Yes
Isoniazid 100mg	Yes	Yes	Yes	Yes
Isoniazid 300mg	Yes	Yes	Yes	Yes
Pyrazinamide 500mg	Yes	Yes	Yes	Yes
Pyridoxine 50mg	Yes	Yes	Yes	Yes
Rifampicin/Isoniazid 150mg/75mg	Yes	Yes	Yes	Yes
Rifampicin/Isoniazid 50mg/30mg	Yes	Yes	Yes	Yes
Rifampicin/Isoniazid 50mg/60mg	Yes	Yes	Yes	Yes
Rifampicin/Isoniazid/Ethambutol 150mg/75mg/275mg	Yes	Yes	Yes	Yes
Rifampicin/Isoniazid/Pyrazinamide 50mg/30mg/150mg	Yes	Yes	Yes	Yes
Rifampicin/Isoniazid/Pyrazinamide/Ethambutol 150mg/75mg/4	Yes	Yes	Yes	Yes
Streptomycin 1gm	Yes	Yes	Yes	Yes
Multidrug Resistant Tuberculosis Medicines				
Kanamycin 1gr.vial	No	Yes	Yes	Yes
p-aminosalicylic acid	No	Yes	Yes	Yes
Amikacin 500mg/2ml	No	Yes	Yes	Yes
Ofloxacin 200mg	No	Yes	Yes	Yes
Levofloxacin 250mg	No	Yes	Yes	Yes
Ethionamide 250mg	No	Yes	Yes	Yes
Cycloserine 250mg	No	Yes	Yes	Yes
Pyridoxine 50mg	No	Yes	Yes	Yes
Antifungals				
Amphotericin B 50mg, IV	No	Yes	Yes	Yes
Clotrimazole 400mg, pessary	Yes	Yes	Yes	Yes
Fluconazole 100mg	No	Yes	Yes	Yes
Fluconazole 200mg	Yes	Yes	Yes	Yes

Drugs	SECONDARY			TERTIARY
	HC	DH	CH	RH
Anti-Infectives				
Antifungals				
Flucytosine 100mg/ml IV	No	Yes	Yes	Yes
Griseofulvin 125mg	Yes	Yes	Yes	Yes
Griseofulvin 500mg	Yes	Yes	Yes	Yes
Miconazole 700mg	Yes	Yes	Yes	Yes
Nystain 100,000 IU	Yes	Yes	Yes	Yes
Nystain 100,000 IU/ml	Yes	Yes	Yes	Yes
Nystain 500,000 IU Oral use	Yes	Yes	Yes	Yes
Antivirals				
Aciclovir 400mg	No	Yes	Yes	Yes
Gancyclovir 500mg IV (CMV infection)	No	No	No	Yes
Antiretrovirals - Subject to current National Aids Control Program Protocols				
Abacavir 300mg	Yes	Yes	Yes	Yes
Abacavir 60mg	Yes	Yes	Yes	Yes
Abacavir Oral Solution 20mg/ml, 240ml	Yes	Yes	Yes	Yes
Atazanavir 300mg	Yes	Yes	Yes	Yes
Didanosine 125mg	Yes	Yes	Yes	Yes
Didanosine 250mg	Yes	Yes	Yes	Yes
Didanosine 400mg	Yes	Yes	Yes	Yes
Effavirenz 200mg	Yes	Yes	Yes	Yes
Effavirenz 600mg	Yes	Yes	Yes	Yes
Lamivudine + Stavudine + nevirapine 150+30+200	Yes	Yes	Yes	Yes
Lamivudine + Stavudine + nevirapine 30+6+50	Yes	Yes	Yes	Yes
Lamivudine + Stavudine + nevirapine 60+12+100	Yes	Yes	Yes	Yes
Lamivudine + Stavudine 150+30	Yes	Yes	Yes	Yes
Lamivudine + Stavudine 30+6	Yes	Yes	Yes	Yes
Lamivudine + Stavudine 60+12	Yes	Yes	Yes	Yes
Lamivudine + Tenofovir 300+300	Yes	Yes	Yes	Yes
Lamivudine + Zidovudine + nevirapine 150+300+200	Yes	Yes	Yes	Yes
Lamivudine + Zidovudine + nevirapine 30+60+50	Yes	Yes	Yes	Yes
Lamivudine + Zidovudine 150+300	Yes	Yes	Yes	Yes
Lamivudine + Zidovudine 30+60	Yes	Yes	Yes	Yes
Lamivudine 150mg	Yes	Yes	Yes	Yes
Lamivudine Oral Solution, 10mg/ml, 100ml	Yes	Yes	Yes	Yes
Lopinavir + Ritonavir 100+25	Yes	Yes	Yes	Yes
Lopinavir + Ritonavir 200+50	Yes	Yes	Yes	Yes
Lopinavir + Ritonavir Oral Solution 30+20mg/ml	Yes	Yes	Yes	Yes
Nevirapine 200mg	Yes	Yes	Yes	Yes
Nevirapine Syrup, 10mg/ml	Yes	Yes	Yes	Yes
Ritonavir 100mg	Yes	Yes	Yes	Yes
Zidovudine 300mg	Yes	Yes	Yes	Yes
Zidovudine Oral Solution, 10mg/ml, 100ml	Yes	Yes	Yes	Yes
Antiamoebic and Anti giardiasis Medicines				
Metronidazole 125mg/5ml	Yes	Yes	Yes	Yes
Metronidazole 250mg	Yes	Yes	Yes	Yes
Tinidazole 500mg	No	Yes	Yes	Yes

Drugs	SECONDARY		TERTIARY	
	HC	DH	CH	RH
Anti-Infectives				
Antimalarials				
Artemether20mg+Lumefantrine120mg	Yes	Yes	Yes	Yes
Artemether20mg/ml	Yes	Yes	Yes	Yes
Artemether30mg/ml	Yes	Yes	Yes	Yes
Artesunate100mg+Amodiaquine270mg	Yes	Yes	Yes	Yes
Artesunate50mg+Amodiaquine135mg	Yes	Yes	Yes	Yes
Doxycycline100mg	Yes	Yes	Yes	Yes
Primaquine15mg	No	Yes	Yes	Yes
QuinineDihydrochloride300mg/ml	Yes	Yes	Yes	Yes
QuinineSulphate300mg	Yes	Yes	Yes	Yes
Sulphadoxine/pyrimethamine500+25mg	Yes	Yes	Yes	Yes
Anti-pneumocystosis				
Pentamidine300mg(PFR)IV	No	Yes	Yes	Yes
AntineoplasticandImmunosuppressives				
Azathioprine50mg	No	Yes	Yes	Yes
Cyclophosphamide25mg	No	Yes	Yes	Yes
Dexamethasone1mg/ml	Yes	Yes	Yes	Yes
Dexamethasone4mg	Yes	Yes	Yes	Yes
Hydrocortisone100mg	Yes	Yes	Yes	Yes
Methotrexate2.5mg	No	Yes	Yes	Yes
Prednisolone5mg	Yes	Yes	Yes	Yes
Tamoxifen10mg	No	Yes	Yes	Yes
Vincristine1mg	No	Yes	Yes	Yes
Anti-ParkinsonismMedicines				
Benzhexol2mg	No	Yes	Yes	Yes
Levodopa100mg+Carbidopa10mg	No	Yes	Yes	Yes
MedicinesAffectingtheBlood				
AntianaemiaMedicines				
FerrousFumarate20mg/ml	Yes	Yes	Yes	Yes
FerrousSalt200mg+FolicAcid0.25mg	Yes	Yes	Yes	Yes
FerrousSulphate200mgCoated(65mgIron)	Yes	Yes	Yes	Yes
FolicAcid5mg	Yes	Yes	Yes	Yes
MedicinesAffectingCoagulation				
Heparin5000u/ml	No	Yes	Yes	Yes
Phytomenadione(VitK1)1mg/ml	Yes	Yes	Yes	Yes
ProtamineSulfate10mg/ml	No	Yes	Yes	Yes
Warfarin3mg	No	Yes	Yes	Yes
PlasmaSubstitutes				
Dextran70%inSodiumChloride0.9%	Yes	Yes	Yes	Yes
CardiovascularMedicines				
Anti-anginaMedicines				
Atenolol100mg	No	Yes	Yes	Yes
GlycerylTrinitrate500mgSublingual	No	Yes	Yes	Yes
Propranolol20mg	Yes	Yes	Yes	Yes
Propranolol40mg	Yes	Yes	Yes	Yes
Anti-arrhythmicMedicines				
Atenolol100mg	No	Yes	Yes	Yes
Digoxin0.25mg	No	Yes	Yes	Yes

Drugs	SECONDARY			TERTIARY
	HC	DH	CH	RH
Cardiovascular Medicines				
Anti-arrhythmic Medicines				
Lidocaine (plain) 2%	No	Yes	Yes	Yes
Procainamide 1%	No	Yes	Yes	Yes
Propranolol 40mg	No	Yes	Yes	Yes
Antihypertensive Medicines				
Atenolol 50mg	Yes	Yes	Yes	Yes
Enalapril 10mg	No	Yes	Yes	Yes
Hydralazine 20mg/ml	Yes	Yes	Yes	Yes
Hydrochlorothiazide 25mg	Yes	Yes	Yes	Yes
Magnesium sulfate 500mg/ml	Yes	Yes	Yes	Yes
Nifedipine 10mg	Yes	Yes	Yes	Yes
Propranolol 40mg	Yes	Yes	Yes	Yes
Propranolol 80mg	Yes	Yes	Yes	Yes
Medicines Used in Heart Failure				
Captopril 12.5mg	No	Yes	Yes	Yes
Digoxin 0.25mg	No	Yes	Yes	Yes
Digoxin 0.25mg/ml	No	Yes	Yes	Yes
Furosemide 10mg/ml	Yes	Yes	Yes	Yes
Furosemide 40mg	Yes	Yes	Yes	Yes
Medicines Used in Vascular Shock				
Adrenaline (epinephrine) 1mg/ml	No	Yes	Yes	Yes
Hydrocortisone sodium succinate 100mg	No	Yes	Yes	Yes
Dermatological Medicines				
Benzoic acid + Salicylic acid	Yes	Yes	Yes	Yes
Benzyl Benzoate 25%	Yes	Yes	Yes	Yes
Calamine 15%	Yes	Yes	Yes	Yes
Clotrimazole 1% 20g cream	Yes	Yes	Yes	Yes
Coal Tar 1%	No	Yes	Yes	Yes
Hydrocortisone 1%	Yes	Yes	Yes	Yes
Neomycin 5mg + bacitracin 500iu	Yes	Yes	Yes	Yes
Disinfectants				
Calcium or Sodium hypochlorite 5% solution	Yes	Yes	Yes	Yes
Chlorhexidine + Cetrimide 1.5% - 15%	Yes	Yes	Yes	Yes
Chlorhexidine gluconate 5%	Yes	Yes	Yes	Yes
Providone Iodine	Yes	Yes	Yes	Yes
Surgical Spirit	Yes	Yes	Yes	Yes
Diuretics				
Furosemide 10mg/ml	No	Yes	Yes	Yes
Furosemide 40mg	Yes	Yes	Yes	Yes
Hydrochlorothiazide 50mg	Yes	Yes	Yes	Yes
Mannitol 20%	No	Yes	Yes	Yes
Spironolactone 25mg	No	Yes	Yes	Yes
Gastrointestinal Medicines				
Aluminium hydrox. + Magnesium trisil, 400mg	Yes	Yes	Yes	Yes
Bisacodyl 5mg (paediatric)	Yes	Yes	Yes	Yes
Bisacodyl 5mg	Yes	Yes	Yes	Yes
Bismuth subgallate compound	Yes	Yes	Yes	Yes
Loperamide 2mg	Yes	Yes	Yes	Yes

Drugs	SECONDARY			TERTIARY
	HC	DH	CH	RH
Gastrointestinal Medicines				
Magnesium Trisilicate 500mg	Yes	Yes	Yes	Yes
Metoclopramide 10mg	Yes	Yes	Yes	Yes
Metoclopramide 5mg/ml	Yes	Yes	Yes	Yes
Oral Rehydration Salt	Yes	Yes	Yes	Yes
Promethazine 25mg/ml	Yes	Yes	Yes	Yes
Promethazine 25mg/ml, 2ml	Yes	Yes	Yes	Yes
Ranitidine 150mg	Yes	Yes	Yes	Yes
Ranitidine 25mg/ml	No	Yes	Yes	Yes
Zinc Sulphate 20mg	Yes	Yes	Yes	Yes
Hormones and Other Endocrine Medicines				
Carbimazole 5mg	No	Yes	Yes	Yes
Dexamethasone 4mg/ml	Yes	Yes	Yes	Yes
Dexamethasone 0.5mg	Yes	Yes	Yes	Yes
Ethinylestradiol	No	Yes	Yes	Yes
Glibenclamide 5mg	No	Yes	Yes	Yes
Hydrocortisone 100mg inj	Yes	Yes	Yes	Yes
Insulin Isophane (NPH) 100IU/ml, 10ml	No	Yes	Yes	Yes
Insulin Soluble 100iu/ml 10ml	No	Yes	Yes	Yes
Insulin Zinc Suspension 100IU/ml	No	Yes	Yes	Yes
Iodine 5% Potassium Iodide 10% (Lugol's Iodine)	Yes	Yes	Yes	Yes
Levothyroxine 100microgm	No	Yes	Yes	Yes
Metformin 500mg	No	Yes	Yes	Yes
Methyltestosterone 5mg	No	No	No	Yes
Prednisolone 5mg	Yes	Yes	Yes	Yes
Tamoxifen	No	No	No	Yes
Testosterone Enanthate 250mg/ml	No	No	No	Yes
Contraceptives				
Diaphragms	No	Yes	Yes	Yes
Ethinylestradiol 30µg + Norethisterone 1mg	Yes	Yes	Yes	Yes
Ethinylestradiol 30µg + Levonorgestrel 150µg	Yes	Yes	Yes	Yes
Ethinylestradiol 30µg + Levonorgestrel 300µg	Yes	Yes	Yes	Yes
Ethinylestradiol 30µg + Levonorgestrel 250µg	Yes	Yes	Yes	Yes
Female Condom	Yes	Yes	Yes	Yes
Intra-uterine device	Yes	Yes	Yes	Yes
Levonorgestrel	Yes	Yes	Yes	Yes
Male Condom	Yes	Yes	Yes	Yes
Medroxyprogesterone Acetate 150mg depot	Yes	Yes	Yes	Yes
Norethisterone	Yes	Yes	Yes	Yes
Norgestrel 75µg	Yes	Yes	Yes	Yes
Immunologicals				
Anti-Snake Venom (Polyvalent)	Yes	Yes	Yes	Yes
Tetanus Anti-toxin, Human 1,500u	Yes	Yes	Yes	Yes
Vaccines				
BCG Vaccine (Dried)	Yes	Yes	Yes	Yes
DPT Vaccine	Yes	Yes	Yes	Yes
DPT-HepB+Hib	Yes	Yes	Yes	Yes

Drugs	SECONDARY			TERTIARY
	HC	DH	CH	RH
Immunologicals				
Vaccines				
Measles Vaccine	Yes	Yes	Yes	Yes
Polio Vaccine (oral soln.)	Yes	Yes	Yes	Yes
Rabies Vaccine	Yes	Yes	Yes	Yes
Tetanus Toxoid	Yes	Yes	Yes	Yes
Yellow Fever Vaccine	Yes	Yes	Yes	Yes
Muscle Relaxants (peripherally acting) and Cholinesterase Inhibitors				
Neostigmine 0.5mg/ml	No	Yes	Yes	Yes
Suxamethonium 50mg/ml	No	Yes	Yes	Yes
Ophthalmological Preparations				
Acetazolamide 250mg	No	Yes	Yes	Yes
Aciclovir Eye Ointment	Yes	Yes	Yes	Yes
Atropine Sulphate 1% Eye Drops	No	Yes	Yes	Yes
Chloramphenicol 0.5% Eye Drops	Yes	Yes	Yes	Yes
Desamethasone Eye Oint	No	Yes	Yes	Yes
Dexamethasone Sodium Eye Drop 1mg	No	Yes	Yes	Yes
Gentamicin Eye Drops 0.3%	Yes	Yes	Yes	Yes
Pilocarpine Hydrochloride 2% Eye Drops	No	Yes	Yes	Yes
Tetracaine Eye Drops 0.5%	No	Yes	Yes	Yes
Tetracaine Eye Oint 1%	Yes	Yes	Yes	Yes
Tetracycline 1% Eye	Yes	Yes	Yes	Yes
Timolol Maleate 0.25% Eye Drops	No	Yes	Yes	Yes
Oxytocics and Antioxytocics				
Ergometrine Maleate, 0.5mg	Yes	Yes	Yes	Yes
Ergometrine 0.5mg/ml	Yes	Yes	Yes	Yes
Misoprostol 200 microgram	No	Yes	Yes	Yes
Oxytocin 10 i.u./ml	Yes	Yes	Yes	Yes
Salbutamol 0.5mg/ml	No	Yes	Yes	Yes
Salbutamol 2mg	Yes	Yes	Yes	Yes
Peritoneal Dialysis Solution				
Electrolyte Solutions for Dialysis	No	No	No	Yes
Psychotherapeutic Medicines				
Medicines Used in Psychotic Disorders				
Benzatrophine 1mg	Yes	Yes	Yes	Yes
Benzhexol 10mg/5ml	No	Yes	Yes	Yes
Benzhexol 5mg	No	Yes	Yes	Yes
Chlorpromazine 100mg	No	Yes	Yes	Yes
Chlorpromazine 50mg/2ml	No	Yes	Yes	Yes
Fluphenazine 25mg/1ml	No	No	No	Restricted
Haloperidol 5mg/ml	No	No	No	Yes
Haloperidol 10mg/ml	No	No	No	Yes
Risperidone 2mg	No	No	No	Restricted
Medicines Used in Depressive Disorders				
Amitriptyline 25mg	Yes	Yes	Yes	Yes
Imipramine 25mg	Yes	Yes	Yes	Yes
Fluoxetine 20mg	Yes	Yes	Yes	Yes
Medicines Used in Bipolar Disorders				
Carbamazepine 100mg	Yes	Yes	Yes	Yes

Drugs	SECONDARY			TERTIARY
	HC	DH	CH	RH
Psychotherapeutic Medicines				
Medicines Used in Bipolar Disorders				
Carbamazepine 200mg	Yes	Yes	Yes	Yes
Lithium Carbonate 250/300mg	No	Yes	Yes	Yes
Valproic Acid 200mg/500mg	Yes	Yes	Yes	Yes
Medicines Used in Generalized Anxiety and Sleep Disorders				
Diazepam 5mg	Yes	Yes	Yes	Yes
Lorazepam 1mg	Yes	Yes	Yes	Yes
Medicines Used for Substance (Alcohol/Opioid) Dependence)				
Buprenorphine 2mg/8mg	No	No	No	Restricted
Medicines Acting on the Respiratory Tract				
Aminophylline 25mg/ml, 10ml	Yes	Yes	Yes	Yes
Beclomethasone Aerosol	Yes	Yes	Yes	Yes
Epinephrine 1mg/ml	No	Yes	Yes	Yes
Hydrocortisone 100mg/ml	Yes	Yes	Yes	Yes
Prednisolone 5mg	Yes	Yes	Yes	Yes
Salbutamol 0.5mg/ml	Yes	Yes	Yes	Yes
Salbutamol 4mg	Yes	Yes	Yes	Yes
Salbutamol Aerosol Inhaler	Yes	Yes	Yes	Yes
Solutions Correcting Water, Electrolyte and Acid-Based Disturbances				
Dextrose 5%	Yes	Yes	Yes	Yes
Dextrose 5% in Normal Saline	Yes	Yes	Yes	Yes
Dextrose 10%	Yes	Yes	Yes	Yes
Half strength Ringer's Lactate 500ml	Yes	Yes	Yes	Yes
Normal Saline 0.9% NaCl	Yes	Yes	Yes	Yes
Potassium Chloride 500mg (slow release)	No	Yes	Yes	Yes
Ringer's Lactate 500ml	Yes	Yes	Yes	Yes
Sodium Bicarbonate 8.4%, 10ml	Yes	Yes	Yes	Yes
Water for Injection	Yes	Yes	Yes	Yes
Vitamins and Minerals				
Ascorbic Acid 250mg	Yes	Yes	Yes	Yes
Calcium Gluconate 10mg/ml, 10ml	Yes	Yes	Yes	Yes
Calcium Lactate 300mg	Yes	Yes	Yes	Yes
Ergocalciferol 1.25mg	No	Yes	Yes	Yes
Multivitamin	Yes	Yes	Yes	Yes
Pyridoxine (B6) 25mg	Yes	Yes	Yes	Yes
Retinol (Vit A) 200,000 IU	Yes	Yes	Yes	Yes
Retinol (Vit A) 500,000 IU	Yes	Yes	Yes	Yes
Vitamin B-compound	Yes	Yes	Yes	Yes
Vitamin B-compound 2ml	Yes	Yes	Yes	Yes
Ear, Nose and Oropharyngeal Preparations				
Betamethasone 0.1% Ear/eye drops	No	Yes	Yes	Yes
Clotrimazole 1% Soln	No	No	Yes	Yes
Ephedrine 1% Nasal drops	No	Yes	Yes	Yes
Gentamicin 0.3% Ear drops	No	Yes	Yes	Yes
Lignocaine + Adrenaline 2% + 1:100,000 nasal drops	No	Yes	Yes	Yes
Miconazole 2% Oral gel	No	Yes	Yes	Yes