LIBERIA HARMONIZED HEALTH FACILITY ASSESSMENT (HHFA) REPORT

October 2022

Foreword

The Harmonized Health Facility Assessment (HHFA) provides essential information on service delivery through assessing and monitoring service availability and readiness(capacity) at district and health facility levels; assessing the equitable and appropriate distribution of services and resource as well as providing the sector with skills and tools for monitoring service and resource availability on a regular basis. The HHFA provides essential information on status of the health system in terms of service accessibility (e.g., density of health facilities and beds, core health workers, service utilization), as well as the readiness of the facilities to provide an adequate level of service (e.g. availability of trained staff, diagnostics, equipment and medicines), both for general health services and for specific key health interventions (e.g. maternal and newborn health, HIV/AIDS, TB, malaria diagnosis and treatment). The HHFA is an improved version of the SARA methodology, which WHO and other partners have developed, and currently being rolled out in some countries. It is more robust and comprehensive approach.

This documentation of performance reviews of health care services and subsequent reports will contribute favourably to monitoring service availability and readiness of the health sector, and to generate evidence to support planning as Liberia strives in building a resilient health system after being fragmented by the civil conflict, Ebola outbreak, and the COVID-19 pandemic.

The timely release of this report helps Liberia realize its goal of achieving middle-income status by addressing a key data gap: how to measure and monitor progress in the transformational phase of health system improvement. Health system responses to increased inputs and improved processes, and the effects of these on improved health outcomes and better health status, can be monitored with the help of the HHFA survey, whose importance has increased with a heightened focus on accountability and the need to demonstrate results at the national and international levels.

Finally, on behalf of the Ministry of Health, I express our appreciation to the World Health Organization, the Global Fund, the Global Alliance for Vaccines and Immunization for providing the much needed financial and technical support for the conduct of HHFA 2022.

Hon. Wilhemina Jallah, MD
Minister of Health

Acknowledgements

The Ministry of Health undertook the Harmonized Health Facility Assessment (HHFA) 2022 study, a situational analysis of the development and performance of the Liberian health system. However, without the tremendous assistance of several people, institutions, and organizations, whether public or private, national or international, the Ministry could not have successfully undertaken and accomplished this mission alone.

I would like to acknowledge the experts from MoH health programs, national institutions, the private sector, and health collaborative partners such as WHO, Global Fund, JHPIEGO, and Last Mile Health who provided technical and financial assistance to this project. Please accept the warmest gratitude of the Ministry's leadership for a job well done from everyone who participated in any manner to this effort especially heads of MOH units/divisions, county health officers and medical directors during the adaptation, training, field exercise and report writing.

Kindly allow me to call out a few organizations and people in order to emphasize the teamwork that went into creating this report. I want to acknowledge the efforts of Assistant Minister Chea Sanford Wesseh and his team at the Ministry, which includes Luke L. Bawo, Nelson K. Dunbar, Director of Research, Patrick Konwloh, Director of HIS, Dikena G. Jackson, Assistant Director of Research, Mr. Martin Dumoe, Director of Policy and Planning, Mr. Ernest Gonyon, Director, Health Financing, Joe Kerkulah, M&E Officer, James Momo, Research Officer, Colleen B. Parker, Research Officer, Josephus Kilikpo, Research Officer, Moses Camue, HIS Officer, and as well as Mr. Joseph Nyan and Richard Russ of LISGIS, whose vision, management, leadership, and team support made this possible.

I also thank UNICEF for her important participation during the tool revision process. The team from the WHO Afro (Tim Roberton and Asley Sheffel) and WHO Country Office, Dr Charles Ocan, Dr. Louis Ako and Mr. Moses Bolongei. We also acknowledged Dr. Wondimu Ayele from UNDP/GF and Napoleon Bennela from Jhpiego for the important role in providing technical support to the assessment and report team.

Once again, on the behalf of the MoH, I thank you all.

Hon. A. Vaifee Tulay
Deputy Minister for Policy, Planning & Research

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Abbreviation & Acronyms

ACT	Artemisinin combination therapy
AIDS	Acquired immune deficiency syndrome
ANC	Antenatal care
ART	Antiretroviral Therapy
ARV	Antiretroviral
BCG	Bacillus Calmette-Guérin
BEmOC	Basic emergency obstetric care
CBC	Complete blood count
CD4	Cluster of differentiation 4
CEmOC	Comprehensive emergency obstetric care
D&C	Dilation and curettage
DBS	Dried blood spot
DHIS2	District health information software/system version 2
DTP	Diphtheria tetanus pertussis
GoL	Government of Liberia
GPS	Global positioning system
HepB	Hepatitis B
HiB	Haemophilus influenza type B
HIV	Human immunodeficiency virus
HIV+	HIV positive
HMER	Health Information System, Monitoring and Evaluation and Research
HMIS	Health management information system
IMCI	Integrated management of childhood illness
IMEESC	Integrated management of emergency and essential surgical care
LMH	Last Mile Health
IPT	Intermittent preventive therapy
ITN	Insecticide treated net
IV	Intravenous
M&E	Monitoring and evaluation
MDR-TB	Multiple drug resistant tuberculosis
MNCAH	Maternal, neonatal, child and adolescent health
MoH	Ministry of health
NCD	Non-communicable disease
ORS	Oral rehydration solution
PMTCT	Prevention of mother-to-child transmission
RDT	Rapid diagnostic test
SARA	Service availability and readiness assessment
SDG	Sustainable development goal
SP	Sufadoxine pyrimethamine
STI	Sexually transmitted infection
TB	Tuberculosis
UNDP	United Nation Development Program

UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
WHO	World Health Organization

Executive Summary

The 2021/2022 Liberia Harmonized Health Facility Assessment (HHFA) was conducted to ascertain the availability, readiness and quality of health service delivery to better understand existing gaps/improvement and identify sustainable approaches for improving health care delivery services.

The HHFA tool covers the service availability and readiness across facilities with emphasis on the provision of reproductive, maternal, newborn, and child health (RMNCH), nutrition services, infectious diseases and noncommunicable disease services. It considers general service availability that focuses on health infrastructure, health workforce and service utilization. Additionally, the HHFA assesses the general service readiness that includes basic amenities, basic equipment, standard precautions for infection prevention, diagnostic capacity and essential medicines. Finally, the HHFA covers detail service specific availability and readiness as well as management and finance support systems of service delivery. The HHFA aims to provide information needed to track how health systems respond, to increased inputs and improved outputs and impact on health outcomes and monitor and measure progress in health system strengthening over time.

The objectives of the survey were:

- To determine the general and specific physical availability or presence of quality health services that encompasses health infrastructure, core health personnel and aspects of services utilization in health facilities in Liberia.
- To assess service availability in terms of general service readiness (presence of basic amenities, basic equipment, standard precautions for infection prevention, diagnostic capacities, and essential medicines) health facilities in Liberia.
- To assess service specific readiness – (ability of health facilities to offer a specific service and the capacity to provide specific tracer items, such as trained staff, guidelines, equipment, diagnostics, medicines, and commodities) health facilities in Liberia.

The Liberia HHFA was conducted for 25 days beginning August 5th 2021 in a sample health facility and included 568 health facilities out of 866 health facilities mapped within the Liberia master health facilities listing for 2021. Of the surveyed facilities, there 464 clinics, 68 health centers and 36 hospitals.

The conduct of the HHFA in Liberia is the first of it kind to assess supply and demand dimensions of health care quality and responsiveness. Like other countries, the HHFA is an improved version of the SARA and has proven to be programmatically powerful and useful for identifying health systems strengthening needs. The information provided by this assessment provides health sector stakeholders with evidence-base information that guide and inform planning and execution of health service interventions and can as well be used as a tool for advocacy and policy dialogue at all levels in Liberia. The key findings from this assessment have been summarized and categorized into the following groups: presence of serious gaps/shortages reflected in red (0%-49%), room for improvement denoted in yellow (50%-74%) and progressing towards target denoted in green (75%-100%).

0%-49%	50%-74%	75%-100%
Serious gaps/shortages	Room for Improvement	Progressing towards target

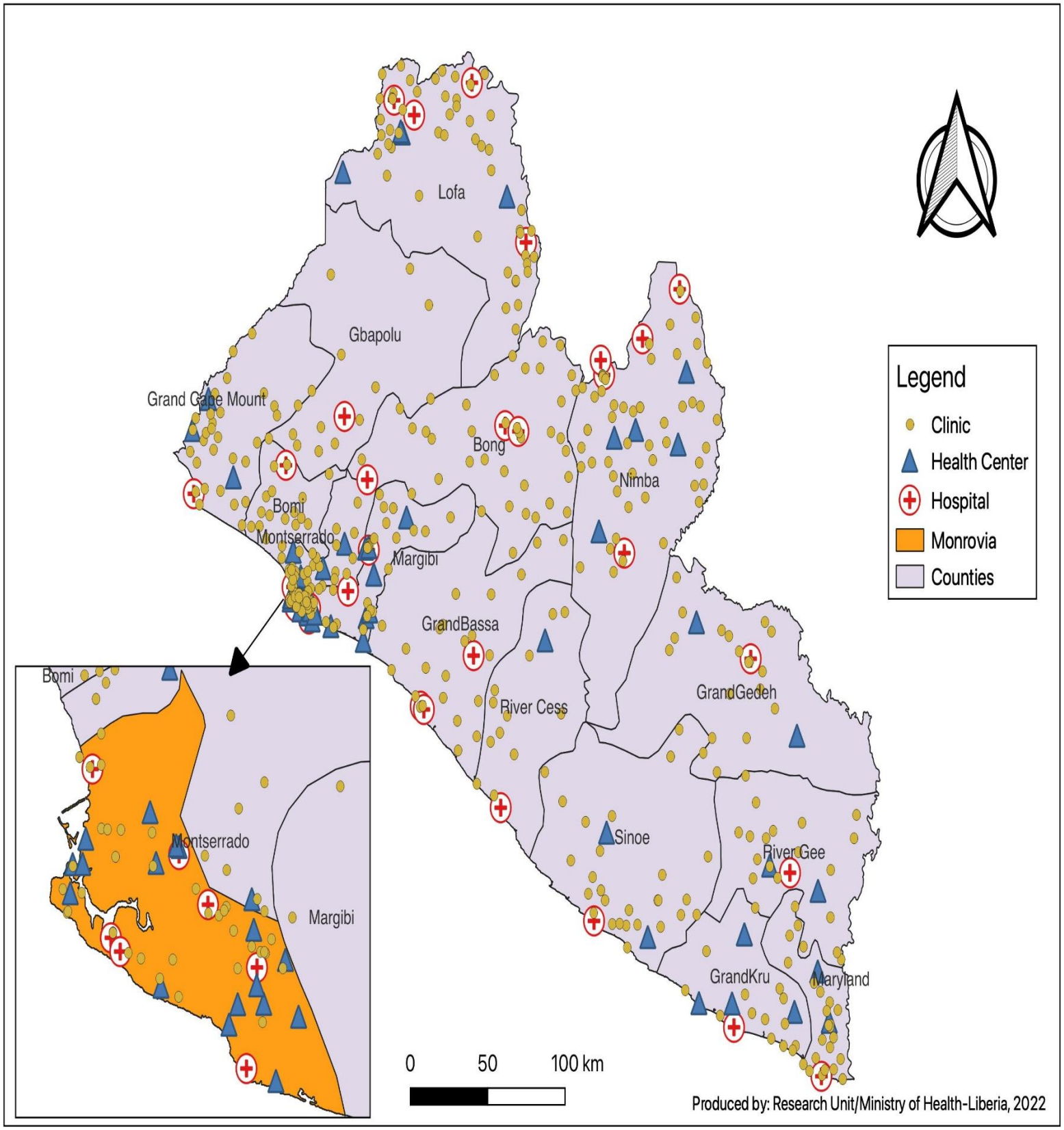
Indicator	Percent Availability	General Service Availability
General Service Availability Index (100% target)	58%	On average the general service availability index is 58%
Health facility density (2 facilities per 10 000 pop)	95%	1.9 health facilities per 10,000 population compared to 1.95 in 2018
Inpatient beds (25 inpatient beds per 10 000 pop)	63%	15.9 inpatient beds per 10,000 population compared to 16.4 in 2018
Maternity beds (10 beds per 1000 pregnant women)	100%	11.1 maternity beds per 1000 pregnant women
Midwife density (6 midwives 1000 pregnant women)	100%	8 midwives per 1000 births (2 more than minimum required)
Health workforce density (23 health workers per 10 000 pop)	48%	11 core health workers per 10,000 population compared to 10.7 in 2018
Outpatient utilization (5 outpatient visits per person per year)	17%	0.8 outpatient beds per 10,000 population compared to 1.12 in 2018
Inpatient utilization (10 hospital discharges per 100 pop per year)	67%	6.7 hospitals discharges per 100 population per year compared to 6.3 in 2018
MNCH Service Availability	90%	child preventive and curative care services available in 90% of health facilities, compared to 87% in 2018.
	89%	Antenatal care services available in 89% of the health facilities compared to 87% in 2018.
	14%	CEmONC available in 14% of facilities compared to 4% in 2018
	83%	family planning services available in 83% of health facilities, same in 2018
	87%	Adolescent health care services available in 87% health facilities compared to 83% in 2018
	83%	Routine child immunization provided in 87% health facilities compared to 81% in 2018
	77%	BEmONC available in 77% of health facilities compared to 61% in 2018

Summary of Key Findings		
Indicator	**Percent Availability**	**General Service Availability**
Communicable Disease Service Availability	100%	Malaria service available in 100% compared to 94% in 2018
	92%	Sexually transmitted infections service available in 92% compared to 91% in 2018
	39%	Antiretroviral prescription and management available in 39% compared to 36% in 2018
	73%	PMTCT available in 73% compared to 65% in 2018
	31%	HIV/AIDS care and support provided in 31% compared to 32% in 2018
	39%	Tuberculosis service provided in 39% compared to 25% in 2018
Non-communicable Disease Services	31%	Chronic respiratory disease diagnosis and management provided in 31% compared to 31% in 2018
	48%	Cardiovascular disease diagnosis and management available in 48% compared to 49%
	2%	Cervical cancer diagnosis in 2% facilities compared to 5%
	37%	Diabetes services in 37% compared to 29% in 2018
Neglected Tropical Diseases	43%	NTDs Services provided in 43% facilities compared 31% in 2018

General Service Readiness Index and Domain		
Indicator	**Percent Readiness**	**Detailed Information**
General Service Readiness Index	51%	On average 51% of the health facilities in Liberia have are ready to provide quality health care compared to 56% in 2018.
Basic Amenities	52%	52% of the health facilities have basic amenities for patient care compared to 79% in 2018.
Basic Equipment	58%	58% of the health facilities have basic equipment for patient care compared to 60% in 2018.
Diagnostic Capacity	46%	46% of the health facilities have diagnostics capacity compared to 39% in 2018.
Essential Medicine	37%	37% of the health facilities have Essential medicines compared to 35% in 2018.
Standard Precautions for Infection Prevention	61%	61% of the health facilities have standard precautions for infections prevention compared to 68% in 2018.

General Service Readiness Index and Domain		
Indicator	**Percent Readiness**	**Detailed Information**
MNCH Service Readiness	76%	Health facilities were 76% ready to provide Family Planning Service compared to 73% in 2018
	65%	Health facilities were 65% of ready to provide Antenatal Care Service compared to 55% in 2018
	73%	Health facilities were 73% to provide Child Immunization Service compared to 34% in 2018
	48%	Health facilities were 48% ready to provide Child Preventive and Curative Care service compared to 53% in 2018
	54%	Health facilities were 54% ready to provide Adolescent Health Service compared to 38% in 2018
	63%	Health facilities were 63% ready to provide BEmONC compared to 81% in 2018
	25%	Health facilities were 25% ready to provide CEmONC compared to 44% in 2018
Communicable Disease Service Readiness	76%	Health facilities were 76% ready to provide HIV Counselling and Testing Services compared to 74% in 2018
	45%	Health facilities were 45% ready to provide HIV/AIDs Care and Support Services compared to 58% in 2018
	25%	Health facilities were 25% ready to provide HIV/AIDS antiretroviral (ARV) services compared to 0% in 2018
	50%	Health facilities were 50% ready to provide PMTCT services compared to 43% in 2018
	35%	Health facilities were 35% ready to provide STI Services compared to 52% in 2018
	44%	Health facilities were 44% ready to provide TB Services compared to 42% in 2018
	66%	Health facilities were 66% ready to provide Malaria Services compared to 58% in 2018
Non-communicable Disease Services Readiness	**34%**	Health facilities were 34% ready to provide Cardiovascular disease Services compared to 40%
	23%	Health facilities were 23% ready to provide Chronic Respiratory Services compared to 31% in 2018.
	46%	Health facilities were 46% ready to provide Diabetes Services compared to 44%
	48%	Health facilities were 48% (n=15) to provide Cervical Cancer Care Services compared to 40% in 2018
Neglected Tropical Diseases Service Readiness	17%	Health facilities were 17% ready to provide NTDs compared to 31% in 2018

Figure 1:Map of health facilities assessed in the Liberia HHFA 2021



CHAPTER ONE: Background and Introduction

1.1 Geography, Population and Demography

Liberia is situated in West Africa, bordering Sierra Leone on the west, Guinea to the north and Cote D'Ivoire to the east. It covers an area of 111,369 square kilometers and is home to about 4.4 million people. It is a low-income country with an estimated Gross Domestics Product (GDP) per capita of USD 622 in 2019, a 8.8% declined from 2018[1] . The country is geographically divided into five regions and 15 counties, with populations ranging from 74,317 in Grand Kru County to 1,434,974 in Montserrado County[2] . According to the 2019 United Nations Development Program (UNDP) Human Development Index, Liberia ranked 176 out of 189 countries which is among the lowest in the world. The report stated that the average life expectancy in Liberia is estimated at 65 years (66.5-females and 63.5-males) and the adult literacy rate is 52% for women and 75% for men[3] . Progress is being made on some of the Sustainable Development Goals (SDG)—for example, access to improved drinking water is 85 percent, and 48 percent of households have access to improved sanitation facility with services concentrated in urban (35 percent) than rural areas (9 percent)[4] .

1.2 Overview of the Health Sector, and System in Liberia

The ten (10) year National Health Policy (2011–2021), which includes the creation of a health sector recovery and investment plan (2011–2021) that serves as a road map for future health sector implementation, were both made more apparent by multiple outbreaks including the Ebola virus disease (EVD) in 2014 and now the Covid-19 outbreak in March 2020. The National Health Policy and Plan has nine investment areas (fit for purpose health workforce, community engagement, leadership and governance, health information system, quality health service delivery, medicines and technology, emergency preparedness and response, health financing, and health infrastructure), and the Investment Plan for Building a Resilient Health System is a complement to those areas. These investment areas allow the health sector to become responsive and proactive in dealing with future outbreaks. These policy documents will be reviewed and updated in 2022 considering the health care performance and challenges encountered during implementation especially as a result of multiple outbreaks including Ebola and Covid-19.

The health service delivery system has three-tiers (EPHS 2011), namely Tertiary (referral hospitals), the secondary (county hospitals and health centers) and primary (clinics & Community Health Services) managed through a de-concentration approach.

[1] Liberia GDP Per Capita 2000-2020. www.macrotrends.net. Retrieved 2020-11-30.
[2] Liberia National Population and Housing Census projected figure in 2020
[3] UNESCO Institute for Statistics (http://uis.unesco.org/)
[4] Liberia Demographic and Health Survey, 2019-20

Rapid expansion of the private-for-profit and NGO sectors is augmenting the public-private partnership (PPP) for health and furthering health service coverage and utilization.
As of 2021, there were 866 health facilities reporting to the Liberia DHIS2 across the 15 counties. Public health facilities account for majority (55%), followed by private (45%). Fewer number of these facilities account for Hospitals (4.2%) and Health Centers (7%) and majority (88%) are clinics. There is basically equal distribution of health facilities between rural (49.6%) and Urban (50.4%). Though access to healthcare increased from 59% in 2008 to 71% in 2013 with the construction of new health facilities. Since 2013, the Ministry of Health has not estimated access to health care which is a vigorous process that is obtain from surveys (DHS or LMIS) or population census. However, this figure has change slightly with the increased in health facilities over the years.

The 2019-20 Demographic and Health Survey (DHS) results indicate that infant mortality rate in Liberia increased from 54 deaths per 1,000 live births in 2013 to 63 deaths per 1,000 live births in 2019-20 thus disrupting the gains made in previous years towards achievement of the Sustainable Development Goal 3 (SDG 3). According to the LDHS 2019, the under-5 mortality rate declined slightly from 94 deaths per 1,000 live births in 2013 to 93 in 2019-20. Mortality during the first month of life (neonatal) is higher than post neonatal deaths (37 deaths per 1,000 births versus 25 deaths per 1,000 births) and accounts for 59 percent of overall infant mortality. Liberia's maternal mortality is among the highest in the world with a ratio of 742 deaths per 100,000 live births (DHS 2019-20), a 31% declined from the 2013 estimate (1,072).

The total fertility rate is 4.2 with rural women most likely to have more children (5.5 births per woman) than those in urban areas (3.4 births). The modern contraceptive prevalence rate (MCPR) increased from 19 percent in 2013 to 24 percent in 2019-20. However, the unmet need for family planning increased from 31 percent to 33 percent during the same period. The DHS also reported that 80 percent of deliveries took place in a health facility, 84 percent of deliveries were assisted by a skilled birth attendant.
Malaria remains the major cause of outpatients as well as hospitalization in Liberia and the entire population is at risk of acquiring the disease in the health sector. The Malaria Health Facility Survey (HFS) 2018, estimated that Malaria accounted for 33.9% of the total outpatient attendance at health facilities in Liberia. This represents seven percent reduction in the total percentage of lab-confirmed cases of malaria among outpatient attendants in 20135. Liberia, on the other hand, has a high burden of HIV/AIDS, which affects 1.8 percent to 5.4 percent of the population, with about 1.9 percent of the population living with the infection.

[5] NMSP, 2016-2020

The spread of tuberculosis has been fuelled by the HIV/AIDS epidemic, with a co-infection rate of 22.3% (a sero-prevalence survey, 2009).

1.3 Rationale for HHFA

The Ministry of Health (MOH) built-in health information system, monitoring and evaluation and Research (HMER) as an invaluable component of the ten-year strategic plan and an integral part of the post-Ebola recovery and investment plan (2015-2021). An observed challenge is that the quality of reports from health facilities and counties are often incomplete, overdue, of inadequate quality and subject to bias. While it is evident to systematically improve the quality of data generated from the health facilities through a well-functioning routine health management information system, this need to be complemented by a systematic annual facility assessment of service availability and readiness and record reviewing for selected indicators to fill data gaps and to verify the quality of routinely reported data that informs progress and performance reports.

The Harmonized Health Facility Assessment (HHFA) provides essential information on service delivery through assessing and monitoring service availability and readiness(capacity) at district and health facility levels; assessing the equitable and appropriate distribution of services and resource as well as providing the sector with skills and tools for monitoring service and resource availability on a regular basis. The HHFA provides essential information on status of the health system in terms of service accessibility (e.g., density of health facilities and beds, core health workers, service utilization), as well as the readiness of the facilities to provide an adequate level of service (e.g. availability of trained staff, diagnostics, equipment and medicines), both for general health services and for specific key health interventions (e.g. maternal and newborn health, HIV/AIDS, TB, malaria diagnosis and treatment).

Monitoring facility level performance of health services delivery provides information on whether health services are present and are being provided at the expected level of quality. It further provides an indication of how investment in the formal health sector is resulting in changes at the level of service delivery that are believed to influence utilization of services and ultimately impacts population level outcomes. According to WHO standard for the conduct of HHFA, the 2021 HHFA would have a census of health facility based assessment with full compliance with the various components (modules) of the HHFA methodology. However, due to minimum resources, the 2021 HHFA was a sample survey.

1.4 Facility assessment in Liberia

Liberia has conducted a number of facility assessments using SARA methodology since 2016 when it was first piloted in Liberia. The last survey was done in 2018 and a number of things have happened since including the COVID 19 pandemic. The HHFA is an improved version of

the SARA methodology, which WHO and other partners have developed, and currently being rolled out in some countries. It is more robust and comprehensive approach.

1.5 Objectives

1.5.1 General Objective

The general objective of HHFA is to:

1. Ensure demand for accountability and to demonstrate results at country and global level.
2. Provide information needed to track how health systems respond to increased inputs and improved outputs and impact on health outcomes.
3. Monitor and measure progress in health system strengthening over time.

Specific objectives

1. To determine the general and specific physical availability or presence of quality health services that encompasses health infrastructure, core health personnel and aspects of services utilization in health facilities in Liberia.

2. To assess service availability in terms of general service readiness (presence of basic amenities, basic equipment, standard precautions for infection prevention, diagnostic capacities, and essential medicines) health facilities in Liberia.

3. To assess service specific readiness – (ability of health facilities to offer a specific service and the capacity to provide specific tracer items, such as trained staff, guidelines, equipment, diagnostics, medicines, and commodities) health facilities in Liberia.

4. To assess the quality of the HMIS data

5. To determine the functionality of health service delivery management and coordination functions of the counties, districts, and health facilities,

CHAPTER TWO: Methodology

The HHFA was a cross-sectional survey that assessed a sample health facility across the fifteen counties of Liberia. A census of hospitals, health centers and public clinics were carried out while a sample (30%) of private clinics were selected. Due to limited resources, other components of the HHFA such as Client exit interview and Quality of Care with emphasis on TB, HIV, Malaria and PMTCT were not conducted.

2.1 Sampling Frame

An updated health facilities listing (Table 1 below) of 866 functional facilities from Liberia Master Facility Listing 2021 and reporting through the Liberia DHIS2 was used as the sampling frame for the HHFA assessment. Hospitals and health centers had the lowest proportion (4.3% and 7%) while clinics had the majority with 88.6%. Montserrado that host the nation's capital Monrovia with a population of over One Million had over one-third (39%) of the total health facilities in Liberia.

Table 1: Health Facilities Distribution by Facility Type and by County

County	Clinic		Health Centers		Hospitals		
	Private	Public	Private	Public	Private	Public	Grand Total
Bomi	3	23				1	27
Bong	14	38		1	1	2	56
Gbarpolu	1	14				1	16
Grand Bassa	6	25	1		2	1	35
Grand Cape Mount	1	28	1	3		1	34
Grand Gedeh	2	19		2		1	24
Grand Kru	2	15		4		1	22
Lofa	5	50		3	2	2	62
Margibi	22	20	8	6	1	1	58
Maryland	3	21		2		1	27
Montserrado	266	44	10	12	4	6	342
Nimba	29	46	1	4	3	3	86
River Cesss	2	16		1		1	20
River Gee	2	15		2		1	20
Sinoe	2	34				1	37
Grand Total	360	408	21	40	13	24	866

2.3 Sample Size Calculation

The sample size for the HHFA (592 Health Facilities) was calculated considering all public health facilities, hospitals and health centers, and 30% of private clinics as shown in table 2 below. The sample 592-health facilities were rounded off to 600 health facilities.

Table 2: Distribution of Sample Health Facility by Facility Type and by County

County	Public Clinics	Health Centers	Hospitals	30% Private Clinics	Total Facilities
Bomi	20		1	1	22
Bong	39		3	4	46
Gbarpolu	14		1	0	15
Grand Bassa	24	1	3	3	31
Grand Cape Mount	29	3	1	1	34
Grand Gedeh	19	2	1	1	23
Grand Kru	13	4	1	1	19
Lofa	47	4	4	4	59
Margibi	19	10	2	4	35
Maryland	22	2	1	0	25
Montserrado	36	27	11	81	155
Nimba	46	5	5	7	63
River Cesss	16		1	1	18
River Gee	15	2	1	1	19
Sinoe	32	2	1	1	36
Grand Total	**391**	**62**	**37**	**110**	**600**

2.4 Selection of Sample Health Facilities (Clinics)

A sample of 600 health facilities were earmarked to be assessed. The list included hospitals, health centers and clinics; and managing authorities that included Public, private for profit and non-profit facilities. Since both hospitals and health centers were census based, only selected private clinics (110) were selected based on probability proportionate to the distribution of private health clinics across the fifteen counties of Liberia.

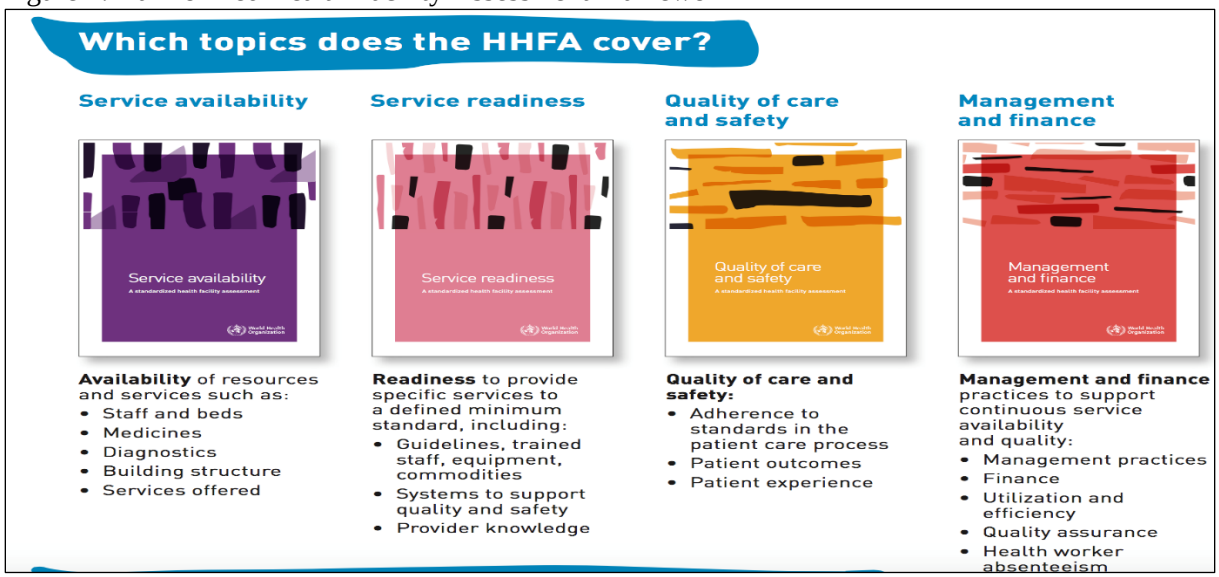
2.5 Data collection and Instruments

The instruments used for data collection was based on questionnaires from HHFA developed by the WHO and partners and was adapted to the Liberia context by the HHFA core technical for Liberia. The HHFA Core Indicators questionnaire was adapted and used for the Liberian HHFA.

The HHFA assessment has four major modules/topics (see figure 2 below) with specific data collection instruments/tools for data collection. These modules or topics include: 1) service availability and readiness module, 2) data quality assessment modules and,3) Quality of care module 4) Management and Financing. The quality of care and safety module was not carried out due to limited resources.

The HHFA core instrument encompasses sets of questionnaires broken down into seven main types (sections) of data collection tools based on the following: 1) General information, 2) staffing, 3) infrastructure, 4) available services, 5) readiness of services, 6) diagnostics and medicines and 7) interviewer's observations.

Figure 2: Harmonized Health Facility Assessment Framework



Description of questionnaires

- ***Basic infrastructure questionnaire***: This tool collects data on the facility identification including the geographical coordinates, and general service availability.
- ***Facility Assessment Questionnaires***: Interviewers collected information on the availability of resources, support systems, and facility infrastructure elements necessary to provide a level of service that generally meets accepted national and international standards. The Facility Assessment Questionnaires included maternal, neonatal and child services (family planning, antenatal care, PMTCT, obstetric and newborn care, immunization, and child curative care), HIV/AIDS, Tuberculosis, malaria, non-communicable diseases, surgery, and blood transfusion services). Data collection tools further gathered information on systems in place for the provision of care services, including diagnostics, medicines and supply chain systems, testing, care and treatment, referral, and follow-up. Interviewers also collected information on health facility policies and practices related to collecting and reporting records and statistics for services provided to clients through the health facility.

- ***Observation Protocol/Clinical assessment:*** For sick child, SBA, and immunization consultations, the observer will assess the extent to which service providers adhered to standards of care, based on generally accepted practices for good quality service delivery. The observations were recorded in a checklist. Observations included both the process used in conducting specific procedures and examinations and the content of information (including history, symptoms, and advice) exchanged between the provider and the client.
- ***Staff assessment:*** The availability of staff at health facility when they are supposed to be available were checked through the staff roaster mechanism. The data collectors checked on who should be present in the facility at specified time and who is present.
- ***Health Worker/Provider Interview***: Service providers were interviewed regarding their qualifications (training, experience, and continued in-service training), the supervision they received, and their perceptions of the service delivery environment.

2.6 Adaptation of HHFA Questionnaires for all the modules

A two-day stakeholders workshop to adapt the HHFA questionnaire was held from April 15 to 16, 2021. The adaptation workshop considered revision of both the SARA tool and the core HHFA questionnaires developed by the WHO. Expertise in the different health topics from several health organizations, UN agencies and the Liberia Statistics House (LISGIS) took part in the revision and adaptation of the HHFA tool for Liberia.

Recruitment, training, and Pretesting of Tool

The HHFA data collection training workshop was held on two different occasions, the first training lasted for 15 days (April 26 to May 9th) followed by a refresher training in July (27th-31st) 2021.The training on various modules were led by topic experts who were either program managers/ directors or technical officers who have had several years of experience in the subject matter.

The assessors were either clinicians, public health specialist or sociologist who had prior experience in conducting of SARA, LDHS, MIS, etc and were not working in selected HHFA assessment facilities at the time of recruitment. Additionally, these interviewers had a minimum qualification of a Diploma or bachelor's degree with experience in the conduct of population or health facility-based studies. The role to play during the assessment was determined during the training exercise and was based on performance. The training brought together 60 assessors that included 15 county clinical supervisors, 15 national supervisors and 30 data collectors.

Training approach included interview techniques, classroom lectures, mock interviews and pilot testing in facilities close to the training site. Tablets were exclusively used for the HHFA data collection exercise. Assessors were trained for week learning how to navigate the tablets, select new forms, inter data, edit and submit.

Technical experts training on the used of the tablets included: MOH (ICT/data managers), LISGIS (data programmers and data quality officers) and WHO Liberia. They were separate

team set up to regularly follow up, supervise, and visit the teams if need be to review their work and monitor data quality. In addition, there were 6 field coordinators from the Central MOH and WHO assigned in counties to assist teams with additional support and solve unforeseen logistical challenges.

Pertest

The questionnaires were pretested to detect any possible problems in the flow of the questionnaires, gauge the length of time required for interviews, as well as any problems in translations. Following training of interviewers, supervisors and team leads; MOH and partners along with assessors piloted the HHFA tool for 2 days in 14 sample facilities selected across clinics, health centers and hospitals. Data collected from hospitals and health centers during the pilot were accepted to form part of the overall sample facilities if the data had quality otherwise revisited during the actual field data collection.

2.7 Data Collection and Quality control of fieldwork

Prior to the field data collection, a communication notifying and requesting permission of all county health teams, county authorities, medical directors and officers in charge of both public and private health facilities earmarked to participate in the HHFA 2021 was made in two weeks prior with subsequent reminder before the survey. The field data collection was carried out for a period of 25 days across 5 regions of Liberia beginning August 5th. Each day, the team supervisors assigned separate sections of the tool to individual data collection using the tablets. The data collectors received the assignment, complete it and resubmit to the supervisors. Finally, the supervisors download, review and resubmit to the WHO Cloud Based Server. Each team were given a list of facilities to visit, giving the facilities' names, types, and locations. The team supervisors were responsible for making prior arrangements with the management of the facilities to be visited next, at least one day before the visits so that managers can prepare to receive the interviewers. On average, a team spent 2 days per hospital, 1.5 days per health center and 1 day or less per clinic. The team had a revisit time of one day.

Quality control of fieldwork

Several steps were undertaken to ensure the quality of data collected beginning with adequate organization and preparation for the training. Data collectors and supervisors took pre- and post-tests to assess their learning and knowledge of the assessment guidelines and standards for data collection. On a daily basis, the supervisors conducted spot checks, revision of the modules for completeness and ensure transmission of electronic data to the server. Members of the TWG were involved in supportive supervision, spot-checking and validation of the data daily. A team comprising of MOH, LISGIS and WHO were formed to review data submitted to the central server daily.

Where inconsistencies were noticed in submitted data, the team supervisor and the national coordinator were contacted to liaise with the specific team with said problem to make correction either in the form of re-visitation where necessary or make revision and re-submit.

2.8 Data management, Analysis, and Dissemination

Data entry and cleaning

The HHFA data was captured using hand held devices.
The data processing was led by LISGIS and MOH with assistance from technical partners from WHO. Data processing and cleaning started during field data collection. Each day upon completing data collection, data were synchronized daily by the team supervisor on to a WHO cloud based server. Data were sent to server via the Internet or other modes of communication, which allowed electronic transfer of files. Each team supervisor monitored the quality of the data received on a daily basis. Data cleaning included checking of range, structure, and a selected set of checks for internal consistency. All errors detected during primary editing at the site of the data collection were corrected by the field team through their supervisors. At the central level, the secondary data processing and editing were carried out through daily downloads and checks for consistencies. All data collection and editing programs were written using CSPro.

2.9 Data analysis and Publication of Survey Results

The tabulation plan for preliminary and the final report were adapted from the HHFA/SARA, standard tabulation plan. The data analysis and report writing were led by the Research Unit of the Ministry of Health supported by LISGIS and WHO Liberia/Geneva. Data analysis was conducted with CSPro, SPSS and Excel using the standard core indicators as well as country-specific indicators of interest. On October 4th to 9th, 2022, a six-day workshop held outsize of Monrovia brought together 30 health technicians to write the final report. The participants were placed in a group of five based on the sections of the report. The workshop was jointly organized by Global Fund, WHO, Jhpiego and Last Mile Health. Analysis were mainly stratified by county, health facility type, managing authority and urban/rural location. The last day of the workshop was held as data validation workshop in order to review the survey findings and provide feedbacks for finalizing the report.

2.10 Dissemination of the Results and the Data

The technical session held with partners during the report writing and validation workshop served as a preliminary dissemination workshop. The final draft report was disseminated to larger partners for review, inputs and finalization of the report. The final HHFA report was disseminated through printed and electronic copies to development partners, donor agencies, program managers who work in the health field, as well as government officials, and researchers in the health, social and human sciences. County sessions might also be held to disseminate the data at the county level.

Dissemination to counties through County Health Offices is key due emphasis to increase the awareness and the ownership of findings and to ensure its utilization in future planning by the counties.

Once the final report is published, data files from the assessment will be available to institution or individuals that request a copy from the MOH and will be posted on MOH/Liberia website.

2.11 Ethical Issues Considered in the HHFA

All parties involved in the development of the Liberia Harmonized Health Facility observed the national and international ethical rules regarding conflicts of interest and confidentiality. For instance, all teams involved were guided through many documented key ethical principles, including the WHO guidelines on governance and ethics, among others, throughout the training of research assistants and subsequent stages of the HHFA processes. The main goal was to make sure that everyone engaged bore binding responsibility for the design and conduct of HHFA. The Ministry of Health also examined the research procedure for ethical approval.

Being aware of the Covid-19 outbreak during the design and field implementation of the HHFA, the survey management team and trainers introduced several Infection Prevention and control measures through training as well as field data collection to mitigate exposure of the study participants. During the training, assessors were placed according to IPC measures particularly the COVID-19. All participants wore mask and every table had sufficient sanitizer to dis-effect their hands and surfaces.

2.12 Limitations of the Survey

The Liberia HHFA being conducted for the first time could have been a complete census of health facilities instead of sample facilities according to WHO standard. The WHO HHFA CSPro Platform used in Liberia is still be piloted and as such had some operational issues in a place where internet access is poor. The key challenge encountered by the team was malfunctioning of the platform.

For example, on several occasions, assigned tasks electronically sent to team members could not be accessed by the teams or completed tasks sent to supervisors electronically could not be accessed by the supervisors.

Several forms synchronized by the supervisors could not be accessed through the central server by the technical team, though such data were collected and present in the tablets.

Another failure of the platform was to link separate tasks completed by individual members of the team to make a completed questionnaire for a facility. As such some of these functions were manually completed and took several months.

Lastly, due to covid-19 outbreak, Liberia could not be supported by an in-person consultant from WHO though other countries had the opportunity. The HHFA being conducted for the first time in Liberia, the need for an in-person support was necessary to fast trick implementation.

3.0 General service availability: infrastructure, health workforce, and service utilization

3.1 Introduction

Mapping out of the available inputs for Health Service delivery that exists across the Country is critical to ensure that the populace accessibility is increased, quality of care is enhanced and improved as well as clients' satisfaction and demand for service delivery is cultured. These include but not limited to information on the Health Workforce, Health Infrastructure (physical infrastructure, equipment, transport, ICT), and Health Products and technologies. The health services must be physically accessible for the population to benefit from the services offered. In Liberia Counties have different numbers of health facilities and cadres of staff hence the variability of service provision.

Service Availability refers to the physical presence of the delivery of services, encompassing health infrastructure, core health personnel, and service utilization. Service availability is described by an index using three areas of tracer indicators. This is made possible by expressing the indicators as a percentage score compared with a target or benchmark, then taking the mean of the area scores.

Service Availability is described by three areas of tracer indicators:

Health infrastructure

- Facility density per 10 000 population
- Inpatient bed density per 10 000 population
- Maternity bed density per 1000 pregnant women

Health workforce

- Health Workforce density

Service Utilization

- Outpatient utilization
- Inpatient utilization

Key Findings

- On average, the general service availability index for Liberia is 58%.
- Among indices, health infrastructure had the highest with 86% followed by health workforce index (48%) and service utilization index with 42%.
- About 568 health facilities of 866 was covered in 2021 HHFA compared to 765 in 2018
- Using 866 health facilities, Liberia had a facility density ratio of 1.9 per 10,000 people (Figure 3 , which is encouraging base on the WHO threshold of 2.

- However, it ranged from 1.2/10,000 in Grand Bassa County to 3.0 per 10,000 people in Grand Kru Counties.
- The HHFA found that health facilities were open on average of 5.5 days per week and 10.3 hours per day (table 5). It is important to note that this is self-reported by the health facility and was not verified through direct observation.
- The inpatient bed density per 10,000 population was assessed in all counties across the country. The result shows a national inpatient density of 15.9 per 10,000 population compared 6.3 in 2018 SARA.
- Nationally, there 11.1 maternity beds per 1000 pregnant women. This above the recommended target set by WHO.
- Nationally, the density of midwives per 1,000 pregnant women was 8, which is 2 more than the international benchmark of 6 per 1000 birth.
- The national combined figure was 11 per 10,000 population. This means Liberia is 48% on track of achieving the recommended target of 23 per 10,000 population.
- the number of outpatient visits per person per year in Liberia is less than (0.8) visit per person per year compared to 1 visit per person per year recording in SARA 2018. This is far below the recommended target of 5 visits per person per year. This indicates that Liberia is 17% on track of achieving the target of 5 visits per person per year.
- Nationally, there are 6.7 hospital discharges per 100 population per year, this means, Liberia is 67% on track of achieving the WHO recommended target of 10 hospitals discharges per 100 population per year.

3.2 Health Infrastructure

There are three domains captured to measure health infrastructure for Liberia: They include:

- Health facility density: The number of health facilities available relative to the total population for the same geographical area
- Inpatient bed density: The number of inpatient beds available relative to the total population for the same geographical area
- Maternity bed density: The number of maternal beds per 1000 pregnant women per year. Table 3 below shows targets for each of the health infrastructure domains established based on WHO recommendation.

Table 3: Health Facility Density and Score Calculations

Domain	Indicator	Target	Score (%) (n/target, maximum 100)
Health Facility Density	Number and distribution of health facilities per 10 000 population	2	n/2*100
Inpatient bed Density	Number and distribution of inpatient beds per 10 000 population	25	n/2*100
Maternity bed Density	Number and distribution of inpatient beds per 10 000 population	10	n/2*100

Profile of Health Facility Assessed

The number of facilities covered by the Liberia HHFA 2021 was 568 of the 600 facilities earmarked as opposed to 765 in the 2018 SARA+. Of the 600 health facilities initially planned to be assessed, about 5% (32 health facilities) did not form part of the analysis either because they were closed (3%), 1.8% not found or not assessed due to bid road condition and 1% excluded due to incompletion. About 6% and 12% of the 568 facilities (Table 4 below) assessed were hospitals and health centers respectively with majority be clinics. Over two-third of the facilities assessed were public health facilities.

Table 4: Distribution of Sample Facilities assessed by County, Facility type, Ownership and Residence

	All Health Facility	Hospital				Health Center				Clinic			
		Public	NGO	FBO	For profit	Public	NGO	FBO	For profit	Public	NGO	FBO	For profit
National	**568**	**25**	**3**	**6**	**2**	**37**	**3**	**10**	**18**	**386**	**3**	**13**	**62**
County													
Bomi	23	1	0	0	0	0	0	0	0	21	1	0	0
Bong	44	2	0	0	0	0	0	0	0	38	0	0	4
Gbarpolu	13	1	0	0	0	0	0	0	0	12	0	0	0
Grand Bassa	30	1	1	0	0	0	1	1	0	23	2	0	1
Grand Cape Mount	32	1	0	0	0	3	0	1	0	27	0	0	0
Grand Gedeh	23	1	0	0	0	2	0	0	0	19	0	1	0
Grand Kru	18	2	0	0	0	2	0	0	0	14	0	0	0
Lofa	55	2	0	2	0	5	0	1	0	45	0	0	0
Margibi	36	0	0	0	1	6	1	0	4	19	0	1	4
Maryland	25	1	0	0	0	2	0	1	1	20	0	0	0
Montserrado	133	6	1	3	1	11	1	6	12	38	0	5	49
Nimba	61	4	1	1	0	4	0	0	1	43	0	3	4
River Cess	19	1	0	0	0	0	0	0	0	17	0	1	0
River Gee	20	1	0	0	0	2	0	0	0	16	0	1	0
Sinoe	36	1	0	0	0	0	0	0	0	34	0	1	0
Urban/Rural													
Urban	186	22	1	6	2	18	1	9	16	44	1	9	57
Rural	382	3	2	0	0	19	2	1	2	342	2	4	5

Health Facility Density

Health services must be physically accessible for the population to benefit from them. The Liberia Harmonized Health Facility Assessment 2021 covered 568 facilities as compared to 765 health facilities in 2018 SARA+. The calculation of the health facility density considered both facilities within the master facilities listing (2021) and Health Facilities reporting monthly data through the DHIS2 (2021). This calculation did not considered health post or non-functional facilities.

Key Findings

- The health facility density ratio of Liberia is 1.9 per 10,000 people (Figure 3, which is encouraging based on the WHO threshold of 2.
- This means Liberia is 95% on track of achieving the recommended target for health facility density per 10,000 population.
- However, it ranged from 1.2/10,000 in Grand Bassa County to 3.0 per 10,000 people in Grand Kru Counties.
- The health facility density ratio of less than 2 is observed in almost 50% (7 counties) of the counties. This indicates uneven distribution of health facilities base on population across the counties.
- Also, populated counties such as Nimba, Bong and Lofa had health facilities that fall below the required target set by WHO. Table 5 and Figure 3 below present the number of health facilities disaggregated by type and the population density ratio.

Figure 3: Liberia Health Facility Density per 10,000 Population by County

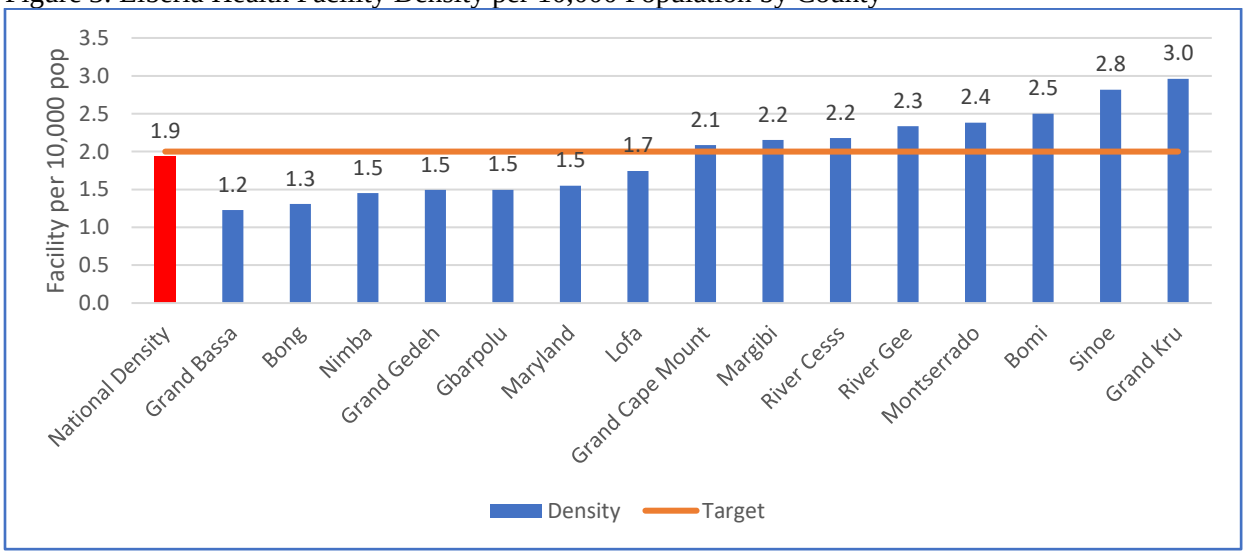


Table 5: Liberia Health Facility Density per 10,000 Population by County and Health Facility Type

County	Population	All HF	Health Facility Type			Density
			Clinics	Health Centers	Hospitals	
Bomi	107945	27	26	0	1	2.5
Bong	427937	56	52	1	3	1.3
Gbarpolu	107007	16	15	0	1	1.5
Grand Bassa	284486	35	31	1	3	1.2
Grand Cape Mount	163069	34	29	4	1	2.1
Grand Gedeh	160736	24	21	2	1	1.5
Grand Kru	74316	22	17	4	1	3.0
Lofa	355283	62	55	3	4	1.7
Margibi	269382	58	42	14	2	2.2
Maryland	174441	27	24	2	1	1.5
Montserrado	1434975	342	310	22	10	2.4
Nimba	592892	86	75	5	6	1.5
River Cesss	91763	20	18	1	1	2.2
River Gee	85707	20	17	2	1	2.3
Sinoe	131393	37	36	0	1	2.8
Grand Total	**4461332**	**866**	**768**	**61**	**37**	**1.9**

Delivery of Health Services

The number of days per week health facilities are open and the number of hours per day they operate were key indicators for measuring health service delivery.

Key Findings

- The HHFA found that health facilities were open on average of 5.5 days per week and 10.3 hours per day (table 6). It is important to note that this is self-reported by the health facility and was not verified through direct observation.
- Among counties, health facilities in Montserrado reported higher averages (6.2) days per week and 14.8 hours per day compared to other counties.
- Among health facilities type, health centers reported longer averages for days per week and hours per day facilities operated.
- Similarly, private facilities operated longer hours per day and days per week. compared to public facilities, while facilities in Urban areas had longer hours per day and days per week of operation compared to Rural facilities.

Table 6: Days and hours of OPD services delivered by County, Facility Type, Ownership and Location

	Total Health Facility	Mean number of hours per day facility is open	Mean number of days per week facility is open
National	**568**	**10.3**	**5.5**
County			
Bomi	23	7.3	5.1
Bong	44	9.3	5.4
Gbarpolu	13	6.5	5.0
Grand Bassa	30	9.5	5.4
Grand Cape Mount	32	8.7	5.3
Grand Gedeh	23	8.0	5.2
Grand Kru	18	10.7	5.4
Lofa	55	9.5	5.5
Margibi	36	11.3	5.8
Maryland	25	7.2	5.1
Montserrado	133	14.8	6.2
Nimba	61	9.9	5.3
River Cess	19	7.7	5.5
River Gee	20	10.0	5.2
Sinoe	36	6.5	5.0
Health Facility Type			
Hospital	36	14.1	5.9
Health Centre	68	17.8	6.5
Clinic	464	9.0	5.4
Ownership			
Government/Public	448	8.6	5.3
NGO/not-for-profit	9	15.6	6.3
Mission/Faith Based Organization (FBO)	29	14.2	6.0
Private-for-profit	82	17.5	6.5
Location			
Urban	186	14.6	6.2
Rural	382	8.3	5.3

Inpatient Bed Density

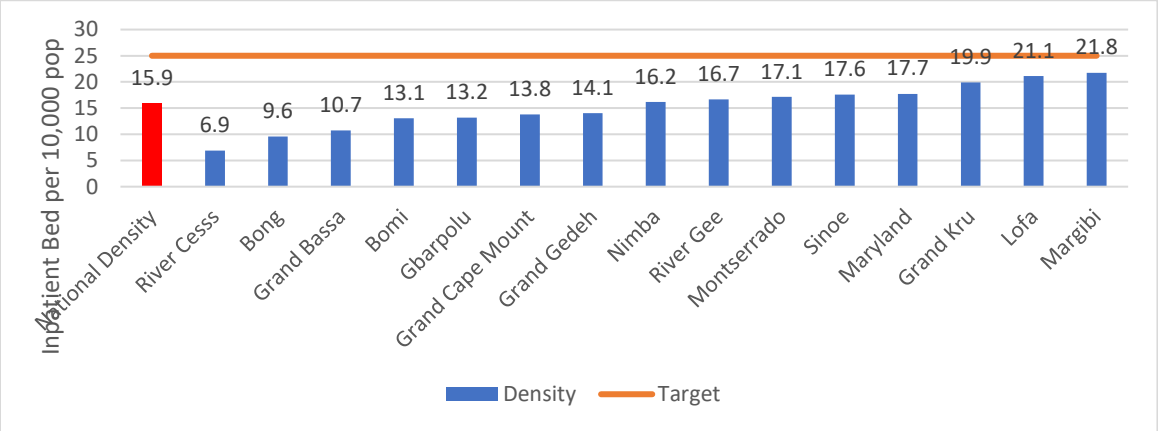
Timely access to safe hospital care remains a major concern in Liberia. Target bed-occupancy rates have been proposed as a measure of the ability of a hospital to function safely and effectively. At the same time High bed-occupancy rates have shown to be associated with greater risks of hospital-associated infection, access block due to free services and to have a negative impact on staff health (Ref). Hospital bed-occupancy rates have been proposed as a measure that reflects the ability of a hospital to properly care for patients.

Bed-occupancy rates do seem to influence expected performance for inpatient care and therefore is an important measure in hospital management statistics as an operational target and measure of quality. The need for timely admission to an appropriate ward of patients presenting to emergency departments or for booked surgery or cannot be over emphasized.

Key Findings

- The inpatient bed density per 10,000 population was assessed in all counties across the country. The result shows a national inpatient density of 15.9 per 10,000 population compared 16.3 in 2018 SARA.
- This is a major improvement though Liberia is 63% on track of achieving the WHO recommendation target of 25 per 10,000 population.
- The inpatient bed density ranged from 6.9 in Rivercess to 21.8 in Margibi County. Figure 4 below shows detail distribution.

Figure 4: Inpatient density per 10 000 pop by county, Liberia 2021

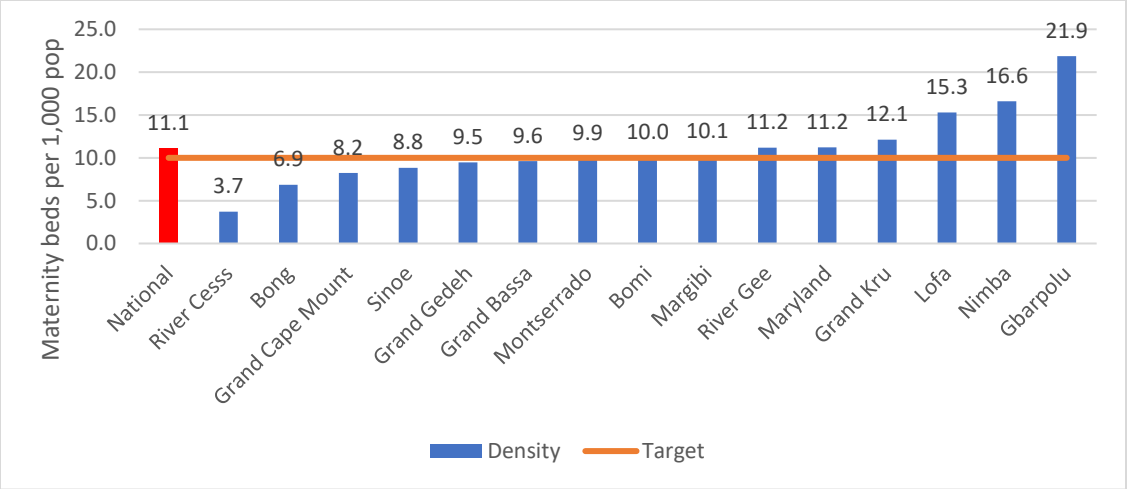


Maternity Bed Density

Maternity bed density calculations assumed there should be sufficient beds for all pregnant women with an occupancy of 80% and a mean duration of stay of three days. Maternity bed scores were calculated as the number of maternity beds per 1000 pregnant women. The WHO has set a recommended target of 10 beds per 1000 pregnant women. Figure 5 below shows the maternity bed density in Liberia by county.

- Nationally, there 11.1 maternity beds per 1000 pregnant women. This above the recommended target set by WHO.
- Of the fifteen counties in Liberia, 8 counties met or exceeded the target of 10 maternity bed beds per 1000 pregnant women.
- Gbarpolu county had the highest maternity beds density at 21.9 maternity beds per 1000 pregnant women while River Cess had the lowest maternity beds density of 3.7 maternity bed per 1000 pregnant women.

Figure 5: Maternity bed density per 1000 pregnant women



3.3 Health workforce

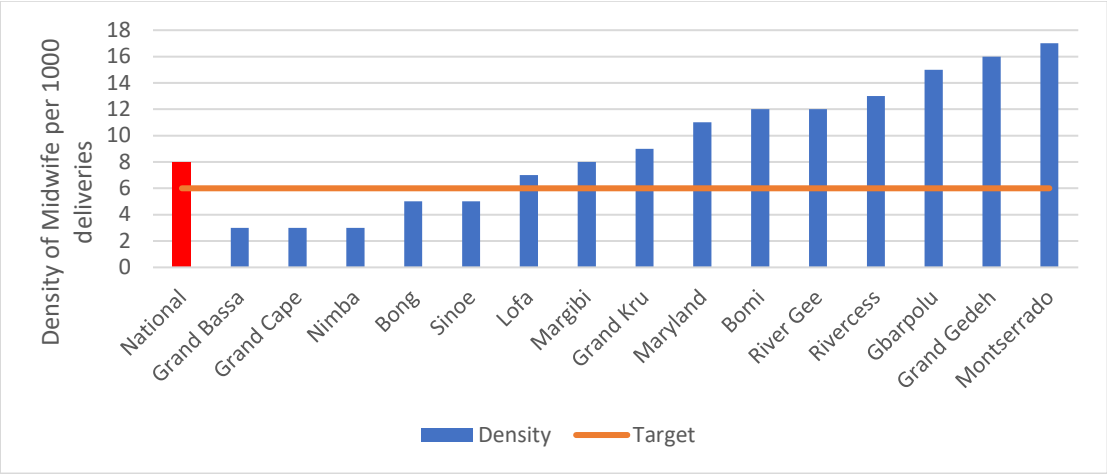
Liberia is one of the countries with high ratio of maternal mortality (742 per 1000000 livebirth) globally. The availability of midwife 24/7 in EmONC facility is key to mitigating the high maternal death. The WHO has set a benchmark of 6 midwives per 1000 birth assuming that a midwife can attend an average of 175 births during a typical year. Table 15 annex 1 shows distribution by cadre. Health workforce density: core medical professionals per 10 000 population: physicians, non-physician clinicians, registered nurses, and midwives. This includes part-time physicians who are given the value of 0.5 in the scoring.

Density of Midwife to 1000 Birth

Figure 6 below shows the number of midwives for every 1,000 institutional deliveries in each county. These figures were calculated using the number of institutional deliveries conducted at a facility within the 12-month reference period.

- Nationally, the density of midwives per 1,000 births was 8, which is 2 more than the international benchmark of 6 per 1000 birth.
- Ten counties out of 15 met this standard ranging from 6-17 midwives per 1000 birth.
- The lowest ratio of midwives per 1,000 deliveries was reported from Bong (5), Grand Cape Mount (3), Nimba (3), Sinoe (5) and Grand Bassa (3) with per 1,000 deliveries.

Figure 6: Density of Midwife per 1000 births by county

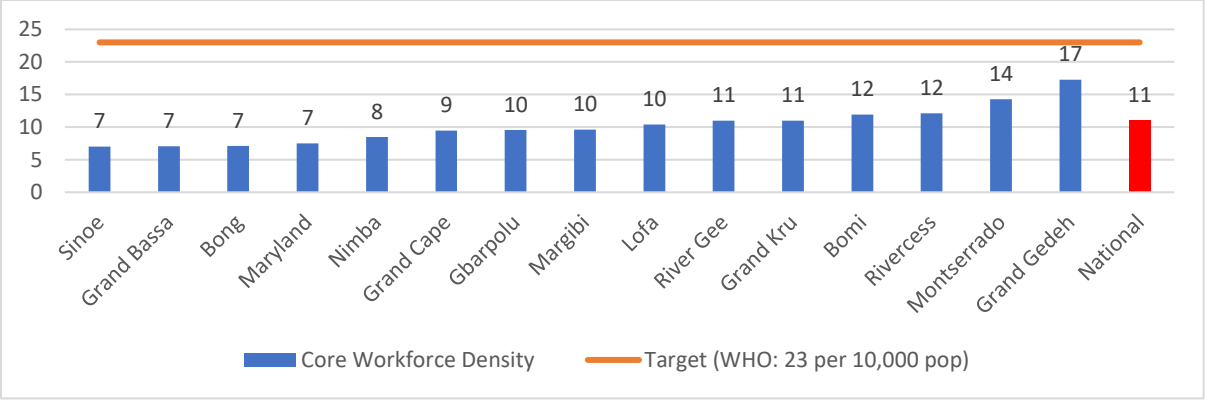


Core Health Workers Density

Figure 7 below shows, the ratio of midwives, physicians, physician assistant and nurses combined, per 10,000 population.

- The international benchmark for the combined cadre is 23 per 10,000 population. The number of physicians, midwives, physician assistant and nurses per 10,000 population was not met anywhere in the country.
- The national combined figure was 11 per 10,000 population. This means Liberia is 48% on track of achieving the recommended target of 23 per 10,000 population.
- The highest ratio were reported in Grand Gedeh and the lowest from Sinoe, Grand Bassa, Bong, Maryland.

Figure 7: Core Health Workers Density per 10,000 population per county



3.4 Service Utilization

In populations with poor or suboptimal health infrastructure the service utilization rate is an indicator of access.

• Number of outpatient visits per capita per year: the number of visits for ambulant care, not including immunization, over the total population.

• Number of hospital discharges per 100 population (excluding deliveries): this indicator provides additional information on the availability and access to inpatient services.

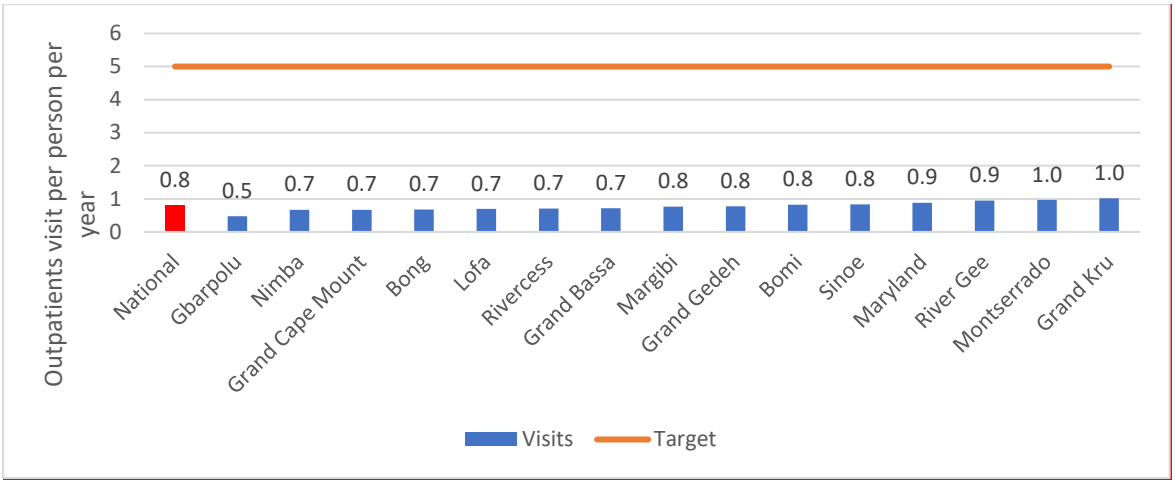
Outpatient Service Utilization

One of the indispensable indicators in evaluating the efficacy of the health care system, especially in low- and middle-income countries, is the prevalence of health service utilization (HSU). As a human right, HSU is one of the most important mechanisms of the health system and a significant determinant of health. However, the level of HSU in many countries is not satisfactory and even in countries with a National Health Service system, which provide public coverage, there are differences in the provision of health services for different groups of society.

The WHO target is 5 visits per person per year. Available data from DHIS2 for 2021 fiscal year was used to calculate the outpatient visits density per person per year by county in Liberia in the HHFA report.

- As shown in figure 8 below, the number of outpatient visits per person per year in Liberia is less than (0.8) visit per person per year compared to 1 visit per person per year recording in SARA 2018. This is far below the recommended target of 5 visits per person per year.
- This indicates that Liberia is 17% on track of achieving the target of 5 visits per person per year.
- The outpatient visits per person per year was very low across all counties, which portrays that access is one of the biggest challenge in the country.
- These results could be in this case attributed to the inadequacy of the human resources for health identified in figure 8 above across counties or lack of proper mechanisms for capturing the data from the service provision points in outpatient units or the DHIS2.

Figure 8: Outpatient visits per person per year by county of Liberia 2021

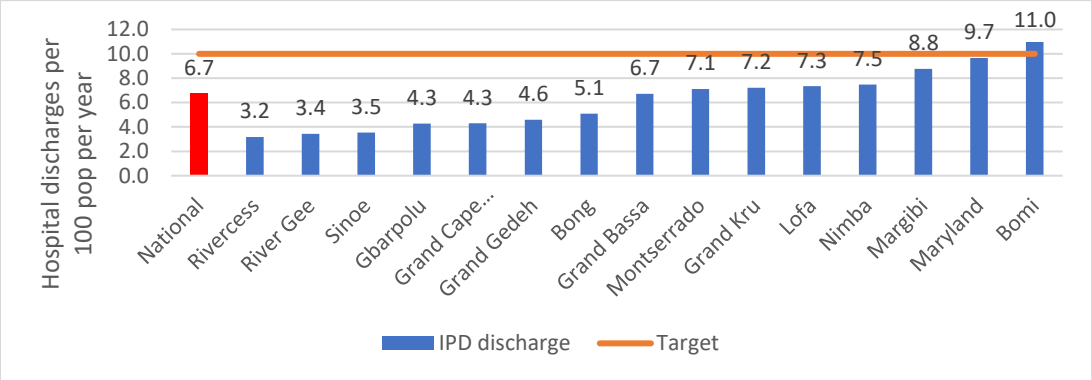


Inpatient Service Utilization

Timely access to safe hospital care remains a major concern in Liberia. Target bed-occupancy rates have been proposed as a measure of the ability of a hospital to function safely and effectively. At the same time High bed-occupancy rates have shown to be associated with greater risks of hospital-associated infection, access block due to free services and to have a negative impact on staff health. Hospital bed-occupancy rates have been proposed as a measure that reflects the ability of a hospital to properly care for patients. Bed-occupancy rates do seem to influence expected performance for inpatient care and therefore is an important measure in hospital management statistics as an operational target and measure of quality. The need for timely admission to an appropriate ward of patients presenting to emergency departments or for booked surgery cannot be over emphasized. The recommended target for inpatient is 10 hospitals discharges per 100 population per year. Figure 9 below shows the inpatient utilization in Liberia.

- Nationally, there are 6.7 hospital discharges per 100 population per year.
- This means, Liberia is 67% on track of achieving the WHO recommended target of 10 hospitals discharges per 100 population per year.
- Only one county (Bomi) achieved the benchmark of 10 hospitals discharges per 100 population per year.
- Hospitals discharges per 100 population per year ranged from the lowest in RiverCess county (3.2 hospital discharges per 100 population per year) to the highest in Bomi county (11 hospital discharges per 100 population per year).

Figure 9: Number of hospitals discharges per 100 pop per year



3.5 HHFA Service Availability Index

The service availability index was calculated using the six service availability indicators: Facility density, inpatient bed density, maternity bed density, health workforce density, outpatient service utilization and inpatient service utilization. The service availability index is the unweighted average of the three core areas: infrastructure, health workforce, and utilization and is presented as a percentage score. Table 7 below shows how the overall service availability index are calculated.

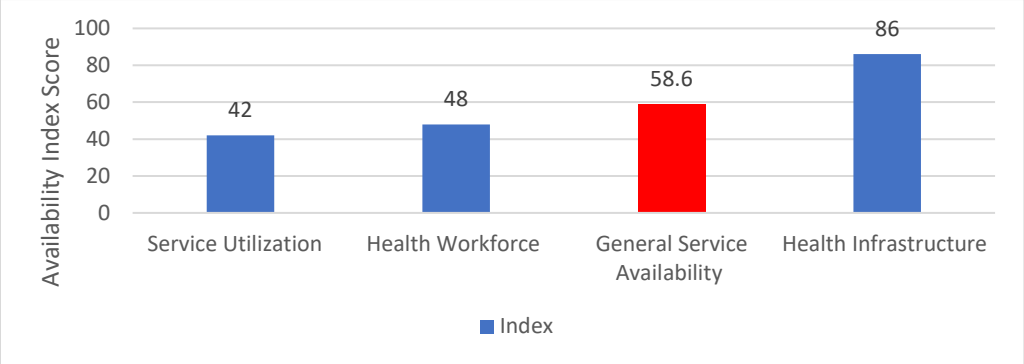
Table 7: Calculation of General Service Availability Index

Index	Indicator	Target	Score
Core Service Areas			
Health Infrastructure Index	Average score of the three indicators: facility density, inpatient bed density, maternity bed density	100	(a+b+c)/3
Health Workforce Index	Core health worker density	100	d
Service Utilization Index	Average score of the two indicators: outpatient visits, hospital discharges	100	(e+f)/2
Service Availability Index	Unweighted average of the three areas: infrastructure, workforce, and utilization	100	((95+63+100)/3+(48)+(17+67)/2)/3

Figure 10 below shows the service availability index for Liberia by County.

- On average, the general service availability index for Liberia is 58%.
- Among indices, health infrastructure had the highest with 86% followed by health workforce index (48%) and service utilization index with 42%.

Figure 10: General Service Availability Indices



CHAPTER FOUR: General Service Readiness

4.1 Introduction

Service readiness is critical to measuring access, quality of health care, and utilization of services offered by health facilities in a country. The 2021 Harmonized Health Facility assessment investigated the readiness to offer required services among 568 health facilities in the country.
The readiness assessment focused on the presence and functionality of the tracer items that are deemed crucial for providing the required quality of health care services. These tracer items are grouped into various domains, namely, infrastructure, amenities, basic equipment, standard precautions for infection control, diagnostic tests, medicines, and health commodities.

Physical access to health services can only be guaranteed if the above inputs or tracer items per domain are made available, and functional and the facility is ready to offer quality service to those seeking health care. For instance, substantial investments may be made available for improving physical infrastructure such as building facilities, hiring staff, and buying equipment and health commodities. However, if these facilities are not made 'ready' by ensuring these items are both functional and efficient for maximum use, then utilization of the services would not result in the desired health outputs or outcomes.
This section presents general characteristics of health facilities that signify their “general readiness” to provide health care services. These are broken down into five major categories by a combined score of "readiness" arrived at by taking the arithmetic mean of the percentage of health facilities having each of the component variables examined in the five domains:

(i) Examining general amenities such as electricity supply, clean water, and sanitation
(ii) Discussing the availability of basic medical equipment
(iii) Looking at equipment and procedures for standard precautions to prevent infections
(iv) Examining diagnostic capabilities for common tests
(v) Describing the availability of key essential medicines.

4.2 General Service readiness

The general service readiness was determined by assessing the overall capacity to provide expected health services according to the type and level of the health facility. This involved analysis of service items under each of the following five domains:

- Basic amenities
- Basic equipment
- Standard precautions for infection prevention
- Diagnostic capacity
- Essential medicines

a) Availability of basic amenities: The survey assessed all seven tracer indicators/items to determine the availability and readiness score. This included a room with privacy, a power

supply, communication equipment, an improved water source, adequate sanitation facilities, computer with internet access, and emergency transportation.

b) Availability of basic equipment: Data was collected in all of the six tracer indicators/items and analysis was undertaken to determine the availability and readiness score of the following: adult weighing scale, child/infant weighing scale, thermometer, stethoscope, blood pressure machines, and light source.

c) Availability of standard precautions: This was determined by an assessment of all the ten tracer indicators/items to establish the availability and readiness score as follows: safe disposal of sharps, safe final disposal of infectious waste, appropriate storage of sharps waste, appropriate storage of infectious waste, disinfectant, disposable or auto-disable syringes, soap, and water or alcohol-based hand rub, latex gloves, and guidelines on standard precautions. This is a critical indicator of the safety of health care services and the work environment. As a basic requirement, healthcare workers must be able to work within a safe working environment and provide services in a manner safest to their clients.

d) Availability of diagnostic capacity: The survey collected data on all the eight tracer indicators/items and analysis was undertaken to determine the availability and readiness score as follows: hemoglobin, blood glucose, malaria diagnostic capacity (RDT or smear), urine dipstick (protein, urine dipstick) glucose, HIV diagnostic capacity (RDT or Elisa), syphilis RDT, and a urine pregnancy test.

e) Availability of essential medicines: The survey collected data on all the fourteen tracer indicators/items and analysis was undertaken to determine availability and readiness score as follows: Amitriptyline, Amoxicillin, Atenolol, Captopril, Ceftriaxone injection, Ciprofloxacin, Cotrimoxazole suspension, Diazepam, Diclofenac, Glibenclamide, Omeprazole, Paracetamol suspension, Salbutamol inhaler, and Simvastatin. The assessment considered only medicines that were observed at the facility with valid expiration dates. The availability of essential medicines is a major determinant of health care quality.

The assessment considered only medicines that were observed at the facility with a valid expiration date.

To establish the various capacities needed and the readiness of health facilities to offer general health services, the following domains were assessed:

a) Availability and readiness of the tracer items for basic amenities
b) Availability and readiness of the tracer items for basic equipment
c) Availability and readiness of the tracer items for standard precautions for infection prevention
d) Availability and readiness of the tracer items for diagnostics
e) Availability and readiness of the tracer items for essential medicines

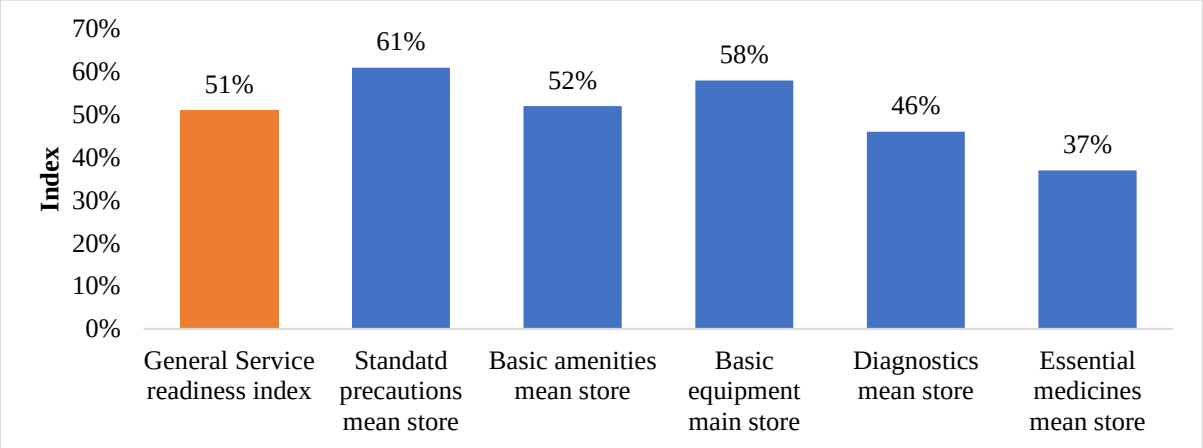
Key findings

- The capacity for health facilities in Liberia to provide health services is 51% compared to 56% in 2018.
- 52% of health facilities have essential basic amenities to provide health services such as availability of clean and safe water, power, communication, etc. compared to 79% in 2018.
- On assurance of clients' and staff safety, 61% of health facilities have standard precautions for infection prevention and control including a safe working environment compared to 68% in 2018.
- On average 58% of the health facilities have basic equipment to provide health services, for example, diagnostic equipment, etc. compared to 60% in 2018.
- Almost half (46%) of the health facilities have the diagnostic capacity to check for various tests essential in general service provision to clients compared to 39% in 2018
- Over one-third (37%) of health facilities have essential medicines in stock for the treatment of illnesses, which implies that access to essential medicine by patients is a critical challenge compared to 35% in 2018.

4.2.1 National General Service Readiness

The general service readiness index for Liberia is 51%. This means about one out of every two-health facilities is ready to provide quality healthcare services. However, less than one percent of health facilities in Liberia have all the basic items essential for the provision of quality health care across the five domains. As illustrated in figure 11 below, on average 52% of the health facilities have basic amenities required to provide general health services, while 61% have standard precautions facilities for infection prevention and control. Fifty-Eight (58%) of health facilities have basic equipment to provide health services, while 37% of facilities have essential medicines required for treatment. Forty-six percent (46%) of health facilities have the diagnostic capacity to conduct various tests essential in general service provision.

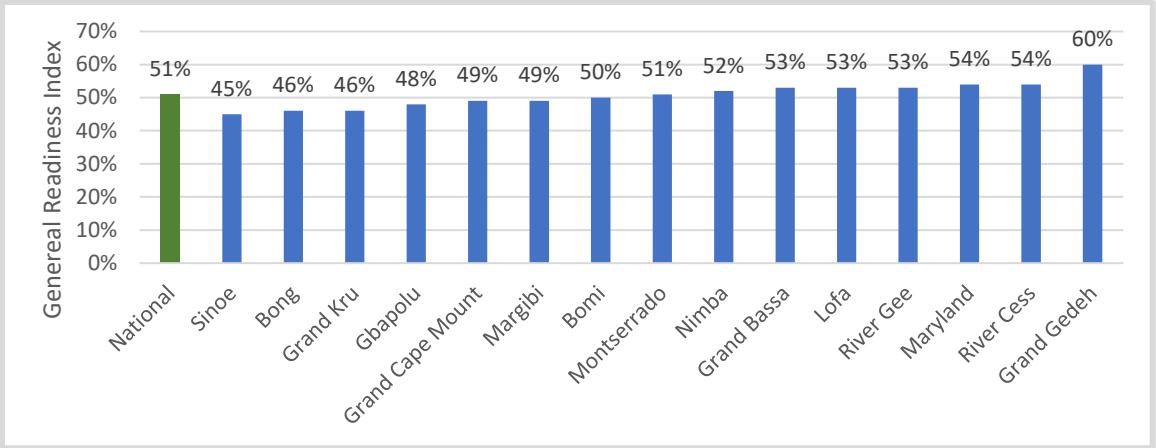
Figure 11: General Service readiness index and domain scores (n=568)



4.2.2 County-level general service readiness

The general service readiness index scores in the fifteen counties ranged from 45% in Sinoe County to 60% in Grand Gedeh County. The average general service readiness scores across counties provide an indication that the quality of health services is fairly good, with room for improvement. Figure 12 presents general service readiness by county in 2021.

Figure 12: General service readiness scores by county in 2021



4.2.3 Health facility general service readiness

The general service readiness scores were higher for secondary health facilities than for primary. The 2021 HHFA result shows a 71% readiness score for hospitals, 62% for health centers, and 51% for clinics. This indicates that the quality of health care services in Liberia needs to be more focused at the primary (clinic) level while maintaining high standards at the secondary level. These trends were similar for the 2018 service availability and readiness assessment. On the other hand, a comparison of public and private health facilities shows a better readiness score for NGOs owned (66%) mission or faith-based (61%), private for-profit (48%) than public (48%) health facilities.

4.3 General service readiness scores by domains and tracer Items

4.3.1 Basic amenities

An enabling work environment is critical for effective and quality healthcare delivery. This includes the physical infrastructure, the availability of an improved source of water, electricity, sanitation facilities, consultation room, and emergency transportation for referral purposes. This section describes the basic amenities that were assessed during the 2021 HHFA (Figure 13 below).

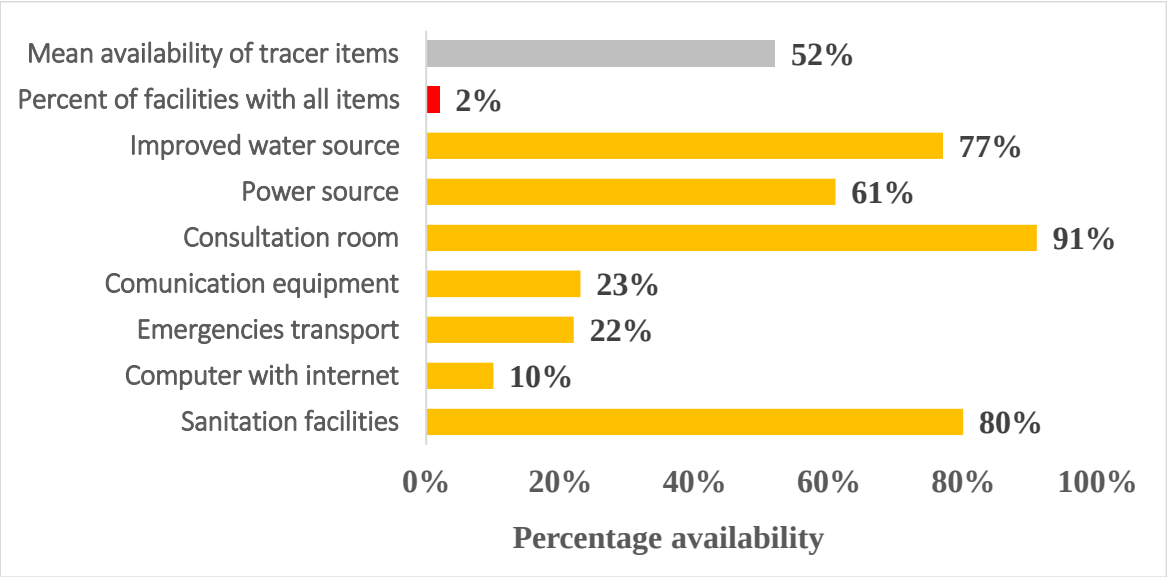
In Liberia, the basic amenities necessary for delivering quality health services were found either not available or limited. The mean availability of tracer items is 52% and only 2% of health facilities have all necessary amenity items. Figure 13 below provides the availability scores of tracer items (**Tables 16 and 17 in Annex 1** present detailed basic amenities readiness scores).

1. A room with privacy
2. Power supply
3. Communication equipment
4. Improved water source
5. Sanitation facilities
6. A computer with internet access
7. An emergency transportation

Key findings

- On average 52% of health facilities have basic amenities necessary to facilitate service provision.
- 91% compared to 87% of health facilities in 2018 have consultation rooms with privacy to ensure patients' confidentiality.
- 22% in 2021 compared to 78% of facilities in 2018 have emergency transport while 10% of the facilities have computers with Internet.
- Also, 23% of facilities had communication equipment in 2021 compared to 52% in 2018.
- The readiness score for the improved source of water is 77% compared to 53% and while the power supply is 61% compared to 62% in 2018.

Figure 13: Percentage of health facilities with basic amenities (n=568)



4.3.2 Basic equipment

The survey assessed heath facilities readiness based on the availability of basic equipment required for the delivery of quality and comprehensive health services.

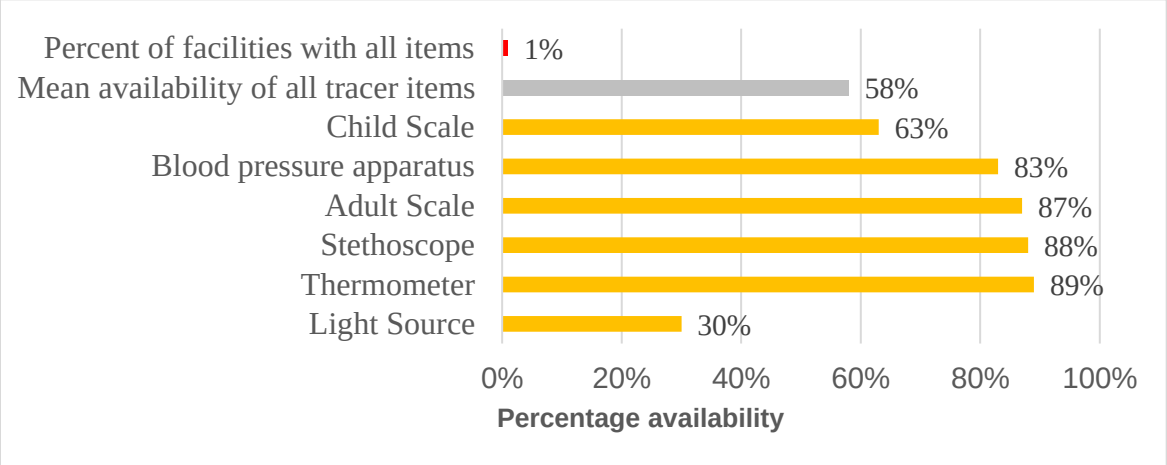
1. Adult weighing scale
2. Child/infant weighing scale,
3. Thermometer,
4. Stethoscope,
5. Blood pressure machines and
6. Lighting source

Key findings

- On average 58% of the health facilities in Liberia have the basic equipment for patient care compared to 79% in 2018.
- 88% of facilities have stethoscopes, 89% had thermometers, while 87% have adult weighing machines and 63% have weighing machines for children compared to 91%, 89%, 81%, and 62% in 2018.
- Only 1% of the facilities had all tracer items in the main service area of the health facility.

The mean availability of all six-tracer items is 58% while 1% of health facilities have all six-tracer items. Figure 14 presents the percentage of health facilities with basic equipment.

Figure 14: Percentage of facilities with basic equipment items available (n=568)



The absence of an adult scale in 13% of health facilities is expected to compromise HIV services provided to patients in care monitoring, antenatal services, and the administration of certain medicines and drugs. On the other hand, the lack of an infant/child scale in 37% of health facilities will affect nutrition services especially growth monitoring. Detailed data on basic equipment availability by county, facility type, urban/rural, and managing authority are shown in **table 18 in annex 1.**

4.3.3 Standard precautions for infection Prevention

Infection prevention and control is an essential aspect of basic health care, as well as specialized services. The safety of patients and health workers is a fundamental part of the health service delivery system. Therefore, all health facilities are expected to have in place the necessary standard precautions items which are listed below. Detailed data on availability by county, facility type, urban/rural, and managing authority are shown in **table 19-21 in annex 1.**

1. Safe disposal of sharps,
2. Safe final disposal of infectious wastes,
3. Appropriate storage of sharps wastes,
4. Appropriate storage of infectious wastes,
5. Disinfectant,
6. Disposable or auto-disable syringes,
7. Environmental disinfectant

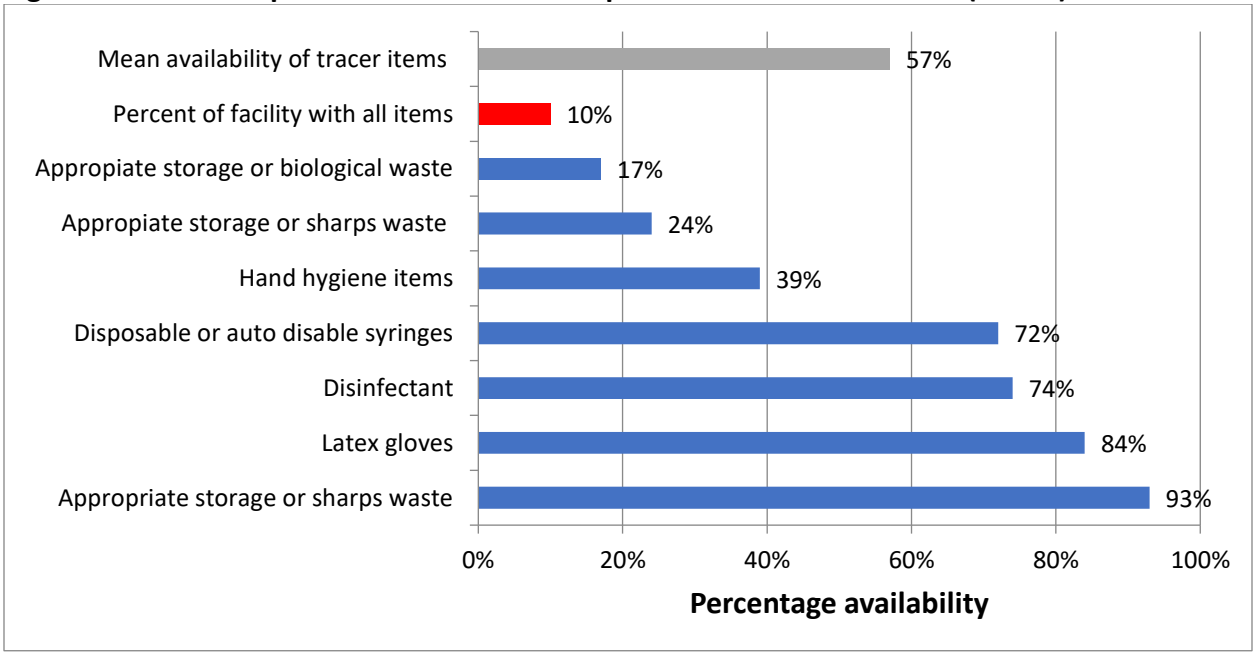
8. Latex gloves, and
9. Guidelines on standard precautions

Key Findings

- On average 61% of the health facilities (N=568) have standard precautions for infection prevention and control while 55% have available guidelines for standard precautions compared to 68% and 61% in 2018.
- 98% of health facilities have disposable or auto-disposable syringes available, while 96% have disinfectants compared to 97% and 91% in 2018
- 72% of facilities have appropriate storage for sharp wastes compared to 86% in 2018.
- 69% of the health facilities have latex gloves compared to 79% in 2018
- 84% of the health facilities have Safe final disposal of non-sharp infectious waste.

The survey results revealed that 61% of health facilities have standard precautions facilities and items in place for infection prevention and control, while 55% have available guidelines for standard precautions. Almost all health facilities (98%) have disposable or auto-disposable syringes and disinfectants (96%). However, only 82% of health facilities had safe final disposal of sharps**,** and 14% with Appropriate storage of non-sharp infectious waste. Figure 15 below presents the percentages of health facilities with standard precautions for infection prevention.

Figure 15: Standard precautions for infection prevention items available (n=568)



4.3.4 Diagnostic capacity

The readiness of health facilities' diagnostic capacity was assessed by the presence of selected diagnostic tests. The readiness of a health facility to perform certain tests were also evaluated based on the level of health care (e.g.: hospital, health center, and clinic). To determine the capacity of health facilities to offer critical diagnostic services, eight tracer service indicators were assessed. See table **table 22 in annex 1.**

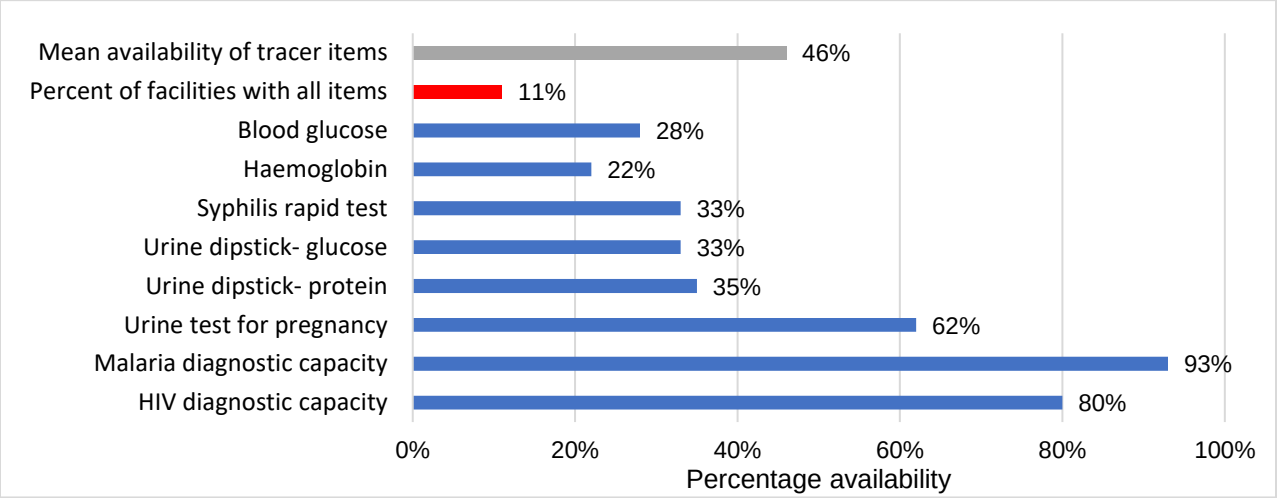
1. Carry out tests for Malaria
2. Carry out tests for HIV
3. Check for Blood glucose
4. Check for Haemoglobin
5. Check for syphilis using a rapid test
6. Check urine dipstick for glucose
7. Check urine dipstick for protein
8. Carry out urine tests for pregnancy

Key findings:

- The readiness score for diagnosis across health facilities (568) in Liberia is 46% compared to 39% in 2018 and the percentage of health facilities with all items is 11%.
- On the above diagnostic items, the capacity for the health facilities to conduct tests for Malaria was 93% in 2021 compared to 66% in 2018.
- The capacity to check for HIV was available in 80% compared to 64% of the health facilities in 2018. Moreover, the capacity of health facilities to conduct a urine test for pregnancy was 62%, while urine dipstick for protein testing has increased to 35% from 33% in 2018, and check for glucose was 33% in 2021.
- The capacity for health facilities to conduct syphilis rapid tests was 33% compared to 23% in 2018.
- The survey also established that the least available diagnostic services were check for hemoglobin 22%, and blood glucose 28% respectively compared to 19% and 15% in 2018 as well.

The survey found that health facilities under the management of private for-profit and mission or faith-based have higher diagnostics readiness scores compared to the public and NGOs owned and manage health facilities. Figure 16 presents the percentage of health facilities with diagnostic facilities.

Figure 16: Percentage of facilities with diagnostic capacity items available (n=568)



4.3.5 Essential medicines

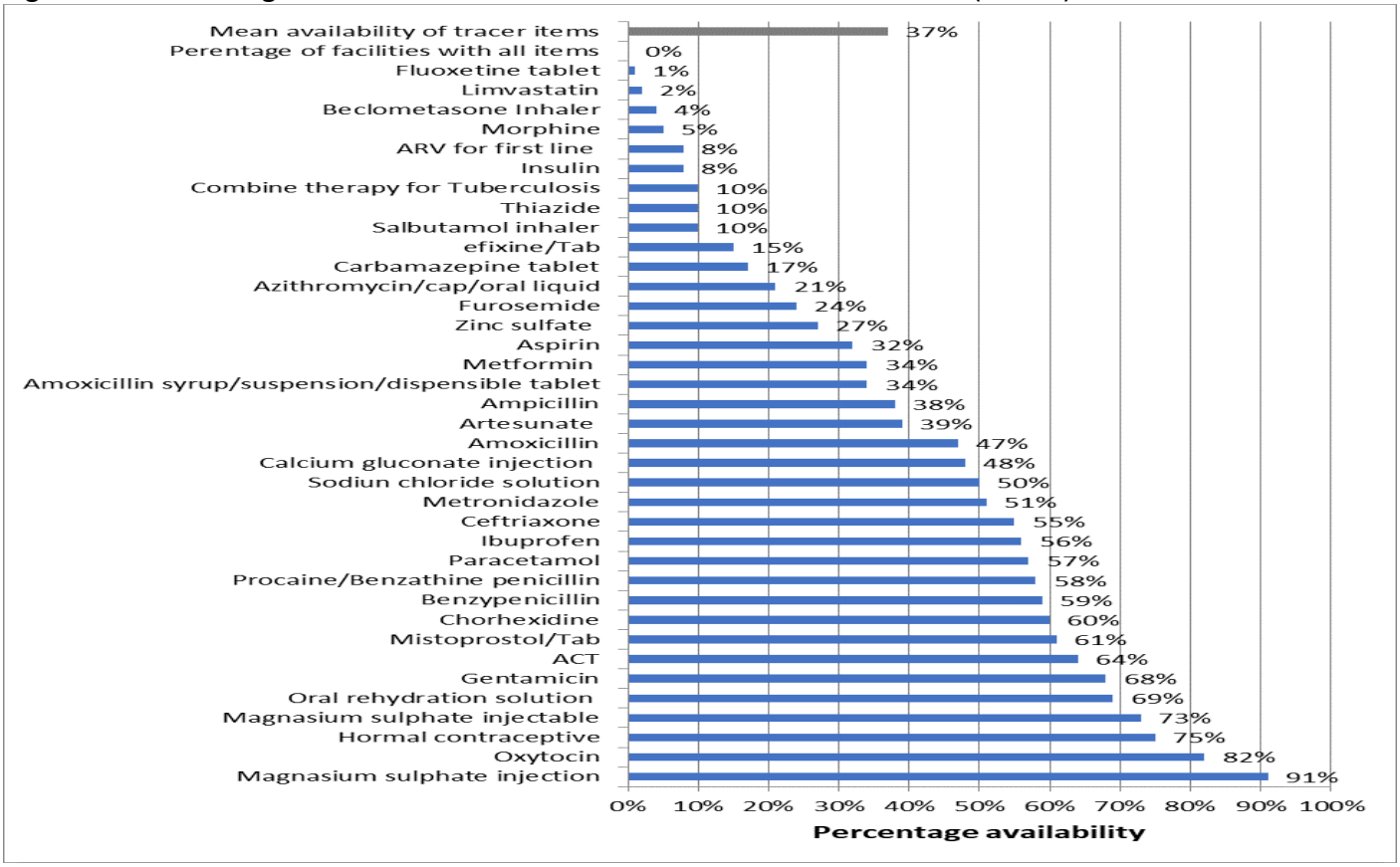
The availability of essential medicines is key to the delivery of quality healthcare services. It increased the demand for health services and build patients' trust in the health system. The investigation considered 24 tracer items enshrined in the National Essential Drugs and Medicine List. **See table 23-25 in annex 1.**

Key findings (Figure 17)

- The survey established that overall, 37% of the health facilities (N=568) have at least one essential tracer medicine, while 69% of the health facilities have ampicillin and 55% Ceftriaxone injections available in stock as compared to 60% and 40% respectively in 2018. Less than half of health facilities had amoxicillin syrup/suspension 47% and Gentamicin injection in stock 71 % compared to 69% and 70% respectively in 2018.
- 69% of health facilities have oral rehydration salt sachets while Zinc sulphate tablets or syrups registered 27%. These were the most essential medicines available in health facilities compared to 72% and 48% in 2018.
- In the management of labour, Oxytocin injection was available in 82% of health facilities while Salbutamol inhalers 10% and Insulin regular injections 8% were available in stock compared to 81%, 64%, and 8% in 2018.

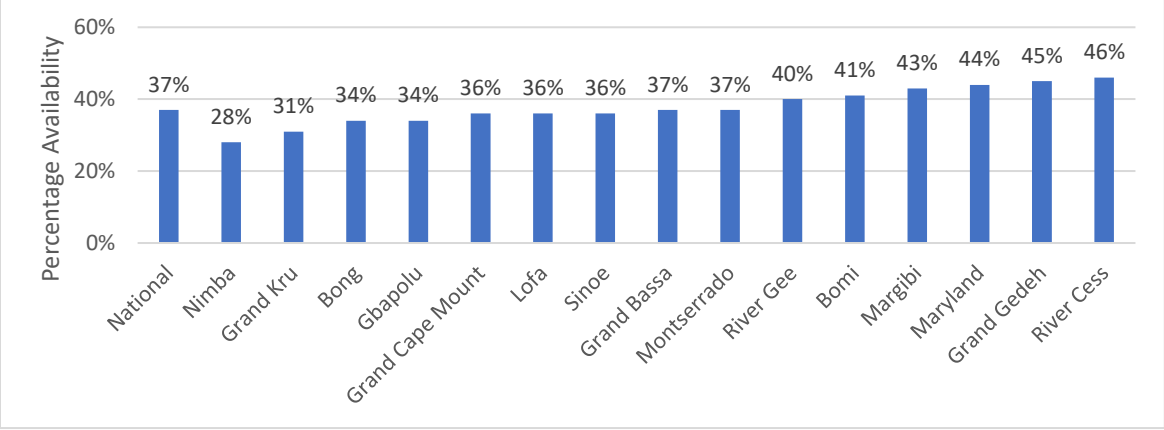
The results revealed high essential medicines scores for oral rehydration solutions, treatment of infections, and food supplements compared to essential medicines for managing diabetes, hypertension, heart diseases, and cholesterol.

Figure 17: Percentage of facilities with essential medicines items available (n=568)



Data from the HHFA show minimum variation in essential medicines scores across counties. For instance, only 5 of the 15 counties achieved a score of 41% and above. The rest of the counties score below 41%. This situation is expected to affect the quality of health services in the country. Figure 18 presents health facility essential medicines scores by county.

Figure 18: Mean availability of essential medicine tracer items, by county (n=568)



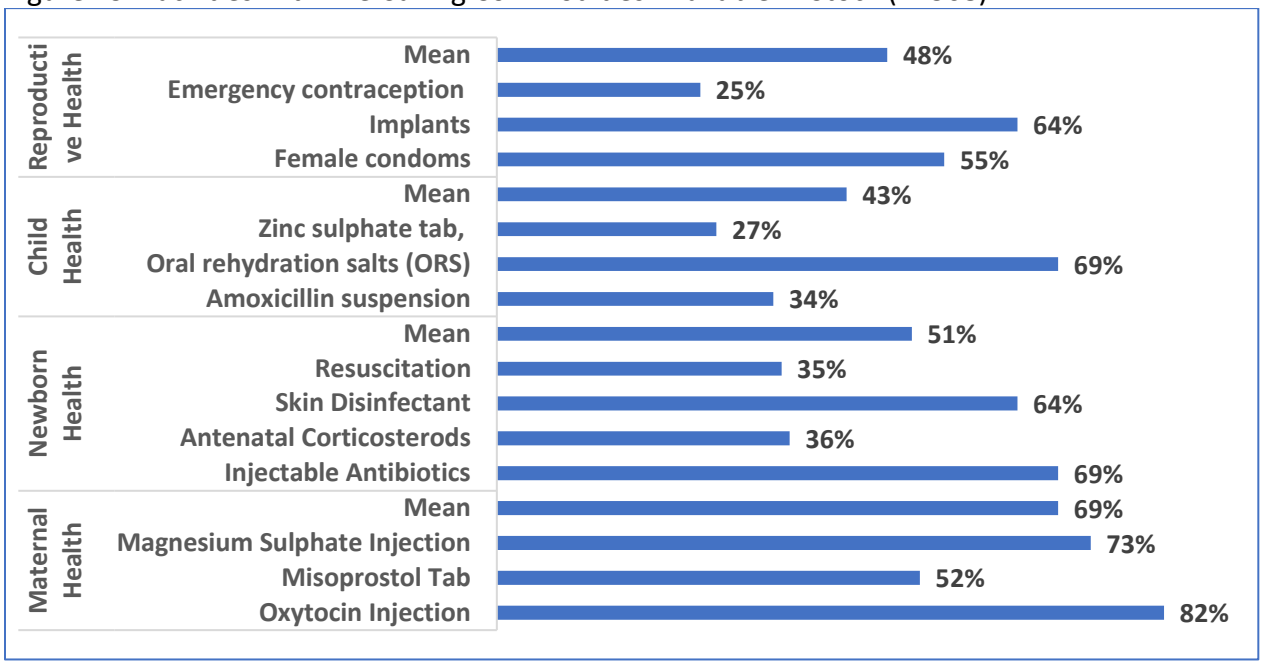
4.3.6 Life-Saving Commodities for RMNCH

The United Nations Commission on Life-Saving Commodities for Women's and Children's Health which is part of Every Women, Every Child movement was formed to increase access to life-saving medicines and health supplies for the world's most vulnerable people. The Commission identified a priority list of 13 overlooked life-saving commodities across the reproductive, maternal, new-born, and child health (RMNCH) 'continuum of care' that, if more widely accessed and properly used, could save the lives of more than 6 million women and children. The HHFA reveals a mean proportion of all lifesaving commodities across facilities to be 53% while only 1% of health facilities had all lifesaving commodities available. Similarly, specific lifesaving commodities were assessed with emphasis on Maternal Health, New-born Health, Child health, and reproductive health.

Key findings (Figure 19 below reveals the following)

- The mean proportion of life-saving commodities for maternal health at health facilities was 69% (N=568). The most stocked maternal health commodities were Oxytocin injectable at 82%, followed by Magnesium Sulphate injection at 73% and the least was Misoprostol at 52%.
- The mean proportion of life-saving commodities for Reproductive health at health facilities was 48% (N=568).
- The highest number of available reproductive health lifesaving commodities were Implants (64%) followed by 55% Female Condoms and the least was Emergency contraception at 25%.
- Also, the mean proportion of life-saving commodities for Newborn and Child health at health facilities were 51% and 43% respectively.
- The least available for newborn health were antenatal corticosteroids (36%) and resuscitation equipment (35%).
- The highest available commodities for newborn health across health facilities were Injectable (69%) and skin disinfectant/ chlorhexidine (64%)
- The highest available commodities for child health were Oral rehydration salts (69%), while Amoxicillin suspension (34%) and Zinc sulphate tab, dispersible tab, or syrup (27%) were the least commodities.

Figure 19: Facilities with Life-Saving Commodities Available in Stock (n=568)



4.4 General service readiness scorecard

The general service readiness scorecard is a summary of the quality of health services in the country. It provides a snapshot of health facility readiness to provide basic and comprehensive services to the Liberian people. The scorecard covers; the general service readiness index score, basic amenities mean score, standard precautions mean score, basic equipment mean score, essential medicine mean score and diagnostic mean score. See table 26 in annex 1.

4.5 Conclusion

The general readiness index score is a reflection of the health system. Therefore, a low index score is a manifestation of poor quality of health care services. Liberia's index score is 51% which is a 5% reduction from the 2018 SARA. Except for Diagnostics (46%) and Essential Medicine (37), the remaining general readiness indicates a sign of the deteriorating quality of health services. The Ministry of Health has to invest in the general service readiness indicators in order to improve the quality of healthcare in the country.

CHAPTER FIVE: SPECIFIC SERVICE Availability and READINESS

5.0 Service Specific availability and readiness

5.1 Introduction

Besides assessing the readiness of health facilities to provide general health services, the 2021 HHFA for Liberia also measured the availability and readiness of health facilities to offer the following key specific health services:

a) Maternal and reproductive health: Antenatal care, Family planning, Basic and comprehensive obstetric care, Adolescent health, and lifesaving medicines for maternal and child health,
b) Child health: Curative and preventive care and growth monitoring, Routine child immunization, Essential medicines for child health
c) HIV/AIDS services: HIV counselling and testing, HIV/AIDS care and support services, Antiretroviral therapy (ART), Prevention of mother-to-child transmission (PMTCT), Sexually transmitted infections (STIs)
d) Tuberculosis services
e) Malaria services
f) Non-communicable disease (NCD) services: cardiovascular conditions, chronic respiratory disease, diabetes
g) Neglected tropical diseases (NTDs)
h) Surgery: Basic surgery and comprehensive surgery
i) Highly diagnostic services
j) Blood transfusion

The percentage of each of the services for the facilities offering the service was computed as a measure of the availability of the service. In addition, for facilities offering the service, readiness to provide the service was assessed based on the presence of a number of tracer items for trained staff, guidelines, equipment, diagnostic capacity, and medicines and commodities.
The tracer items are considered to be a minimum set of items that are a prerequisite for the facility to be able to offer an adequate level of care. Service readiness is a key indicator for assessing and monitoring improvements and investments in service delivery. An overall score summarizing service readiness was computed for each health service by taking the mean of the availabilities of the tracer items for that service.

In each of the specific services arrange of tracer indicators and items have been used to measure the readiness index. The indicator measurements considered for the index of the indices were:

1. Availability of tracer-trained staff and guidelines
2. Availability of tracer equipment
3. Availability of tracer diagnostics and
4. Availability of Medicines and commodities.

5.2 Maternal, newborn, child, and adolescent health (MNCAH) Summary

Maternal Mortality Ratio (MMR) in Liberia stands at 742 per 100,000 live births in 2019, a reduction from 1,072/per 100,000 live births in 2013. However, this ratio is still considered one of the highest in the world6. The main causes of maternal deaths are haemorrhage, hypertension, and infection7, while the main causes of newborn deaths are prematurity, intrapartum-related events (Asphyxia), and Sepsis8. One of the strategies to reduce maternal and newborn mortality is to improve the access to emergency obstetric and newborn care, in which complications during pregnancy and childbirth are identified and referred to a higher level if necessary.

Basic and comprehensive care Basic emergency obstetric and newborn care is critical to reducing maternal and neonatal death. Basic emergency obstetric and newborn care (BEmONC) includes the capacity to provide the following seven signal functions: (1) parenteral administration of antibiotics, (2) parenteral administration of oxytocic drugs, (3) parenteral administration of anticonvulsants, (4) assisted vaginal delivery, (5) manual removal of placenta, (6) manual removal of retained products, and (7) neonatal resuscitation.

Comprehensive obstetric and newborn care consists of all functions of basic emergency obstetric and newborn care plus Caesarean section and blood transfusion. The evidence-based show that the improvement of emergency obstetric and newborn care will reduce maternal and newborn mortality.
Guidelines jointly issued by WHO, UNICEF, and UNFPA recommend four facilities offering basic and one facility offering comprehensive care for every 500,000 people. However, in Liberia, due to difficult geographical access among other challenges, the country recommended having at least one CEmONC for every county, even though the population does not reach 500,000 people.

The harmonized health facility assessment in Liberia had the following specific services considered in the provision of Maternal, newborn, child, and adolescent health services (MNCAH) with a range of tracer indicators for each to measure availability and readiness for the facilities to provide services.

- Provision of antenatal care services
- Provision of basic obstetric and newborn care
- Family planning services
- Adolescent health services
- Child Preventive and curative care services for children under five years
- Routine child immunization
- Comprehensive obstetric and newborn care services.

6 Liberia DHS 2013 and 2019

7 Causes of maternal deaths, 2013

8 Situation Analysis of the Newborn Health in Liberia, April 2013.

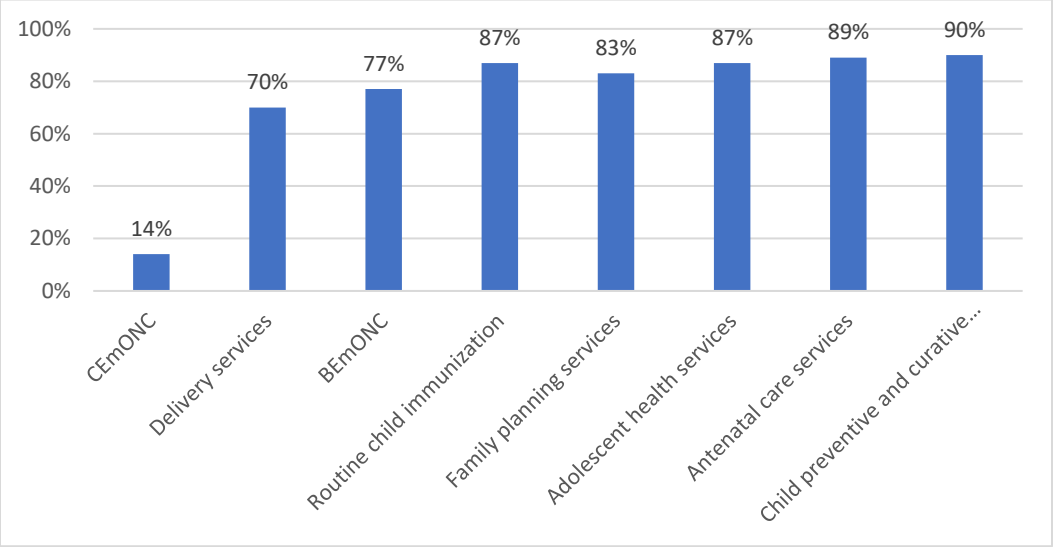
5.2.1 Availability of MNCAH services

Maternal, newborn, and adolescent health services (MNCAH) were assessed, and the key findings are shown below in Figure 20.

Key findings

- None of the MNCAH services in Liberia were available in all (100%) of the existing facilities.
- In Liberia, child preventive and curative care services are available in 90% of health facilities, an increase of 3% when compared to 87% in 2018.
- Antenatal care services are available in 89% of the health facilities surveyed, an increase of 2% as compared to 87% in 2018.
- Eighty-three percent (83%) of the health facilities in Liberia offered family planning services
- Routine child immunization provided in health facilities has increased by only 7% (87%) in comparison to the 2018 report
- Basic Emergency Obstetric and Newborn care services was available in 77% of health facilities compared to 85% in 2018
- The lest available service on MNCH was Comprehensive Emergency Obstetric and Newborn Care services (CEmONC) accounting for 14% of facilities offering delivery services.
- Adolescent health services was available in 87% of facilities compared to 83% in 2018.

Figure 20: Percent of Health Facilities with available MNCAH services (N=568)



5.2.2 Lifesaving commodities for women and children

Mothers and children are vulnerable to many diseases because of the nature of work, environment, activity, and morphologies. When their life is threatened, prevention and lifesaving are important and critical commodities are essential and should always be available.

The key tracer items in various service areas to determine the availability of the lifesaving commodities were observed in stock as shown in Figure 21 below.

- Availability of Family planning commodities
- Availability of maternal health medicines and commodities
- Availability of newborn health medicines and commodities
- Availability of child health medicines and commodities

Key findings

- In family planning, emergency contraceptives were available and observed in 25% of the health facilities in Liberia an increase from 9% in 2018.

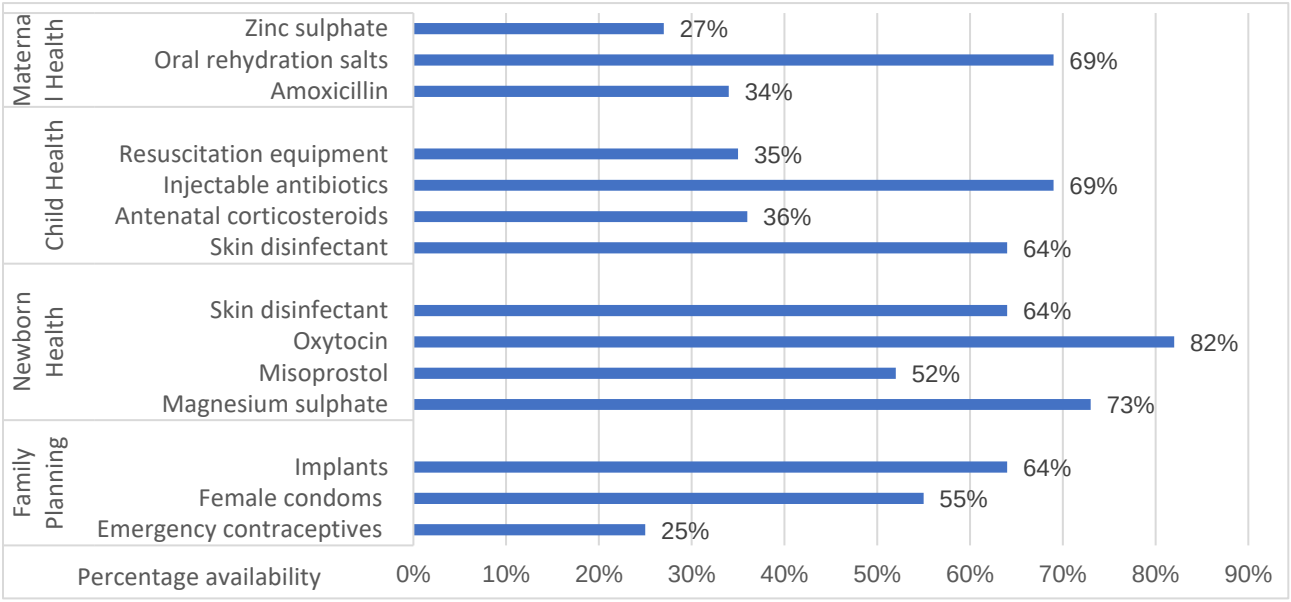
- Female condoms were available in 55% of the health facilities. Long-term family planning methods specifically implants were the most available stocked in 64% of the health facilities a decrease of 8% compared to 2018 (72%). The stock of implants was due to the availability of the commodity at all levels of the health system.

- For maternal health, Oxytocin was the medicine that was mostly available in (82%) of the health facilities, a difference of 1% compared to 2018, and remains the first choice of treatment for post-partum hemorrhage as compared to misoprostol.
- The availability of Misoprostol and Magnesium sulphate at health facilities has shown an increase of 8% and 14% respectively when compared to 2018.

- For newborn health, skin disinfectant for newborns was available in 64% of the health facilities, a decrease of 21% in comparison to 85% in 2018, and antenatal corticosteroids is available in 36 % of the health facilities assessed in 2021 as compared to 2018 (40%) with a 4% decrease. Newborn injectable antibiotics were also available in 69% of the health facilities recording a 32% increase from 37% in 2018 while resuscitation equipment is at 35% of the health facilities, a thirteen percent (13%) decrease from 2018(48%).

- In the provision of child health services, Oral rehydration salts and zinc sulphate for the management of diarrhea were available in 69% and 27% of the health facilities but have shown a reduction of 3% and 23% respectively while health facilities having amoxicillin available for children has decreased by 35% compared to 2018 (69%).

Figure 21: Facilities that have lifesaving and valid commodities observed in stock (568)



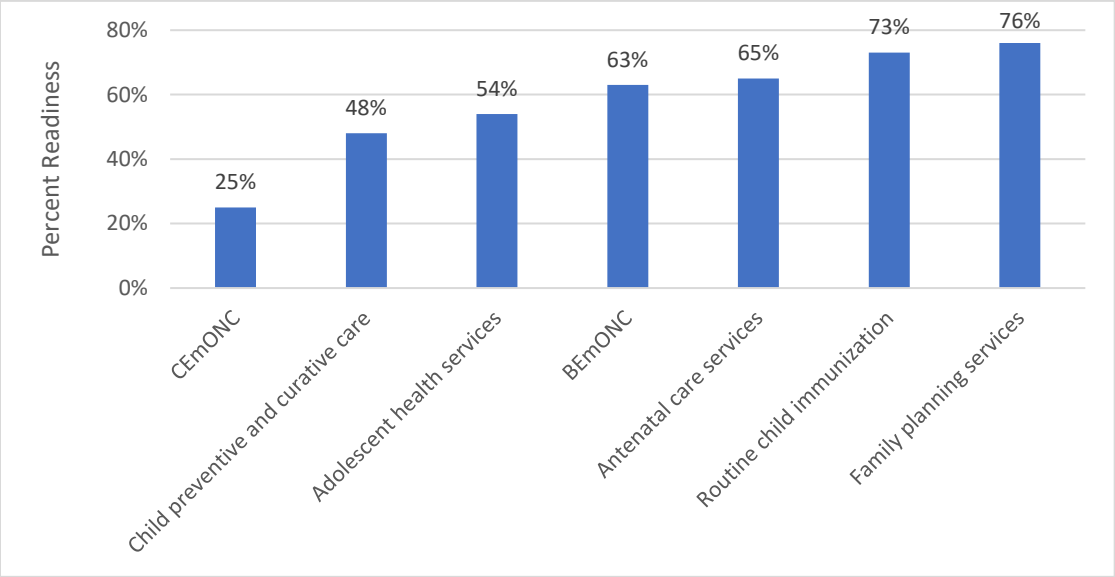
5.2.3 MNCAH readiness index

Key Findings (Figure 22 below reveals the following)

- Overall, the readiness of health facilities to provide antenatal care services (ANC) in Liberia was 65% compared to 55% in 2018 findings. Equipment to provide ANC services was available in 86% of the health facilities while the availability of guidelines, medicines, and commodities was 59% and 67% respectively.
- Readiness to provide Family Planning 76% compared to 73% in 2018. Staff and guidelines, medicines and commodities and Equipment were 70%, 83% and 70% available.
- Similarly, 73% of health facilities are ready to provide routine immunization services compared to 34% in 2018. Staff and guidelines, medicines and commodities and Equipment were 82%, 70% and 74% available.
- About 54% of facilities are ready to provide adolescent health services compared to 38% in 2018. Staff and guidelines, diagnostics and medicines and commodities were 45%, 90%, 77% available.
- Child Health and curative service was one of the least ready despite high available. Less than 50% (48%) of the facility were ready to provide child health service compared to 53% in 2018. About 37%, 63%, 41% and 45% had staff and guidelines, equipment, diagnostics, and medicines and commodities.

- The survey further established that the readiness to provide comprehensive obstetric care services in health facilities was 25% compared to 44% in 2018.
- To support comprehensive obstetric care services, Guidelines and trained staff were available in 35% , medicines and commodities in 22%, diagnostics in 16% and equipment in 28% respectively.
- On average, 63% of all facilities assessed are ready to provide BEmONC services compared to 81% in 2018. Availability of tracer items to support implementation reveals that 50%, 65%, 66% of facilities had staff and guidelines, equipment and medicines and commodities respectively.

Figure 22: Readiness to provide MNCAH services



5.2.4 Family planning

5.2.4.1 Family planning service availability

In the assessment of the service availability for family planning health facilities were asked whether they offer or provide the following types of services at the facility.

Types of services offered at health facility (available)

a)	Combined oral contraceptive pills	b) Progestin-only contraceptive pills	C) Combined injectable contraceptives
d)	Progestin-only injectable contraceptives	e) Male condoms	f) Female condoms
g)	Intrauterine contraceptive device method	h) Implant	i) Cycle beads for standard days
j)	Emergency contraceptive pills	k) Male sterilization	l) Female sterilization

Findings for Family Planning services illustrated in Figure 23 are found below.

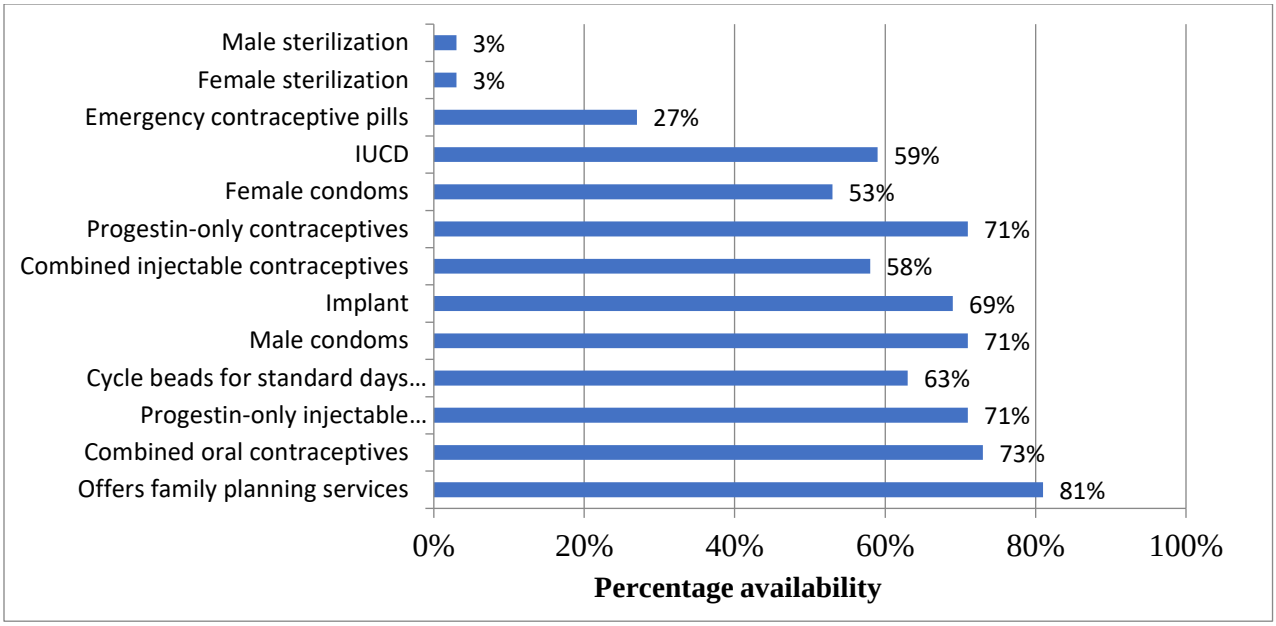
Key findings

- In Liberia 83% of health facilities have family planning services available, though a 2% decrease was shown, the most common available modern method of family planning was combined oral contraceptives provided in 73% of the health facilities in Liberia, a decrease of 6% compared to 2018.
- Progestin-only contraceptive was available in 71% of health facilities, a decrease of 8% in comparison with 2018. While the combined oral contraceptive is 73% with a decrease of 6% as compared to 2018 which was 79%.
- Male and female condoms were available in 71% and 53% of the health facilities respectively. The availability of both health facilities has reduced by 6 % when compared to 2018.
- The most preferred and provided long-term method was implants in 69% of the health facilities with a 6% decrease in 2018.
- Male and female sterilization were the least available family planning services accounting for 3% and 3% of the health facilities respectively.

Table 27, Annex 1 shows the percentage of health facilities offering key family planning services by region, facility type, rural/urban, and managing authority.

- Hospitals have the highest availability of family planning services (83%)
- All facilities in six (Bomi, Grand Cape Mount, Gbarpolu, Grand Kru, River Cess, and Lofa) of the fifteen counties have family planning services available.
- Health facilities in Rural areas (97%) had higher availability of family planning services as compared to urban areas (62%)
- More government/public facilities (98%) offered family planning services as compared to NGO/not-for-profit facilities (88%), Mission/Faith-based Organizations (46%), Private-for-profit (57%)

Figure 23: Percentage of facilities that offer family planning services (N=568)



5.2.4.2 Family planning service readiness

In readiness for FP, eight tracer items were considered for the facilities that had FP services available.

Tracer items required for service delivery family planning readiness

Trained staff and guidelines

a) Guidelines on family planning
b) Staff trained in family planning in the past two years

Equipment

a) Blood pressure apparatus

Medicines and commodities

a) Combined estrogen progesterone oral contraceptive pills
b) Injectable contraceptives
c). Progestin-only contraceptive pills
d). Condoms

Key findings

- In figure 24 below, 76% of health facilities are ready to provide family planning services
- Only 28% of health facilities had all seven key tracer items needed to provide family planning services
- At least one trained staff in family planning two years preceding the survey was in 61% of the health facilities with an increase of 44% as compared to 2018.
- Condoms were available in 83% of the health facilities in Liberia, with a decrease of 6% as compared to the 2018
- Injectable contraceptives were available in 85% of the health facilities with a decrease of 3% as compared to 2018.
- On basic equipment for the provision of family planning, the health facilities had blood pressure machines reduced by 20% when compared to 2018.

- Guidelines for family planning were available in 73% of the health facilities an increase of 11% while job aids were available in 74% of the health facilities an increase of 6% as compared to 2018.
- Progestin only contraceptives pills were available in 82% of the health facilities

Figure 24: Percentage of facilities offering Family planning services that have the tracer items (N=505)

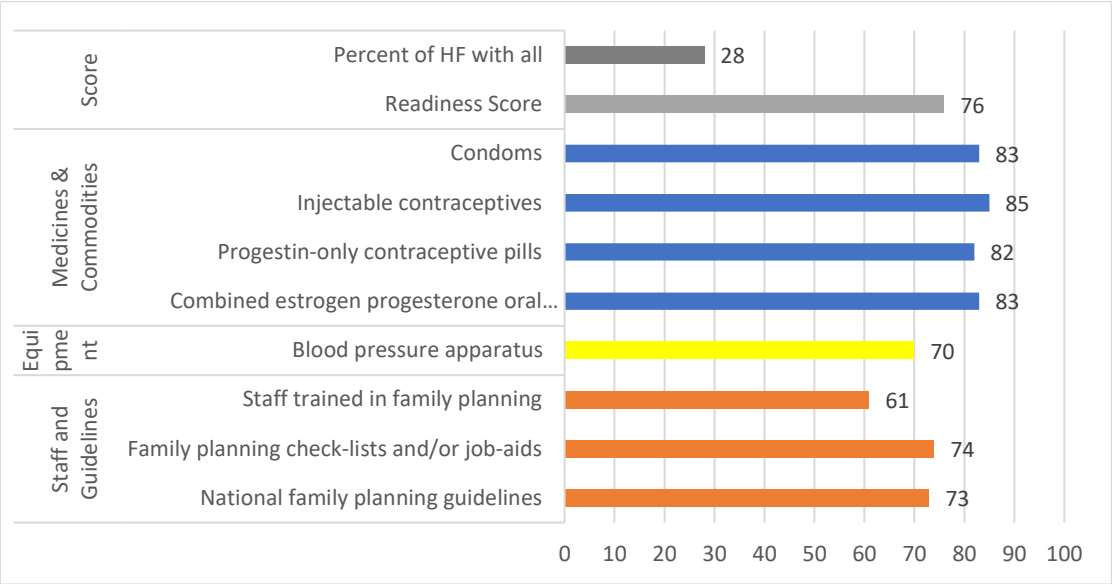
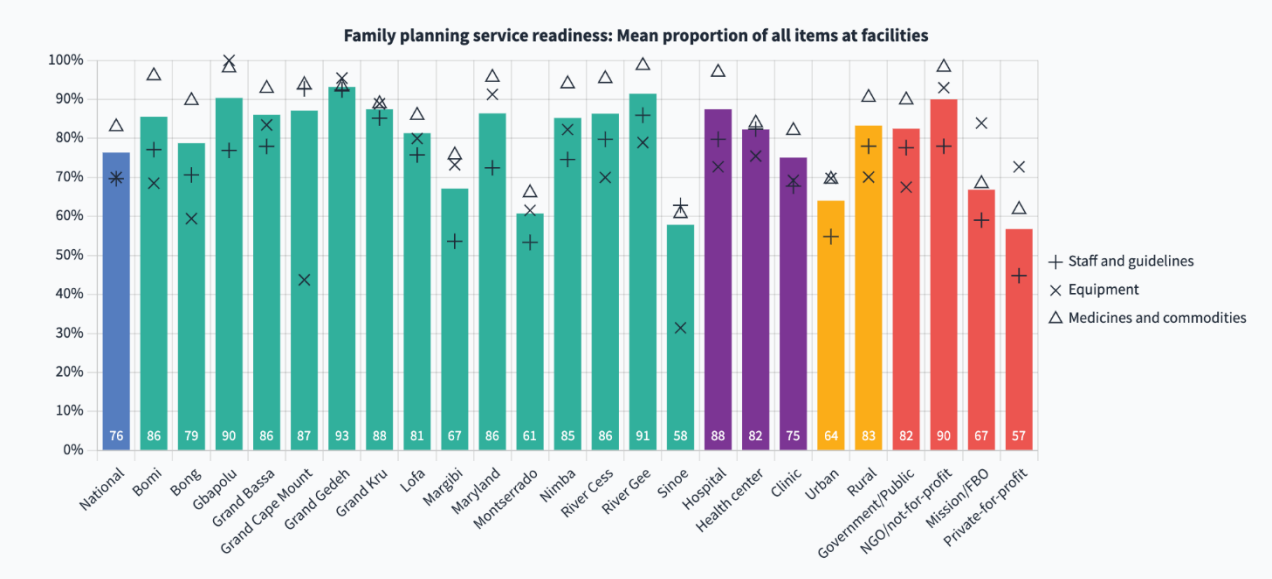


Figure 25 below, shows the percentage of health facilities' readiness to offer family planning based on seven key tracer items by region, facility type, rural/urban, and managing authority

- The mean proportion of all tracer items at Health facilities for family planning services in Rural areas (83%) is as compared to urban areas (64%)
- The mean proportion of all eight tracer items was highest among Hospitals (88%) compare to other facility types
- NGO/not-for-profit facilities have the highest score in the mean proportion (90%) of all eight tracers items as compared to government/public facilities (82%), Mission/Faith-based organizations (67%), and Private-for-profit (57%).
- The mean proportion of staff and guidelines items at health facilities was the lowest in Margibi County (54%), whereas Grand cape Mount and Grand Gedeh health facilities have the highest mean proportion of staff and guidelines items (93%) and (92%) respectively.
- Sinoe had the lowest score (45% each) on health facilities having equipment to provide family planning services.

Figure 25: Percentage of facilities that have tracer items for Family Planning Service by county, facility type, rural/urban, and managing authority (N=505)



5.2.5 Child health preventive and curative care service availability and readiness

5.2.5.1 Child health preventive and curative care service availability

Reducing child mortality relies greatly on effective child health services being accessible and readily available. Curative services for children, vitamin and trace element supplementation, immunization, and nutritional services are all included in preventive and curative child health services. During the survey, child health preventive and curative care services were assessed, and the findings are presented in Figure 26.

Key findings

- The percentage (87%) of health facilities in Liberia providing preventive and curative care services for children under five years of age remains the same as in 2018
- Diagnosis of malaria with a blood test, treatment with ACT, and distribution of ITN/voucher for ITN in children under 5 was available in 42% of the health facilities
- Treatment of pneumonia and administration of amoxicillin for the treatment of pneumonia was provided in 67% and 34% of the health facilities respectively. When comparing the treatment of pneumonia and administration of amoxicillin for the treatment of pneumonia that was provided in health facilities in 2018, they have declined substantially by 19% and 51% respectively.
- In 63% of the health facilities, ORS and zinc supplementation for children with diarrhea were provided, a 15% decrease when compared to 2018.
- Iron supplementations were offered in 57% of the health facilities in Liberia.
- Vitamin A supplementations were available in 64% of the health facilities.

- Child growth monitoring services and Diagnosis and treatment of malnutrition were also available in 45% and 46% of the health facilities respectively.

Figure 26: Facilities that provide preventive and curative services for children U5s (N=568)

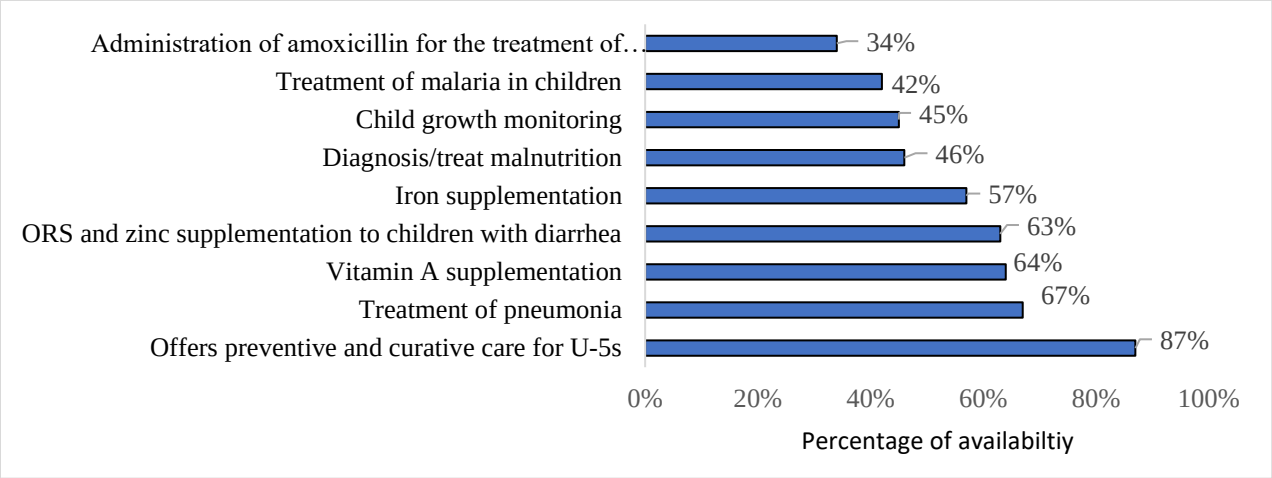


Figure 27 below shows the proportion of health facilities providing Child health preventive and curative care services, by region.

Key findings:

- In seven (7) out of 15 counties, the had all facilities provided preventive or curative care for children under 5 years.
- Three counties had the least scores of health facilities providing preventive or curative care for children under 5 years: Maryland (72%), Montserrado (74%), and Margibi (76%) had less than 80% of the health facilities offering services.

Figure 27: Percentage of health facilities that provided child health preventive and curative care services, by county

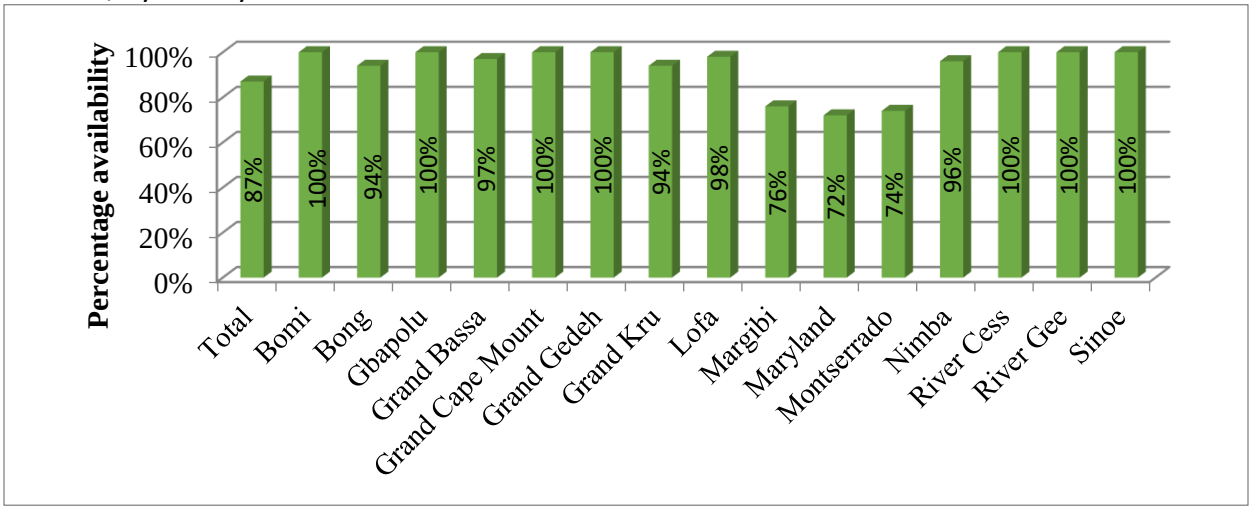


Table 28, Annex 1 shows the percentage of health facilities providing Child health preventive and curative care services, by county, facility type, rural/urban, and managing authority.

- Preventive and curative care services to under five years children were mainly offered in Hospitals (92%), and Health Centers (88%), but less in Clinics (87%).
- The majority of the health facilities offering these services were NGO/Not for Profit (100%), Public (93%), and Mission/FBO (89%).
- Administration of Amoxicillin was least offered in clinics (65%) followed by health centers (78%). Consequently, the service was mostly available in rural areas with (81%) of the health facilities providing the services. Comparatively, with the 2018 survey, there is a 21% decrease in Administration of Amoxicillin services provided mostly in the rural area**.**

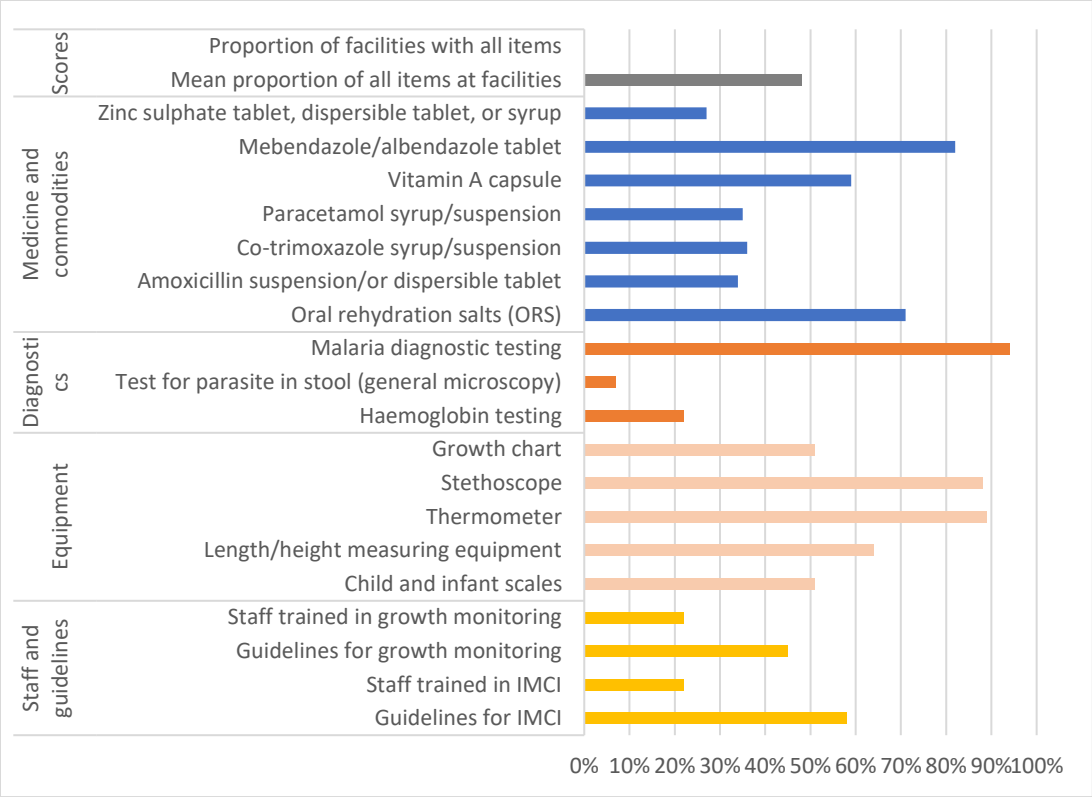
5.2.5.2 Child health preventive and curative service readiness

Availability of 19 tracer items was used in the assessment of the readiness of the child health preventive and curative care services in facilities that provided the services as shown in Figure 28

Key findings:

- Overall, 48% of health facilities within 15 counties had at least one tracer item to provide preventive and curative services to under five years of children and none had all items.
- Child and infant weighing scale was available in 51% of facilities while similarly 51% of growth charts were available in the health facilities
- Testing of Parasites in stool was the least with 7% of health facilities whereas the majority of the health facilities had Malaria diagnostic capacity (94%). Malaria diagnostic capacity has increased by 26% compared to the 2018 report
- Most of the equipment available in health facilities were thermometers (89%) and stethoscopes (88%) indicating a 2% reduction in the availability of Thermometers at health facilities.
- Artemisinin-based combination therapy (ACT) for malaria treatment was available in 65% of the health facilities whereas ORS sachets and Zinc tablets/syrup for diarrhea were available in 71% and 27% of health facilities respectively
- Staff trained in growth monitoring and integrated management of childhood illnesses (IMCI) at least in the past two years preceding the survey was in 22% and 22% of the health facilities; when compared to 2018, this has increased in health facilities by 11% and 7% respectively.
- Length/height measuring equipment was available in 64% of the health facilities

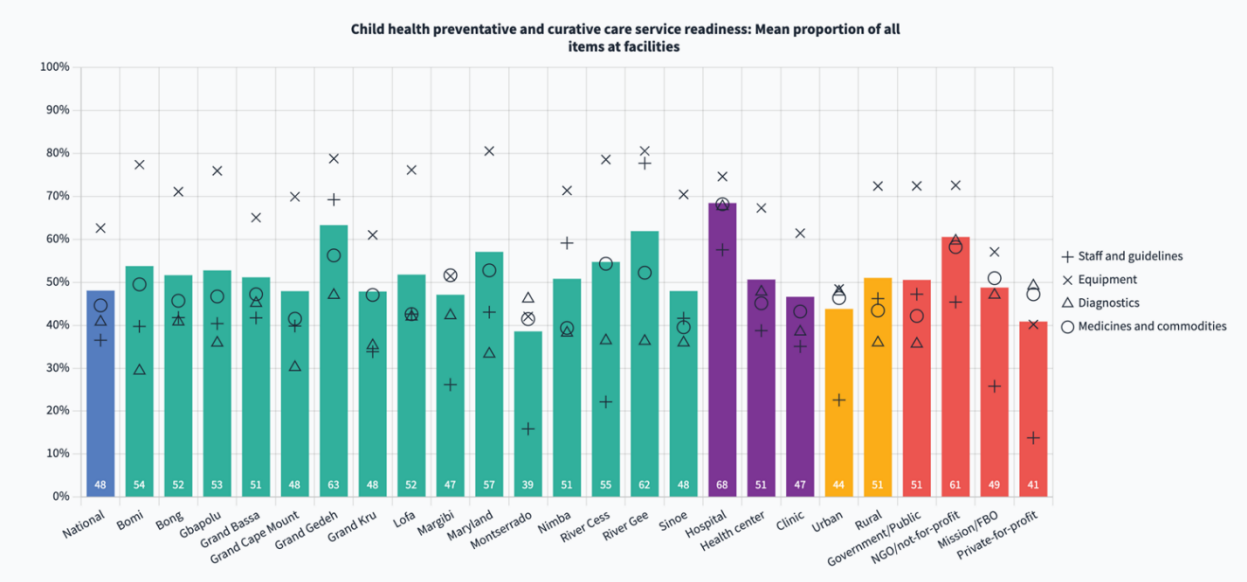
Figure 28: Facilities that have tracer items for child health preventive and curative services (N=513)



Below are key findings from Figure 29 that shows the percentage of health facilities' readiness to offer child health preventive and curative services based on 19 tracer items by region, facility type, rural/urban, and managing authority

- The county with the most available tracer items was Grand Gedeh (63%), followed by River Gee (62%) while Montserrado was the least accounting for 39%.
- The readiness index for preventive and curative care services for children under five years was high among hospitals (68%) followed by health centers (51%) and clinics (47%).
- Guidelines and availability of trained staff in the past two years preceding the survey were in 37% of the health facilities across all levels of care. A readiness score of Seventy-eight percent of health facilities in River Gee had Guidelines and availability of a trained staff to support child health preventive and curative care service.
- Not-for-Profit/NGO facilities had the highest readiness score (61%) followed closely by Public/Government facilities (51%)
- Diagnostics capacity to offer child health preventive and curative care services had the highest readiness score of 60% among NGO/not-for-profit health facilities whereas the Public/Government facilities account for the least score of 36%
- There was a difference of 7% in readiness scores among the rural and urban facilities with 51% and 44% respectively.
- None of the health facilities in Bomi, Maryland, and Grand Kru are testing Parasites in stool (general microscopic).

Figure 29: Percentage of health facilities' readiness to offer preventive and curative care services for children under five years based on 19 tracer items by county, facility type, rural/urban, and ownership



5.2.6 Child Immunization Service

5.2.6.1 Child immunization service availability

Childhood immunization is an important component of healthcare as it prevents children from contracting some life-threatening diseases. The aim is to build a healthy population by ensuring that all children are reached with all essential vaccinations before they celebrate their first birthday.

Key findings

- Figure 30 below shows that 87% of health facilities offer routine childhood immunization services showing a slight increase of 2% compared to the 2018 report.
- Adolescent/adult immunization was offered in 83% of the health facilities.
- The provision of routine child immunization in health facilities on daily basis was 80% of health facilities, while only 3% of health facilities offer weekly child immunization services. None of the health facilities offer monthly and quarterly child immunization services in health facilities.

Figure 30: Percentage of facilities that offer child immunization services (N=568)

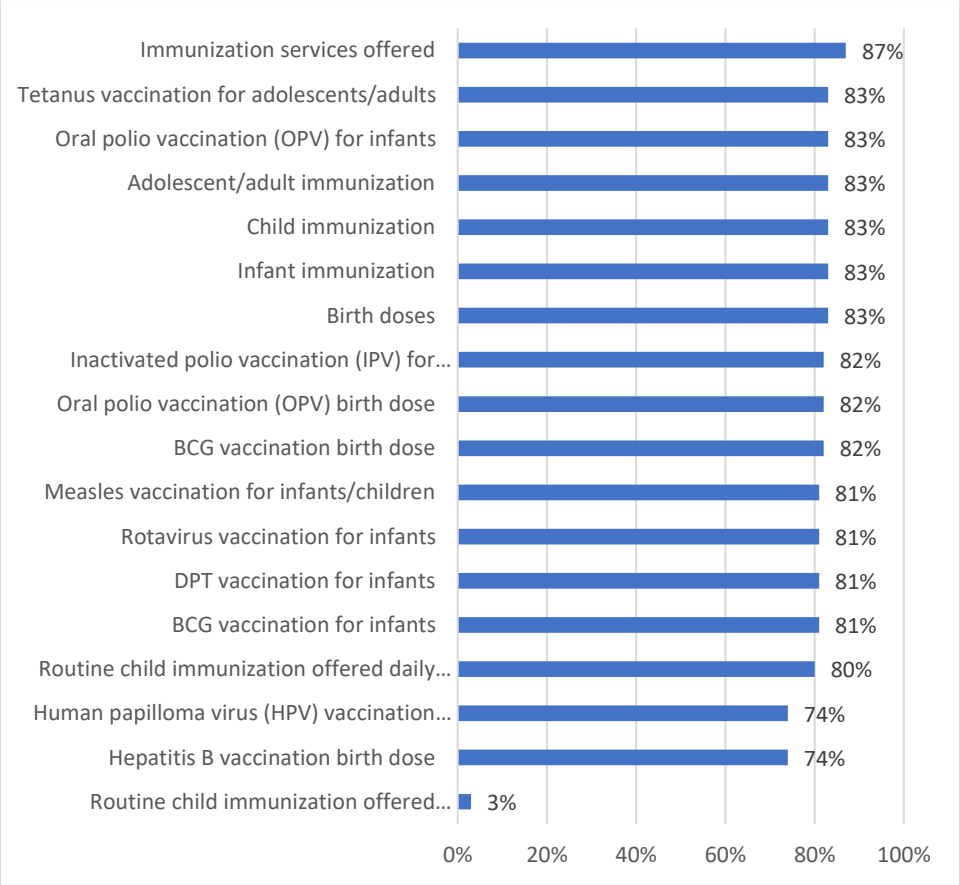


Table 29-30, annex 1 illustrates the percentage distribution of facilities offering child immunization services by facility type, rural/urban, and managing authority.

- Five out of fifteen counties offer child immunization services in all their existing health facilities.

- Health facilities also offered immunization services as outreach programs on a weekly (3%), monthly (0%), and other basis (0%) basis.

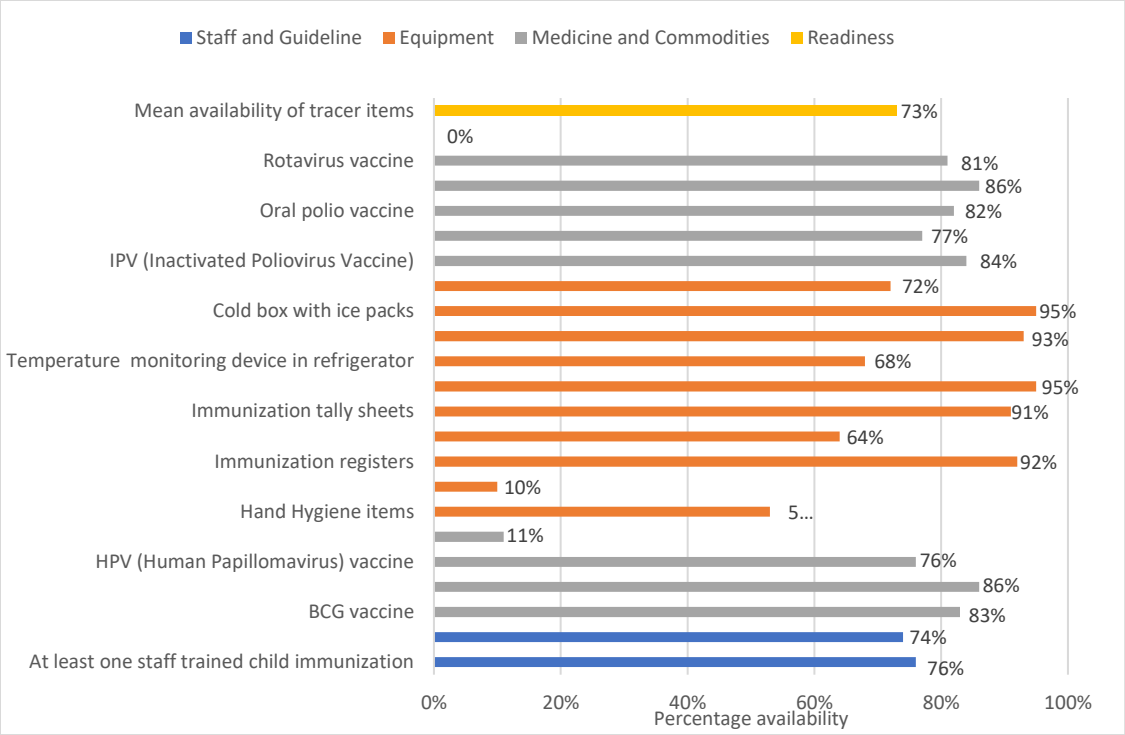
5.2.6.2 Child immunization service readiness

The assessment account for 21 tracer items that need by health facilities to provide routine child immunization services.

Key findings

- In Figure 31 below, the mean availability of tracer items was at 73% of health facilities providing immunization services (N=506), which is 7% reduction compared to 2018 SARA.
- Seventy-two percent of the health facilities had refrigerators, whereas the percentage of health facilities having cold boxes with ice packs remains at 95%.
- Temperature monitoring devices for vaccines were available in 68% of the health facilities, while 10% of them had adequate refrigerator temperatures.
- Almost of health facilities had sharp containers available (96%), and the majority had Auto disposable syringes available (93%)
- Guidelines for immunization were available in 74% of health facilities, a decrease of 11% compared to 2018, and at least one staff trained in childhood immunization for the past two years preceding the survey was in 76% of the health facilities.
- Sixty-four percent (64%) of the health facilities had immunization cards. The following percentage of facilities had the following vaccines:
    - BCG vaccines (83%)
    - DPT-Hib+HepB vaccine (86%)
    - Oral Polio Vaccine (82%)
    - Pneumococcal vaccine (86%)
    - Rota virus vaccine (83%)
    - Measles vaccine (77%)
    - Inactivated poliovirus vaccine in (84%), an increase of 20% in all health facilities compared to the 2018 survey report
    - Human papillomavirus vaccine in 76% of the health facilities, an increase of 63% when compared to the 2018

Figure 31: Facilities that have tracer items for child immunization services (N=506)



Key findings from Figure 32 which shows the main tracer items used to determine the readiness of health facilities in Liberia are seen below.

- Equipment was available in 70% of the health facilities, guidelines and trained staff in 82%, and vaccines and commodities in 74% of the health facilities that offer immunization services.
- Most counties had the required tracer items apart from Montserrado in which 63% of the health facilities had the required vaccines and commodities and Sinoe in which 60% of health facilities had the required equipment to support immunization services.
- The availability of tracer items with health facility type shows an increased base on health facility type level; hospital (82%), health centers (77%), and clinics (73%).
- Fewer tracer items were experienced in Private for-profit (58%) facilities. Rural health facilities had more of the tracer items (78%) than their counterpart in urban (67%).
- Two out of fifteen counties provided immunization services with at least one tracer item in 86% of their existing health facilities i.e. Maryland and Gbarpolu.

Figure 32: Frequency of availability of tracer items for immunization service in health facilities in Liberia by county, facility type, rural/urban, and ownership

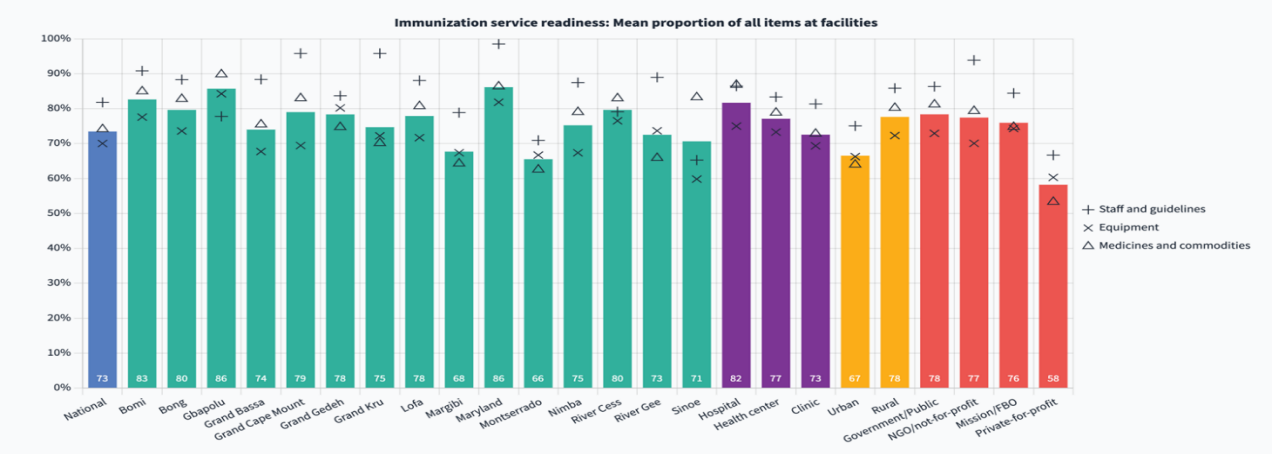
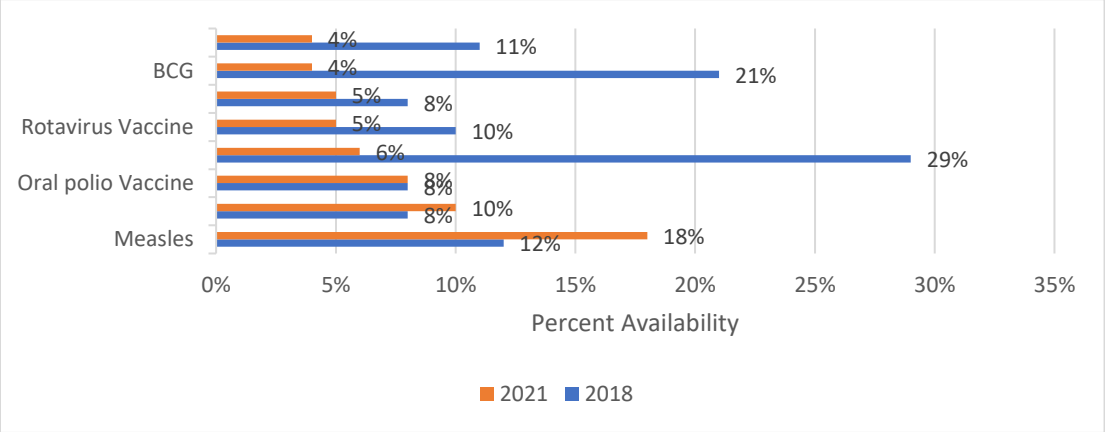


Figure 33 below, shows that some of the vaccines were stock out in the last three months preceding the survey in some facilities with the highest stock out reported in Measles (18%), DPT vaccine (10%), OPV (8%) IPV (6%), Rota and Pneumococcal vaccine (5%), BCG and HPV 4% each in health facilities. Comparing 2018 to 2021, the majority of health facilities in 2018 had vaccine stock-out in the last three months.

Figure 33: Percent of health facilities that had Vaccine stock-out in the last three months (2018 versus 2021)



Immunization is a key intervention in reducing the mortality and morbidity of children. In Liberia, Immunisation services are generally available in 73% of the health facilities providing the service which is commendable. All the immunizing facilities have either a fridge or cold box, almost all had AD syringes and three-quarters of facilities carried out immunization daily.

Most vaccines at the time of the survey were available except for IPV, BCG, Measles, and Human papillomavirus vaccines which were available in less than 27% of facilities. It is recommended that the country must ensure that fridges and cold boxes are supplied with an adequate supply of vaccines to health facilities for primary immunization in order to increase and sustain high immunization coverage and thereby reduce or eliminate vaccine-preventable diseases in children under five.

5.2.7 Antenatal care availability and readiness

One of the highest maternal mortality rates in the world is seen in Liberia. Maternal mortality can be avoided by receiving high-quality antenatal care (ANC). Additionally, antenatal care offered as a full package or profile is one of the most Essential Basic Package of Essential Health Services (BPEHS) for maternal care.

5.2.7.1 Antenatal Care Availability

In Liberia, the assessment of availability for antenatal care service considered the following six tracer items in equal measure:

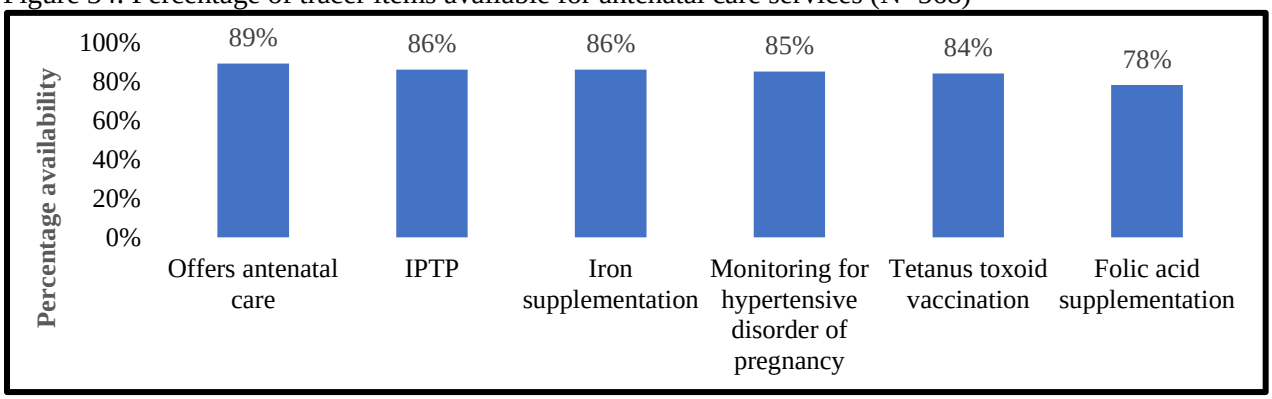
- Provision of Antenatal care services
- Provision of Iron supplementation
- Provision of folic acid supplementation
- Provision of Intermittent preventive treatment in pregnancy (IPTP) for malaria
- Provision of Tetanus Toxoid vaccination
- Monitoring for hypertensive disorders in pregnancy

Table 31 in Annex and Figure 34 show the percentage of health facilities providing Antenatal care services in Liberia.

Key findings

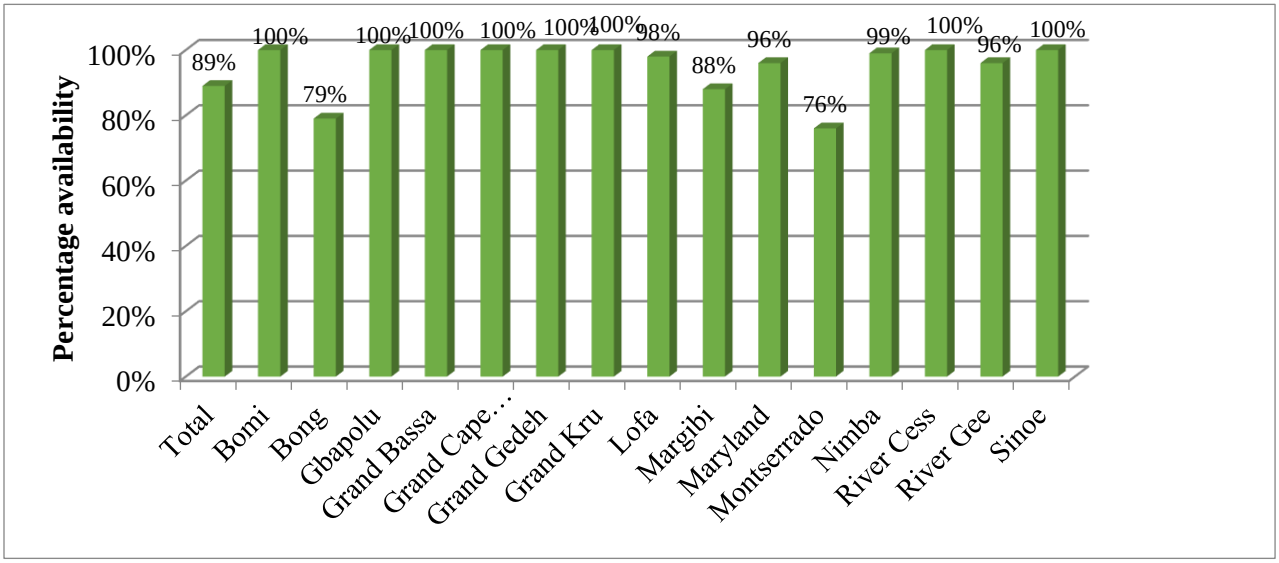
- Antenatal care services were provided in 89% of the health facilities, showing a 2% increase compared to the 2018 report.
- Intermittent Preventive Treatment in Pregnancy for malaria was available in 86% of the health facilities. Iron supplementations were provided in 86% of the health facilities.
- Folic supplementation was provided in 78% of the health facilities.
- Monitoring for hypertensive disorders in pregnancy was available in 85% of the health facilities.Tetanus toxoid vaccination was provided in 84% of the health facilities in Liberia.
- The majority of the health facilities provided ANC services - health centers (96%), clinics (88%), and hospitals (90%).

Figure 34: Percentage of tracer items available for antenatal care services (N=568)



As presented in Figure 35 below ANC service was available in all counties with the least service available in Montserrado county accounting for 76% of the health facilities, though showing an increase of 7% compared to the 2018 report.

Figure 35: Percentage of facilities that offer antenatal care services, by region (N=568)



5.2.7.2 Antenatal Care Service Readiness

The following tracer items were considered during assessing the readiness of facilities to provide antenatal care services among facilities that offered ANC:

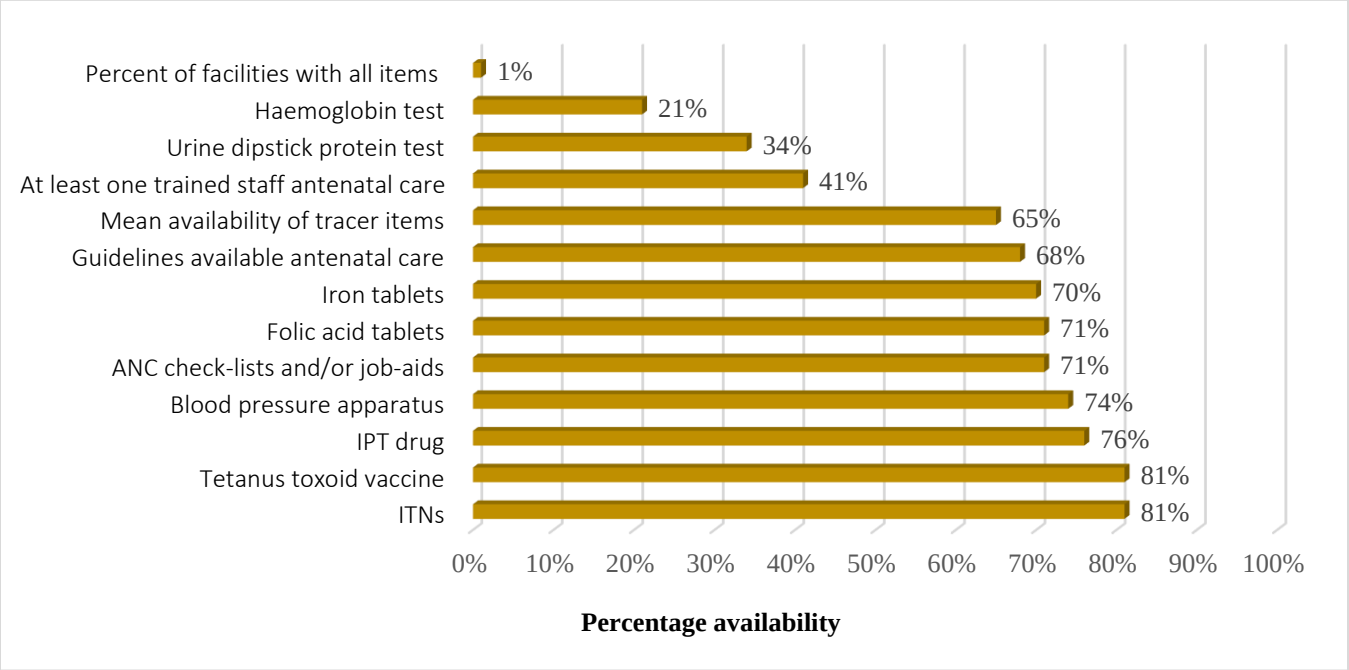
- guidelines on antenatal care services;
- at least one trained staff in antenatal care in the past two years;
- availability of blood pressure machine/apparatus;
- availability of diagnostics for checking hemoglobin levels;
- availability of diagnostics to check urine dipstick for protein;
- availability of iron tablets;
- availability of folic tablets;
- availability of tetanus toxoid vaccine.

Key findings

- In figure 36 below, the mean availability of tracer items was found to be in 65% of the health facilities, with 1% of the health facilities with all tracer items.
- 81% of the health facilities were ready to provide Insecticide-treated nets and Toxoid vaccine. Intermittent preventive treatment drugs for malaria were available in 78% of the health facilities.
- Folic acid (71%) and iron tablets at (70%) were available in 89% of the health facilities, while the capacity to offer Urine dipstick protein tests (34%).

- The least available tracer item was the hemoglobin levels test which was available in only 21% of facilities. Blood pressure apparatus /machines are available in 74% of the health facilities.
- At least one staff trained in antenatal care within two years preceding the survey was available in 41% of the health facilities and Antenatal guidelines were available in 68% of the health facilities.

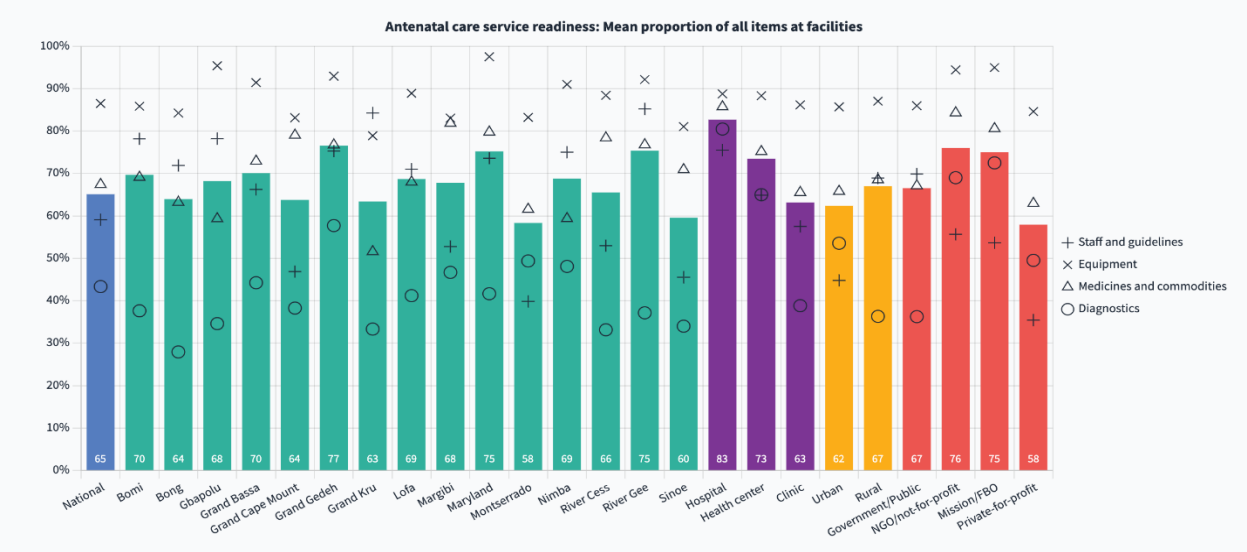
Figure 36: Facilities that have tracer items for ANC



As shown in Figure 37 below, counties had some variation when considering the readiness scores for ANC.

- Though all counties had a average readiness scores above 55%, disaggregation reveals lower scores particularly in diagnostics with Bong (28%), River Cess, and Grand Kru (33%) each, Sinoe (34%) and Gbarpolu (35%) in that order.
- The percentage of facilities that staff had received any ANC training in the last two years and guidelines was low especially in Montserrado (40%), Sinoe (46%) and in Grand Cape Mount (47%).
- Hospitals scored higher than health centers in readiness attaining 83%, and health centers (73%). The readiness score for rural facilities was 67% higher than for facilities located in urban facilities (62%).

Figure 37: Percentage distribution of facilities that have tracer items for ANC, by county, facility type, rural/urban, and managing authority



Liberia has one of the highest rates of maternal mortality in the world. Therefore, if pregnant women and babies' mothers received sufficient care, many of these deaths could be avoided. All mothers have access to high-quality ANC, which allows for the early detection of pregnancy complications and the creation and implementation of a plan to address them to lower the risk of complications and maternal and infant mortality.

Although 89% of all health facilities in Liberia offer ANC services, however, a significant proportion of health facilities in some counties do not. From the survey it was also apparent that the test for anemia and urine protein were the least available services provided in many facilities. It is recommended that ANC services be improved by enhancing the laboratory capacity to detect low hemoglobin levels and urine protein.

5.3 Basic and Comprehensive Obstetric and Newborn Care Availability and Readiness

Obstetric services for normal deliveries and essential care for every newborn are expected at all health centers and general hospitals. In addition, some dispensaries provide service for normal deliveries. All facilities that conduct these services would normally be expected also to provide

basic emergency obstetric and newborn care services, while according to WHO guidelines, a facility providing comprehensive emergency obstetric care.

5.3.1 Basic obstetric and new-born care service availability

The following nine (9) tracer items were used as a proxy measure to assess the availability and readiness of health facilities to provide basic obstetric and newborn care services.;

- Availability of delivery services
- Availability of parenteral administration of antibiotics
- Availability of parenteral administration of oxytocic drug
- Availability of parenteral administration of anticonvulsants
- Provision of assisted vaginal delivery
- Provision of manual removal of placenta
- Provision of manual removal of retained products
- Provision of neonatal resuscitation
- Availability and provision of the basic signal obstetric and newborn functions.

Types of services offered

a) Delivery services b) Parenteral administration of antibiotics c) Parenteral administration of oxytocic drug
d) Parenteral administration of anticonvulsants e) Assisted vaginal delivery f) Manual removal of placenta
g) Manual removal of retained products h) Neonatal resuscitation i) Basic emergency obstetric and newborn care

Figure 38 shows the percentage of health facilities offering obstetric care and newborn services
Key findings (Table 32 in annex 1)

- Delivery services were available at 70% of the health facilities compared to 85% in 2018.
- The main proportion of Obstetric, newborn and perinatal care was 77%.
- Basic emergency obstetric care was available in 61% of the health facilities compared 62% in 2018.
- Though 61% offered BemONC, facilities that offered all 7 signal functions were very low (13%).
- 64% of facilities provided 24 hour / 7 days week delivery services by a skilled service provider
- Basic emergency newborn care was provided in 70% of health facilities compared to 57 in 2018.
- Parenteral administration of antibiotics was 95% and Parenteral administration of oxytocic was available in 97% of the health facilities assessed compared to 83% in 2018.
- On average, parenteral administration of anti-convulsants was provided in 88% of the health facilities compared 70% in 2018.
- Antenatal corticosteroid for pre-term labor is available in 50% of health facilities than 46% in 2018..
- 28% of health facilities provided assisted vaginal delivery compared 9% in 2018.
- 98% of the health facilities offered manual removal of placenta, while manual removal of retained products was in 69% of the health facilities compared to 78% and 42% in 2018.

- Neo-natal resuscitation is available in 86% of health facilities.
- Hygienic cord care/umbilical cord care is available in 99% of health facilities compared to 83% in 2018.
- Kangaroo mother care for premature and/or very small babies is available in 51% of health facilities compared 70% which is a decreased.

Figure 38: Percentage of facilities that offers Basic Obstetric Care Services (N=437)

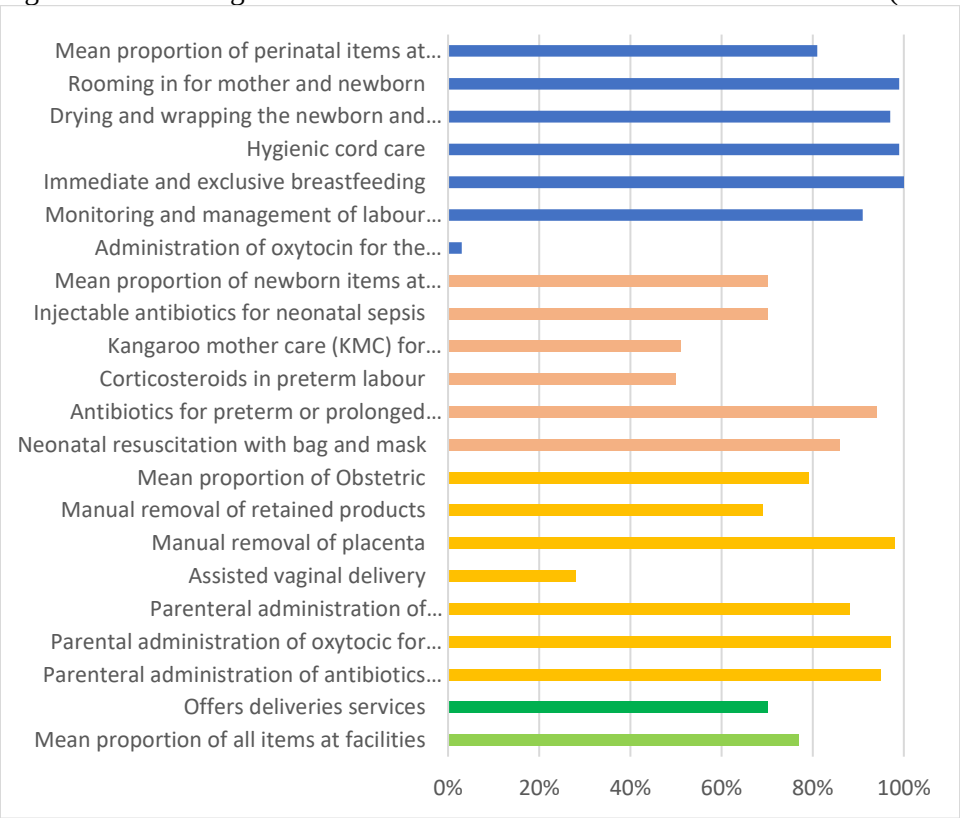


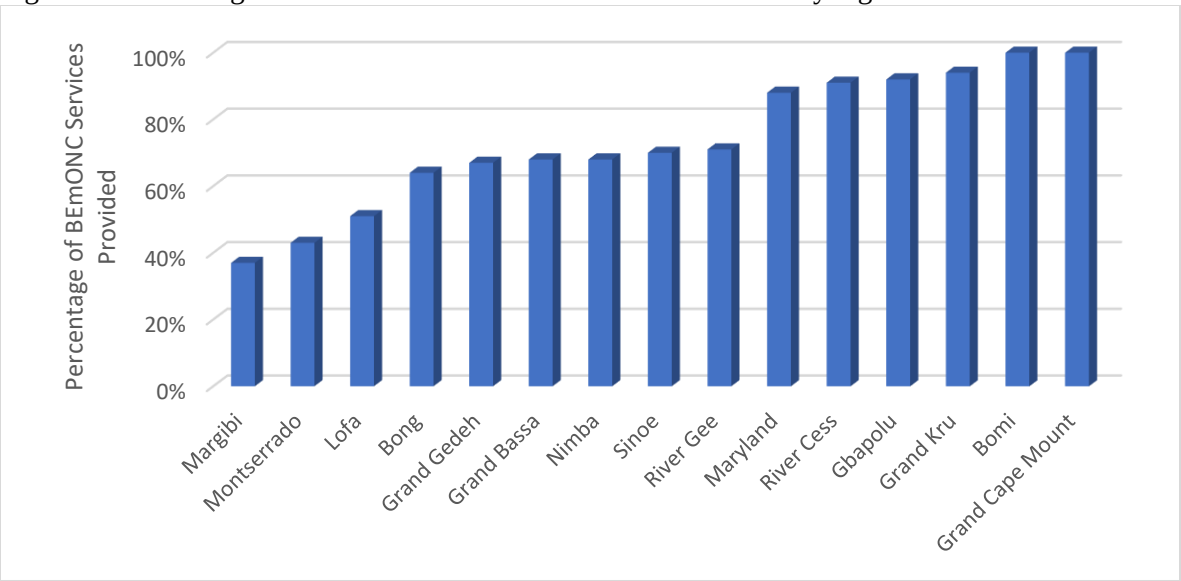
Table 24 in Annex 1 illustrates the percentage distribution of facilities offering obstetric and new-born care services by facility type, rural/urban, and managing authority.

- Delivery services were offered in 89% hospitals, 78% health centers and 68% clinics. Similarly, 89%, 75% and 62% offered 24/7 days week deliveries across hospitals, health centers and clinics respectively.
- Though 61% reported offering BEmONC, 86% of the Hospitals, 68% of health centers, and 58% of the clinics offered delivery care services as compared to 92%, 88%, and 84% in 2018. This was noted more in public health facilities with 82% and least in private for-profit at 48% in 2021, as compared to 93% and 68% respectively in 2018.
- Though 61% offered BemONC, facilities that offered all 7 signal functions were very low by facility type with hospitals (61%), health centers (13%) and clinic (11%) respectively.

- Though deliveries are offered longer days per week in urban with more BemONC services, slightly higher proportion of rural facilities provided all 7 BemONC compared to their urban counterpart.

Figure 39 shows that the availability of BemONC services was in 61% of the health facilities compared to 85% in 2018. Most counties had less than 80% availability, apart from Bomi and Grand Cape Mount (100%) each, Grand Kru (94%), Gbarpolu (92%), Rivercess (91%), and Maryland (88%).

Figure 39: Percentage of facilities that offer basic obstetric services by region



5.3.2 Basic obstetric and newborn care service readiness

To determine the capacity and readiness to offer basic obstetric and newborn care services, Liberia's assessment considered the following twenty-six (26) tracer items indicated below;

Tracer items required and considered for service delivery readiness.

Trained staff and guidelines

a) Guidelines for essential childbirth care b) Guidelines for essential newborn care
c) Staff trained in essential childbirth care in the past two years d) Staff trained in essential childbirth care in the past two years
e) Staff trained in newborn resuscitation in the past two years f) Checklists and/or job aids for essential childbirth care

Equipment

a) Emergency transport b) Sterilization equipment c) Examination light d) Delivery pack
d) Suction apparatus (mucus extractor) f) Manual vacuum extractor g) Vacuum aspirator or D&C kit h) Neonatal bag and mask
i) Delivery bed j) Partograph k) Gloves l) Infant weighing scale
m) Blood pressure apparatus n) Soap and running water OR alcohol-based hand rub

Medicines and commodities

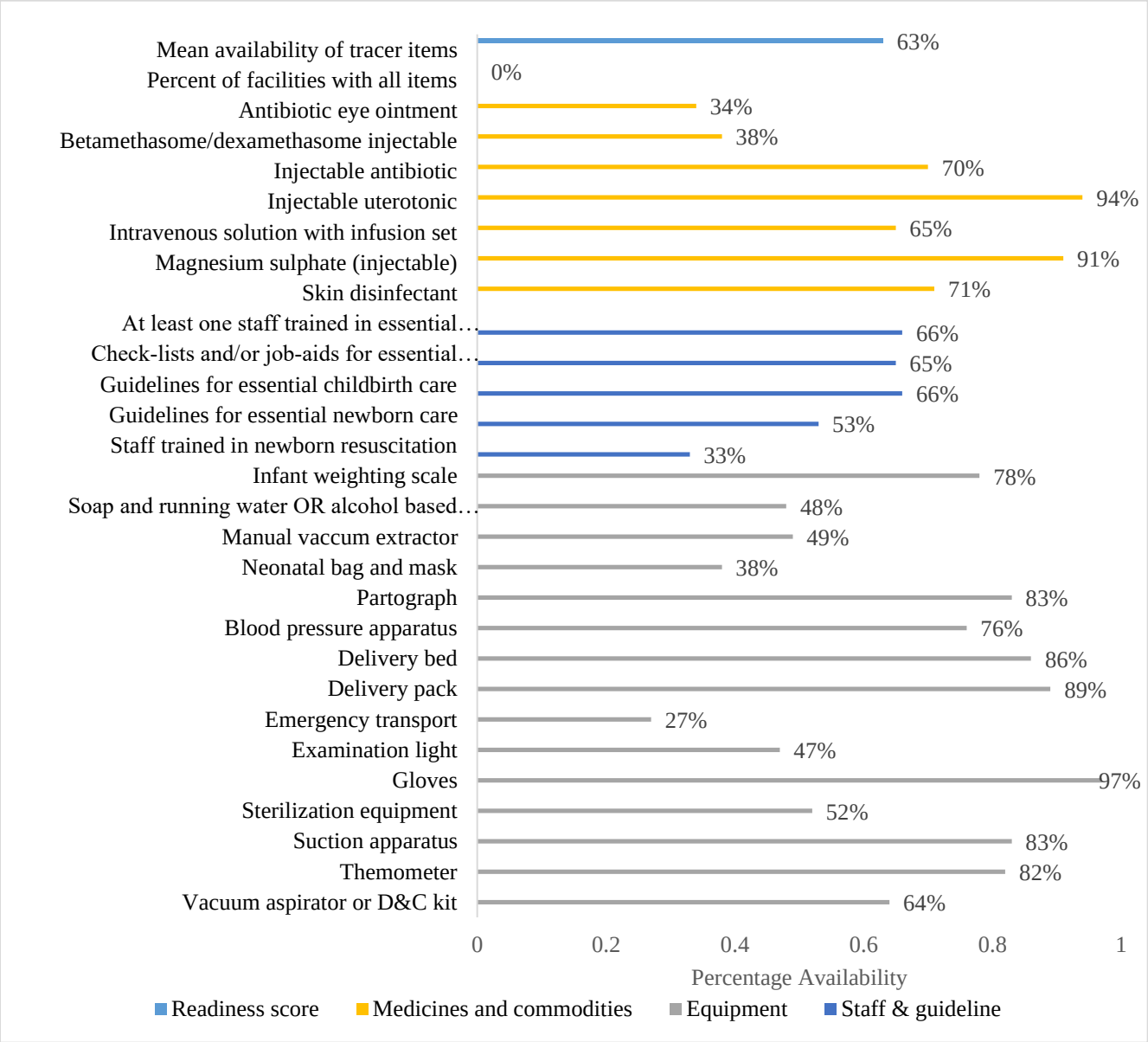
a) Antibiotic eye ointment for newborn b) Injectable uterotonic c) Injectable antibiotic
d) Magnesium sulphate (injectable) e) Skin disinfectant f. Chlorhexidine for umbilical cord care
e) g) Intravenous solution with infusion set

Figure 40 shows the percentage of health facilities offering basic obstetric care and newborn services

Key findings

- On average 63% of the health facilities in Liberia (N=437) had at least one tracer item to provide BEmONC services as compared to 81% in 2018.
- While 66% of health facilities had Guidelines for essential childbirth care, guidelines for essential newborns 53 % and 65% with job aids to provide basic obstetric and newborn care services compared to 67%, 70%, 61% in 2018 respectively.
- At least a trained staff in newborn resuscitation in the past two years preceding the survey was available in 33% of the health facilities compared 16% in 2018.
- Gloves, delivery packs, and delivery beds were available in 97%, 89%, and 96% of the health facilities and had similar trend in 2018.
- Suction machine (83%) and blood pressure machine (76%) was commonly available in health facilities.
- Partographs were available in 83% of the health facilities.
- Emergency transport was stated to be in 27% of the health facilities.
- Infant weighing scale (78%) was in more than three-quarters of the health facilities while neonatal bag and mask were in 38% of the health facilities.
- Examination light was available in 47% of the facilities.
- Vacuum aspirators and Manual vacuum extractors were available in 64% and 49% of the health facilities respectively.
- Sterilization equipment was recorded in 52% of health facilities compared to18% in 2018
- Injectable uterotonic was available in 94% and antibiotic eye ointment was available in 34% of the health facilities compared to 91% and 86% respectively.
- Skin disinfectant was in 71% of the health facilities compared to 91% in 2018.
- Injectable antibiotics 70%), intravenous solution set (65%) and magnesium sulphate injectable (91%) were other major drugs available in most of the health facilities.

Figure 40: Facilities that have tracer items for basic obstetric and newborn care



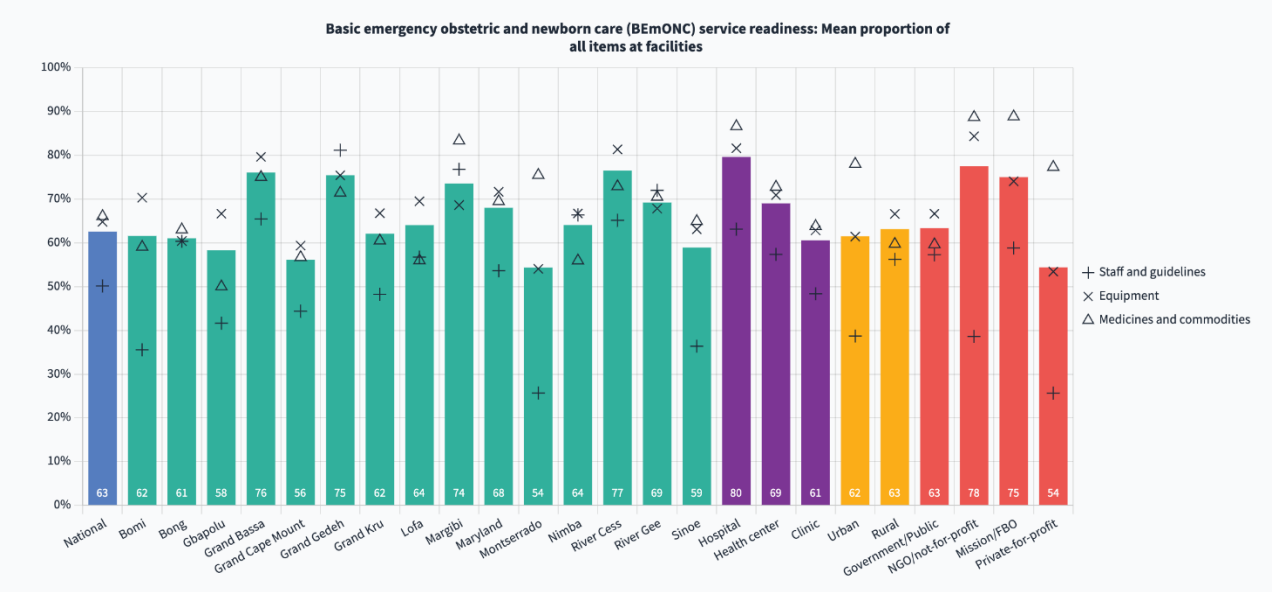
Key findings

Figure 41 below shows the main tracer items of basic emergency obstetric and newborn care used to determine the readiness of health facilities in Liberia.

- The overall readiness score of health facilities accounts for 63%
- Half of the health facilities assessed had staff and guideline readily available
- Hospitals had the greatest availability of the majority of the basic obstetric care items (80%) compared to all other facility types, health centers (69%), and clinics (61%).

- NGO/not-for-profit facilities had the highest mean availability of tracer items (78%), closely followed by Mission/FBO (75%) and Private-for-profit facilities having the least (54%)
- Montserrado having most of Liberia's health facilities had the least percentage of health facilities (54%) having at least one tracer item to provide BEmONC services.
- There was little difference between Rural facilities and urban health in the mean availability of all tracer items (63% and 62% respectively)

Figure 41: Frequency of availability of tracer items for basic emergency obstetric and newborn care service in health facilities in Liberia by county, facility type, rural/urban, and ownership



5.4 Comprehensive obstetric and newborn care service availability and readiness

5.4.1 Comprehensive obstetric and newborn care service availability

The assessment for comprehensive obstetric and newborn care service availability was based on 3 services offered in health facilities thus;

- Availability of comprehensive obstetric and newborn care services
- Availability of Caesarean section

- Availability of Blood transfusion

Types of services offered considered

- Caesarean section
- Blood transfusion
- Comprehensive emergency obstetric and newborn care

Figure 42 shows the percentage of health facilities offering Comprehensive obstetric and newborn care service availability with emphasis on hospitals.

Key findings

- Though 14% available across all facilities assessed, comprehensive emergency obstetric care was available in 86% of hospitals as compared to 60% in 2018.
- Caesarean section was provided in 89% of the hospitals and 19% of the health centers in 2021 compared to 89% and 12% in Hospitals and Health centers in 2018 respectively.
- Blood transfusion services were available in 92% of the hospitals and in 26% of the health centers in 2021 than noticed with 89% and 18% hospitals and health centers in 2018 respectively.

Figure 42: Facilities that offer comprehensive obstetric and newborn care services, by facility type

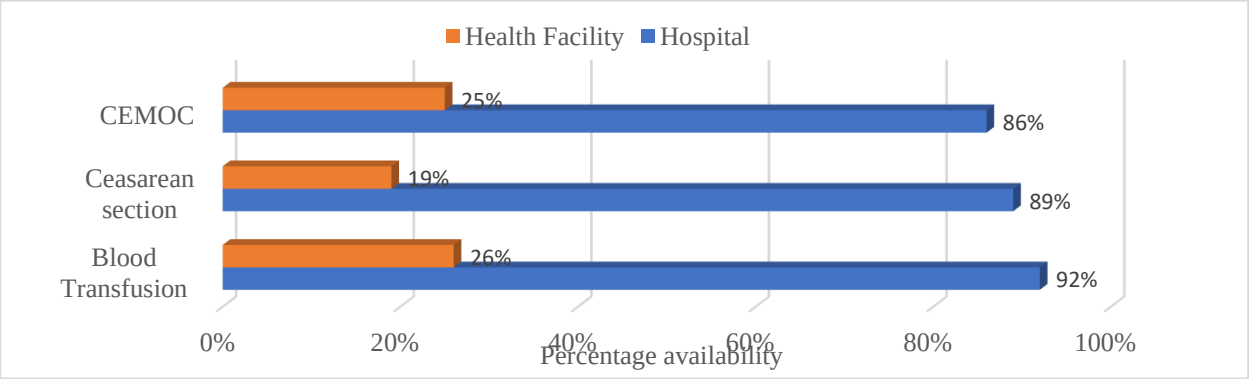
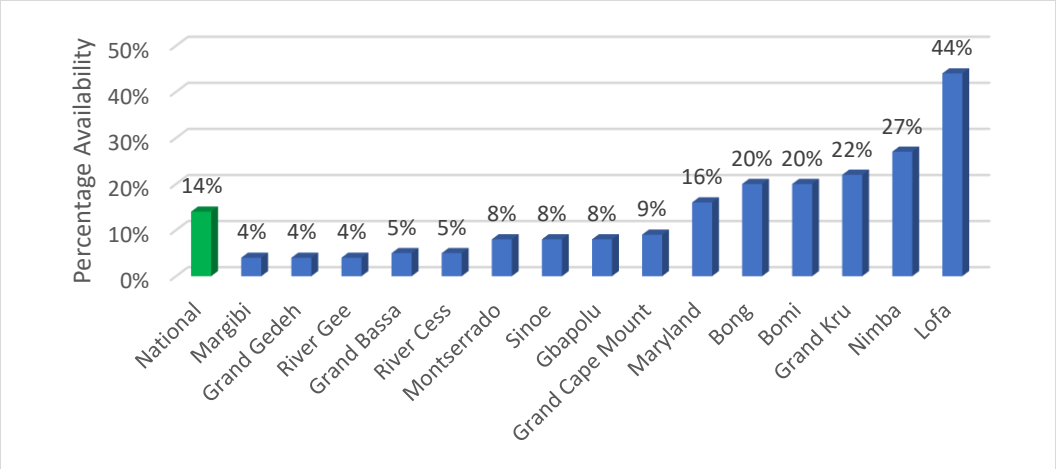


Table 33, Annex 1, and figure 43 below:

- On average, 14% of health facilities are providing CEmONC services compared 4% in 2018.
- By county, Lofa had higher proportion of health facilities that provided CEmONC services with 9 counties providing below 10%.
- Over 60% of hospitals (all urban) provided all 9 signal functions.
- No facilities in Maryland and Grand Kru counties provided all 9 signal functions.
- Higher proportion of CEmONC services are provided in urban compared to rural.

Figure 43: Percentage of facilities that offer comprehensive obstetric care services, by County (N=568)



5.4.2 Comprehensive obstetric and newborn care service readiness

A total of 17 tracer items was used to assess the CEmONC service readiness in Liberia. The total number of health facilities (N= 100) was based on health facilities providing caesarean section.

Tracer items required for service delivery readiness in CEmONC

Trained staff and guidelines

a) Guidelines for CEmONC b) Staff trained in CEmONC c) Staff trained in surgery
d) Staff trained in anaesthesia

Equipment

a) Anaesthesia equipment b) Incubator c. Phototherapy equipment for jaundice in newborn

Diagnostics

a) Blood typing b) Cross match testing

Medicines and commodities

a) Blood supply sufficiency b) Blood supply safety c) Lidocaine 21% d) Epinephrine (injectable)
e) Halothane (inhalation) f) Atropine (injectable) g) Thiopental (powder)
h) Suxamethonium bromide (powder) i) Ketamine (injectable)

Key findings (Figure 44 below reveals that)

- On average 25% of the health facilities (N=100) had at least 1 tracer item to provide CEmONC services as compared to 44% in 2018 (N=58) with none of the health facilities having all items compared to 2% in 2018.
- However, distribution by facility type reveals 54% of hospitals are ready to provide CEmONC. At least 1 staff trained in surgery, for the past two years preceding the survey was in 47% in 2021 compared to 72% in 2018, while trained in Anaesthesia reduce to 45% of the health facilities compared to 66% in 2018.
- Blood supply sufficiency has reduced from 33% to 29% in 2021, cross matching test reduced from 29% to 15%, incubators reduced from 37% to 16%, guidelines for CEmONC

increased from 18% to 22%, while trained staff in CEMOC increased from 15% to 27% of the health facilities in the past two years preceding the survey in 2021

- Lidocaine 5% was provided reduced from 48% to 21% of the health facilities in Liberia
- Epinephrine injectable reduced from 64% to 28% of the health facilities
- Halothane inhalers reduced from 22% to 7% of the health facilities
- Atropine injectables reduced from 53% to 24% of the health facilities.
- Thiopental powder reduced from 34% to 7% of the health facilities in Liberia
- Suxamethonium bromide powder was reduced from 27% to 8% of the health facilities while Ketamine injectable reduced from 67% to 36% of the health facilities

Figure 44: Percentage of facilities that have tracer items for comprehensive obstetric and newborn care services

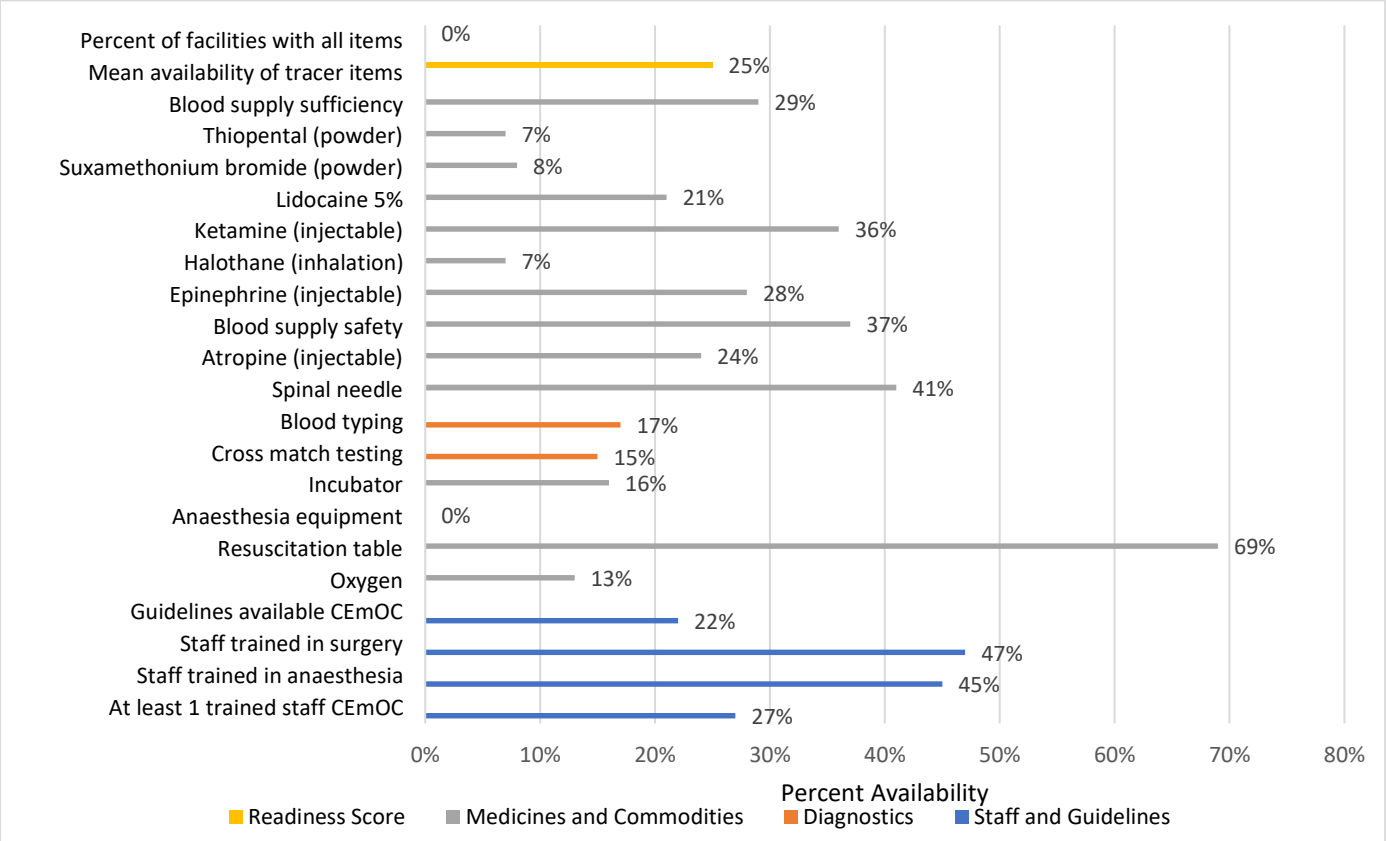
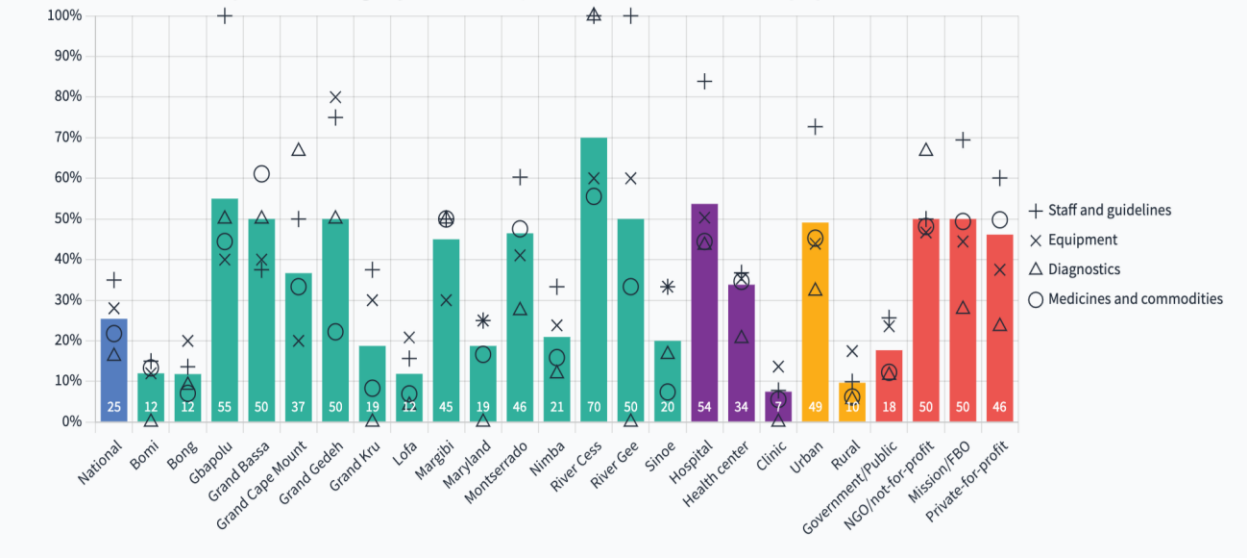


Figure 45 below, show the readiness score index for CEmONC score of 25% (N=100).

- Disaggregation by facility reveals very high proportion among hospitals. About 74% staff trained were trained in CEmONC, 100% in surgery and 97% staff trained in anaesthesia respectively.
- However, Oxygen with administration equipment (including paediatric sized) (29%) was low while Blood supply sufficiency and Blood supply safety were at 58% and 84% respectively among hospitals.

- The counties with minimal readiness were Lofa (12%), Bong (12%), Bomi (12%) and Nimba (21%)
- Thirty-five percent (35%) of the heath facilities assessed had staff and guideline, equipment (28%), diagnostics (16%) and medicines and commodities at 22% respectively.
- Fifty percent of NGO/not-for-profit facilities and Mission/FBO facilities had their mean availability of tracer items for CEmONC services while public facilities had 18%.
- There was a significant difference between Rural facilities and urban health in the mean readiness of tracer items (10% and 49% respectively).

Figure 45: Facilities that have tracer items for comprehensive obstetric care, by county, facility type, rural/urban and ownership



5.5 Adolescent Health service Availability and readiness

5.5.1 Adolescent Health service Availability

Adolescent health services aim at providing services that are friendly to the youth. During the assessment of service availability, the following 8 types of services were used to establish service availability.

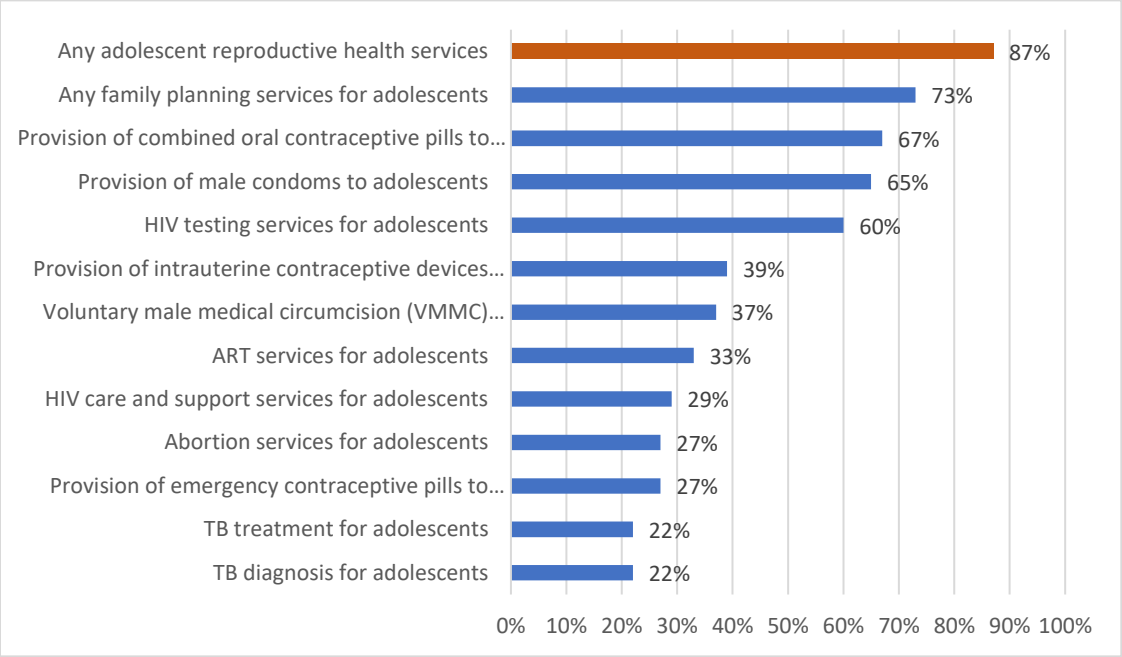
Types of services offered/tracer indicators for service availability for adolescent health

a) Adolescent health services
b) HIV testing and counseling services to adolescents
c) Family planning services to adolescents adolescents
d) Provision of combined oral contraceptive pills to adolescents
e) Provision of male condoms to adolescents
f) Provision of emergency contraceptive pills to adolescents
f) Provision of intrauterine contraceptive device (IUCD) to adolescents
g) Provision of ART to adolescents

Key findings (Figure 46 below)

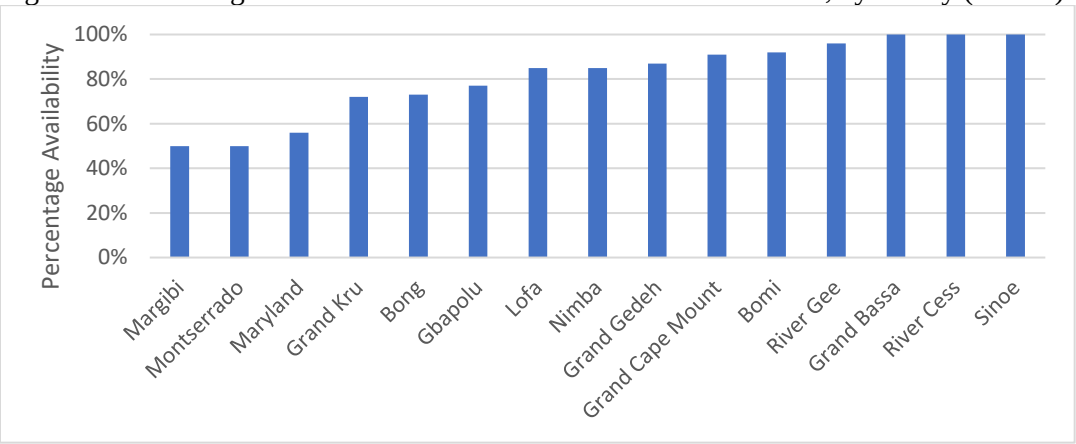
- The availability of adolescent service was in 87% of the health facilities (N=568) compared to 86% (N=765) in 2018 in Liberia with the provision of ART to adolescents remaining the same (33%) in 2021 as in 2018.
- Family planning services to adolescents decreased from 76% to 73% of the health facilities in 2021.
- HIV testing and Counseling services to adolescents increased to 60% of the health facilities compared to 56% in 2018.
- Provision of Antiretroviral treatment to adolescents remains the same at 33% in 2021 and 2018 respectively
- Combined oral contraceptive pills and emergency contraceptive pills for adolescents were available in 67% and 27% of the health facilities respectively.
- IUCD to adolescents were available in 39% of health facilities than 38% in 2018.
- Male condoms offered to adolescents have reduced to 65% of the health facilities compared to 79% in 2018.

Figure 46: Percentage of facilities that offer adolescent health services (N=568)



All facilities in Grand Bassa and Rivercess have Adolescent health services available, while the percentage of facilities offering adolescent health services in other counties ranged between 50% - 96%. **F**igure 47 below show that of the fifteen counties.

Figure 47: Percentage of facilities that offer adolescent health services, by county (N=568)



In Table 34 Annex 1, the Provision of emergency contraceptive pills to adolescents (27%) was least provided across all counties mainly by public facilities (29%).

- Only two (2) out of fifteen (15) counties (i.e., Grand Kru and River Gee) have recorded over 67% in provision of emergency contraceptive pills to adolescents.
- The counties with very low percentages of their facilities with Provision of emergency contraceptive pills to adolescents were notably; Sinoe (23%), Bong (17%), Grand Bassa (11%) while Gbarpolu (8%) Grand Cape Mount (0%) and were providing this service on a low scale or not providing it at all.
- Health facilities distribution by type indicates the provision of adolescent health services at 89% of hospitals, 76% of health centers, and 69% of clinics with more availability in rural facilities (87%) than urban ones (52%). Adolescent health service was offered in 85% of public health facilities as compared to 67% of private facilities on average.

5.5.2 Adolescent health service readiness

To establish service readiness for facilities to provide essential services in adolescent health six (6) tracer items below were used:

Tracer items required for service delivery

Trained staff and guidelines

a) Guidelines for service provision to adolescents b) Staff trained in provision of adolescent health services
c) Staff providing family planning services trained in adolescent sexual and reproductive health
d) Staff providing HIV testing and counseling services trained in HIV/AIDS prevention, care, and management for adolescents

Diagnostics

a) HIV diagnostic capacity

Medicines and commodities

a) Condoms

Key findings (Figure 48 below)

- On average 54% of the health facilities (N=448) had at least 1 tracer item to provide adolescent health services compared to 38% of facilities (N=639) in 2018, while 5% of facilities had all tracer items compared to none in 2018 SARA findings.
- Staff providing family planning services trained in adolescent sexual and reproductive health were less available (66%), while (47%) of facilities had at least a staff trained in the provision of adolescent health services.
- Staff providing HIV testing and counselling services trained in HIV/AIDS prevention, care and management for adolescents in the past two years preceding the survey increase to 36% in 2021 from 20% in 2018.
- HIV Diagnostic capacity to test/check for HIV was available in 90% of the health facilities with more found in rural areas with a 20% increase compared to 70% in 2018 findings.
- 77% of health facilities had condoms available to adolescents with 93% availability at NGO/not-for-profit health facilities.

Figure 48: Facilities that had tracer items for adolescent health services (N=448)

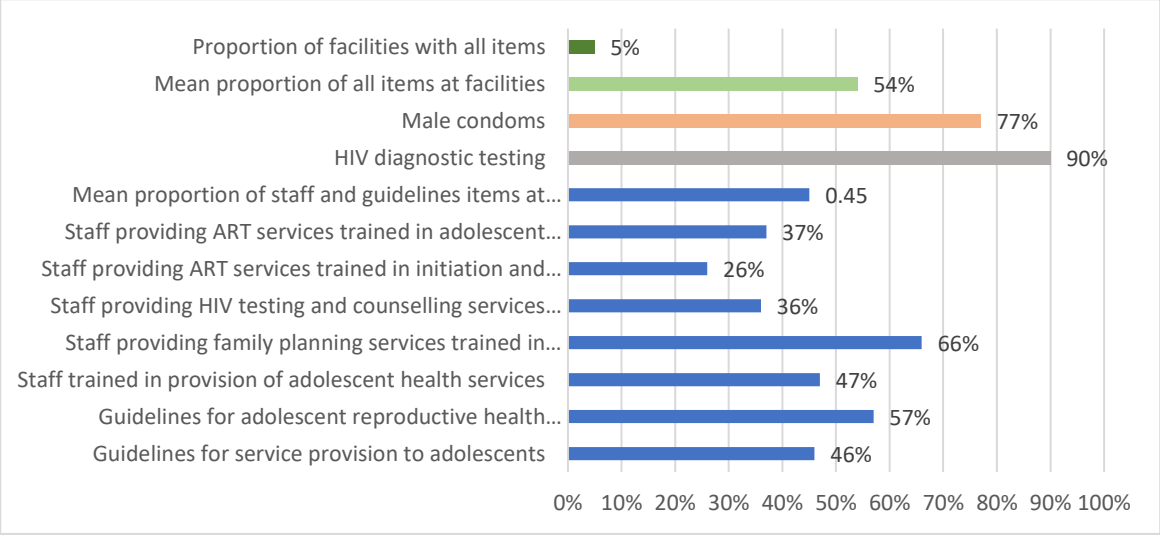


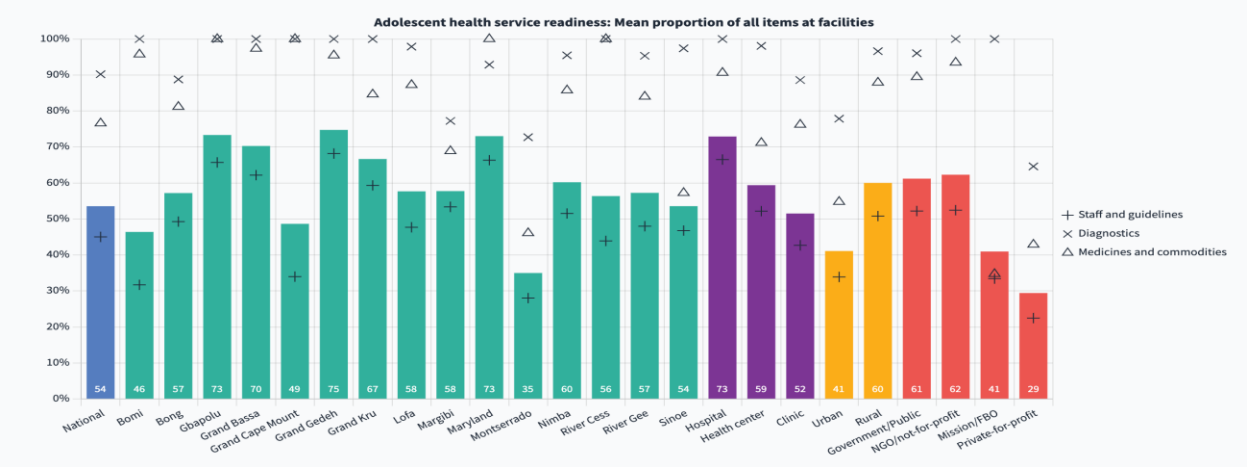
Figure 49 below shows the tracer items for assessing the capacity of the health facilities to provide adolescent services by county, facility type, rural/urban and managing authority

- The overall readiness score was recorded at 54% indicating 72% for Hospitals, 59% for health centers, and 51% for clinics across all counties. Though the medicines and diagnostic facilities

were available in all counties, trained staff and guidelines were less available across counties with 47% and 46% availability.

- The mean availability of the tracer items for hospitals increased by 18% (from 54% in 2018 to 72% in 2021) and health centers by 14% (from 45% in 2018 to 59% in 2021).
- Less than 50% of health facilities in Bomi, Cape Mount and Montserrado were ready to provide adolescent health services compared to other counties

Figure 49: Facilities that have tracer items for adolescent health services by county, facility type, rural/urban and ownership



5.6 HIV/AIDS Service Availability and Readiness

5.6.1 HIV counselling and testing service availability

In the determination of service availability for HIV counselling and Testing 1 tracer service indicator was used for availability of the services. The tracer indicator is highlighted below.

Types of services offered used as tracer for availability of the service

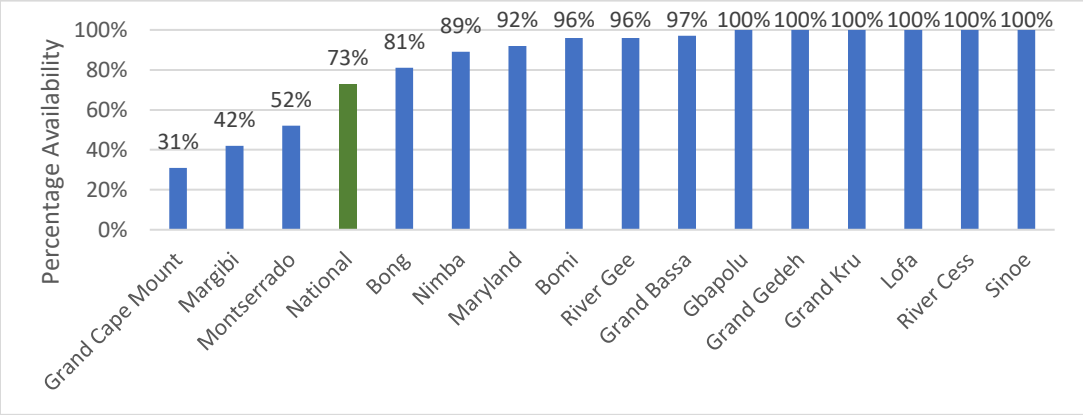
a) HIV counseling and testing services

Key findings (figure 50 below and Table 35 in Annex 1)

- With 9% increase in 2021, HIV counseling and testing services were offered in 73% of the health facilities across the different levels of facilities in Liberia, with major disparities across the counties.
- Five (5) of the fifteen (15) counties have all health facilities offering HIV counseling and testing services.
- Health facilities in Grand Cape Mount and Margibi counties reported the lowest availability score of HIV counseling and testing services at 31% and 42% respectively. This result has shown improvement specifically for Margibi from 35% in 2018 up to 42% in 2021.

- Ninety-four percent (94%) of Hospitals visited provided HIV C&T services in 2021 compared to 100% in 2018, while Health centers increased from 86% in 2018 to 87% in 2021, and clinics increased to 71% from 69% in 2018.
- The data showed that 95% of NGO/not-for-profit facilities and 90% Government/Public of facilities offered this service. Rural health facilities reported the highest at 89% compared to 55% among urban health facilities.

Figure 50: Facilities that offer HIV counseling and testing services, by county (N=568)



5.6.2 HIV counselling and testing service readiness

Tracer items are important in undertaking quality HIV counselling and testing. The assessment considered the following 5 tracer items within the 4 domain items for establishing the readiness of the health facility to provide counselling and testing service.

Tracer items required for service delivery readiness for HIV counseling and testing;

Trained staff and guidelines

a) Guidelines on HIV counseling and testing

b) Staff trained in HIV counseling and testing

Equipment

a) Visual and auditory privacy

Diagnostics

a) HIV diagnostic capacity

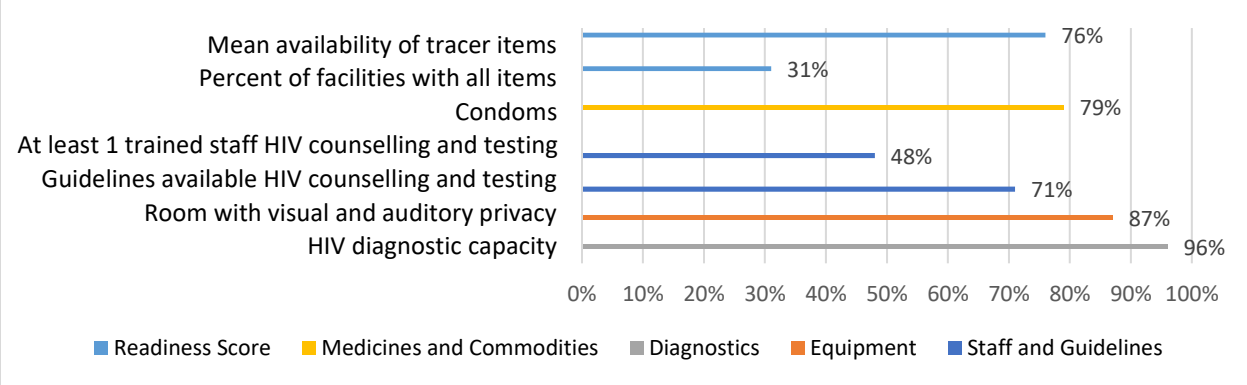
Medicines and commodities

a) Condoms

Key findings (Figure 51 below)

- In Liberia 76%% of the surveyed health facilities (N=469) had at least one tracer item for the provision of HIV counseling and Testing services as compared to 74% in 2018 and 31% of them had all tracer items required as compared to 20% in 2018 (N=448).
- Diagnostic capacity to check for HIV was available in 96% of the (N=469) surveyed facilities and 87% of them had a room with visual and auditory privacy. These findings were different from 2018, with 91% SARA Diagnostic capacity to check for HIV and 90% visual and auditory privacy conducted. Condoms were issued in 79% of the health facilities surveyed. The result showed a change of 4% decreased between 2018 (83%) and 2021
- Availability of Guidelines for HIV counseling and testing increase from 52% in 2018 to 71% 2021. Available tracer item; at least 1 trained staff in HIV counseling and testing in the past two years preceding the survey increased from 32% to 48% in facilities surveyed in 2018 and 2021 respectively.

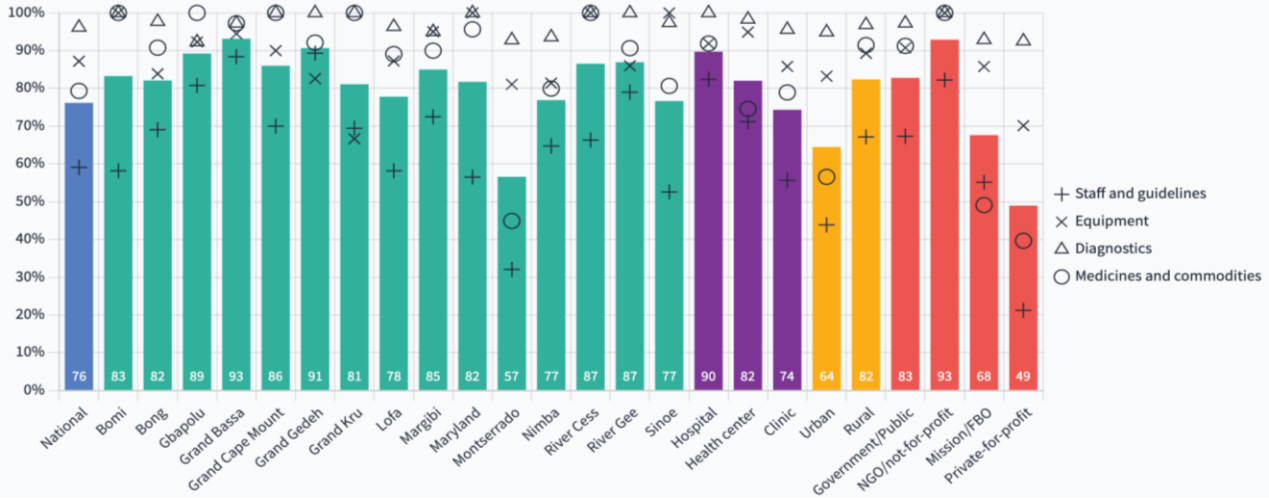
Figure 51: Facilities that have tracer items for HIV counselling and testing services



Key findings (Figure 52 below)

- On average, 89%, 82% health centers and 74% were ready to provide HIV counselling and testing services.
- On average, 82% of hospitals, 71% of health centers and 56% of clinics had staff and guidelines to provide HIV counselling and testing services.
- 91% hospitals, 95% health centers and 86% clinics had Visual and auditory privacy, while 100%, 98% and 96% of hospitals, health centers and clinics had HIV diagnostic and testing capacity.
- Montserrado (57%), and Nimba (77%) were ready to provide HIV counselling and testing services, compared to 67%, and 69% in Montserrado and Nimba in 2018.
- The readiness index was more in NGO/Not-for-profit 93%, Government/Public (83%), and Mission/faith-based (68%) with the least observed in Private-for-profit (49%).

Figure 52: Facilities that have tracer items for HIV counselling and testing services by county, facility type, rural/urban and ownership



5.6.3 HIV/AIDS care and support service availability (CSS)

The following 12 key tracer services were used to assess the availability of HIV/AIDS care and support services. The assessment findings are indicated in Figure 53 below.

Types of services offered/ tracer for HIV/AIDS care and support

a) HIV/AIDS care and support services
b) Treatment of opportunistic infections
c) Provision of palliative care
d) Intravenous treatment of fungal infections
e) Treatment for Kaposi's sarcoma
f) Nutritional rehabilitation services
g) Prescribe/provide fortified protein supplementation
h) Care for Paediatric HIV/AIDS patients
i) Provide/prescribe preventative treatment for TB
j) Primary preventative treatment for opportunistic infections
k) Provide/prescribe micronutrient supplementation
l) Family planning counselling
m) Provide condoms

Key findings

- Generally, HIV care and support services were provided in 31% of facilities (N=568) compared to 32% of the health facilities in 2018, (N=765).
- Treatment for Kaposi's sarcoma, Provide/prescribe preventative treatment for TB, and Palliative care was limited with only available in 7%, 15%, and 19% of health facilities providing these services, respectively.
- Primary preventive treatment of opportunistic infections was available in 29% compared to 30% of the health facilities in 2018.
- Also, Nutritional rehabilitation services and Links with CHWs for any HIV-related services were available in 21% and 45% respectively.
- None of the health facilities in the country offer IV treatment of fungal infections

Figure 53: Percentage of Facilities that offer HIV/AIDS care and support services

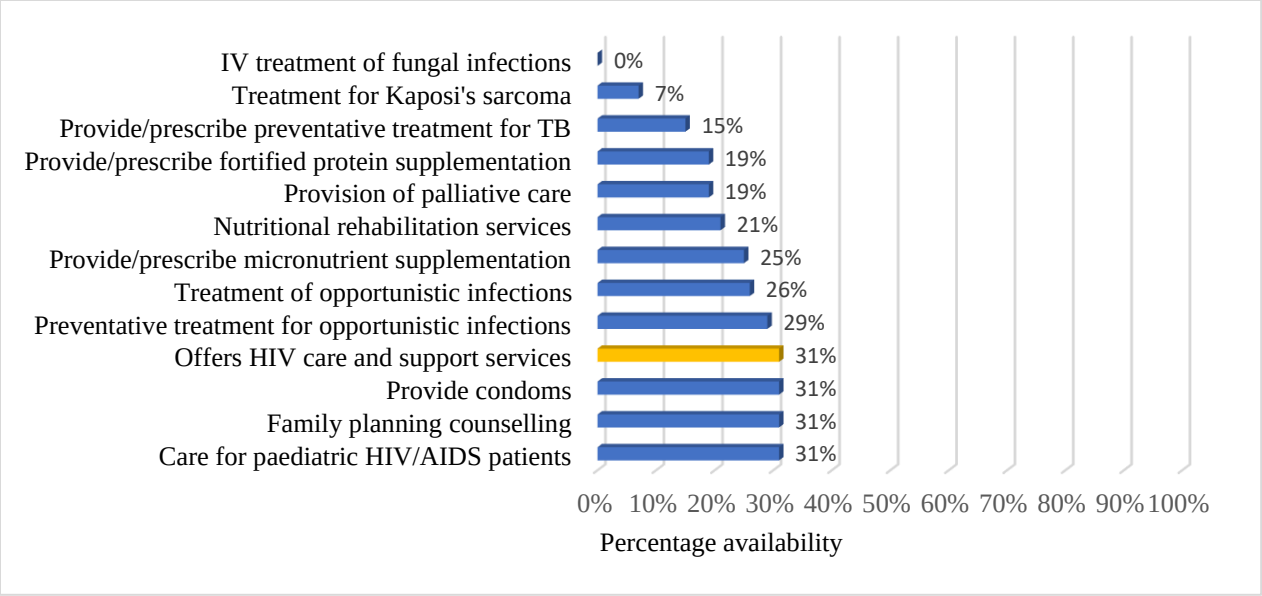


Table 36-37 annex 1 reveal the findings below.

- Hospitals have the highest availability of HIV/AIDs care and support services (86%) compared to 94% in 2018
- Facilities in Grand Gedeh account for highest availability of HIV/AIDs care and support services (75%).
- Health facilities in Rural and urban areas have less than 50% offering HIV/AIDs care and support services, accounting for 43% and 17% respectively.
- Seventy-five percent of NGO/not-for-profit facilities provide HIV/AIDs care and support services compare to 46% of government/public facilities and Private-for-profit facilities being the least account for 3%.
- TB or TB and HIV coinfection and Testing for hepatitis B and C were provided 21% and 7% of the facilities.

5.6.4 HIV/AIDS care and support service readiness

The following 16 tracer items were used to establish the health facility's readiness for HIV care and support services.

Tracer items required for service delivery readiness HIV care and support services

Trained staff and guidelines

a) Guidelines for clinical management of HIV & AIDS
b) Guidelines for palliative care
c) Guidelines for HIV/TB co-infection
d) Staff trained in any aspect of CSS for HIV
e) Staff trained in clinical management of HIV & AIDS

Diagnostics

a) System for diagnosis of TB among HIV + clients
b) Cryptococcal antigen test

Medicines and commodities

a) Intravenous solution with infusion set
c) IV treatment fungal infections
b) Co-trimoxazole cap/tab
d) Fluconazole tab/cap
e) Isoniazid tab/cap
f) First-line TB treatment medications
g) Palliative care pain management (oral)
h) Condoms
i) Nutritional supplements

Key findings (Figure 54)

- On average, facilities had 4-5 of the tracer items for HIV/AIDs Care and Support Service, for an overall readiness score of 45% compared to 58% in 2018.
- Guidelines for management of HIV/AIDS and palliative care were available in 83% and 19% in 2021 compared to 83% and 58% in 2018 respectively.
- Systems for diagnosis of Tuberculosis among HIV clients increased from 46% in 2018 to 49% in 2021.
- At least one trained staff in clinical management of HIV/AIDS in the past two years preceding the survey was available in 53% of the health facilities.
- None of health facilities had all 10 tracer items needed to offer HIV Care and support service
- Condoms, Palliative care pain management, Intravenous solution with infusion set, and Co-trimoxazole tab/caps, were the most available tracer items of the surveyed health facilities (89%, 70%, 48% and 40% respectively).
- The less likely available items were, first-line TB medicines (31%), while none of the health facilities had IV antifungal treatment for cryptococcal infection.

Figure 54: Facilities that have tracer items for HIV care and support services (N=228)

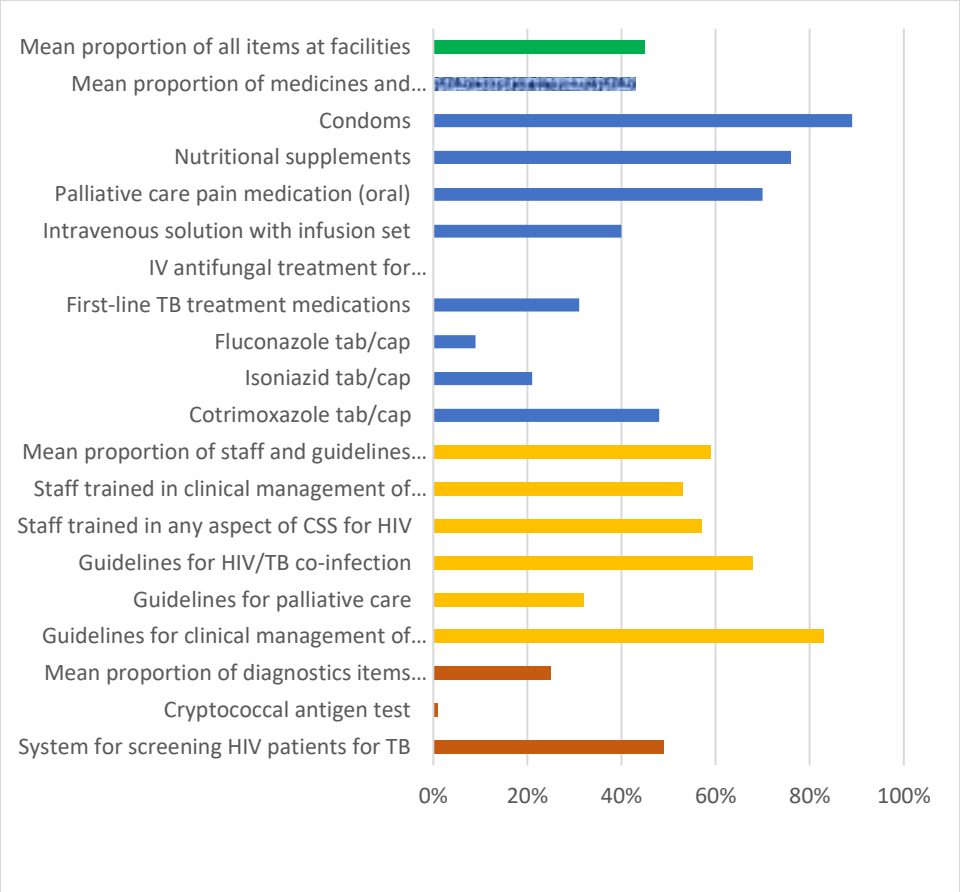


Figure 55 below, indicates the following:

- Across all counties medicines and commodities for HIV care and Support service were available in 43% of facilities in 2021 as compared to 55% of the health facilities in 2018.
- Five of the 15 counties have half of their health facilities with tracer items needed to offer HIV care and support services
- The mean proportion of all tracers items at Health facilities for HIV care and Support service in Rural areas (42%) is as compare to urban areas (54%)
- The mean proportion of all ten tracers items was highest among Hospitals (63%) compare to other facility types
- Mission/Faith-based Organization facilities has the highest score in the mean proportion (64%) of all ten tracers items as compare to Private-for-profit (53%), NGO/not-for-profit (51%) government/public facilities (44%)
- The mean proportion of staff and guidelines items at health facilities was the lowest in River Cess County (28%), whereas Grand Gedeh and Nimba health facilities have the highest mean proportion of staff and guidelines items (78%) and (77%) respectively.
- Sinoe has the lowest score (11%) on health facilities having Diagnostic capacity to provide HIV/AIDs Care and Support Service services.

Figure 55: Facilities that have tracer items for HIV care and support services by county, facility type, rural/urban and ownership (N=228)

5.6.5 HIV/AIDS antiretroviral (ARV) service availability

The introduction of ARVs to HIV patients' treatment and care has averted many deaths due to HIV. Three services offered in health facilities were used as a proxy to measure service availability for ARVs. These were:

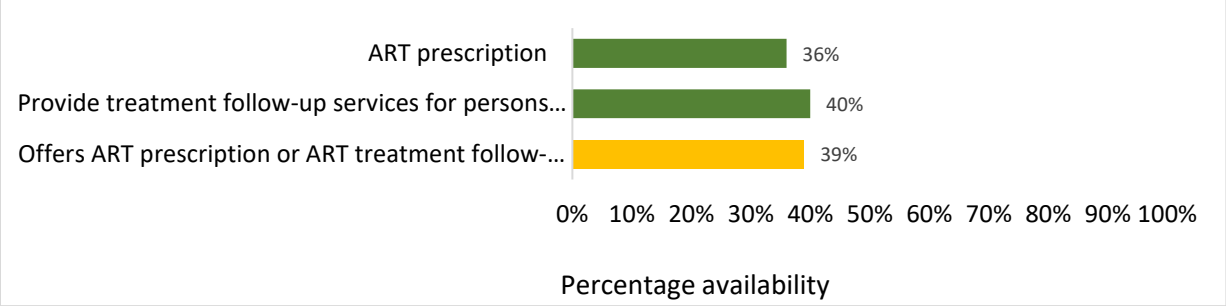
Types of services offered / tracer indicators for availability of HIV/AIDS antiretroviral services

a) ARV prescription or ARV treatment follow-up services
b) Antiretroviral prescription
c) Treatment follow-up services for persons on ART

Key findings (Figure 56 reveals below)

- Anti-retroviral prescriptions and ARV treatment follow-up services were available in 39% of the health facilities (N=568) as compared to 36% in 2018 (N=765).
- Treatment follow-ups for Anti-retroviral therapy was available in 40% of the health facilities compare to 32% in 2018
- Antiretroviral prescriptions availability improved from 36% of health facilities in 2021 compared to 34% in 2018.
  - In **table 38 annex 1,** ARV service was recorded the highest across six counties namely; Gbarpolu (85%), Lofa (75%), Bomi (72%), and Rivercess (70%) followed by Grand Gedeh (63%) and Grand Bassa at 61%. The least was observed in Montserrado at 20% with Grand Cape Mount and Maryland having 28% respectively. However, this trend shows an improvement, as 4%, 38%, 14%, 14%, 5%, and 8% were recorded in Gbarpolu, Lofa, Bomi, Rivercess, Grand Gedeh, and Grand Bassa Counties in 2018.
  - ARVs prescription was 81% across hospitals, and 68% of health centers while 30% in Clinics compared to 92%, 73%, and 29% in 2018 which shows a decreasing trend with only clinics showing a 1% increment.
  - There were major disparities between the public 50% and NGO/private not-for-profit at 82%, private for-profit 7% and urban at 26%, and rural at 45%.

Figure 56: Percentage of facilities that offer ARV services

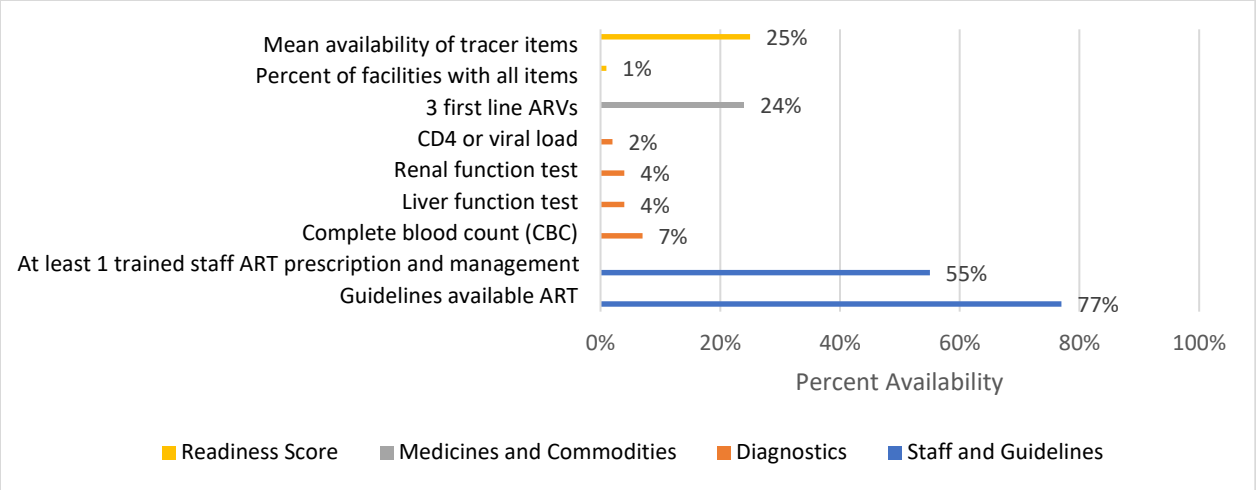


5.6.6 HIV/AIDS ARV service readiness

Key findings

- As shown in Figure 57 below, ARV service readiness score was 25% from 0% in 2018
- Guidelines for ART available in 77% of the health facilities (N=292) representing a decrease from 83% in 2018 (N=254)
- Viral load or CD4 checking decreased by 2% in 2021 of the health facilities than 4% in 2018
- Complete blood count (CBC) is done in 7% (2% increased from 2018) of the health facilities surveyed.
- Liver function test is done in 4% of 2021 (1% increased from 2018) of the health facilities
- Renal function test is performed in 4% of 2021 (1% increased from 2018) of the health facilities.
- At least 1 trained staff in ARV prescription and management in the past two years preceding the survey was in 55% 2021 of the health facilities that provide HIV treatment down from 42% in 2018.

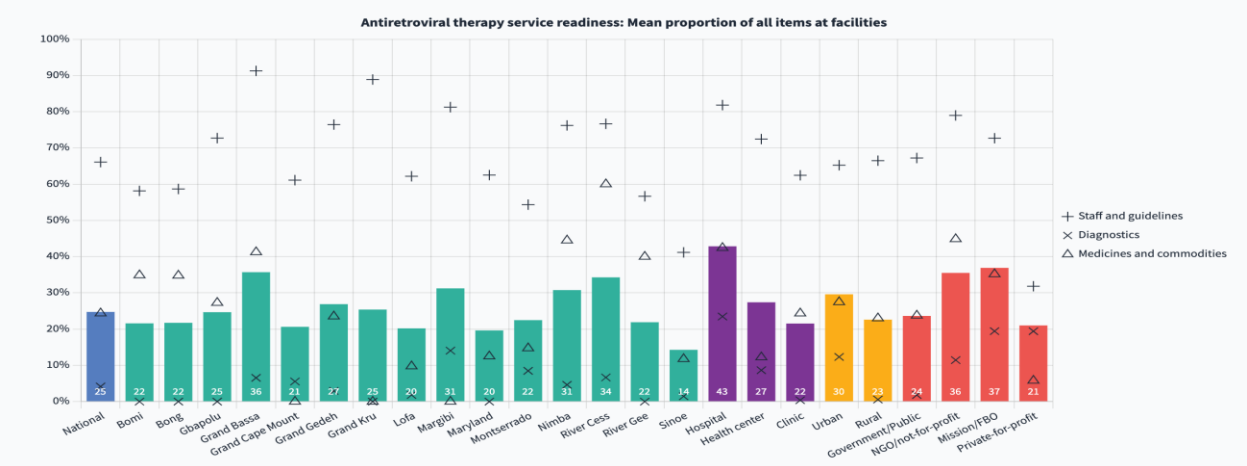
Figure 57: Facilities that have tracer items for ART services among facilities that provide this service



As shown in Figure 58 below;

- The readiness index for ART services account for twenty five percent (25%); The mean proportion of Diagnostics items was as low as in 4% of the health facilities, whereas medicine and commodities (24%) and staff and guidelines account for 66% of the health facilities
- Grand Bassa County facilities account for the highest required tracer items 36% of the health facilities
- The availability of tracer items with health facility type shows hospital (43%), health centers (27%). and clinics (22%).
- Less tracer items were experienced in Private for profit (21%) facilities. Rural health facilities had (23%) less than their counter part in urban (30%).

Figure 58: Facilities that have tracer items for Antiretroviral therapy service readiness by county, facility type, rural/urban and ownership (N=292)



5.6.7 HIV/AIDS: PMTCT service availability and readiness

5.6.7 HIV/AIDS: PMTCT service availability

In the assessment of PMTCT service availability, the following 8 tracer services were used to establish availability of the health facilities to offer services when needed.

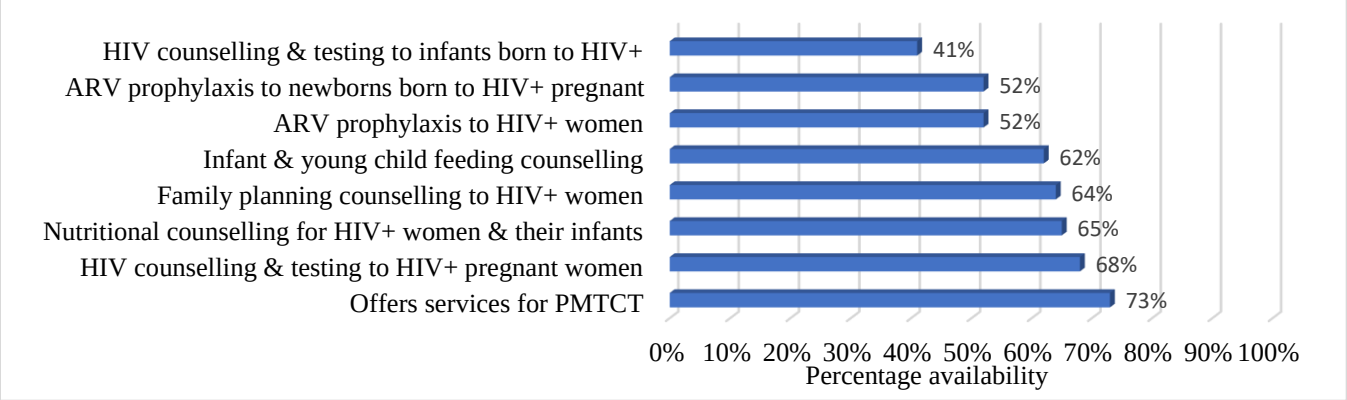
Types of services offered for Tracer PMTCT

a) Preventing mother-to-child transmission (PMTCT) services
b) Counselling and testing for HIV+ pregnant women
c) Counselling and testing for infants born to HIV+ women
d) ARV prophylaxis to HIV+ pregnant women
e) ARV prophylaxis to infants born to HIV+ women
f) Infant and young child feeding counselling
g) Nutritional counselling for HIV+ women and their infants
h) Family planning counselling to HIV+ women

Key findings (Figure 59 below reveals)

- Prevention of Mother to child transmission (PMTCT) was provided is 73% in 2021 of the surveyed health facilities (N=568) compared to 65% in 2018 (N=765)
- ARV prophylaxis to infant of HIV+ women was available in 2021 is 52% of the surveyed health facilities than 45% in 2018
- Family planning counselling to HIV+ women was available in 2021 is 64% of the surveyed health facilities than 62% in 2018
- HIV counseling and testing to HIV+ pregnant women was available in 68% (an increase of 13% from 2018) of the surveyed health facilities and to infants born to HIV+ pregnant women in 2021, 41% (decreased by 17% from 58% in 2018) of the surveyed health facilities.
- Infant and young child feeding counselling were provided in 2021, which is 62% (increased by 4% from 2018, 58%) of the surveyed health facilities.
- Nutrition counseling for HIV+ women and their infants was available in 66% (Increased by 4% from 2018, 61%) of the surveyed health facilities
- ARV prophylaxis to newborns born to HIV+ pregnant women was provided in 52% as similarly reported in 2018 surveyed health facilities.

Figure 59: Percentage of facilities that offer PMTCT services (N=568)

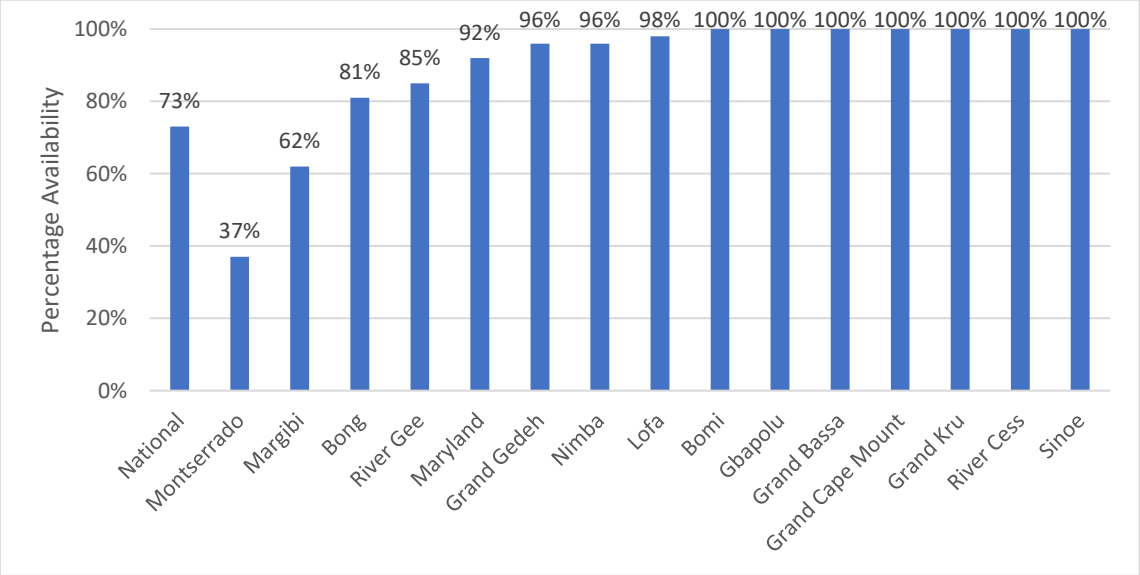


In Table 39 Annex 1 and figure 60 below;

- Prevention of mother-to-child transmission services is mainly available in hospitals (89%) and health centers (82%) and least in clinics (71%) compared to 94%, 84% and 63% in 2018.

- Most facilities providing PMTCT services were public facilities was 93% (10% increase from 2018), with NGO/not-for-profit (88%), Faith-based (80%) and private for-profit (30%) respectively.
- There was a great difference among facilities in urban (46%) and rural (96%). This means that rural health facilities have an increased chance of providing services compared with urban facilities surveyed.
- Seven of fifteen counties have all health facilities offering PMTCT services with Montserrado (37%) and Margibi (62%). This shows an increase of 6% in Montserrado and 1% in Margibi since 2018 SARA.

Figure 60: Percentage of facilities that offer any PMTCT services by County (N=568)



5.6.8 HIV/AIDS: PMTCT service readiness

The following 10 tracer items were used to assess the readiness of the health facilities provide PMTCT services:

Tracer items required for service delivery readiness in PMTCT

Trained staff and guidelines

a) Guidelines for PMTCT
b) Guidelines for infant and young child feeding counselling
c) Staff trained in PMTCT
d) Staff trained in infant and young child feeding

Equipment

a) Visual and auditory privacy

Diagnostics

a) HIV diagnostic capacity for adults
b) Dried blood spot (DBS) filter paper for diagnosing HIV in newborns

Medicines and commodities

a) Zidovudine (AZT) syrup
b) Nevirapine (NVP) syrup
c) Maternal ARV prophylaxis

Key findings (Figure 61 below reveals)

- At least one of the tracer items to provide PMTCT services in Liberia was available in 50% (N=478) of the surveyed health facilities than 43% in 2018 (N=371).
- Capacity to check for HIV in Adults was available in 94% in 2021 recording a 7% increase from 2018 SARA.
- Dried blood spot (DBS) filter paper for diagnosing newborn HIV was available in 12% 2021 of the surveyed health facilities compared to 3% in 2018
- Room with visual and auditory privacy was available in 86% 2021 of the surveyed health facilities than 91% in 2018
- Guideline for PMTCT (64%); and infant and young feeding (54%) were available in compared to 76% and 61% in 2018
- Maternal antiretroviral prophylaxis was available in 37% of surveyed health facilities, while nevirapine and Zidovudine syrups were available in 38% and 16% of the health facilities compared to 35%, 31%, and 3% in 2018.
- The mean readiness for staff and guidelines, equipment, diagnostics and medicines & commodities were 57%, 86%, 53% and 32% respectively.

Figure 61: Facilities that have tracer items for PMTCT services (N=445)

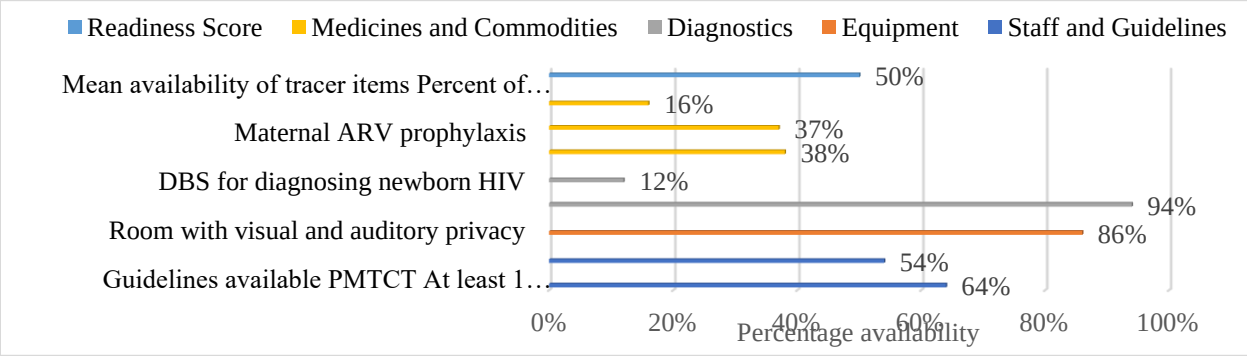
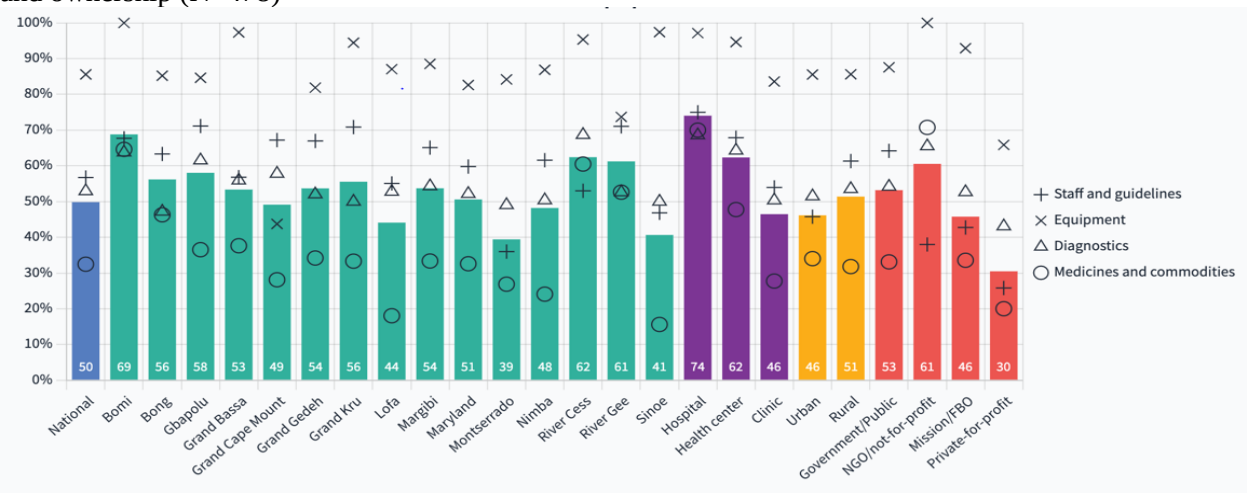


Figure 62 below shows that the service readiness index across counties was 50%.

- Readiness index for PMTCT service was high among hospitals (75%) followed by health centers (62%) and clinics (47%).
- Not-for-Profit/NGO facilities had the highest readiness score (61%) followed closely with the Public/Government facilities (53%)
- There was a difference 5% in readiness score among the rural and urban facilities with 51% and 46% respectively.
- Bomi, River Cess and River Gee Counties facilities have the most readiness score of 69%, 62%, and 61% respectively.
- About three out of 15 counties' mean readiness scores index were below 45%. These counties were Montserrado (39%), Sinoe (41%) and Lofa 44%

Figure 62: PMTCT services among facilities that provide this service, by county, facility type, rural/urban and ownership (N=478)



5.7. Sexually transmitted infections service availability and readiness

5.7.1 STIs service availability

In determination of the service availability for the STI services, the following 3 tracer services were considered.

- Availability of STI services
- Availability of Sexually transmitted infection diagnosis
- Availability of sexually transmitted infection treatment.

Types of services offered tracer for STI availability

a) STI services b) STI diagnosis c) STI treatment

Key findings (Figure 63 below reveals)

- Services for STIs were provided in 92% of the health facilities (N=568) in Liberia representing compared to 91% in 2018 (N=765)
- Diagnosis for STIs was available in 85% of the surveyed health facilities representing a decrease of 6% from 2018, 91%
- Prescriptions for STIs were available in 91% in 2021 which was similarly found in SARA 2018.

Figure 63: Percentage of facilities that offer STI services (N=568)

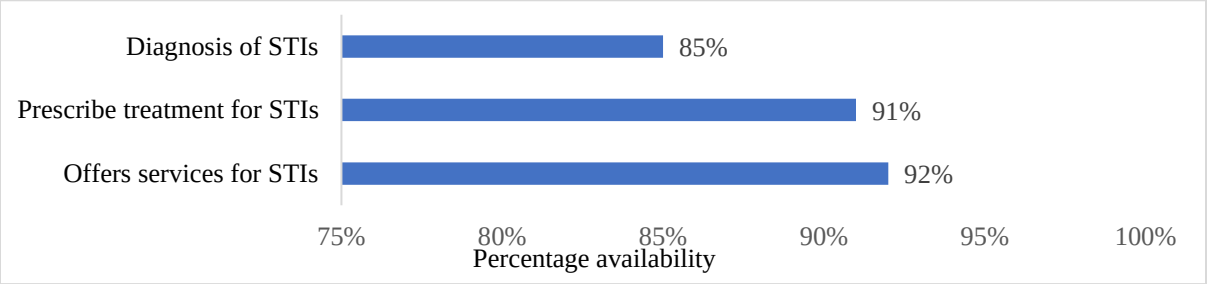
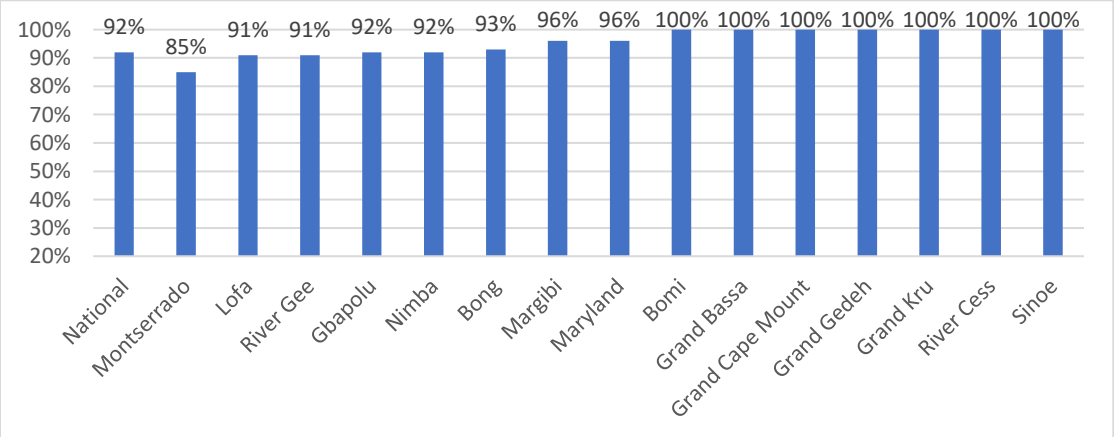


Table 40 in Annex 1 reveal some key findings below

- Seven of fifteen counties (Bomi, Grand Bassa, Grand Cape Mount, Grand Gedeh, Grand Kru, River Cess and Sinoe Counties) have all health facilities offering STI services. This has improved compared to 4 counties in 2018.
- All NGO/not-for-profit and Mission/Faith-based facilities provide STI services, while Public and Private-for-profit facilities account for 95% and 83% of facilities providing STI services.
- Facilities located in urban and rural areas had 88% and 96% of facilities offering STI services available.

Figure 64: Percentage of facilities that offer STI services (N=568)



5.7.1 Sexually transmitted infections service readiness

The following seven (7) tracer items were used to establish STI service delivery readiness.

Tracer items required for service delivery readiness

Trained staff and guidelines

a) Guidelines for diagnosis and treatment of STIs b) Staff trained in STI diagnosis and treatment

Diagnostics

a) Syphilis rapid test

Medicines and commodities

a) Condoms b) Metronidazole cap/tab c) Ciprofloxacin cap/tab

d) Ceftriaxone injectable

Key findings

- On average (figure 65 below), 35% of the surveyed health facilities (N=534) had at least one item to provide sexually transmitted infections services in Liberia with 0% having all tracer items than 52% and 2% in 2018 (682)
- Guidelines for diagnosis and treatment for STIs was available in 54% down from 64% in 2018
- Rapid test for Syphilis was provided in 35% of the surveyed health facilities compared to 23% in 2018
- Ceftriaxone injectable was available in 24% as compared to 42% in 2018 thus representing a decreased of 18% in the surveyed health facilities.
- Metronidazole tablets were available in 46% of the surveyed health facilities.
- In prevention of STIs, condoms were available in 73% of the surveyed health facilities than 83% in 2018
- At least 1 trained staff in STI diagnosis and treatment in the past two years preceding the survey was available in 33%, an increased by 20% from 13% in 2018.

Figure 65: Facilities that have tracer items for STI services (N=534)

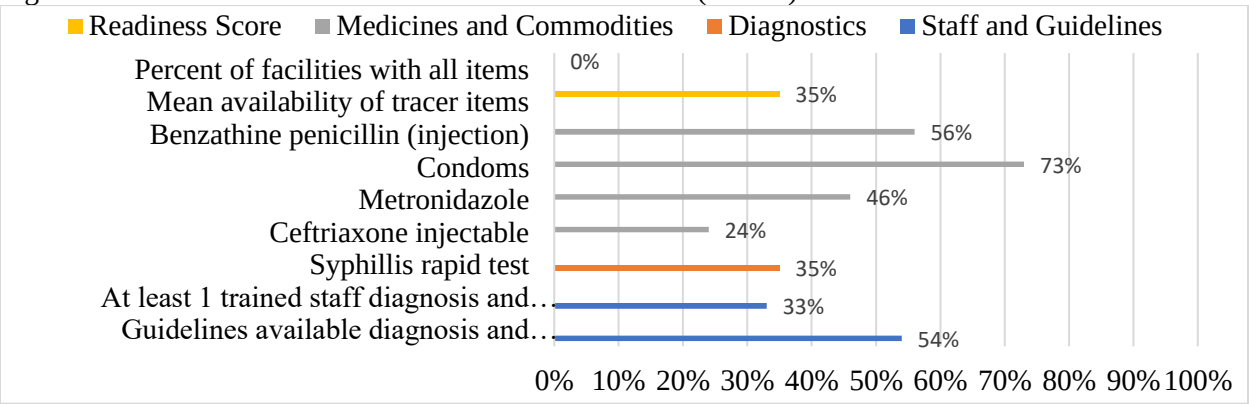
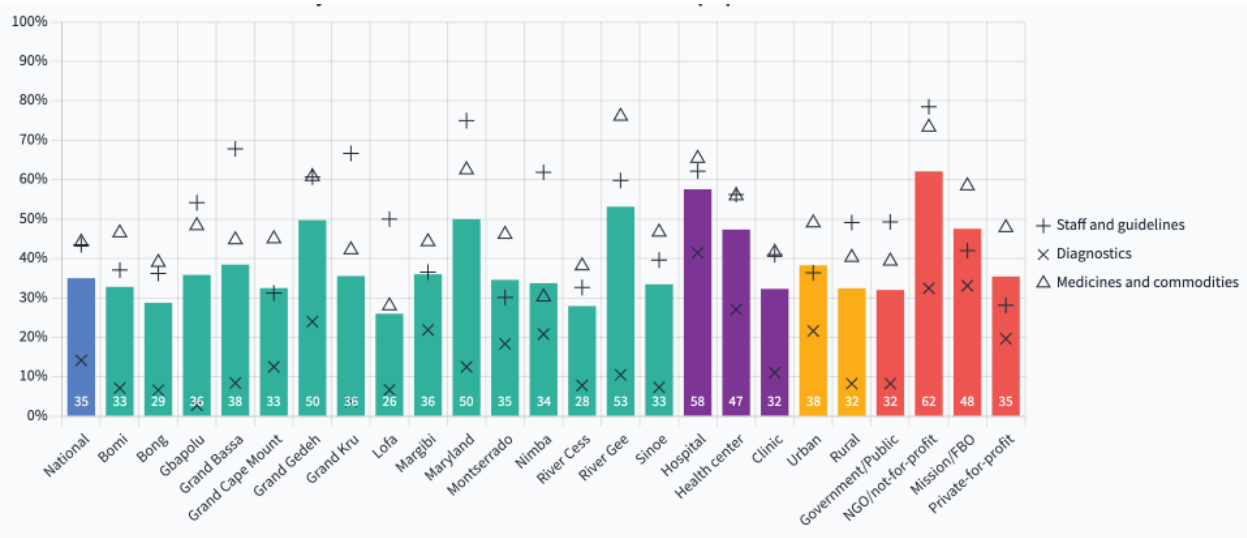


Figure 66 shows the service readiness index score for STI services was 35%.

- In relations to readiness to providing STIs services, Government/Public facilities account for 32%, whereas NGO/not-for-profit 62%, Mission/FBO 48% and Private-for-profit 35% of health facilities
- Hospitals, health centers, and clinics provided STI services at 58%, 47%, and 32% respectively.
- Disparities of the services were seen among the facilities in Rural (32%) and urban (38%) surveyed health facilities in 2021.
- Diagnostic capacity, medicine and commodities and staff and guideline items for STI services had high readiness scores 62%, 68% and 45% respectively in Hospitals.

Figure 66: STI diagnosis and treatment readiness by county, facility type, rural/urban and ownership (N=534)



5.8 Tuberculosis service Availability and Readiness

Tuberculosis is one of the communicable diseases that is of major public health concerns and curable when diagnosed early. Prevention, early detection and treatment, adherence is key in service provision to avoid multi-drug resistant TB (MDR-TB), and also prevent death. The TB prevalence in Liberia is 308 per 100,000 persons according to the WHO 2021 report.

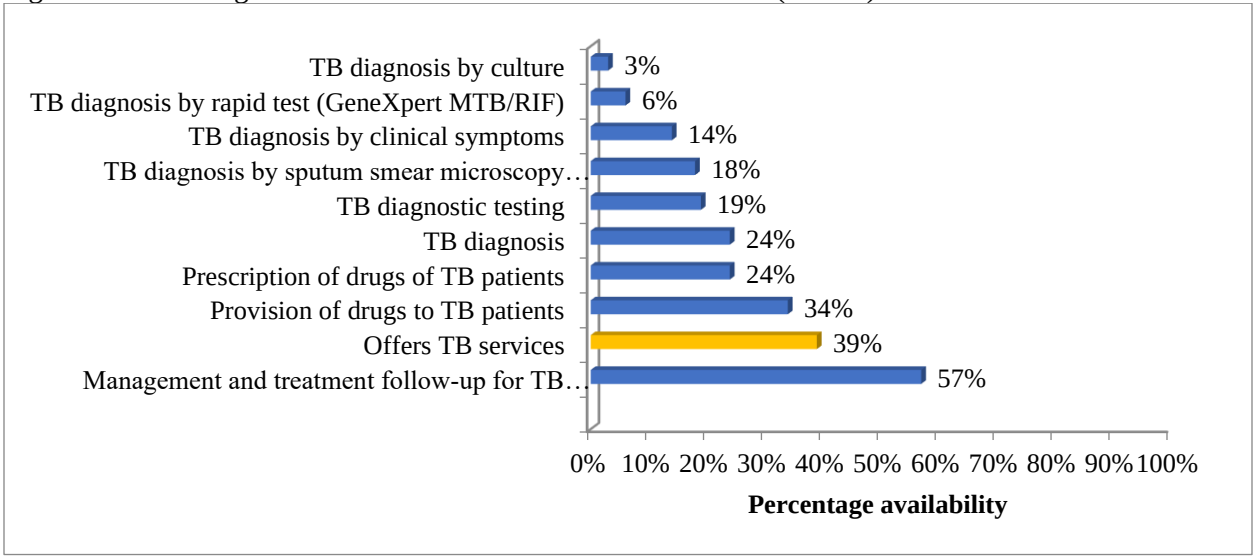
5.8.1 Tuberculosis service availability

Key findings (Figure 68 below reveals)

- Tuberculosis services in Liberia are provided in 39% of the surveyed health facilities (N=568) as compared to 25% in 2018 (N=701).

- Tuberculosis diagnosis was available in 24% health facilities, 24% and 34% of health facilities assessed were able to prescribe medicines to TB patients and could provide medicines to TB patient at follow-up visits. This is higher compared to 2018 with 19%, 16% and 17% respectively.
- On average, Tuberculosis diagnostic testing was done in 19% of the surveyed health facilities compared to 16% in 2018.
- The least common service was TB diagnosis by culture, which was offered at 3% of health facilities compared to 1% in 2018.
- Tuberculosis diagnosis by sputum smear microscopy examination were conducted in 18% of the surveyed health facilities while, diagnosis by rapid test using Gene Xpert (MTB/RIF was in 6% of the surveyed health facilities. Though still low but recorded increases when compared to 16% and 2% in 2018.

Figure 67: Percentage of facilities that offer tuberculosis services (N=568)



As shown in Table 41-42 in annex 1, below are some key findings.

- Ninety-Five (95%) of health facilities assessed in Rivercess provided TB services followed by Grand Gedeh (79%) and Grand Bassa (75%). Six out of fifteen counties (Montserrado, Maryland, Margibi, Grand Cape Mount, Grand Kru, Sinoe and Nimba) provided TB services below 50%.
- Majority of the hospitals 81% and health centers 57% provided TB services, however this represents an increase of 3% and a decrease of 9% respectively when compared to 2018 SARA. Clinics provided the least 35%, however this represents an increase of 15% comparing with 2018.
- NGO/Not-for-profit facilities presented the highest 88%, followed by Government/Public (54%), while Mission/FBO (32%), and Private for profit 11% presented the least of health

facilities. Too many facilities in Rural (54%) compared to urban facilities (23%) provided TB services.

5.8.2 Tuberculosis service readiness

To check for Tuberculosis service readiness, the following 12 tracer items were used.

Tracer items required for service delivery readiness

Trained staff and guidelines

a) Guidelines for diagnosis and treatment of TB
b) Guidelines for management of HIV & TB co-infection
c) Guidelines related to MDR-TB treatment (or identification of need for referral)
d) Guidelines for TB infection control
e) Staff trained in TB diagnosis and treatment
f) Staff trained in management of HIV & TB co-infection
g) Staff trained in client MDR-TB treatment or identification of need for referral
h) Staff trained in TB Infection Control

Diagnostics

a) TB microscopy
b) HIV diagnostic capacity
c) System for diagnosis of HIV among TB clients

Medicines and commodities

a) First-line TB medications

Key findings (Figure 68 below reveals)

- In 2021, on average 44% (42% in 2018) of the health facilities (N=270) had at least one tracer item available to provide tuberculosis services in Liberia and None of the surveyed health facility (2% in 2018) had all tracer items.
- All first line tuberculosis medicines for adults and children were available in 33% and 8% of the surveyed health facilities.
- Tuberculosis microscopy for diagnosis was provided in 27% (decreased from 36% in 2018) while, 98% (increased from 90% in 2018) of the facilities had HIV diagnostic capacity and 61% (decreased from 67% in 2018) of them with systems for diagnosis of HIV among tuberculosis.
- Guidelines for diagnosis and treatment were available in about 50% of the health facilities compared 30% in 2018.
- Important to note is the decrease from 42% in 2018 to 34% in 2021 among health facilities that had tuberculosis medicines and commodities available for treatment.
- At least one trained staff in the past two years preceding the survey in diagnostic and treatment of TB was 44%, staff trained in infection control (41%), trained in management of HIV and TB control (40%) and MDR_TB (32%) respectively.

Figure 68: Facilities that have tracer items for TB services

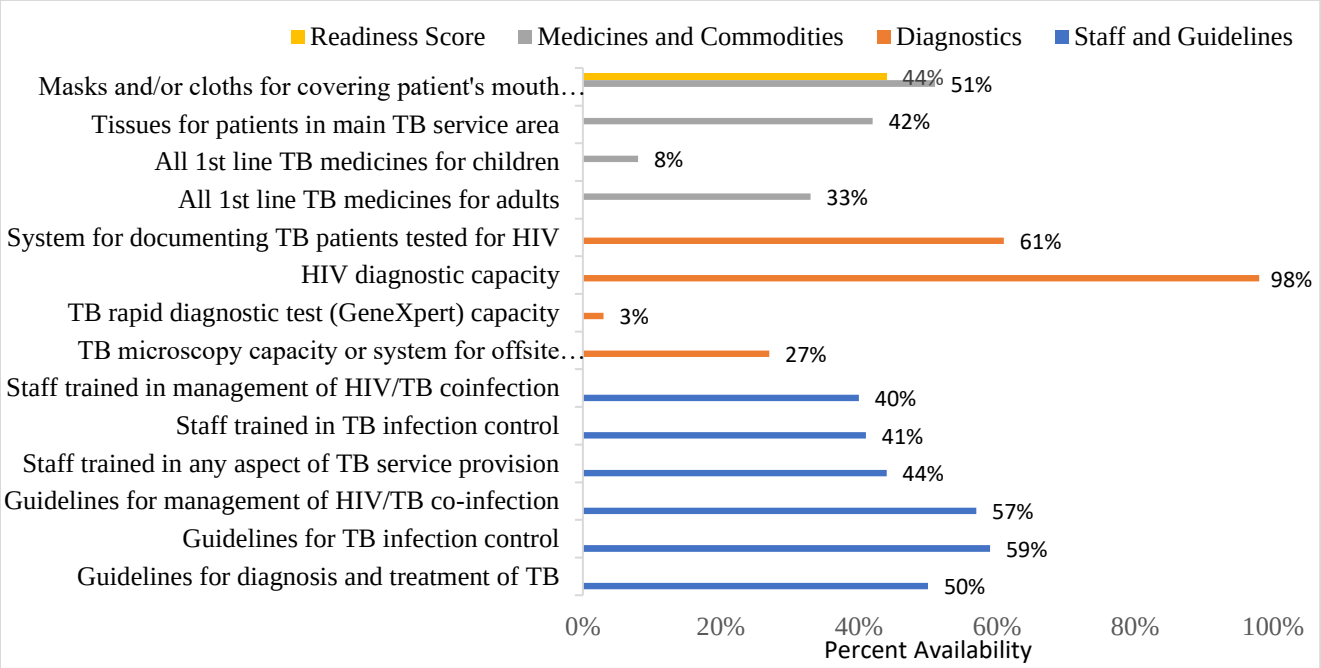
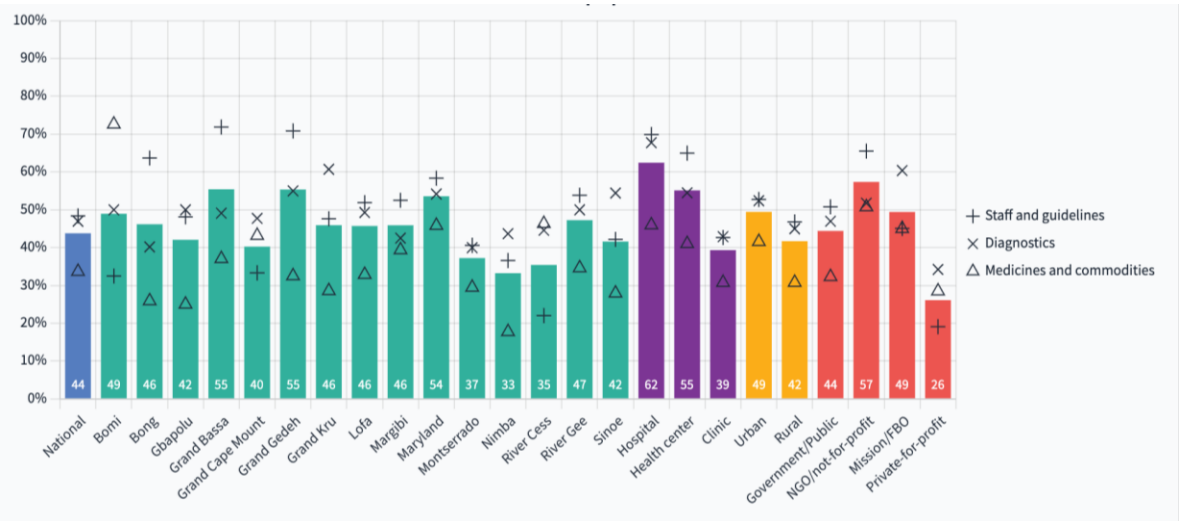


Figure 69 below reveals some key findings:

- About 66% of the hospitals,55% of health centers and 39% of clinics had at least one tracer item needed to provide TB services.
- Facilities located in urban (49%) areas were slightly higher in their readiness to provide TB service items than rural areas (42%).
- Only three (3) counties (Maryland-54%), Grand Gedeh (55%) and Grand Bassa (55%) had more than 50% of their health facilities ready to provide TB services.

Figure 69: Facilities that have tracer items for TB services, by county, facility type, rural/urban and ownership (N=270)



5.9 Malaria service availability and readiness

5.9.1 Malaria service availability

In determining the availability of the malaria services, the following 8 tracer indicators were used as tracers for service availability.

Types of services offered/tracer for service availability

a) Malaria diagnosis or treatment
b) Malaria diagnosis
c) Malaria diagnostic testing
d) Malaria diagnosis by clinical symptoms
e) Malaria diagnosis by RDT
f) Malaria diagnosis by microscopy
g) Malaria treatment
h) IPT

Key findings (Figure 70 below reveals)

- In 2021 (N=568), diagnosis and treatment of Malaria was provided in all the surveyed health facilities (100%) thus representing an increased percentage difference of 6% from 2018 (94%).
- Malaria diagnosis testing was available in 99% of the health facilities with 98% of them accounting for malaria diagnosis testing compared to 94% and 93% in 2018.
- Malaria treatment was provided in 99% of the health facilities surveyed than 93% in 2018.
- Malaria Rapid Diagnosis testing kits was available and used in 96 % of surveyed facilities compared to 92% in 2018.
- Diagnosis by microscopy was done in 50% of surveyed service delivery points compared 37% in 2018.
- Preventive treatment in Pregnancy (IPTp) was carried out in 86% of the surveyed health facilities a drop from 87% in 2018.

Figure 70: Percentage of facilities that offer malaria services (N=568)

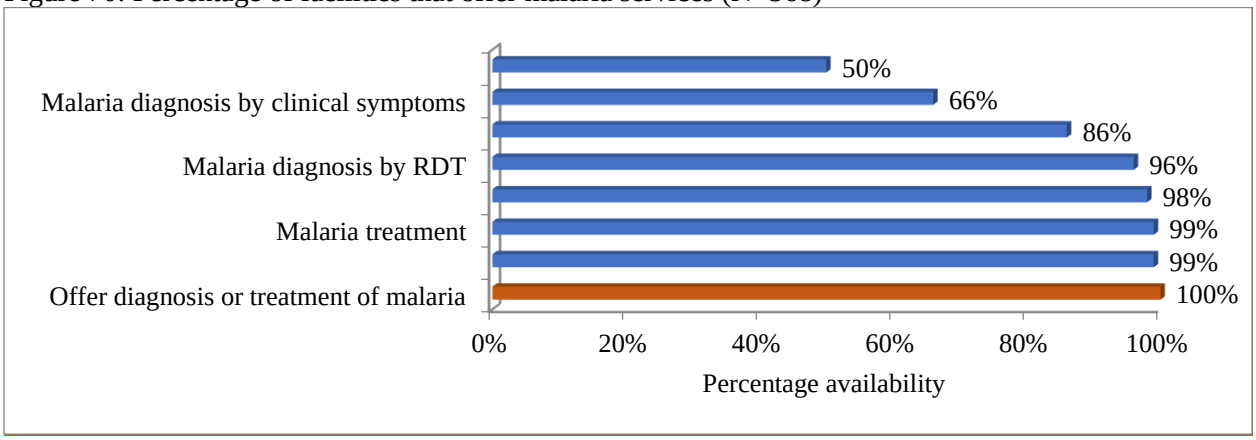
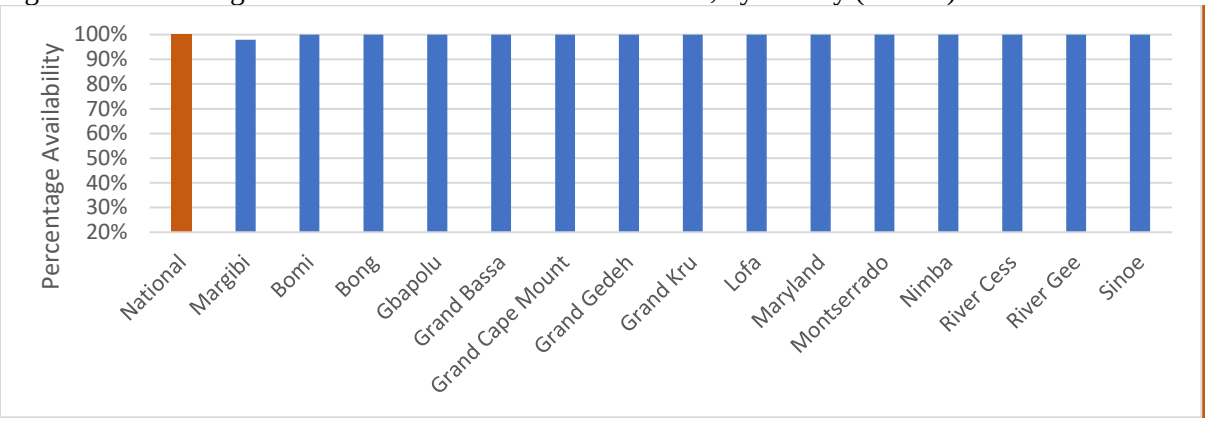


Table 43 in annex 1 and Figure 71 below show that 14 out of 15 counties surveyed facilities offer 100% malaria diagnosis and treatment services with only one county (Margibi) providing 98% services.

- Most of the tracer indicators assessment showed that across all counties, malaria services were available in all of the health facilities.
- All health centers and hospitals provided the malaria diagnosis and treatment services with clinics providing 99%.
- There was no difference between managing authority of facilities as all of the facilities offer malaria services. NGO/ not-for-profit also provided 100% services showing an increase of 11% of the surveyed health facilities from 2018.

Figure 71: Percentage of facilities that offer malaria services, by County (N=568)



5.9.2 Malaria service readiness

The assessment considered 9 tracer items to determine the health facility capacity (service readiness) to provide services for malaria. The following tracer items were used.

Tracer items required for service delivery readiness.

Trained staff and guidelines

a) Guidelines for diagnosis and treatment of malaria
b) Guidelines for IPT
c) Staff trained in malaria diagnosis and treatment
d) Staff trained in IPT

Diagnostics

a) Malaria diagnostic capacity

Medicines and commodities

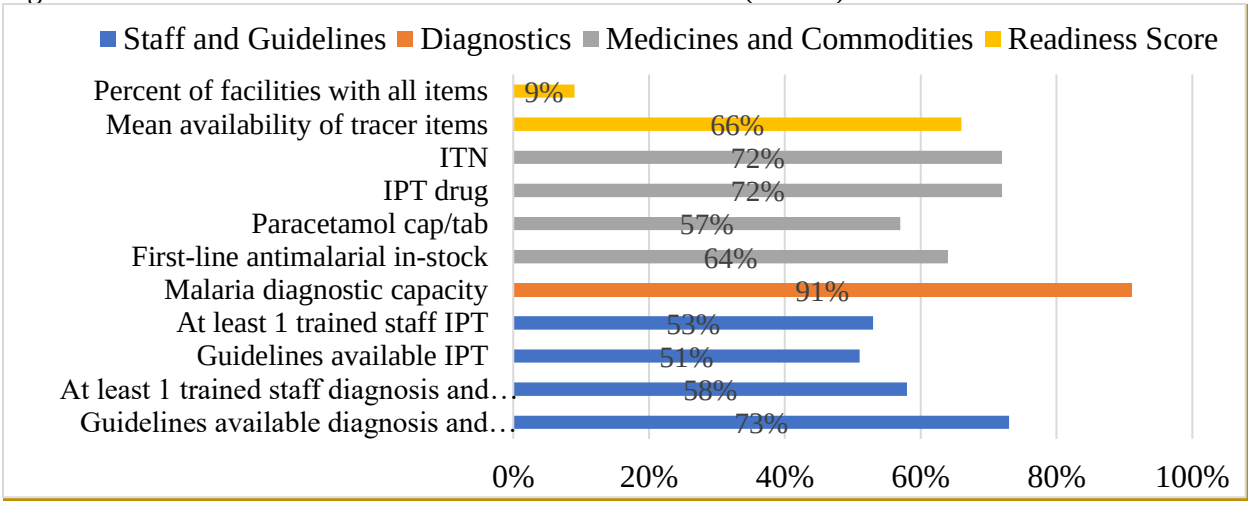
a) First-line antimalarial in stock
b) IPT drug
c) Paracetamol cap/tab
d) ITN

Key findings (Figure 72)

- On average, 66% of the surveyed health facilities (N=566) compared to 58% in 2018 had at least one tracer item to provide malaria services. This means Liberia is 66% ready to provide malaria services.
- At least 9% of health facilities had all tracer items needed to support malaria services compared to none in 2018.
- Diagnostic capacity to check for malaria in the surveyed health facilities was 91% which show an upward trend from 70% in 2018.

- First-line antimalarial drug recorded a decline from 88% in 2018 to 64% in 2021 in the surveyed health facilities.
- Paracetamol tablets was available in 57% from 65% and IPTp in 72% from 81%, a drop of 8% and 9% respectively of all surveyed health facilities.
- Long Lasting Insecticide treated Nets were available in 72% of the surveyed health facilities compared to 71% in 2018.
- Guidelines for diagnosis and treatment of Malaria was 73%, an increase from 56% in 2018, while intermittent presumptive treatment in pregnancy was 51% down from 81% in 2018, available in health facilities in Liberia.
- The least available tracer item was "at least one staff trained in malaria diagnosis and treatment was 58% in 2021 compared to 9% in 2018.

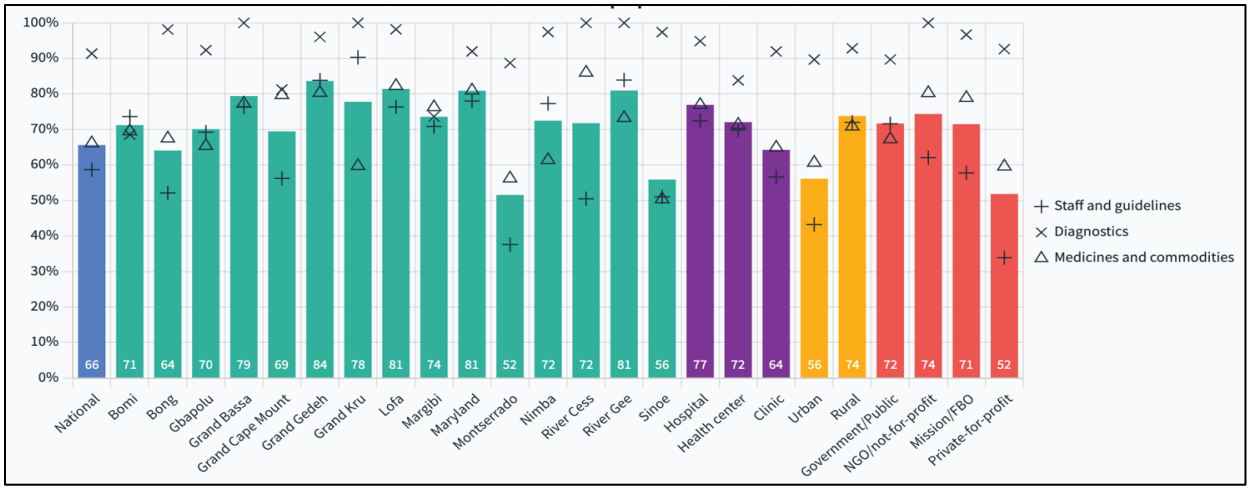
Figure 72: Facilities that have tracer items for malaria services (N=566)



Key findings below are illustrated in **Figure 73 below.**

- Hospitals (77%) compared to health centers with 72% and clinic 64% were ready to provide malaria services.
- NGO/not-for-profit facilities, Government/public facilities and Mission/FBO facilities had more than 70% of their facilities with mean availability of tracer items for Malaria services. Private-for-profit facilities had the least Malaria index score of 52%.
- There was a significant difference of 18% between Rural facilities and urban health facilities in the mean availability of all tracer items (74% and 56% respectively)
- Sixty-six percent (66%) of health facilities had the mean availability of medicines and commodities items to support malaria services.

Figure 73: Facilities that have tracer items for malaria services by county, facility type, rural/urban and ownership (N=566)



5.10 Non-communicable diseases (NCDs) availability and readiness

5.10.1 Non-communicable disease availability

In assessment of the availability of non-communicable services in health facilities in Liberia, the following seven (4) tracer indicators on type of services was used:

- Availability of diabetes diagnosis and or treatment
- Availability of chronic respiratory disease services
- Availability of cardiovascular disease services
- Availability of cervical cancer diagnosis services

Types of services offered for non-communicable service availability

a) Diabetes diagnosis and/or management
b) Cardiovascular Disease (CVD)
C) Chronic Respiratory disease
d) Cervical Cancer Diagnosis

Table 8 below and Table 44-45 in Annex 1 show the percentage of health facilities offering NCDs services availability.

Key findings

- The average availability of NCDs was 30% across facilities.
- Cardiovascular diseases was availability in 48% of health facilities assessed compared to 49% in 2028, while diagnosis and treatment was provided in 47%.
- The least available service was cervical cancer diagnosis in 2% of the health facilities less than 5% in 2018.
- Diabetes services were also provided in 37% of health facilities compared to 29% in 2018. Also, diagnosis and treatment of diabetes were provided in 31% and 34% respectively.
- Chronic respiratory disease service availability was also seen in 31% while diagnosis and treatment was provided in 11% and 30% respectively.

Table 8: Availability of non-communicable disease services by county, facility, location and ownership (N=568)

	Any services for diabetes	Any services for cardiovascular disease	Any screening, diagnostic or treatment services for cervical cancer	Any services for chronic respiratory disease	NCDs Mean Availability
National	37%	48%	2%	31%	30%
Bomi	20%	31%	0%	31%	21%
Bong	19%	34%	2%	27%	21%
Gbapolu	23%	31%	0%	23%	19%
Grand Bassa	31%	84%	0%	59%	44%
Grand Cape Mount	69%	91%	3%	53%	54%
Grand Gedeh	25%	41%	0%	20%	22%
Grand Kru	33%	78%	6%	72%	47%
Lofa	25%	27%	0%	20%	18%
Margibi	20%	20%	2%	15%	14%
Maryland	24%	56%	4%	60%	36%
Montserrado	60%	55%	3%	30%	37%
Nimba	22%	42%	3%	15%	21%
River Cess	19%	61%	9%	61%	38%
River Gee	24%	51%	0%	38%	28%
Sinoe	3%	16%	0%	13%	8%
Facility type					
Hospital	94%	92%	31%	89%	77%
Health center	68%	68%	3%	51%	48%
Clinic	30%	43%	1%	26%	25%
Urban / rural					
Urban	56%	54%	4%	31%	36%
Rural	20%	43%	1%	31%	24%
Managing authority					
Government/Public	23%	42%	2%	30%	24%
NGO/not-for-profit	58%	79%	6%	79%	56%
Mission/FBO	51%	57%	3%	29%	35%
Private-for-profit	57%	54%	2%	30%	36%

5.10.2 Readiness to provide Non-Communicable Disease services

During the assessment of non-communicable disease service readiness, four (4) proxy indicators were used to measure the service readiness. The following were the services:

- Readiness to diagnosis and management for diabetes
- Readiness to diagnosis and management for chronic respiratory diseases
- Readiness to diagnosis and management for cardiovascular diseases
- Readiness to diagnosis for cervical cancer

Figure 74 below shows Readiness to diagnosis and management for diabetes

- Diabetes diagnosis and management was provided in 46% of the health facilities (N=182) compared to 44% in 2018.
- Equipment for diagnosis and management of diabetes were available in over 84% of the health facilities compared to 2018 (85%).
- Staff and guidelines items account for the least tracer items of health facilities (22%) that support diabetes services.
- Hospitals (67%) were mostly ready to provide diabetes services.

Figure 74: Readiness to diagnosis and management for diabetes by county, facility, location and ownership (N=182)

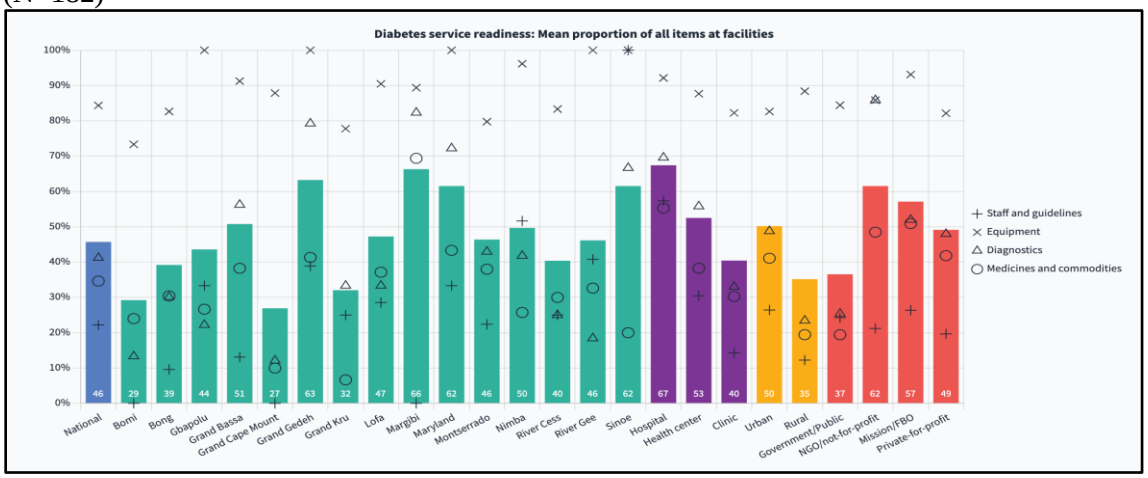


Figure 75 below shows diagnosis and management for chronic respiratory diseases

- Chronic respiratory disease diagnosis and management was provided in 23% of the health facilities (N=186) compared to 31% in 2018.
- Equipment for diagnosis and management of chronic respiratory disease were available in 49% of the health facilities compared to 2018 (32%).
- Staff and guidelines items account for the least tracer items of health facilities (16%) compared 14% in 2018 SARA.
- Hospitals (40%) were mostly ready to provide this service.

Figure 75: Readiness to Chronic respiratory disease diagnosis and management by county, facility, location and ownership (N=186)

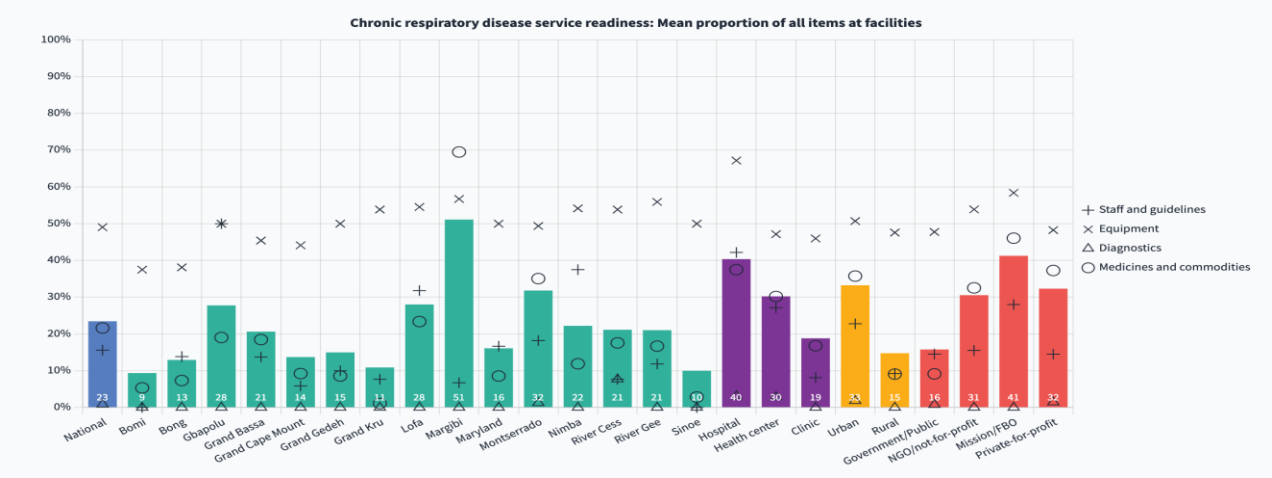


Figure 76 below shows Readiness to diagnosis and management for cardiovascular diseases

- Cardiovascular diseases diagnosis and management was provided in 34% of the health facilities (N=266) than 40% in 2018.
- Equipment for diagnosis and management of Cardiovascular disease were available in 88% of the health facilities.
- Staff and guidelines items account for the least tracer items of health facilities (14%).
- Hospitals (46%) were mostly ready to provide this service.

Figure 76: Readiness to Cardiovascular diseases diagnosis and management by county, facility, location and ownership (N=266)

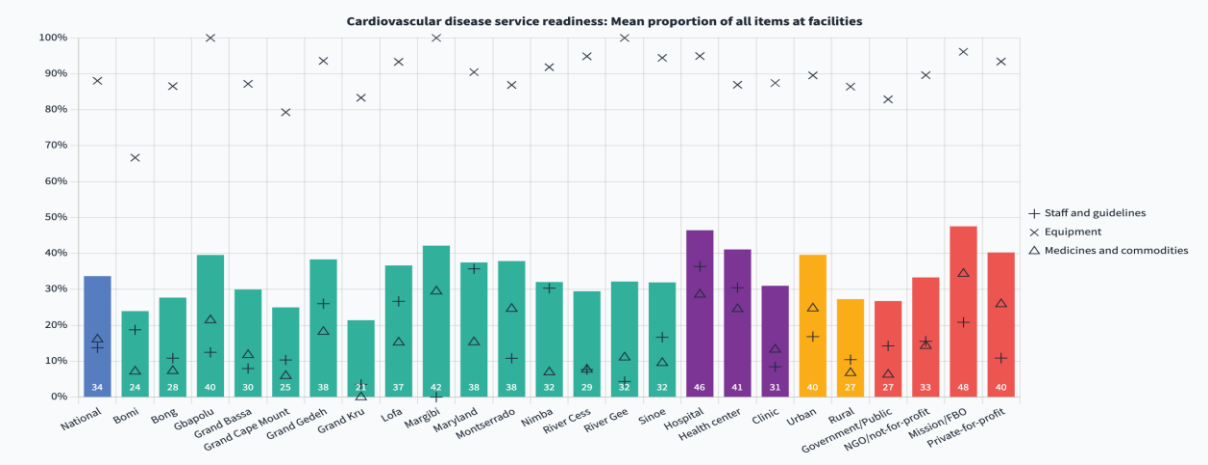
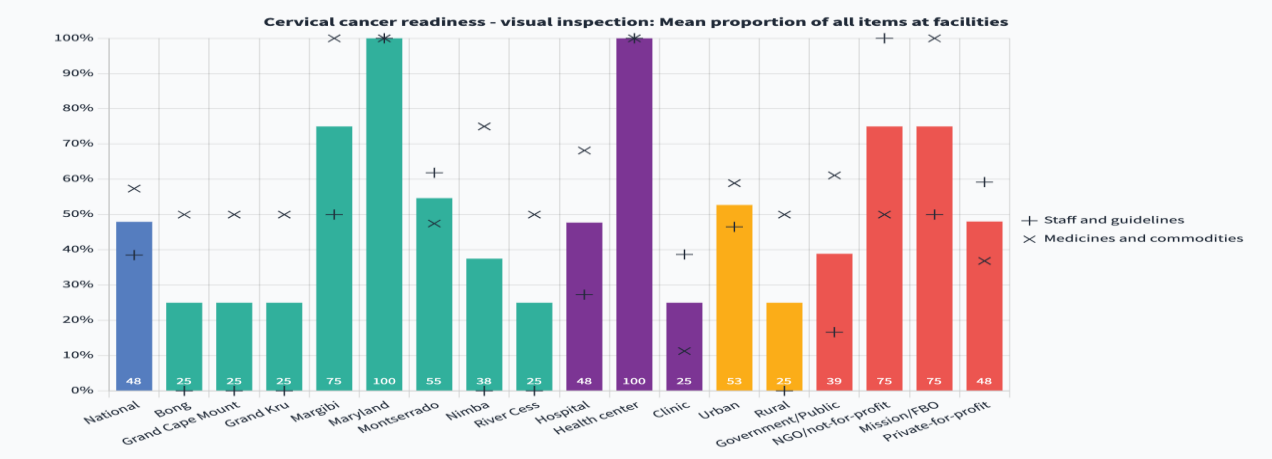


Figure 77 below shows Readiness to diagnosis for cervical cancer

- Cervical cancer diagnosis was provided in 48% of the health facilities (N=15) compared 40% in 2018.
- The basic equipment for cervical cancer screening was available in 75% compared 87% in 2021.
- The medicines and commodities items for cervical cancer service was available in 57% of the health facilities.

- Of the cancer services, breast cancer and prostate cancer account for the lowest overall readiness scores of 23% and 26% of health facilities respectively.

Figure 77: Readiness to diagnosis for cervical cancer by county, facility, location and ownership (N=15)



5.11 Mental health and neurological services

5.11.1 Mental health and neurological services availability

In assessment of the availability of Mental health and neurological services in health facilities in Liberia, the following Ten (10) tracer indicators on type of services was used:

- Availability of services for mental health disorders (depression, psychosis and bipolar disorder)
- Availability of services for neurological disorders
- Availability of mental health inpatient services
- Availability of Neurological inpatient services
- Availability of services for Management of depression
- Availability of services for Management of bipolar disorder
- Availability of services for Management of psychosis
- Availability of services for Management of epilepsy
- Availability of services for Management of dementia
- Community linkages for mental or neurological services

Key Findings

- Table 9 below reveals that 44% of all facilities assessed offered any services for mental or neurological health
- Also, 42% and only 5% offered Services for neurological disorders and Neurological inpatient respectively.
- Similarly, Services for mental disorders (depression, psychosis and bipolar disorder), Management of depression, Management of bipolar disorder, Management of psychosis,

Management of epilepsy and Management of dementia were offered in 35%, 32%, 15%, 22%, 42% and 18% respectively in health facilities assessed.

- Disaggregation by ownership reveals that more private facilities offered these services when compared. Over 60% and 90% of private not for profit facilities offered any mental or neurological services.
- Majority of these services are provided in hospitals compared to other type of facilities.

Table 9: Percentage of facilities providing Mental or Neurological health services by county, location and ownership (N=568)

.	Any services for mental or neurological health	Services for mental disorders (depression, psychosis and bipolar disorder)	Services for neurological disorders	Mental health inpatient services	Neurological inpatient services	Management of depression	Management of bipolar disorder	Management of psychosis	Management of epilepsy	Management of dementia	Community linkages for mental or neurological services	n
National	44%	35%	42%	5%	3%	32%	15%	22%	42%	18%	34%	568
Region												
Bomi	72%	61%	72%	0%	0%	69%	20%	37%	72%	33%	47%	23
Bong	28%	26%	26%	4%	2%	20%	13%	17%	30%	13%	19%	44
Gbapolu	92%	77%	92%	8%	8%	77%	38%	62%	92%	46%	54%	13
Grand Bassa	67%	51%	64%	0%	0%	31%	11%	25%	61%	20%	51%	30
Grand Cape Mount	34%	19%	34%	0%	0%	22%	9%	19%	34%	19%	31%	32
Grand Gedeh	84%	51%	84%	12%	12%	43%	20%	31%	67%	28%	35%	23
Grand Kru	89%	78%	89%	17%	17%	78%	67%	72%	89%	61%	89%	18
Lofa	85%	80%	87%	9%	9%	75%	29%	56%	85%	42%	82%	55
Margibi	31%	25%	29%	2%	0%	31%	12%	21%	29%	12%	12%	36
Maryland	56%	52%	52%	8%	8%	52%	44%	44%	52%	48%	48%	25
Montserrado	9%	8%	9%	2%	1%	7%	6%	7%	9%	5%	6%	133
Nimba	80%	61%	66%	12%	6%	54%	12%	14%	74%	13%	62%	61
River Cess	100%	86%	100%	9%	0%	67%	5%	19%	100%	19%	95%	19
River Gee	67%	54%	67%	9%	9%	49%	40%	49%	67%	45%	54%	20
Sinoe	36%	21%	36%	0%	0%	16%	10%	10%	39%	8%	34%	36
Facility type												
Hospital	81%	81%	81%	53%	44%	75%	72%	78%	81%	69%	61%	36
Health center	51%	47%	50%	15%	12%	49%	34%	41%	51%	34%	44%	68
Clinic	41%	31%	39%	1%	0%	28%	10%	16%	39%	13%	31%	464
Urban / rural												
Urban	21%	18%	19%	6%	5%	17%	11%	14%	19%	12%	13%	186
Rural	64%	50%	61%	3%	2%	45%	18%	28%	62%	23%	52%	382
Managing authority												
Government/Public	63%	52%	61%	7%	5%	47%	23%	32%	63%	27%	50%	448
NGO/not-for-profit	94%	94%	94%	6%	6%	67%	18%	67%	94%	54%	61%	9
Mission/FBO	29%	18%	29%	3%	5%	18%	5%	7%	24%	5%	22%	29
Private-for-profit	6%	4%	4%	0%	0%	4%	1%	1%	4%	1%	4%	82

5.11.2 Mental health and neurological services Readiness

In assessment of the readiness of **Mental health and neurological services** in health facilities in Liberia, the following Eight (8) tracer indicators on type of services was used:

Tracer items required for service delivery readiness.

Trained staff and guidelines

b) **Guidelines for management of mental and neurological conditions**

b) **Staff trained in diagnosis and management of mental health conditions**

d) **Staff trained in diagnosis or management of neurological conditions**

Diagnostics

b) Mental or neurological health diagnostic capacity

Medicines and commodities

c) **At least one type of medicine for depression**

c) **At least one type of medicine for psychosis**

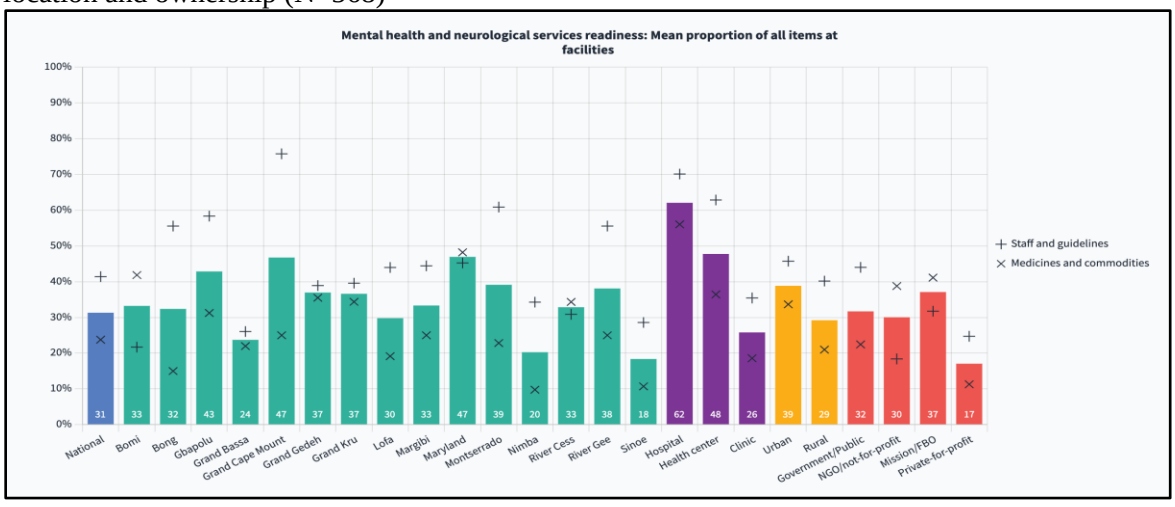
d) **At least one type of medicine for bipolar disorders**

d) **At least one type of medicine for epilepsy**

Key Findings (Figure 79 below) shows Readiness Mental health and neurological services

- The mean proportion of all items at health facilities was 31% with 62% and 48% hospitals and health centers ready to provide mental or neurological health services.
- More urban (39%) compared to Rural (29%) health facilities are ready to provide the service. Similarly, more public than private facilities were ready to provide mental or neurological health services. Also, the mean proportion of facilities having staff and guidelines, and medicines and commodities were 41% and 24% respectively.
- Similarly, over 60% and 34% of facilities had Guidelines for management of mental and neurological conditions and Staff trained in diagnosis and management of mental health conditions.

Figure 78: Facilities readiness to provide Mental or Neurological health services by facility, county, location and ownership (N=568)



5.12 Neglected tropical Diseases

5.12.1 Neglected tropical disease service availability

In assessment of the availability of Neglected Tropical Diseases (NTDs) service in health facilities in Liberia, the following ten (10) tracer indicators on type of services provided were assessed.

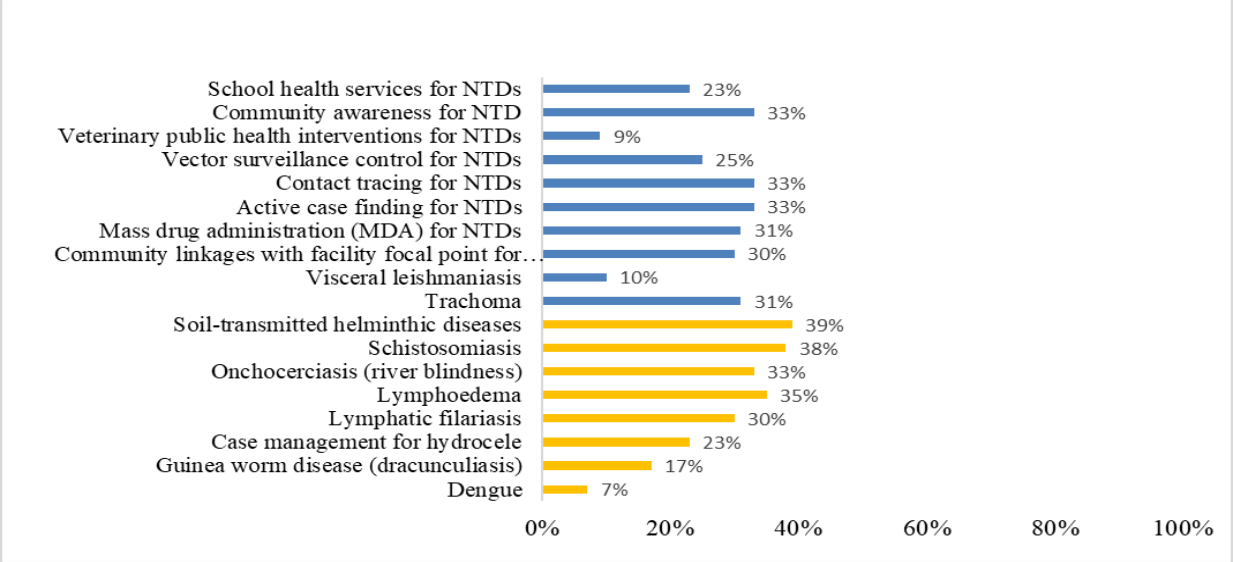
Types of services offered for NTDs service availability

a)	Dengue diagnosis and/or management	b)	Lymphatic Filariasis diagnosis and management
C)	Soil Transmitted Helminths (STH)	d)	Schistosomiasis diagnosis and management
e)	Onchocerciasis diagnosis and management	f)	Trachoma diagnosis and management
g)	Guinea worm disease (dracunculiasis)	h)	Visceral leishmaniasis diagnosis and management
i)	Case Management of hydrocele	j)	Lymphoedema diagnosis and management

Key findings (Figure 79 below and Table 46-47 in annex 1)

- In Liberia 43% of health facilities provide NTDs services compared 31% in 2018.
- In 2021, Lymphatic Filariasis 30%, Soil Transmitted Helminths 39% services are available
- Schistosomiasis diagnosis and management services is available in 38% of the facilities in 2021, compared to 30.4% of the health facilities in 2018.
- Onchocerciasis diagnosis and management services is provided in 33% of the health facilities compared to 32.8% in 2018.
- For NTDs conditions or activities with low percentages below (20%) in Liberia are: Guinea worm diseases (dracunculiasis) 17%, visceral leishmaniasis 10%, Veterinary public health intervention 9%and Dengue 7%.

Figure 79: Percentage of health facilities offering NTD services (N=568)



5.12.2 Neglected tropical diseases service readiness

In determination of service readiness for NTDs in health facilities in Liberia, the following thirteen (13) tracer items on availability and in stock was used.

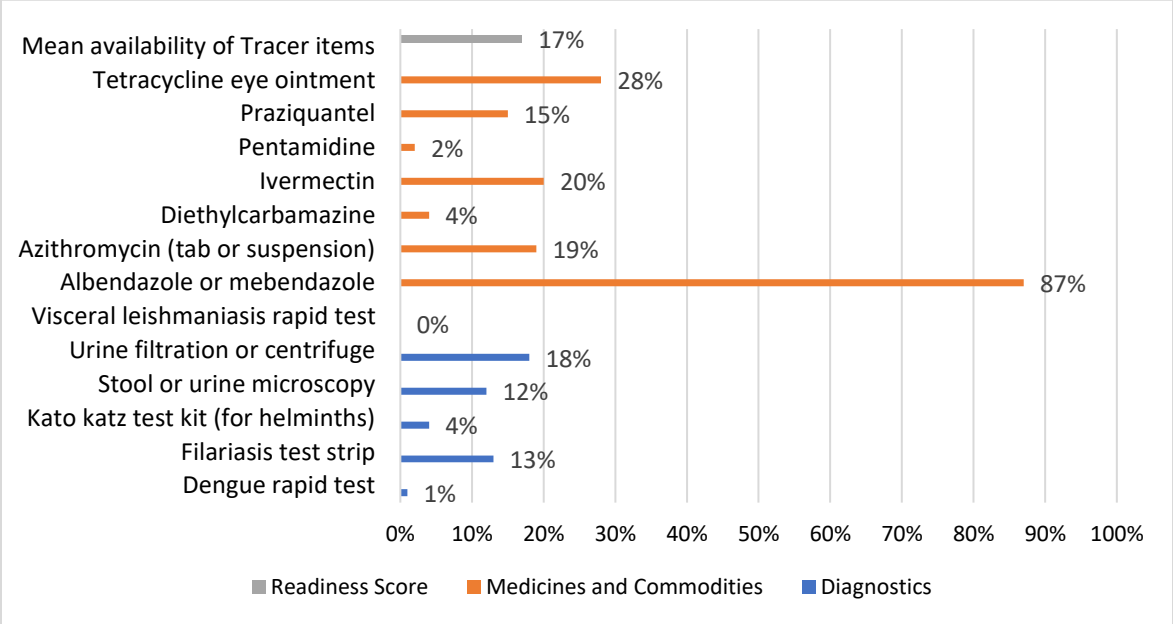
Tracer items for NTDs service availability readiness

a) Dengue (for helminths) b) Filariasis test strip c) Kato katz test kit
c) Stool or urine microscopy rapid test d) Urine filtration or centrifuge d) Visceral leishmaniasis
e) Albendazole or mebendazole f) Azithromycin (tab or suspension) g) Diethylcarbamazine
h) Tetracycline eye ointment i) Praziquantel j) Ivermectin
k) Pentamidine

Key findings (Figure 80 below reveals)

- On average, 17% (decrease from31% in 2018) of the health facilities (N=287) had at least one tracer item for NTDs available, with none having all tracer items.
- None of the health facilities had visceral leishmaniasis rapid test available.
- For availability of medicines and commodities items, the most available medicine was Albendazole or mebendazole 87% of health facilities and the least available medicine was Pentamidine (2%)

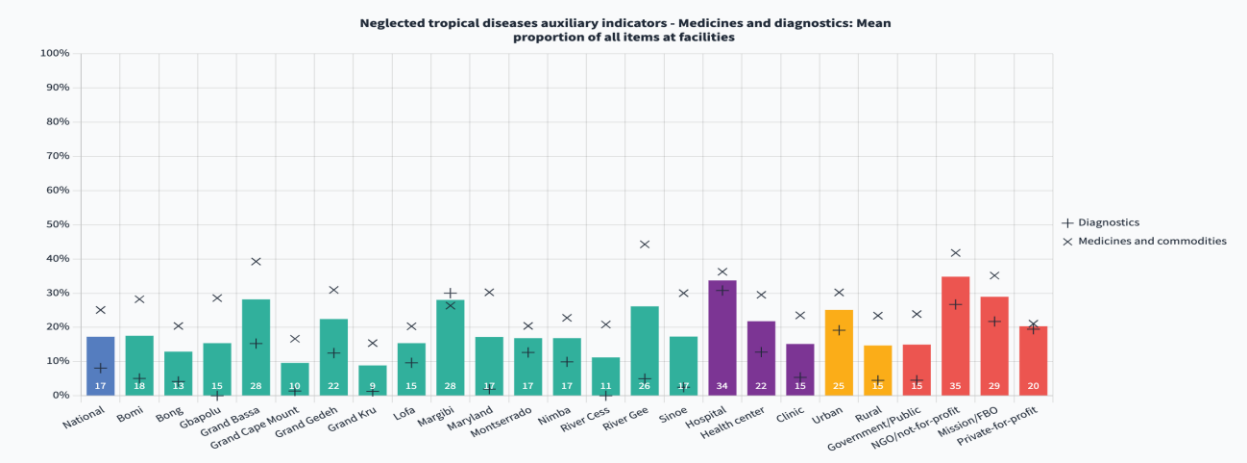
Figure 80: Facilities that have tracer items for NTDs (N=287)



Key findings below are illustrated in **Figure 81 below reveals the following.**

- Eight (8%) of the heath facilities assessed had diagnosis items readily available
- NGO/not-for-profit facilities had on average 35% of tracer items for NTD services. Government/public facilities had the lowest availability of 15% of tracer items.
- There was a significant difference of 15% between urban and Rural health facilities in the mean availability of all tracer items (25% and 10% respectively)
- With readiness index score for NTD service, hospitals had 34% compared to health centers with 22% and clinic 15%
- Twenty-five percent (25%) of health facilities had the mean availability of medicines and commodities items to support malaria services.

Figure 81: Facilities that have tracer items for Neglected Tropical Diseases (NTD) services by county, facility type, rural/urban and managing authority (N=287)



5.13 Surgical services Availability and readiness

5.13.1 Minor surgery service availability

Basic surgical services were assessed using the availability of the following nine tracer service indicators:

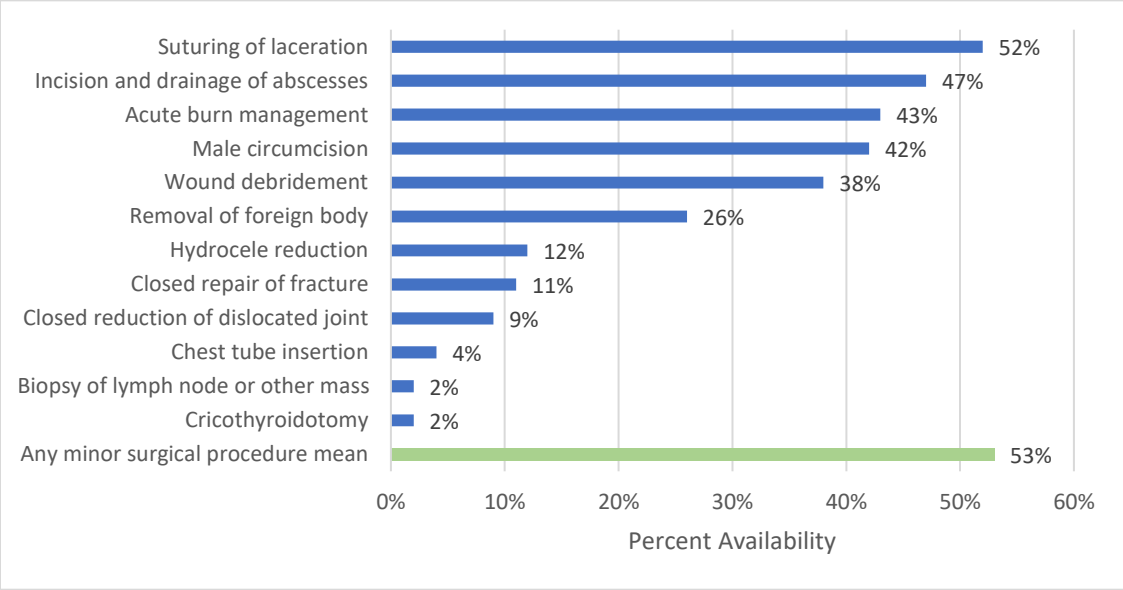
Types of services offered/tracer indicator for basic surgical services

a) Basic surgical services
b) Incision and drainage of abscesses
c) Wound debridement
d) Acute burn management
e) Suturing of laceration
f) Closed repair of fracture
g) Cricothyroidotomy
h) Male circumcision
i) Hydrocele reduction
j) Chest tube insertion
k) Chest tube insertion
l) Biopsy of lymph node or other mass
m) Removal of foreign body
n) Closed reduction of dislocated joint

Key findings (Figure 82 below reveals)

- On average 53% of the health facilities provide minor surgical services compared to 51% in 2018
- Incision and drainage of abscesses was available in 47% of the health facilities compared to 44% in 2018.
- Suturing of laceration was available in 52% of the health facilities compared to 50% in 2018.
- The proportion of health facilities having wound debridement services was available in 38% of the health facilities, similar to 2018.
- Male circumcisions were done in 42% of the health facilities compared to 40% in 2018.
- Chest tube insertion, cricothyroidotomy, biopsy of lymph node or other mass, and close reduction of dislocated joint services had less than 10% of health facilities accounting for them.

Figure 82: Percentage of facilities that offer minor surgical services (N=568)



In Table 48 Annex 1 reveals the following below:

- Comparatively, counties with the most health facilities offering minor were Rivercess (91%), Bomi, Bong and Grand Gedeh having 75% of their health facilities.
- Counties with less than 20% of the health facilities having minor surgical services were Grand Cape Mount (9%).
- Most of the facilities offering minor surgical services were of level of hospitals (89%), while frequency in Health centres was 53% and clinics being the least at 51%.
- NGO/not-for-profit based had a higher likelihood of offering the service (73%) compared to 56% of public and 43% private for profit health facilities. Almost 61% of facilities located in rural settings provided minor surgical services.

5.13.2 Minor surgery readiness

The service readiness score for basic surgery was assessed using several but not limited to the following tracer items required for surgery services availability in health facilities.

Tracer items required for service delivery in basic surgery

Equipment	Medicine and Commodity
a) Minor surgical kit	b) Skin disinfectant
c) Cricothyroidotomy or tracheostomy set	d) Lidocaine 1% or 2% injection
e) Chest tube insertion set	f) Suture needles and thread
g) Chest tubes	h) Materials for splinting extremities
i) Latex gloves (sterile)	j) Materials for casts

Key findings (Figure 83 below reveals):

- Twenty-eight (28%) of the health facilities had one minor surgery tracer item available to provide surgery in Liberia with 1% of the health facilities with all items (N=318)
- Sutures needles and thread (45%) was available in health facilities.
- Minor surgical kit was available in 31% of the health facilities compared to 47% in 2018.
- Lidocaine 1 or 2 injection was stocked in 59% of the health facilities compared to 95% in 2018.
- Skin disinfectants were available in 45% of the health facilities compared to 94% in 2018.
- Chest tube and chest tube insertion set were availability was in 6% and 5% of the health facilities respectively

Figure 83: Facilities that have tracer items for minor surgical services (N=318)

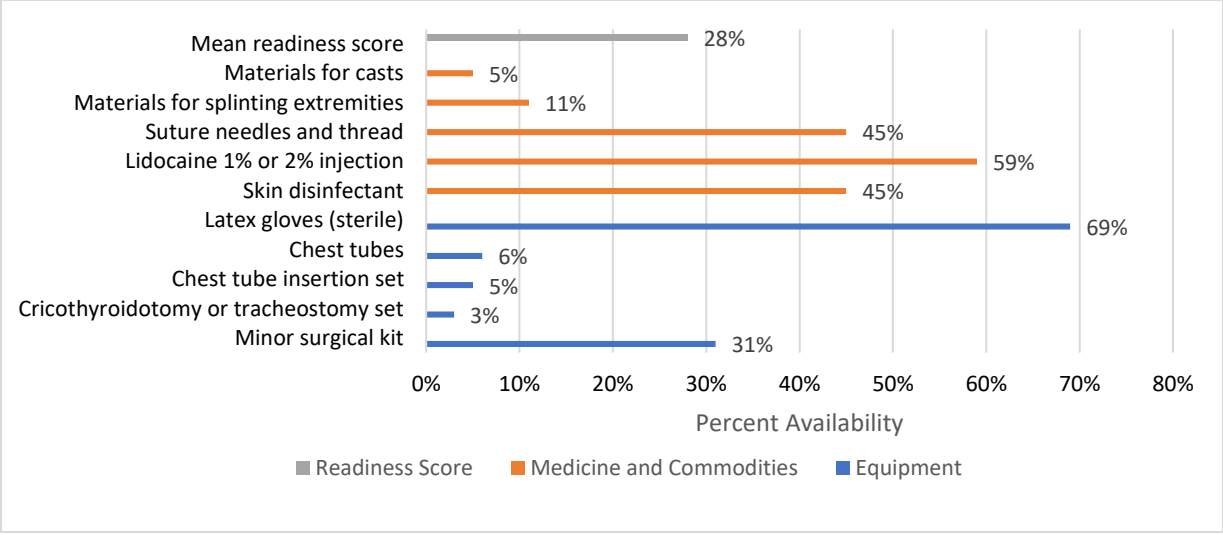
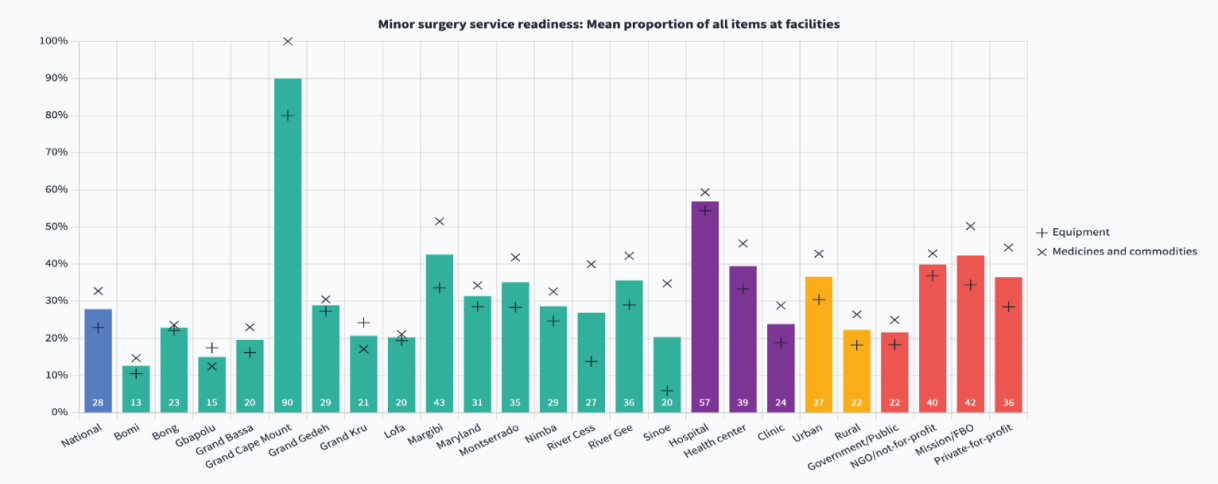


Figure 84 below shows that tracer items for assessment of readiness were categorized into equipment and medicines and commodities.

- The tracer items categorized as equipment were available in 23%, medicines and commodities were offered in 33% facilities that provided surgical services.
- Health facilities located in urban (37%) and rural areas (22%) had a difference of mean readiness score of 15%.
- Almost all (13/15) of the counties had less than 40% of their health facilities with at least one tracer items to provide surgical services.
- The mean readiness for equipment was highest (80%) in Grand Cape Mount with three counties (Bomi (11%), River Cess (14%) and Sinoe (6%) scoring below 15%.
- Grand Cape Mount and Margibi besides other counties had over 50% of their facilities ready to provide medicines and commodities for minor surgical services.
- Hospitals (57%) more ready to provide minor surgery compared to health centers (39%) and clinics (24%) respectively.
- These trends are the same when considering equipment and medicine and commodities for minor surgery readiness.

Figure 84: Facilities that have tracer items for Minor surgical services by county, facility type, rural/urban and Ownership (N=287)



5.14 Major surgery availability and readiness

5.14.1 General surgery availability

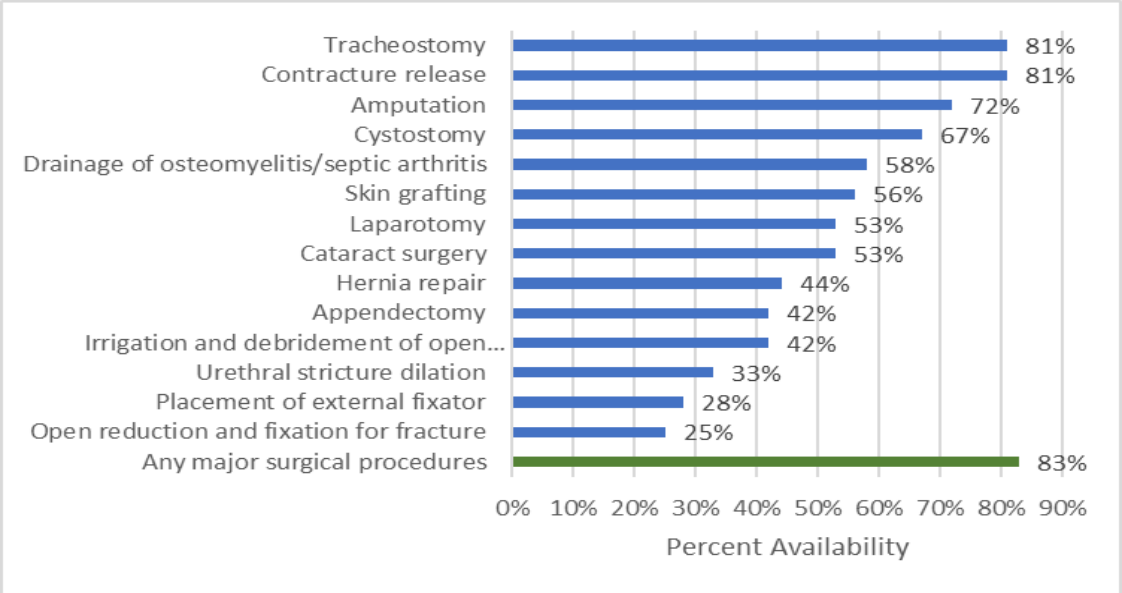
Types of services offered

- Major surgical services
- Tubal ligation
- Dilatation & Curettage or vacuum aspiration
- Episiotomy, cervical and vaginal laceration repair
- Hernia repair
- Cystectomy
- Laparotomy
- Skin grafting
- Amputation
- Contracture release
- Irrigation and debridement of open fracture
- Anorectal malformation repair
- Congenital hernia repair
- Pediatric intussusception reduction
- Tracheostomy
- Vasectomy
- Obstetric fistula repair
- Appendectomy
- Placement of external fixator
- Urethral stricture dilatation
- Congenital hernia repair
- Cleft lip and palate repair
- Open reduction and fixation for fracture
- Cataract surgery
- Drainage of osteomyelitis/septic arthritis
- Caesarean section
- Club foot repair
- Pediatric escharotomy/fasciotomy contracture release

Key findings (Figure 85 below reveals) and Table 49 in annex 1.

- Major surgery services were provided in 83% of the hospitals (N=36) compared to 92% in 2018.
- Episiotomy, cervical and vaginal laceration repair services were carried out in 89% of the hospitals compared to 84% in 2018.
- Appendectomy, Laparotomy, and Hernia repair were done in 81%, 67%, 81% of the hospitals respectively.
- Tubal ligation was available in 81% of the hospitals compared to 76% in 2018.
- Amputation was carried out in 53% of the hospitals compared to 46% in 2018.
- Cystostomy in 56% of the hospitals compared to 70% in 2018.
- Club foot repair and Obstetric fistula repair was done in 14% of the hospitals compared to 53% in 2018.
- Cataract surgery and cleft palate were available in 25% of the hospital similar to 2018 report.
- Caesarean section services were available in 89% of the hospitals.
- Vasectomy (47%) and Skin grafting (42%) were also provided in hospitals compared with vasectomy 35%

Figure 85: Percentage of hospitals that offer Major surgical services (N=36)



Further details on major surgery available by county, facility type, managing authority and urban/rural can be seen **in Table 50-51 in annex 1.**

5.14.2 Essential surgery (major surgery) service readiness

The service readiness for essential surgery was assessed based using the following 41 tracer items for service delivery:

Tracer items required for service delivery to assess essential surgery services.

Staff and Guideline

a) Guidelines for IMEESC (WHO Integrated Management for Essential and Emergency Care)
b) Staff trained in IMEESC
c) WHO surgical safety checklist
d) Staff trained in general surgery
e) Staff trained in general anaesthesia

Equipment

a) Basic operating table
b) Overhead operating light
c) Examination light to aim at surgical site
d) Basic set of surgical instruments
e) Cricothyroidotomy set
f) Sterilization equipment in facility or system for sending items outside for sterilization
g) Blood pressure apparatus
h) Stethoscope
i) Cardiac monitor and ECG electrodes
j) Defibrillator
k) Anaesthesia machine
l) Capnograph
m) Gasometer
n) Intubation equipment (adult)
o) Intubation equipment (paediatric)
p) Resuscitation bag, and mask (adult, paediatric, and neonatal)
q) Suction apparatus with catheter
r) Thermometer
s) Tourniquet
t) Spinal needle

Medicines and Commodities

a) Sutures with needles (any)
b) Disposable latex gloves (non-sterile)
c) Skin disinfectant
d) Oxygen with administration equipment
e) Nasogastric tubes
f) Urinary catheters
g) Atropine (injectable)
h) Adrenaline / epinephrine injection
i) Bupivacaine (injectable)
j) Diazepam (injectable)
k) Ephedrine
l) Halothane
m) Ketamine
n) Lidocaine 5%
o) Suxamethonium
p) Thiopental

Table 52-55 annex 1 shows the percentage of hospitals offering essential surgery/major surgery services.

Key findings (Figure 86 below reveals)

- On average 59% of the hospitals (N=30) compared to 70% provided essential surgery services in Liberia.
- Most of the hospitals had staff trained in general surgery (67%) and anesthesia (97%) while at least 1 trained staff in IMEESC in the past two years preceding the survey was in 53% of the hospitals compared to 88%, 88% and 16% respectively in 2018.
- Suction machine was available in 90% of the hospitals compared to 92% in 2018
- Across all counties 70% of the hospitals had anesthetic machine compared to 28% in 2018

About 49% of hospitals were ready to provide major surgery when it comes to the use of medicines and commodity. Medicines and commodities with the highest were urinary catheter (90%), Disposable latex gloves (non-sterile) (87%), Ketamine (83%), Sutures with needles (77%),Diazepam injectable (73%), and nasogastric tubes (70%).

Figure 86: Hospitals that have tracer items for comprehensive surgical services (N=30)

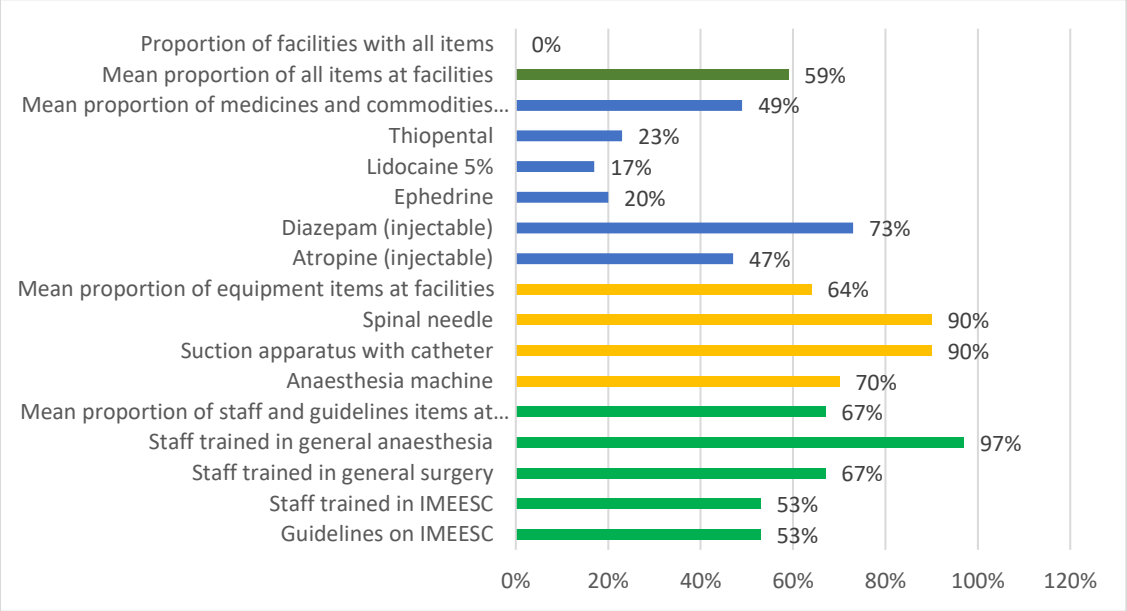
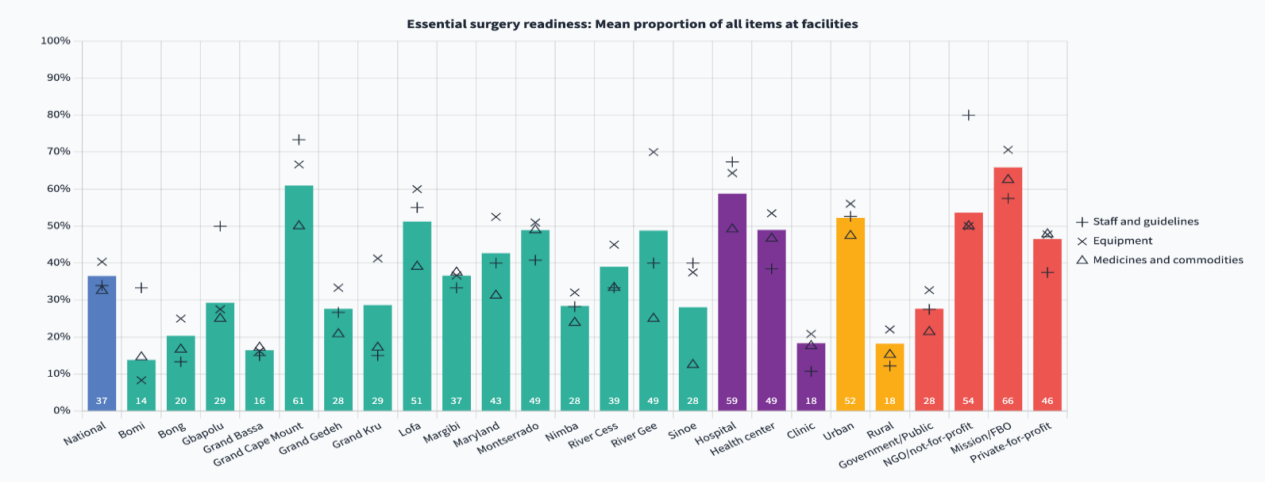


Figure 87 below reveals:

- The general readiness for essential surgical services was 59% (11% decline among hospitals), however readiness in terms of Equipment, staff and guidelines, and Medicines and Commodities were 64%, 67% and 49% respectively compared to 70%, 69%, 62% and 75% in 2018 in hospitals (N=30).
- Counties had varying levels of readiness for the provision of essential surgical services for instance Grand Cape Mount and Lofa had over 50% of health facilities ready with the rest of the counties below 50%.
- Bomi and Grand Bassa had the poorest scores of 14% and 16% in terms of overall readiness score. Hospitals have the highest essential surgical services readiness score of (59%) compared to health center (49%) and clinic (18%). In comparison with rural and urban, there is a significant difference with the readiness score as urban readiness score accounts for (52%) against rural (18%).

Figure 87: Health that have tracer items for essential surgical services, by county, facility type, rural/urban and ownership (N=79)



5.15 Laboratory diagnostic test availability and readiness

5.15.1 Laboratory diagnostic test availability

The following 18 tracer services offered were used as tracer indicators for laboratory diagnostic test availability in Liberia.

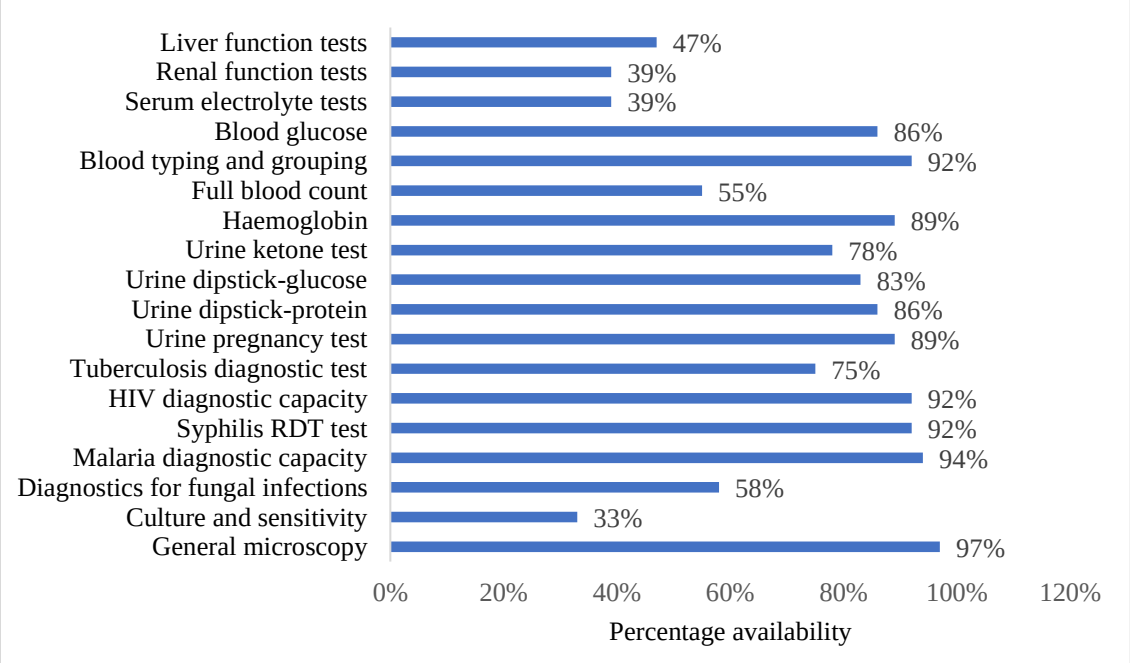
Full blood count	HIV diagnostic capacity	Culture and sensitivity
Blood typing and grouping	Tuberculosis diagnostic test	General microscopy
Liver function test	Urine dipstick-protein	Urine ketone test
Urine pregnancy test	Urine dipstick-glucose	Hemoglobin
Syphilis RDT test	Blood glucose	Malaria diagnostic capacity
Serum electrolytes	Renal function test	Diagnostic for fungal infections

Key findings (Figure 88 below)

- On average 36% of the hospitals (N=36) provided advanced diagnostic services compared to 37% in 2018. Syphilis RDT test was done in 92% of the hospitals compared to 48% in 2018
- Liver function tests were done in 47% of the hospitals compared to 29% in 2018
- Blood typing and grouping by ant globulin was done in 92% of the hospitals compared to 55% in 2018. Full blood count with differential is done in 53% of the hospitals compared to 33% in 2018
- Serum electrolytes were available in 39% of hospitals compared to 18% in 2018
- Malaria diagnostic capacity were available in 94% of the hospital
- Tuberculosis diagnostic test were available in 75% of the hospital

Table 56-57 in annex 1 highlighted the percentage of facilities offering laboratory diagnostic test availability services

Figure 88: Percentage of hospital that offer laboratory diagnostic tests



5.15.2 High level diagnostic equipment service availability

The following tracer services were assessed to determine availability of the high--level diagnostic equipment services in Liberia.

a) Availability of X--ray diagnostic services
b) Availability of Ultrasound services
c) Availability of CT scan services

Key findings

- In Liberia, 36% of the hospitals provide imaging equipment and procedures compared to 48% in 2018.
- Ultrasound services are available in 81% of the hospitals compared to 72% in 2018.
- Diagnostic X--ray services are provided in 56% of the hospitals compared to 64% in 2018.
- Computer tomography CT scans is available in 11% of the hospitals compared to 3% in 2018.

Figure 89: Hospitals with high level imaging equipment and procedures (N=36)

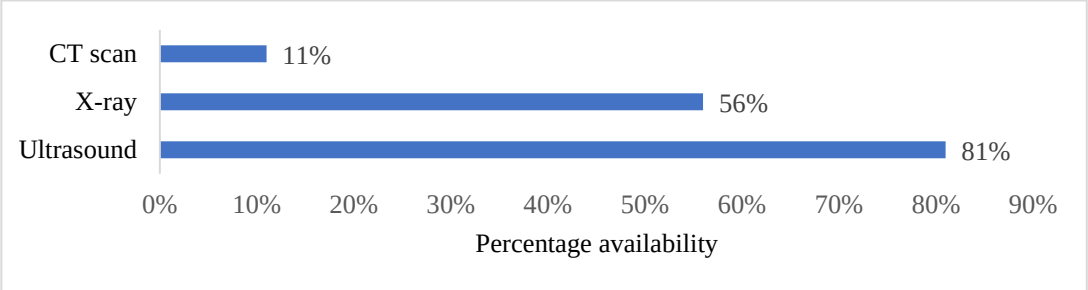


Table 58 Annex 1 shows counties with highly imaging equipment and procedures. However, some counties including Gbarpolu, and Rivercess, did not have any of imaging equipment and procedures. CT scan were available in three counties: Grand Bassa (3%), Montserrado (1%), and Nimba (1%).

These high level of imaging equipment and procedures were majorly available in NGO/not-for profit hospitals (31%) followed by mission/faith based (24%) while government/public was least in 6% of the hospitals. Ultrasound (3%) and X--rays (1%) of the imaging equipment and procedures were majorly available in rural hospitals.

5.16 Basic transfusion readiness

A total of the following seven (7) tracer items were assessed for service delivery readiness for basic blood transfusion services.

Tracer items required for service delivery readiness for basic transfusion.

Trained staff and guidelines

a) Guidelines on the appropriate use of blood and safe blood transfusion
b) Staff trained in the appropriate use of blood and safe blood transfusion.

Equipment

c) Blood storage refrigerator

Diagnostics

d) Blood typing
Cross match testing

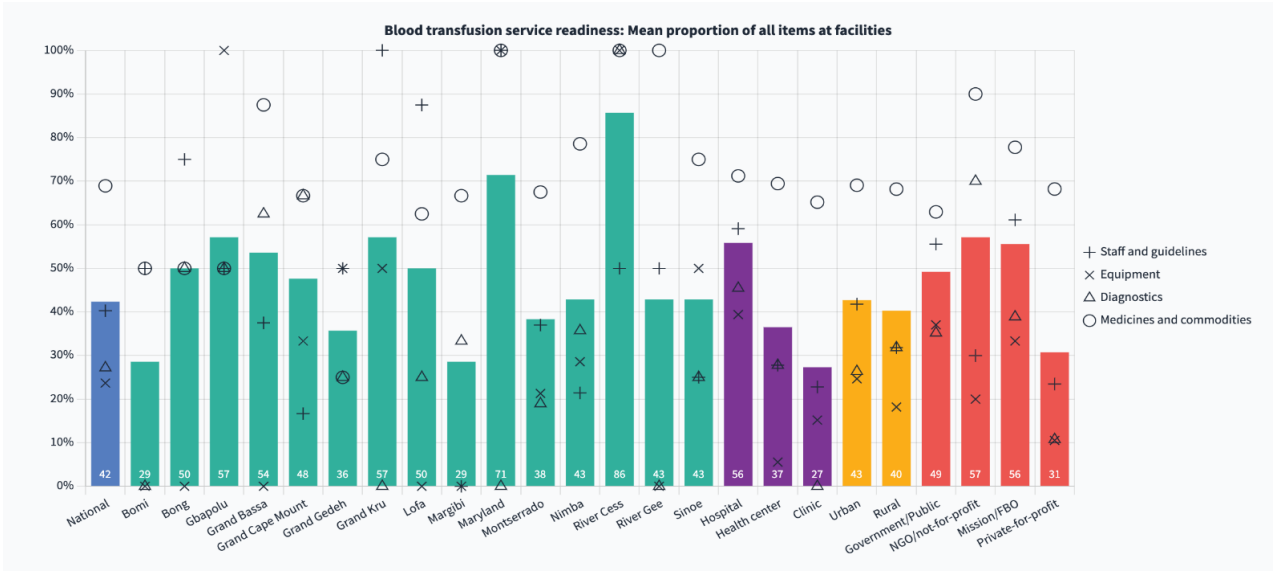
Medicines and commodities

e) Blood supply sufficiency
f) Blood supply safety

Key findings (Figure 90 below reveals)

- Forty-two (42%) of health facilities in Liberia had at least tracer item to provide blood transfusion service while one percent of the health facilities had all tracer items for blood transfusion.
- Blood supply safety is provided in 74% of the health facilities compared to 67% in 2018.
- Blood supply sufficiency is available in 63% of the health facilities compared to 52% in 2018.
- Blood typing is done in 29% of the health facilities, while cross matching typing is available in 26% of the health facilities compared to 60% for blood typing and 34% for cross matching typing in 2018.
- On average, 24% of health facilities in Liberia have a blood storage refrigerator compared to 21% in 2018.
- Guidelines on appropriate use of blood and safe blood transfusion are available in 31% of the health facilities, while 49% of the health facilities have at least one trained staff in appropriate use of blood and safe blood transfusion.
- 39% for guidelines on appropriate use of blood and safe blood transfusion was availability

Figure 90: Percent of Health facilities that have tracer items for blood transfusion, by county, facility type, rural/urban and ownership (N=59)



The other blood service readiness tracer items available in health facilities are Blood supply safety (74%), Blood supply sufficiency (63%), Blood typing (29%), and Cross matching typing (26%). On average 24% of the health facilities in Liberia have blood storage refrigerator. Table 59 in annex 1 shows further results.

CHAPTER Six Management and finance support systems

6.1 Facility governance and management

6.1.1 Governance and Management Systems

Governing and managing health facilities encompasses a series of measures and systems for planning, organizing and decision-making such that it directly affects both healthcare workers and patients. Figure 91 below reveal findings on health facilities accounting for facility governance and management.

Key findings

- A system to routinely elicit community input into health facilities management decision accounts for 62% of all health facilities assessed.
- Majority of health facilities in rural areas (82%) accounted for a system to routinely elicit community input into health facilities management decision as compared to urban areas accounting for 39%.
- NGO/Not-for-profit and Government/ Public facilities had majority of its facilities accounting for a system to routinely elicit community input into health facilities management decision 82% and 81% respectively, while Mission/FBO (43%), and Private for profit 29% accounted for the least of health facilities.

Figure 91: Percent of Health facilities that have a routine system for eliciting community input into facility management decisions, by county, facility type, rural/urban and ownership (N=568)

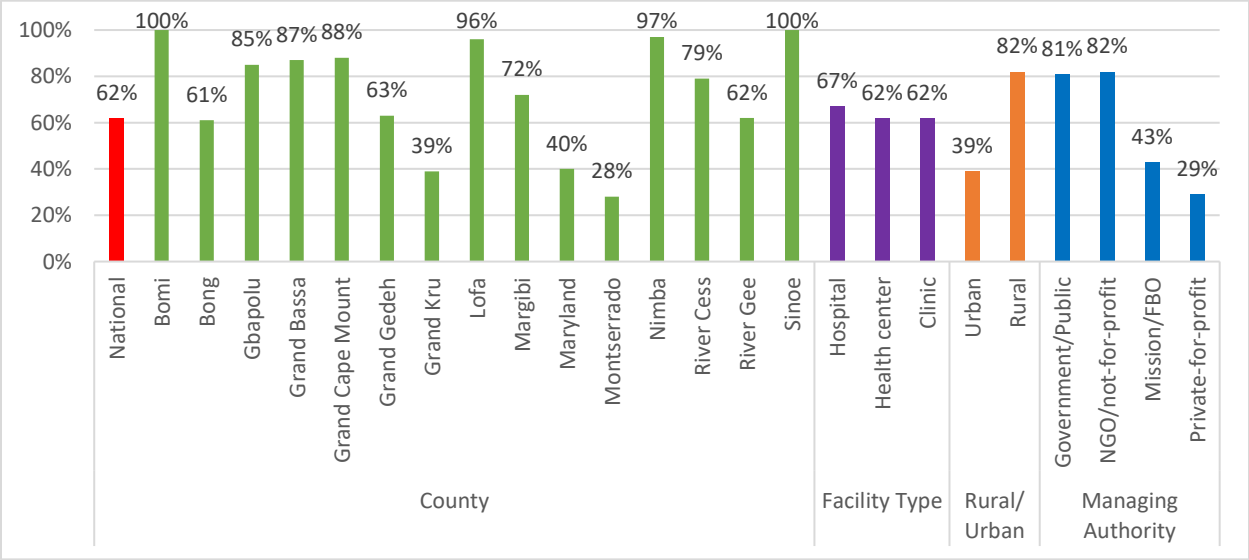


Table 60 in annex 1 reveals that More than two-third of health facilities in Liberia have a facility management committee responsible for the overall management of the health facilities in the past 3 months.

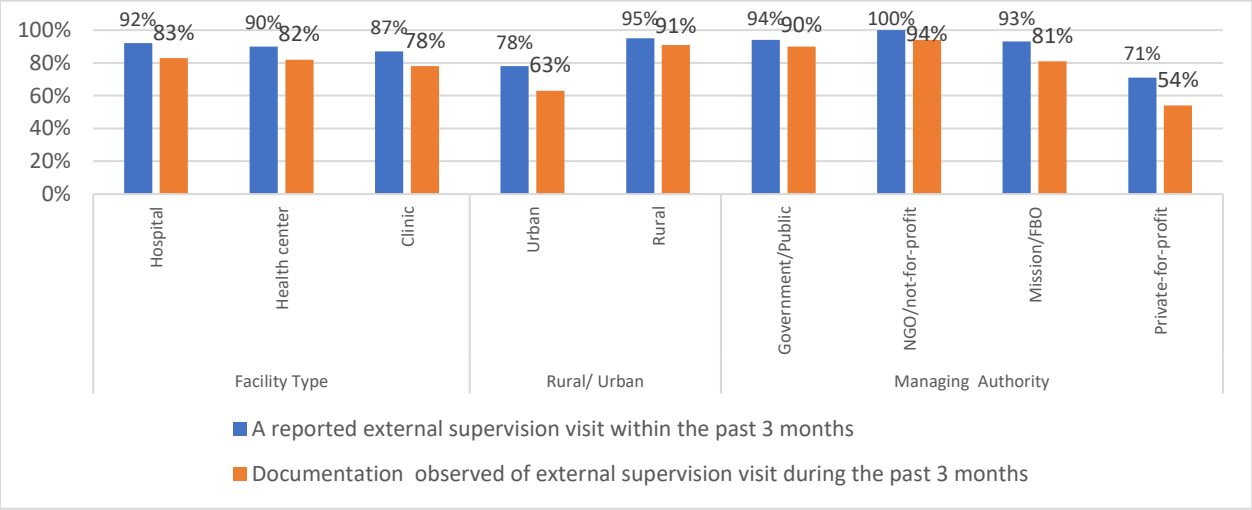
6.1.2 Management of Staff (Staff supervision)

Supportive supervision is viewed as an intervention that improves performance, supports the health system, and helps healthcare providers to provide high-quality care. Additionally, consistent supportive supervision is essential for keeping staff members engaged and motivated. Figure 92 below and **table 61 in annex 1 reveal these findings.**

Key findings (Figure 92 below reveals)

- In Liberia, the proportions of health facilities reported receiving external supervision visit(s) within the past three month was 87% while 78% of health facilities had documentation observed for external supervision visits received.
- Health facilities in rural areas had external supervisions at 95% as compared to urban area revealing 78%.
- The proportion of health facilities reported receiving external supervision visits in the past three months were found to be significantly low in Margibi County accounting for 38% with similar proportion accounting for documentation of external supervision visits received.
- All NGO/not-for-profit reported having external supervision visit within the past three months. The proportion of Government/Public facilities and Mission/FBO reporting that there were external supervision visits within the past 3 months accounted for 94% and 93%.

Figure 92: Percent of Health facilities accounting for external supervision received in the past 3 months with documentation observed, by facility type, rural/urban and ownership (N=568).



6.2 Systems for staff and patient safety

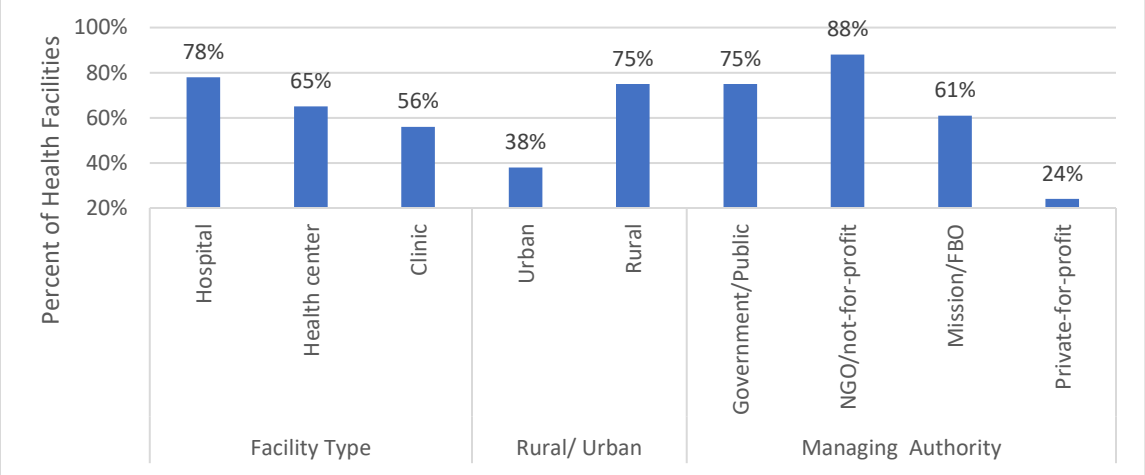
6.2.1 System for Infection Prevention and Control (IPC)

System for infection prevention and control in health facilities is paramount in ensuring the safety and well-being of both healthcare workers and patients. Moreover, the availability of IPC guideline and use in health facility is essential for healthcare workers as it offers a precise framework of protocols and best practices to reduce the risk of infection and the spread of diseases or illnesses by identifying, containing, and addressing potential health hazards. Figure 94 below reveal key findings. Further findings are shown in **table 62 in annex 1.**

Key findings (Figure 93 below reveals)

- Overall, 58% of health facilities assessed had guidelines for infection prevention and control available whereas 65% of health facilities accounted for staff being trained in a certified IPC course.
- The availability of IPC guidelines facility type vary with hospital accounting for 78%, Health center (65%) and Clinics (56%).
- Health facilities in rural areas had greater proportion (75%) reporting the availability of guideline for IPC compared to health facilities in urban area (38%)
- The least number of facilities reported having IPC guidelines available were in the counties of Montserrado, Margibi, Nimba, and Lofa, with percentages of 30%, 58%, 63%, and 65%, respectively.

Figure 93: Percent of Health facilities reported having IPC guidelines, by facility type, rural/urban and ownership (N=568).



6.2.2 Emergency preparedness systems

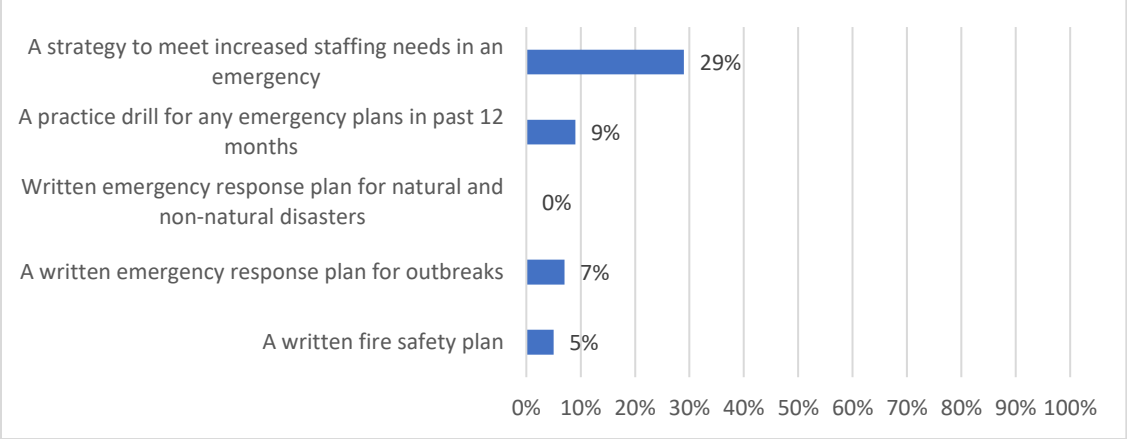
Liberia has experienced two major diseases outbreaks; Ebola and COVID-19 in less than a decade in addition to other smaller outbreaks and natural disasters. and integrated preparations, such as emergency response plans and training of staff, are essential for healthcare institutions to

guarantee proper readiness. In addition, healthcare facilities need a workforce to guarantee they have enough people on hand in the event of an unexpected crisis. Healthcare facilities need up-to-date information and supplies, as well as a reliable method of communication that can be utilized to immediately notify personnel and provide direction in the case of an emergency. Figure 94 below reveals the following.

Key findings:

- The proportion of counties that have health facilities a written emergency response plan for outbreaks, range from none to 34%
- Only 5% of health facilities assessed have a written fire safety plan. Moreover, none of the health facilities had written emergency response plan for natural and non-natural disasters.
- Less than 10% of health facilities across Liberia practiced drill for any emergency in the past 12 month. Only NGO/not-for-profit health facility had at least 61% with 14% for Mission/FBO and 9% of the Government/public health facilities

Figure 94: Percent of Health facilities accounting for emergency preparedness systems (N=568)



6.3 Quality monitoring systems

6.3.1 Internal quality assurance and improvement systems

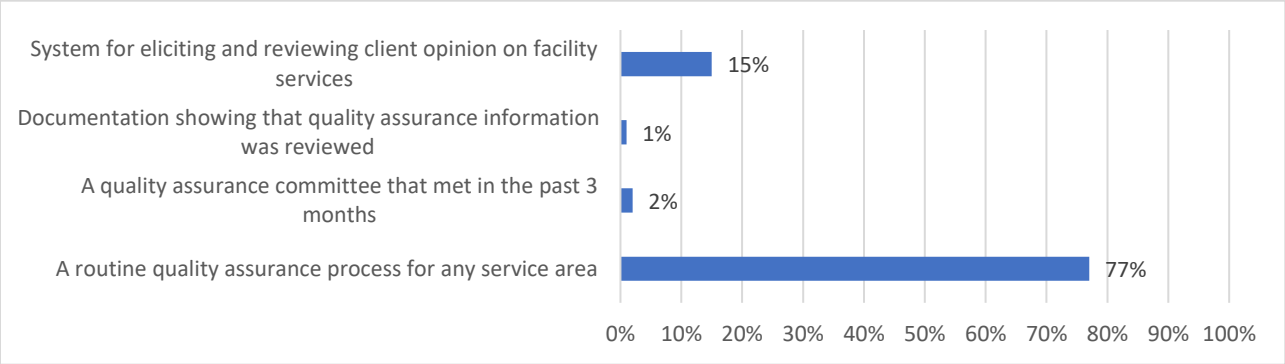
Assuring that all aspects of a patient's treatment are up to par in terms of quality and safety is a top priority in the healthcare industry, making quality assurance all the more important. Health

services must be delivered in a way that is both efficient and safe, thus it is necessary to create policies, procedures, and processes to achieve this. Clinical procedures and recommendations, patient input, clinical audits, etc., are all examples of quality assurance practices. It's a step toward giving them the finest treatment possible. Figure 95 below **reveals these findings.**

Key findings

- Majority (77%) of the health facilities conducted a routine quality assurance process in at least a service delivery area in the health facility. Compare to other counties, Maryland had the least proportion (44%) of its facilities conducting routine quality assurance.
- Almost no facility (99%) had documentation showing that quality assurance information was reviewed during the period.
- In Liberia, only 15% of the health facilities have a mechanism in place for routinely collecting and reviewing client opinion on facilities services. Private-for-profit health facilities have an even lower percentage (9%) than the national average.

Figure 95: Percent of Health facilities accounting for internal quality assurance and improvement (N=568)



6.4 Monitoring systems for quality of inpatient care

6.4.1 Case review systems

The goals of case review process are to improve the quality and safety of patient care by learning from past performance, adverse events, errors, and near misses to identify and suggest practice and systems improvements to prevent similar future episodes.

Key Findings

- On average (Table 10 below reveals), about 60% of facilities had formal case review system with 48% and 22% having formal death review and maternal death review system respectively.
- Hospitals had higher scores when compared with other facility types.
- About 74% of hospitals had maternal death review system in place. Table 8 below shows further distribution.

Table 10: Percentage of facilities offering inpatient services with case review systems by county, location and ownership

National	Formal case review system	Formal death review system	Perinatal death review system	Maternal death review system	n
	60%	48%	36%	22%	564
County					
Bomi	0%	100%	75%	59%	23
Bong	100%	37%	40%	17%	44
Gbapolu	100%	100%	50%	31%	13
Grand Bassa	100%	75%	64%	56%	30
Grand Cape Mount	75%	75%	13%	6%	32
Grand Gedeh	100%	100%	47%	39%	23
Grand Kru	0%	0%	71%	78%	18
Lofa	88%	75%	20%	18%	55
Margibi	100%	71%	47%	10%	36
Maryland	33%	67%	77%	60%	25
Montserrado	39%	25%	11%	4%	132
Nimba	100%	74%	43%	28%	59
River Cess	100%	100%	67%	65%	19
River Gee	100%	100%	53%	40%	20
Sinoe	100%	100%	6%	5%	35
Facility type					
Hospital	83%	89%	81%	74%	35
Health center	76%	52%	42%	33%	67
Clinic	29%	14%	32%	18%	462
Urban / rural					
Urban	57%	44%	27%	12%	185
Rural	74%	68%	40%	30%	379
Managing authority					
Government/Public	78%	72%	41%	31%	445
NGO/not-for-profit	59%	88%	69%	58%	8
Mission/FBO	77%	62%	53%	17%	29
Private-for-profit	41%	20%	7%	2%	82

6.4.2 Adverse event monitoring

Adverse events are unintended and sometimes harmful occurrences associated with the use of a medicine, vaccine or medical device (collectively known as therapeutic goods). Adverse events include side effects to medicines and vaccines, and problems or incidents involving medical devices. Examples of adverse events are any un favourable and unintended sign, symptom or disease associated with the use of a therapeutic good. An abnormal laboratory finding could be one example of an unfavourable and intended sign. As shown in table 9 below, only 11% of health

had System and guidelines to monitor adverse events while only 2% had System and guidelines to monitor nosocomial infections. See table 11 below for further distribution.

Table 11: Percentage of facilities offering inpatient services with Adverse event monitoring by county, location and ownership

	System and guidelines to monitor adverse events	System and guidelines to monitor nosocomial infections	n
National	11%	2%	92
County			
Bomi	23%	0%	2
Bong	18%	0%	3
Gbapolu	100%	0%	1
Grand Bassa	50%	0%	4
Grand Cape Mount	0%	0%	4
Grand Gedeh	0%	0%	3
Grand Kru	0%	0%	2
Lofa	13%	13%	8
Margibi	0%	0%	7
Maryland	33%	33%	3
Montserrado	6%	1%	40
Nimba	15%	0%	11
River Cess	100%	0%	1
River Gee	0%	0%	2
Sinoe	0%	0%	1
Facility type			
Hospital	22%	3%	36
Health center	14%	5%	42
Clinic	0%	0%	14
Urban / rural			
Urban	12%	3%	73
Rural	5%	0%	19
Managing authority			
Government/Public	17%	0%	46
NGO/not-for-profit	11%	11%	7
Mission/FBO	23%	8%	13
Private-for-profit	3%	2%	26

6.4.3 Monitoring quality of surgical care

Surgical care is an integral component of healthcare services in all countries, and its quality is evaluated through monitoring of national indicators of safe surgical and anaesthesia care. In Liberia, monitoring is only partial because of the lack of data regarding some of the indicators. However, there is a need for comprehensive monitoring in order to gain knowledge of the progress towards the healthcare goals proposed by the World Health Organization. Table 12 below reveals the following key findings.

Key findings

- On average, formal case review system for surgical cases and deaths in health facilities assessed was 25%.
- Also, system and guidelines to monitor adverse surgical event and monitor post-operative infections were 14% and 16% respectively.

Table 12: Percentage of facilities offering inpatient surgical services with quality monitoring by county, location and ownership

	Formal case review system for surgical cases and deaths	System and guidelines to monitor adverse surgical events	System and guidelines to monitor post-operative infections	n
National	25%	14%	16%	45
Region				
Bomi	100%	100%	0%	1
Bong	100%	0%	50%	2
Gbapolu	100%	100%	0%	1
Grand Bassa	0%	0%	0%	2
Grand Cape Mount	0%	0%	50%	2
Grand Gedeh	0%	0%	0%	1
Lofa	0%	0%	0%	4
Margibi	50%	0%	50%	2
Montserrado	23%	6%	6%	20
Nimba	29%	29%	29%	7
River Cess	0%	100%	100%	1
River Gee	0%	100%	100%	1
Sinoe	0%	0%	0%	1
Facility type				
Hospital	34%	24%	31%	29
Health center	9%	9%	0%	11
Clinic	20%	0%	0%	5
Urban / rural				
Urban	26%	15%	15%	40
Rural	20%	0%	20%	5
Managing authority				
Government/Public	37%	32%	37%	19
NGO/not-for-profit	33%	0%	0%	3
Mission/FBO	10%	10%	10%	10
Private-for-profit	22%	4%	4%	13

6.4.4 Monitoring systems for IPC and hand hygiene

According to WHO, good hand hygiene and other cost-effective infection prevention and control (IPC) practices can prevent 70% of nosocomial infections also referred to as healthcare-acquired infections (HAIs). In addition, hand hygiene and environmental hygiene in health care facilities reduced the risk of dying from an infection with antimicrobial-resistant (AMR) pathogens by more than 50% and decreased associated long-term complications and health burden by at least 40%.

Key findings

Table 13 below shows the distribution of facilities, counties, location and ownership according to monitoring systems for infection prevention and hand hygiene practices.

- On average, 41% of the facilities reported performing IPC monitoring using a specified framework in the past 6 months. Similarly, a little over 50% reported performing hand hygiene monitoring among health workers using a specified framework in the past 6 months.
- The practice of IPC monitoring and hand hygiene increases with facility type from hospital to clinic. Hospitals had 64% and 78% respectively.
- Rural facilities are more committed to practicing IPC and hand hygiene compared to their urban counterpart. Generally, 50% and 61% of public facilities are practicing these measures.

Table 13: Percentage of facilities with Monitoring systems for IPC and hand hygiene

	Monitoring IPC using a specified framework in the past 6 months	Monitoring hand hygiene among health workers using a specified framework in the past 6 months	n
National	41%	52%	568
Region			
Bomi	39%	39%	23
Bong	59%	57%	44
Gbapolu	62%	62%	13
Grand Bassa	40%	65%	30
Grand Cape Mount	63%	88%	32
Grand Gedeh	80%	76%	23
Grand Kru	28%	33%	18
Lofa	47%	71%	55
Margibi	47%	50%	36
Maryland	24%	24%	25
Montserrado	20%	35%	133
Nimba	82%	89%	61
River Cess	49%	49%	19
River Gee	54%	76%	20
Sinoe	21%	21%	36
Facility type			
Hospital	64%	78%	36
Health center	41%	54%	68
Clinic	40%	50%	464
Urban / rural			
Urban	29%	41%	186
Rural	51%	61%	382
Managing authority			
Government/Public	50%	61%	448
NGO/not-for-profit	33%	61%	9
Mission/FBO	49%	62%	29
Private-for-profit	21%	31%	82

6.5 Monitoring systems for laboratory service quality

Laboratory Quality Management System (LQMS) is a standardized procedure and practice contributing to the overall quality of laboratory test results.
According to LQMS, the quality of a testing result does not depend on a single step. But instead, it requires quality in individual processes, resources, and overall organizational structure.
For example, an essential element of Laboratory QMS is an Internal Audit. The organization's employees perform the internal audit as a way of self-assessment. It identifies gaps or non-compliances (NCs) and suggests corrective actions to eliminate undesirable situations. As a result, internal audits help increase the overall efficiency and reliability of the test procedure and its result.

Key Findings (Table 14 below reveals the following findings)

- On the overall, very limited facilities met the national external quality assessment in the 12 months for any other test prior to the survey.
- On average, 59% and 12% of health facilities assessed had laboratory that met NEQA criteria in the past 12 months for any TB and HIV related test respectively.
- Seven (7%) and 13% of the facilities had An established routine external quality assessment mechanism for at least one laboratory test and had a quality control system that is part of the national external quality assessment (NEQA) program
- Only 14%, 8% and 3% of hospitals, health centers and clinics met the national external quality assessment in the 12 months for any other test prior to the survey.
- The distribution of these standards by ownership reveals that public facilities are performing far below the expected when compared to private ownership.
- Also, there is not significant different in the results when distributed by rural and urban location of facilities.

Table 14: Percentage of facilities offering laboratory services with Monitoring systems for laboratory service quality

.	An established routine external quality assessment mechanism for at least one laboratory test	An external laboratory quality control system that is part of the national external quality assessment (NEQA) program	Laboratory that met NEQA criteria in the past 12 months for any TB-related test	Laboratory that met NEQA criteria in the past 12 months for any HIV-related test	Laboratory that met NEQA criteria in the past 12 month for any other test	n
National	7%	13%	59%	12%	4%	430
Region						
Bomi	0%	0%	0%	0%	0%	16
Bong	3%	9%	33%	6%	0%	27
Gbapolu	10%	10%	100%	20%	10%	10
Grand Bassa	6%	8%	100%	6%	0%	29
Grand Cape Mount	6%	3%	100%	3%	0%	31

Grand Gedeh	21%	45%	70%	45%	21%	21
Grand Kru	0%	22%	0%	11%	0%	9
Lofa	16%	20%	63%	20%	2%	45
Margibi	5%	25%	31%	23%	17%	29
Maryland	0%	14%	100%	14%	14%	7
Montserrado	5%	9%	50%	9%	1%	85
Nimba	10%	17%	88%	19%	10%	57
River Cess	0%	0%	0%	0%	0%	15
River Gee	6%	11%	0%	6%	0%	15
Sinoe	5%	11%	50%	11%	5%	34
Facility type						
Hospital	40%	43%	63%	49%	14%	35
Health center	15%	27%	54%	22%	8%	59
Clinic	3%	9%	60%	9%	3%	336
Urban / rural						
Urban	8%	13%	49%	13%	4%	142
Rural	5%	13%	66%	12%	5%	288
Managing authority						
Government/Public	7%	12%	55%	11%	4%	330
NGO/not-for-profit	6%	18%	100%	18%	6%	9
Mission/FBO	17%	31%	87%	31%	12%	26
Private-for-profit	4%	9%	37%	8%	3%	65

6.6 Health information system

In order to make decisions for planning, monitoring, and evaluating health systems and services, as well as for quality improvement, a routine health information system is necessary. In Liberia, all functioning health facilities (Hospitals, Health Centers, and Clinics) are required to submit health information about the various programs and services offered. These data are recorded in facilities registers and later transcribed into the Liberia Health Management Information System (LHMIS) health facility monthly reporting form.
The forms are submitted every month to the District Health Office and inputted into the DHIS2 for data management and decision-making. See figure 96 below.

Key findings:

- A significant proportion of health facilities (90%) reported having routine and systemic processes for facility-level quality checking for data compiled for reports.
- Health facilities in rural areas accounted for 94% with regard to having routine and systemic processes for facility-level quality checking for data compile for reports compared to health facilities in urban area (86%)
- Government/Public and NGO/Not-for-profit facilities presented the highest proportion (94%) of health facilities accounting for routine and systematic process for facility-level quality checking of data compiled of reports, while Mission/FBO and private-for-profit accounted for 89% and 83% respectively.

Figure 96: Percent of Health facilities reported having routine and systemic processes for facility-level quality checking for data compile for reports, by facility type, rural/urban and ownership.

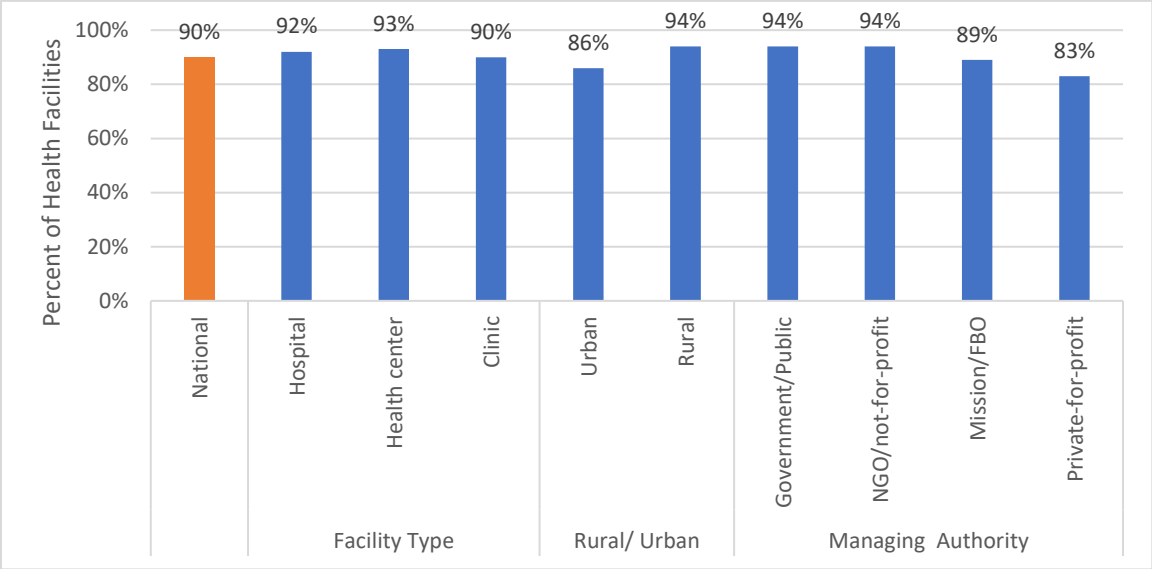


Table 63 in annex 1 reveals the following below:

- On average, eighty-seven percent (87%) of health facilities had designated full-time staff for managing facility data and reporting while 72% of health facilities account for having data management staff with specific data training.
- Regarding health facilities having a designated full-time staff for managing facility data and reporting, there was no noticeable difference between rural and urban areas (87% and 88%, respectively).

CHAPTER SEVEN CONCLUSION AND RECOMMENDATION

7.0 Conclusions and recommendations

This section proves summary of key findings, observations and conclusion derived from the Harmonized Health Facility Assessment process and lessons learned regarding general service availability and readiness as well as specific service availability and readiness for health sector programmes being implemented by Ministry of Health Liberia.

7.1 General comments

Whenever HHFA is conducted in a country for the first time, the methodology usually involves a census of the health facilities in the country. However, in Liberia, we conducted a survey using all

hospitals and health centers but a sample of clinics were used for the survey for the first time in Liberia. There are a number of lessons that may help to improve future surveys.

Questionnaire tools and Sampling frame: The Liberian HHFA coordinating committee reviewed and adapted the original HHFA tool recommended by WHO to the Liberian context by adding Liberia specific questions and was piloted for two days at selected health facilities in Monrovia. It is recommended that subsequent surveys use the newly adapted instruments with additional information including the QOC component which was part of this assessment due to lack of adequate resources. It is strongly recommended that future HHFA be a census to set national level baseline since this was a sample health facilities survey.

Planning and conduct of the HHFA: A major survey exercise requires careful advance planning and preparation as well as adequate time to mitigate data gaps and anomalies, data cleaning, analysis and write up. The Liberia HHFA had the required technical skill mix to facilitate the entire survey. However, future HHFA surveys should benefit from greater lead-time and realistic time lines for completing the exercise and report. Also, analysis should be carried out in workshop basis with the participation of key team players including counties, national MOH, LISGIS and partners. This was not possible during the first round of HHFA due to the Covid-19 outbreak. Also, the HHFA platform is new and being piloted in several countries including Liberia, as such having team in the same place to share the best of skills is key to timely implementation.

Missing service availability elements: This HHFA reported on few indicators not considered from the HHFA since they are national level indicators. Core health workers density, outpatient and inpatient utilization were accessed from the DHIS2 and other sources from the MOH (HR division). Future HHFA should collect these information from the health facilities if possible and should be a census based.A comprehensive national master health facility list with unique identifiers, basic statistic and infrastructure information is ideal for Liberia. The 2021 master facility listing had some gap as some of the facilities were not functional or available during the field assessment.
The master list of health facilities must be updated as often to include names, code, location, type (ie: clinic, health center and hospital) and ownership status (ie: private and public) available. This process is only possible if the next HHFA is a census to ensure that specifics of facilities are collected and verified during the field exercise.

7.2 General Service availability

The density of health care facilities, measured in terms of facilities per 10,000 people, varied across counties by a ratio of 1.9, though encouraging nationally based on the WHO threshold of 2. The fair distribution of healthcare facilities is unquestionably a matter of concern that calls for a more in-depth investigation in order to ensure that underserved regions get priority when brand new infrastructure is being proposed. The number of health facilities in an area may be used as a stand-in for measuring access to care. In areas with a low population density, it makes more sense to have a greater number of facilities of a smaller size (which would result in a higher facility per ten

thousand population), whereas in areas with a high population density, it makes more sense to have a smaller number of facilities of a larger size..

Outpatient visits per capita or use per person year are a better indicator of successful health-care access. The findings revealed that this was very low in Liberia, accounting for only 17% (0.8 per 5 visits per person per year) of the World Health Organization's recommended minimum of five (5) visits per person. Whether there is a problem with data collection and documentation at healthcare facilities or maybe there isn't enough healthcare available, in any case, it's important to support community methods for increasing healthcare demand and introducing new, all-encompassing services..

There is a huge lack of ambulance across the counties, creating a significant emergency transit deficit. To make use of available resources, it is important to establish clear channels for patient referrals, including the creation of county-level referral strategies and intercounty referrals. Specialists are mainly available at hospitals, making it difficult for certain people to get particular care. Plans for training and deploying more specialist human resources will help lower the high rate of maternal mortality including other preventable deaths. Buy additional ambulances and strategically distribute them via county coordination or contact centers for simple referral or strengthen and use existing structures.
Aside from specialties, the conclusion regarding the allocation of health professionals to the population appears to be quite uneven at first. The HHFA data and report used for health workforce strategic planning should explicitly assess this deficit by county, including attrition rate (absenteeism) and skill mix shortfalls that need to be filled or trained. The Liberia core health workers density remains far below the WHO target. Liberia is currently (11 core health workers per 10,000 population instead of 23. This means, the country is just 48% on track of achieving the recommended target. .

7.3 General Service Readiness

The scores for diagnostics and critical medications received relatively poor marks as scores are below 50%. Though basic equipment, basic amenities and standard precautions are above 50%, there is critical need for improvement. Liberia General Service Readiness (GSR) index is 51%, which means only 51% of health facilities assessed are ready to provide quality health services. Life saving commodities for RMNCH available was 69%, commodities for child health and reproductive health remains below average. Unlike Malaria and HIV diagnostic testing, Liberia lacks the diagnostics capacity to conduct several other testing.

According to the findings of the assessment, a significant gap exists in the capacity of the majority of healthcare institutions to conduct fundamental and routine diagnostic tests. This deficiency was particularly observed among clinics and health centers, though there are some gaps among hospitals when considering specific services like cancer, CVDs, etc. The outcomes of the standard measures to avoid infections were promising and excellent, with the majority of the basic items such as storage and disposal sharps and non sharps infectious wastes, single use of disposable

syringes and available gloves and masks. However, storage of non sharps infectious waste and availability of guidelines remain very low and requires immediate attention. .

The basic equipment score seems moderate, but there were significant differences in counties without a reliable power supply and where infant weighing scales were less prevalent. Basic equipment like pulse oximeter, examination light, otoscope and ophthalmoscope remains very low in clinics and health centers and requires improvement. Though basic amenities in facilities is above average, amenities such as power and improved water sources need to be improved particularly power. The least available amenities of serious concerns are communication system and emergency transportation system for patients. These are very cardinal to the provision of services particularly for BEmONC and CEmONC cservices.

7.4 Specific service availability

All except one of the maternal Newborn and Child health services (CEmONC) were progressing towards targets which is very welcoming. Though BEmONC is available at 77% of facilities and CEmONC at 14% of facilities (86% in hospitals) there is need to strengthen services across all 9 signal functions. All 9 signal functions were provided in 61% and 25% of hospitals and health centers, while all 7 BEmONC signal functions were provided in 61% hospitals, 13% health centers and 11% clinics respectively. These need serious attention especially for health centers and clincs that are majority in number and suitable to provide BEmONC services The need to equip facilities to offer all 9 signal functions based on facility types is critical for obstetric emergencies and saving women and newborn's lives, and this would substantially decrease the high incidence of maternal and neonatal mortality in Liberia.
Among communicable disease services provided across the country, 100% and 92% of facilities assessed are providing malaria and STIs services.

Though the provision of PMTCT is at 73%, there is critical need to strengthen screening of pregnant women for early detection and prevention among newborns. Other services such as ARV prescription and management, HIV/AIDs care and support and TB detection are poorly being provided and requires immediate attention.
It is vital to emphasize that primary care for cardiovascular disease, chronic respiratory illnesses, and diabetes were hardly accessible, since the availability of noncommunicable disease services was, on average, 30% across all facilities. Chronic illnesses are becoming more common in Liberia, which is why the country needs to implement measures to detect them early and prevent them from worsening. Almost all health facilities should be able to provide primary screening services. Health promotion interventions and strategies are to be strengthened among communities and social media to educate the public on the significance of using health services, early identification, treatment, and prevention of illnesses that might be deadly or cause impairment.

7.5 Specific service readiness

The readiness findings were as unusually varied as 2018 SARA. Every single service and industry were affected. When it comes to dealing with unique differences, each service showed a very

different readiness pattern. Though service availability are among facilities offering MNCH, their readiness remains at average level and thus require improvement. Child preventive and curative care and CEmONC services need particular attention since there are reduction when compared to 2018 SARA findings. Except for malaria, PMTCT and HIV counselling and testing services, all other communicable disease service readiness are below average. There is need to strengthen these services with emphasis on the availability of tracers items such staff and guidelines, equipment, diagnostics and medicines and commodities. .

The ARV service readiness score was the least at 25% though a huge increase from 0% in 2018. This is still a low ARV readiness score because there aren't many facilities that offer advanced diagnostic tests like a complete blood count, CD4, kidney function, and liver function. It is also important to note that viral load and CD4 checking decreased by 2% rather than 4% in 2018. Similarly, Non-communicable disease service readiness remains low with the least ready service being neglected tropical diseases.

7.6 Facility governance and management

To ensure health facility ownership among community leaders there need to established system to routinely elicit their inputs into health facilities management decision accounts. Over 60% of facilities mentioned community involvement in decision making processes. Accordingly, facilities are regularly supervised by external and internal health authorities to ensure quality standards are ahead to. With multiple outbreaks all year, it is very key to strengthen IPC measures. Facilities in Montserrado, Margibi, Nimba, and Lofa counties reported shortages of IPC guidelines. Similarly, a lot needs to be done to ensure the availability and use of written emergency response plan for outbreaks. A little over one-third (34%) of facilities assessed had written emergency response plan for outbreaks.

Routine quality assurance practices are key to ensuring compliance to standards. About 77% of facilities confirmed the practiced of routine quality assurance. Though 60% facilities said they had formal case review system for patients, 48% and as low as 22% reported having death review and maternal death review systems respectively. It is very critical to strengthen these review systems especially for maternal death review system to ensure that preventable deaths are mitigated.

To conclude, the conduct and management of the first ever HHFA in Liberia was successful.

In addition to conducting HHFA within two years using census data and a random sample every three to four years, more policy briefs should be developed to educate policy implications. This is to show how far along the government's health priorities recommended in the National Health Policy and Plan and the Essential package of health services are being implemented. These results should also be used as a yardstick to monitor and measure how far Liberia has come using future HHFA assessments.

Annexes

Annex 1. Tables

Table 15: Number of midwives per 1,000 institutional deliveries and per 10,000 population and number core health workers per 10,000 population by County

	Population	Number of deliveries in facilities	Number of midwives in facilities	Number of midwives per 1,000 institutional deliveries	Number of midwives per 10,000 population	Number of physicians, midwives, nurses and PAs in all facilities	Number of physicians, midwives, nurses and PAs per 10,000 population
National	4,461,332	113,778	914	8	2	4750	11
County							
Bomi	107945	1990	24	12	2	126	12
Bong	427937	16763	84	5	2	297	7

Gbarpolu	107007	2155	32	15	3	100	9
Grand Bassa	284486	6607	23	3	1	197	7
Grand Cape	163069	5839	20	3	1	151	9
Grand Gedeh	160736	5563	87	16	5	272	17
Grand Kru	74316	1723	16	9	2	80	11
Lofa	355283	12508	89	7	3	361	10
Margibi	269382	5483	44	8	2	253	9
Maryland	174441	3671	40	11	2	128	7
Montserrado	1434975	18113	311	17	2	2003	14
Nimba	592892	24686	68	3	1	491	8
Rivercess	91763	2264	29	13	3	109	12
River Gee	85707	2383	28	12	3	92	11
Sinoe	131393	4030	19	5	1	90	7
Source: DHIS 2021/MOH HR							

Table 16: Percentage of facilities with Basic amenities for tracer items by county, facility type, urban/rural, and managing authority

	Power	**An improved water source**	**Access to improved sanitation facilities for clients**	**Auditory and visual privacy for patient consultations**	**Communications system**	**Computer with internet**	**Emergency transportation system for patients**	**Mean proportion of all items at facilities**	**Proportion of facilities with all items**	**n**
National	61%	77%	80%	91%	23%	10%	22%	52%	2%	568
County										
Bomi	75%	84%	49%	100%	4%	4%	76%	56%	0%	23
Bong	39%	81%	81%	84%	6%	8%	2%	43%	0%	44
Gbapolu	77%	69%	38%	85%	8%	0%	38%	45%	0%	13
Grand Bassa	48%	72%	56%	100%	32%	11%	43%	52%	5%	30
Grand Cape Mount	59%	84%	88%	97%	6%	0%	16%	50%	0%	32
Grand Gedeh	61%	92%	72%	92%	76%	0%	20%	59%	0%	23
Grand Kru	67%	44%	83%	94%	6%	0%	22%	45%	0%	18
Lofa	71%	67%	58%	85%	40%	5%	33%	51%	2%	55
Margibi	57%	85%	88%	100%	22%	18%	21%	56%	6%	36
Maryland	80%	72%	92%	88%	12%	4%	36%	55%	0%	25

Montserrado	56%	82%	96%	88%	17%	20%	14%	53%	3%	133
Nimba	69%	80%	65%	90%	26%	0%	25%	51%	0%	61
River Cess	95%	42%	91%	100%	47%	5%	51%	62%	0%	19
River Gee	71%	78%	78%	91%	18%	0%	13%	50%	0%	20
Sinoe	49%	66%	61%	100%	49%	0%	10%	48%	0%	36
Facility type										
Hospital	78%	97%	86%	92%	58%	47%	72%	76%	14%	36
Health center	69%	94%	94%	96%	31%	22%	38%	63%	7%	68
Clinic	59%	74%	78%	91%	20%	7%	18%	49%	1%	464
Urban / rural										
Urban	60%	81%	93%	88%	21%	20%	22%	55%	4%	186
Rural	61%	74%	68%	94%	24%	1%	23%	49%	0%	382
Managing authority										
Government/Public	60%	76%	72%	92%	23%	3%	23%	50%	0%	448
NGO/not-for-profit	52%	79%	67%	94%	52%	31%	79%	65%	12%	9
Mission/FBO	67%	87%	98%	100%	23%	25%	36%	62%	7%	29
Private-for-profit	60%	77%	91%	86%	20%	18%	13%	52%	3%	82

Table 17: Percentage of facilities with Basic water, sanitation, hygiene, health care waste management, and environmental cleaning

.	Basic water service	Limited water service	No water service	Basic sanitation service	Limited sanitation service	No sanitation service	Basic hygiene service	Limited hygiene service	No hygiene service	Basic health care waste service	Limited health care waste service	No health care waste service	n
National	77%	4%	22%	0%	26%	14%	1%	97%	0%	0%	0%	4%	568
County													
Bomi	84%	0%	16%	0%	16%	39%	0%	88%	0%	0%	0%	4%	23
Bong	81%	6%	19%	0%	26%	16%	2%	98%	0%	0%	0%	2%	44
Gbapolu	69%	8%	31%	0%	23%	46%	8%	92%	0%	0%	0%	8%	13
Grand Bassa	72%	20%	28%	0%	24%	41%	0%	100%	0%	0%	0%	0%	30
Grand Cape Mount	84%	0%	16%	0%	66%	3%	0%	94%	0%	0%	0%	0%	32
Grand Gedeh	92%	4%	8%	0%	41%	20%	0%	100%	0%	0%	0%	0%	23
Grand Kru	44%	0%	50%	0%	6%	11%	0%	100%	0%	0%	0%	0%	18
Lofa	67%	4%	33%	0%	15%	29%	0%	100%	0%	0%	0%	5%	55
Margibi	85%	0%	15%	0%	24%	2%	0%	94%	0%	0%	0%	0%	36
Maryland	72%	0%	24%	0%	16%	4%	0%	100%	0%	4%	0%	0%	25
Montserrado	82%	6%	16%	0%	27%	1%	0%	98%	0%	0%	0%	4%	133

Nimba	80%	3%	20%	0%	26%	26%	3%	96%	0%	0%	0%	1%	61
River Cess	42%	5%	58%	0%	19%	0%	9%	91%	0%	0%	0%	0%	19
River Gee	78%	4%	22%	0%	22%	13%	0%	100%	0%	0%	0%	18%	20
Sinoe	66%	0%	34%	0%	26%	36%	0%	97%	0%	0%	0%	13%	36
Facility type													
Hospital	97%	0%	3%	0%	39%	6%	0%	100%	0%	0%	0%	0%	36
Health center	94%	0%	6%	0%	37%	1%	0%	100%	0%	0%	0%	4%	68
Clinic	74%	5%	25%	0%	24%	16%	1%	97%	0%	0%	0%	4%	464
Urban / rural													
Urban	81%	5%	17%	0%	29%	3%	0%	98%	0%	0%	0%	3%	186
Rural	74%	4%	26%	0%	23%	23%	1%	97%	0%	0%	0%	4%	382
Managing authority													
Government/Public	76%	3%	23%	0%	23%	19%	1%	96%	0%	0%	0%	4%	448
NGO/not-for-profit	79%	21%	21%	0%	33%	21%	0%	100%	0%	0%	0%	0%	9
Mission/FBO	87%	0%	13%	0%	40%	2%	0%	100%	0%	0%	0%	0%	29
Private-for-profit	77%	7%	21%	0%	27%	6%	0%	99%	0%	0%	0%	4%	82

Table 18: Percentage of facilities with Basic equipment tracer items by county, facility type, urban/rural, and managing authority

	Thermometer	Stethoscope	Blood pressure apparatus	Pulse oximeter	Examination light	Otoscope	Ophthalmoscope	Adult weighing scale	Child scale	Infant scale	Measuring tape	Height board / stadiometer	Mean proportion of all items at facilities	Proportion of facilities with all items	n
National	89%	88%	83%	18%	30%	27%	6%	87%	63%	58%	82%	61%	58%	1%	568
County															
Bomi	84%	69%	57%	0%	28%	25%	0%	84%	65%	84%	92%	96%	57%	0%	23
Bong	87%	88%	87%	12%	25%	6%	6%	98%	73%	68%	87%	73%	59%	2%	44
Gbapolu	92%	92%	77%	8%	38%	15%	0%	92%	69%	69%	85%	85%	60%	0%	13
Grand Bassa	95%	92%	84%	33%	64%	26%	3%	92%	38%	59%	97%	60%	62%	0%	30

Grand Cape Mount	88%	88%	56%	6%	56%	84%	13%	91%	59%	50%	100%	91%	65%	3%	32
Grand Gedeh	92%	96%	92%	4%	8%	43%	4%	88%	88%	75%	92%	88%	64%	0%	23
Grand Kru	100%	94%	100%	0%	67%	6%	6%	56%	72%	56%	100%	67%	60%	0%	18
Lofa	85%	93%	91%	15%	27%	49%	13%	87%	73%	84%	93%	93%	67%	0%	55
Margibi	83%	81%	81%	13%	4%	20%	2%	83%	41%	35%	79%	29%	46%	2%	36
Maryland	88%	92%	80%	24%	36%	28%	8%	92%	92%	96%	96%	84%	68%	8%	25
Montserrado	87%	86%	84%	30%	24%	23%	9%	82%	46%	41%	66%	25%	50%	2%	133
Nimba	90%	92%	94%	10%	40%	29%	3%	92%	88%	83%	87%	89%	66%	1%	61
River Cess	100%	95%	91%	0%	67%	5%	0%	91%	91%	61%	95%	79%	65%	0%	19
River Gee	96%	91%	91%	4%	18%	36%	0%	91%	80%	71%	78%	100%	63%	0%	20
Sinoe	92%	95%	57%	16%	29%	13%	3%	95%	79%	55%	95%	97%	60%	0%	36
Facility type															
Hospital	94%	94%	94%	56%	50%	50%	36%	92%	72%	72%	81%	78%	72%	17%	36
Health center	85%	87%	88%	38%	46%	40%	16%	87%	79%	78%	88%	69%	67%	7%	68
Clinic	89%	88%	82%	14%	28%	24%	4%	87%	60%	56%	82%	59%	56%	0%	464
Urban / rural															
Urban	90%	89%	88%	29%	26%	27%	10%	86%	50%	47%	69%	33%	54%	3%	186
Rural	88%	88%	78%	8%	35%	27%	3%	88%	73%	69%	93%	84%	61%	0%	382
Managing authority															
Government/Public	85%	85%	76%	10%	33%	26%	5%	85%	72%	67%	90%	83%	60%	1%	448
NGO/not-for-profit	94%	88%	94%	46%	54%	42%	0%	94%	39%	82%	88%	61%	65%	0%	9
Mission/FBO	98%	97%	94%	26%	32%	25%	12%	97%	65%	50%	64%	61%	60%	3%	29
Private-for-profit	92%	94%	93%	30%	24%	27%	8%	88%	46%	43%	72%	19%	53%	1%	82

Table 19: Percentage of facilities with Standard precautions for infection prevention tracer items by county, facility type, urban/rural, and managing authority

.	Guidelines for standard precautions	Guidelines for health care waste management	Staff trained in health care waste management	Hand hygiene items	Latex gloves	Single use standard disposable or auto-	Sterilization equipment in facility	Environmental disinfectant	Appropriate storage of sharps waste	Appropriate storage of non-sharp infect	Safe final disposal of sha	Safe final disposal of non-sharp	Mean proportion of all items at	Proportion of facilities with all items	n

						disable syringes				ious waste	rps waste	infectious waste	facilities		
National	55%	31%	41%	31%	69%	98%	59%	96%	72%	14%	82%	84%	61%	1%	568
County															
Bomi	47%	59%	39%	49%	57%	96%	53%	100%	61%	4%	80%	88%	61%	0%	23
Bong	58%	40%	22%	17%	64%	100%	61%	98%	77%	4%	81%	80%	58%	0%	44
Gbapolu	92%	62%	54%	77%	85%	85%	31%	100%	77%	0%	62%	77%	67%	0%	13
Grand Bassa	76%	67%	76%	31%	49%	97%	70%	100%	49%	25%	97%	97%	70%	12%	30
Grand Cape Mount	75%	16%	22%	25%	78%	100%	94%	91%	100%	0%	97%	97%	66%	0%	32
Grand Gedeh	84%	61%	96%	41%	57%	100%	87%	100%	69%	8%	96%	92%	74%	0%	23
Grand Kru	89%	61%	22%	28%	44%	100%	44%	94%	56%	17%	89%	89%	61%	0%	18
Lofa	69%	45%	65%	5%	78%	100%	78%	98%	93%	13%	87%	87%	68%	0%	55
Margibi	39%	24%	22%	32%	63%	88%	34%	98%	75%	20%	80%	90%	55%	0%	36
Maryland	92%	52%	40%	52%	56%	100%	36%	96%	52%	16%	88%	88%	64%	0%	25
Montserrado	30%	10%	30%	41%	81%	97%	43%	97%	74%	25%	79%	83%	58%	0%	133
Nimba	72%	38%	64%	9%	68%	100%	97%	89%	77%	3%	86%	82%	65%	0%	61
River Cess	65%	28%	58%	33%	53%	100%	65%	100%	53%	0%	91%	91%	61%	0%	19
River Gee	73%	54%	49%	51%	82%	100%	100%	96%	82%	0%	82%	78%	71%	0%	20
Sinoe	71%	36%	13%	5%	26%	100%	39%	92%	40%	5%	58%	58%	45%	0%	36
Facility type															
Hospital	75%	67%	78%	31%	75%	100%	78%	100%	83%	6%	97%	92%	73%	0%	36
Health center	62%	37%	47%	35%	75%	100%	68%	99%	81%	22%	81%	87%	66%	0%	68
Clinic	53%	29%	38%	31%	68%	97%	57%	96%	71%	14%	82%	84%	60%	1%	464
Urban / rural															
Urban	36%	18%	33%	36%	77%	96%	48%	97%	76%	23%	82%	84%	59%	0%	186
Rural	72%	43%	47%	26%	62%	99%	68%	96%	69%	7%	83%	84%	63%	1%	382
Managing authority															
Government/Public	71%	44%	47%	29%	63%	98%	66%	96%	73%	9%	81%	82%	63%	0%	448
NGO/not-for-profit	54%	54%	67%	48%	67%	100%	94%	100%	67%	21%	100%	100%	73%	21%	9
Mission/FBO	62%	29%	45%	33%	78%	94%	46%	100%	80%	7%	94%	91%	63%	0%	29
Private-for-profit	23%	7%	25%	33%	77%	99%	47%	94%	70%	27%	81%	85%	56%	0%	82

Table 20: Percentage of facilities with Personal protective equipment tracer items by county, facility type, urban/rural, and managing authority

	Gloves	Surgical/respiratory masks	Particulate respirators / N95 face masks	Protective gowns	Aprons (impermeable)	Eye protection	Gumboots or clogs	Haircovers	Mean proportion of all items at facilities	Proportion of facilities with all items	n
National	98%	79%	66%	90%	88%	84%	41%	55%	75%	26%	568
County											
Bomi	96%	92%	80%	100%	100%	100%	53%	65%	86%	49%	23
Bong	100%	90%	66%	96%	96%	98%	52%	77%	84%	35%	44
Gbapolu	100%	77%	77%	100%	100%	100%	31%	77%	83%	15%	13
Grand Bassa	100%	97%	97%	100%	97%	100%	62%	83%	92%	48%	30
Grand Cape Mount	94%	84%	94%	100%	97%	94%	6%	34%	75%	6%	32
Grand Gedeh	96%	92%	92%	100%	100%	96%	31%	67%	84%	20%	23
Grand Kru	94%	89%	100%	100%	100%	100%	94%	100%	97%	78%	18
Lofa	100%	96%	65%	100%	98%	100%	85%	60%	88%	38%	55
Margibi	96%	67%	57%	82%	76%	74%	55%	49%	70%	38%	36
Maryland	100%	84%	96%	100%	96%	92%	88%	92%	94%	76%	25
Montserrado	98%	80%	52%	81%	77%	66%	22%	45%	65%	16%	133
Nimba	100%	47%	41%	95%	99%	90%	51%	34%	70%	20%	61
River Cess	100%	100%	91%	100%	100%	100%	9%	95%	87%	9%	19
River Gee	100%	87%	82%	96%	91%	91%	36%	96%	85%	31%	20
Sinoe	97%	47%	90%	66%	69%	95%	21%	23%	63%	5%	36
Facility type											
Hospital	100%	100%	94%	97%	97%	97%	83%	94%	95%	81%	36
Health center	99%	90%	79%	96%	93%	90%	66%	71%	85%	47%	68
Clinic	98%	77%	63%	89%	86%	83%	36%	52%	73%	21%	464
Urban / rural											
Urban	98%	78%	59%	85%	81%	72%	33%	51%	70%	26%	186
Rural	98%	80%	72%	93%	93%	94%	47%	59%	80%	26%	382
Managing authority											
Government/ Public	98%	80%	71%	93%	91%	91%	45%	58%	78%	27%	448
NGO/not-for-profit	100%	100%	100%	100%	100%	100%	94%	79%	97%	73%	9
Mission/FBO	94%	67%	72%	98%	93%	93%	50%	61%	79%	37%	29
Private-for-profit	100%	79%	53%	81%	79%	67%	26%	48%	67%	19%	82

Table 21: Percentage of facilities offering laboratory services with the following items in at least one main laboratory testing area by health facility, county, location and ownership

.	Hand hygiene items	Latex gloves	Single use standard disposable or auto-disable syringes	Environmental disinfectant	Appropriate storage of sharps waste	Appropriate storage of non-sharp infectious waste	Appropriate storage of biological waste	Mean proportion of all items at facilities	Proportion of facilities with all items	n
National	39%	84%	72%	74%	93%	24%	17%	57%	10%	430
County										
Bomi	78%	84%	78%	84%	95%	0%	5%	61%	0%	16
Bong	48%	85%	74%	80%	91%	20%	15%	59%	9%	27
Gbapolu	70%	80%	70%	80%	80%	0%	0%	54%	0%	10
Grand Bassa	72%	86%	81%	81%	89%	34%	29%	67%	23%	29
Grand Cape Mount	39%	71%	77%	26%	97%	16%	6%	47%	0%	31
Grand Gedeh	53%	87%	79%	70%	100%	21%	13%	60%	13%	21
Grand Kru	67%	89%	78%	78%	100%	56%	44%	73%	33%	9
Lofa	31%	80%	58%	76%	93%	22%	11%	53%	9%	45
Margibi	26%	74%	52%	70%	82%	33%	28%	52%	5%	29
Maryland	57%	100%	100%	86%	100%	71%	57%	82%	43%	7
Montserrado	31%	89%	86%	90%	97%	26%	20%	63%	14%	85
Nimba	36%	86%	51%	69%	97%	26%	11%	54%	3%	57
River Cess	52%	71%	71%	71%	71%	17%	11%	52%	11%	15
River Gee	40%	94%	77%	77%	94%	6%	6%	56%	0%	15
Sinoe	19%	67%	59%	33%	75%	11%	11%	39%	8%	34
Facility type										
Hospital	69%	91%	91%	94%	100%	54%	46%	78%	31%	35
Health center	51%	83%	83%	85%	97%	39%	25%	66%	19%	59
Clinic	36%	83%	69%	71%	92%	20%	13%	55%	8%	336
Urban / rural										
Urban	39%	89%	80%	85%	96%	27%	21%	62%	14%	142
Rural	39%	79%	66%	65%	90%	21%	13%	53%	7%	288
Managing authority										
Government/Public	43%	76%	64%	64%	87%	23%	14%	53%	8%	330
NGO/not-for-profit	94%	100%	100%	100%	100%	46%	39%	83%	39%	9
Mission/FBO	47%	94%	81%	84%	100%	25%	15%	64%	7%	26
Private-for-profit	25%	92%	83%	87%	99%	23%	19%	61%	11%	65

Table 22: Percentage of facilities with Basic diagnostic capacity tracer items by county, facility type, urban/rural, and managing authority

.	Haemoglobin testing	Blood glucose testing	Urine dipstick-glucose testing	Urine dipstick-protein testing	Urine dipstick-ketone testing	Urine test for pregnancy	Malaria diagnostic testing	HIV diagnostic testing	Syphilis RDT testing	Mean proportion of all items at facilities	Proportion of facilities with all items	n
National	22%	28%	33%	35%	30%	62%	93%	80%	33%	46%	11%	568
County												
Bomi	8%	17%	17%	21%	17%	37%	80%	100%	21%	36%	0%	23
Bong	13%	18%	16%	12%	16%	40%	100%	79%	18%	35%	0%	44
Gbapolu	8%	8%	15%	15%	8%	31%	92%	100%	15%	32%	8%	13
Grand Bassa	23%	17%	29%	34%	32%	53%	100%	100%	20%	45%	17%	30
Grand Cape Mount	6%	9%	9%	16%	9%	13%	81%	100%	31%	31%	6%	32
Grand Gedeh	33%	29%	41%	53%	41%	72%	100%	100%	41%	57%	17%	23
Grand Kru	6%	17%	11%	17%	11%	33%	100%	100%	11%	34%	0%	18
Lofa	22%	11%	27%	27%	24%	69%	98%	96%	18%	44%	4%	55
Margibi	38%	47%	36%	38%	36%	53%	76%	56%	29%	45%	13%	36
Maryland	12%	20%	28%	32%	28%	40%	92%	92%	28%	41%	8%	25
Montserrado	34%	49%	51%	53%	47%	71%	92%	60%	43%	56%	20%	133
Nimba	13%	6%	31%	34%	27%	80%	97%	92%	52%	48%	3%	61
River Cess	5%	9%	5%	14%	5%	77%	100%	100%	14%	36%	5%	19
River Gee	4%	20%	18%	18%	13%	60%	100%	96%	29%	40%	0%	20
Sinoe	5%	3%	12%	12%	3%	79%	100%	97%	22%	37%	0%	36
Facility type												
Hospital	53%	75%	83%	83%	83%	83%	94%	97%	78%	81%	42%	36
Health center	46%	54%	59%	65%	56%	74%	88%	94%	56%	66%	25%	68
Clinic	18%	22%	27%	30%	25%	59%	94%	78%	28%	42%	7%	464
Urban / rural												
Urban	34%	51%	55%	57%	51%	73%	92%	62%	47%	58%	19%	186
Rural	11%	8%	14%	17%	12%	52%	94%	95%	22%	36%	4%	382
Managing authority												
Government/Public	10%	9%	15%	19%	13%	47%	92%	93%	20%	35%	2%	448
NGO/not-for-profit	46%	67%	73%	73%	73%	79%	100%	100%	73%	76%	46%	9
Mission/FBO	38%	60%	74%	74%	64%	98%	97%	89%	76%	75%	29%	29
Private-for-profit	38%	53%	55%	55%	52%	79%	94%	52%	45%	58%	19%	82

Table 23:Percentage of facilities with Essential medicines by county, facility type, urban/rural, and managing authority

.	Salbutamol inhaler	Beclomethasone or other corticosteroid inhaler	Gliclazide or other sulphonylurea tab/cap	Metformin cap/tab	Insulin injection	beta blocker, calcium blocker, thiazide-like diuretic, ACE inhibitor	Simvastatin or other statin tab/cap (e.g. atorvastatin, pravastatin, fluvastatin)	Furosemide tab/cap or injection	Aspirin tab/cap	Paracetamol tab/cap	Ibuprofen tab/cap	Morphine (oral or injectable)	n
National	10%	4%	16%	34%	8%	10%	2%	24%	32%	57%	56%	5%	568
County													
Bomi	13%	0%	8%	65%	21%	24%	0%	17%	41%	41%	45%	0%	23
Bong	0%	6%	8%	18%	4%	0%	0%	12%	25%	30%	74%	4%	44
Gbapolu	8%	0%	15%	8%	0%	8%	0%	23%	15%	38%	46%	0%	13
Grand Bassa	15%	0%	5%	45%	8%	0%	0%	8%	29%	59%	53%	8%	30
Grand Cape Mount	0%	0%	3%	16%	6%	6%	0%	9%	9%	88%	84%	0%	32
Grand Gedeh	4%	0%	17%	13%	4%	13%	0%	13%	49%	65%	13%	0%	23
Grand Kru	0%	0%	6%	0%	0%	0%	0%	0%	0%	6%	6%	0%	18
Lofa	4%	0%	15%	33%	7%	5%	2%	9%	11%	47%	31%	2%	55
Margibi	45%	16%	33%	39%	6%	4%	2%	36%	45%	85%	60%	4%	36
Maryland	12%	8%	12%	24%	8%	8%	0%	20%	40%	64%	56%	8%	25
Montserrado	15%	6%	27%	54%	10%	18%	5%	43%	48%	68%	61%	8%	133
Nimba	1%	1%	4%	13%	5%	3%	0%	8%	15%	34%	31%	0%	61
River Cess	5%	5%	5%	9%	5%	21%	0%	21%	30%	81%	100%	0%	19
River Gee	0%	0%	4%	15%	4%	0%	0%	4%	20%	46%	62%	4%	20
Sinoe	3%	0%	3%	0%	19%	0%	0%	8%	8%	40%	90%	3%	36
Facility type													
Hospital	33%	14%	67%	58%	69%	33%	8%	53%	56%	78%	69%	28%	36
Health center	24%	6%	35%	54%	16%	16%	1%	46%	50%	59%	56%	16%	68
Clinic	8%	3%	11%	30%	4%	8%	2%	20%	29%	55%	55%	2%	464
Urban / rural													
Urban	19%	6%	28%	52%	15%	17%	4%	41%	51%	71%	63%	8%	186
Rural	3%	2%	6%	18%	2%	4%	0%	9%	16%	44%	50%	1%	382
Managing authority													
Government/Public	3%	1%	8%	16%	5%	4%	0%	7%	11%	44%	46%	2%	448
NGO/not-for-profit	46%	6%	25%	73%	39%	0%	0%	39%	67%	67%	67%	12%	9
Mission/FBO	21%	9%	28%	60%	16%	29%	2%	51%	66%	88%	76%	10%	29
Private-for-profit	20%	9%	29%	57%	9%	18%	5%	47%	61%	72%	68%	7%	82

Table 24: Percentage of facilities with Essential medicines by county, facility type, urban/rural, and managing authority

.	Fluoxetine or other SSRI tab/cap	Phenytoin or carbamazepine tab/cap	Amoxicillin tab/cap	Procaine penicillin or benzathine penicillin injection	Gentamycin injection	Cefriaxone injection	Artemisinin-based combination therapy (ACT)	Artesunate (injection or suppository)	ARVs for first line combination treatment regimen	Combination therapy for tuberculosis	Oral rehydration salts (ORS)	Zinc sulphate tab, dispersible tab or syrup	n
National	1%	17%	47%	58%	71%	55%	64%	39%	8%	10%	69%	27%	568
county													
Bomi	0%	61%	17%	53%	61%	72%	45%	49%	33%	41%	84%	41%	23
Bong	6%	10%	28%	80%	56%	46%	88%	71%	6%	7%	88%	13%	44
Gbapolu	0%	46%	15%	69%	69%	23%	46%	69%	15%	23%	46%	15%	13
Grand Bassa	0%	23%	40%	41%	61%	61%	61%	34%	5%	23%	80%	5%	30
Grand Cape Mount	0%	22%	44%	56%	75%	53%	31%	16%	6%	6%	72%	0%	32
Grand Gedeh	0%	43%	84%	80%	72%	76%	69%	67%	20%	8%	96%	96%	23
Grand Kru	0%	22%	0%	67%	61%	11%	67%	72%	11%	22%	94%	56%	18
Lofa	0%	22%	55%	9%	75%	64%	91%	82%	5%	5%	42%	11%	55
Margibi	0%	10%	63%	48%	94%	76%	79%	31%	2%	12%	66%	27%	36
Maryland	4%	44%	24%	76%	80%	68%	76%	68%	4%	12%	88%	72%	25
Montserrado	1%	8%	61%	65%	77%	58%	64%	20%	3%	4%	62%	29%	133
Nimba	1%	10%	26%	39%	49%	32%	51%	25%	4%	6%	54%	10%	61
River Cess	0%	33%	53%	56%	77%	67%	67%	47%	47%	14%	86%	33%	19
River Gee	0%	18%	51%	78%	67%	58%	51%	22%	31%	40%	85%	58%	20
Sinoe	0%	5%	45%	74%	61%	45%	39%	56%	13%	8%	92%	23%	36
Facility type													
Hospital	8%	58%	61%	69%	92%	72%	61%	69%	28%	31%	86%	47%	36
Health center	3%	24%	56%	60%	76%	71%	63%	56%	12%	31%	57%	38%	68
Clinic	1%	14%	46%	57%	69%	53%	64%	35%	7%	7%	69%	25%	464
Urban / rural													
Urban	1%	13%	65%	64%	80%	64%	65%	29%	5%	9%	69%	31%	186
Rural	1%	20%	32%	52%	62%	48%	63%	47%	11%	11%	69%	23%	382
Managing authority													

Government/Public	1%	20%	27%	48%	62%	46%	57%	45%	12%	13%	65%	22%	448
NGO/not-for-profit	0%	54%	67%	67%	73%	73%	61%	67%	21%	48%	67%	33%	9
Mission/FBO	3%	17%	83%	80%	89%	83%	74%	33%	3%	10%	87%	38%	29
Private-for-profit	1%	7%	75%	69%	81%	65%	74%	26%	0%	1%	73%	34%	82

Table 25: Percentage of facilities with Essential medicines by county, facility type, urban/rural, and managing authority

	Ready-to-use therapeutic food (RUTF)	Hormonal contraceptives (oral, injectable and/or implants)	Folic acid tab/cap	Oxytocin injection	Magnesium sulphate injection	Chorhexidine solution	Mean proportion of all items at facilities	Proportion of facilities with all items	n
National	25%	75%	71%	82%	73%	60%	37%	0%	568
County									
Bomi	24%	96%	57%	100%	92%	37%	41%	0%	23
Bong	13%	90%	40%	81%	73%	39%	34%	0%	44
Gbapolu	62%	100%	38%	100%	85%	38%	34%	0%	13
Grand Bassa	44%	97%	75%	95%	84%	51%	37%	0%	30
Grand Cape Mount	6%	100%	88%	100%	100%	72%	36%	0%	32
Grand Gedeh	43%	83%	72%	87%	87%	80%	45%	0%	23
Grand Kru	67%	89%	28%	94%	100%	56%	31%	0%	18
Lofa	27%	93%	78%	98%	98%	75%	36%	0%	55
Margibi	17%	77%	98%	88%	74%	47%	43%	0%	36
Maryland	36%	92%	84%	96%	96%	48%	44%	0%	25
Montserrado	9%	50%	74%	63%	43%	66%	37%	0%	133
Nimba	41%	90%	55%	87%	90%	42%	28%	0%	61
River Cess	56%	100%	77%	100%	100%	86%	46%	0%	19
River Gee	49%	85%	78%	100%	96%	73%	40%	0%	20
Sinoe	42%	57%	87%	95%	87%	71%	36%	0%	36
Facility type									
Hospital	64%	83%	78%	89%	89%	86%	58%	0%	36
Health center	34%	74%	84%	93%	82%	78%	46%	0%	68
Clinic	22%	75%	69%	81%	71%	56%	35%	0%	464
Urban / rural									
Urban	14%	55%	75%	67%	50%	63%	40%	0%	186
Rural	35%	92%	67%	96%	92%	57%	34%	0%	382
Managing authority									
Government/Public	38%	92%	66%	93%	89%	56%	33%	0%	448
NGO/not-for-profit	33%	88%	73%	88%	88%	73%	50%	0%	9
Mission/FBO	11%	33%	83%	83%	68%	70%	47%	0%	29
Private-for-profit	4%	53%	77%	62%	41%	64%	40%	0%	82

Table 26:General service readiness index and domain scores by county, facility type, managing authority, and urban vs. rural location

.	Basic amenities mean score	Basic equipment mean score	Standard precaution mean score	Diagnostics mean score	Essential medicines mean score	General service readiness index	n
National	52%	58%	61%	46%	37%	51%	568
Bomi	56%	57%	61%	36%	41%	50%	23
Bong	43%	59%	58%	35%	34%	46%	44
Gbapolu	45%	60%	67%	32%	34%	48%	13
Grand Bassa	52%	62%	70%	45%	37%	53%	30
Grand Cape Mount	50%	65%	66%	31%	36%	49%	32
Grand Gedeh	59%	64%	74%	57%	45%	60%	23
Grand Kru	45%	60%	61%	34%	31%	46%	18
Lofa	51%	67%	68%	44%	36%	53%	55
Margibi	56%	46%	55%	45%	43%	49%	36
Maryland	55%	68%	64%	41%	44%	54%	25
Montserrado	53%	50%	58%	56%	37%	51%	133
Nimba	51%	66%	65%	48%	28%	52%	61
River Cess	62%	65%	61%	36%	46%	54%	19
River Gee	50%	63%	71%	40%	40%	53%	20
Sinoe	48%	60%	45%	37%	36%	45%	36
Facility type							
Hospital	76%	72%	73%	81%	58%	72%	36
Health center	63%	67%	66%	66%	46%	62%	68
Clinic	49%	56%	60%	42%	35%	48%	464
Urban/rural							
Urban	55%	54%	59%	58%	40%	53%	186
Rural	49%	61%	63%	36%	34%	49%	382
Managing authority							
Government/Public	50%	60%	63%	35%	33%	48%	448
NGO/not-for-profit	65%	65%	73%	76%	50%	66%	9
Mission/FBO	62%	60%	63%	75%	47%	61%	29
Private-for-profit	52%	53%	56%	58%	40%	52%	82

Table 27: Percentage of facilities offering Family planning services by county, facility type, managing authority, and urban vs. rural location

.	Family planning services	Any modern method of contraception	Combined oral contraceptive pills	Progestin-only contraceptive pills	Combined injectable contraceptives	Progestin-only injectable contraceptives	Male condoms	Female condoms	Intrauterine contraceptive devices	Implants	Emergency contraceptives	Male sterilization	Female sterilization	Cycle beads for standard days method	n
National	81%	80%	73%	71%	58%	61%	71%	53%	52%	69%	27%	3%	3%	63%	568
Region															
Bomi	100%	100%	87%	100%	83%	79%	100%	96%	88%	100%	24%	4%	4%	100%	23
Bong	87%	87%	79%	81%	82%	80%	81%	73%	70%	73%	17%	2%	2%	77%	44
Gbapolu	100%	100%	100%	92%	100%	69%	100%	100%	92%	100%	8%	0%	0%	100%	13
Grand Bassa	97%	97%	95%	95%	25%	84%	97%	52%	67%	97%	29%	5%	5%	73%	30
Grand Cape Mount	100%	100%	100%	100%	50%	53%	100%	100%	100%	100%	0%	6%	6%	100%	32
Grand Gedeh	87%	87%	87%	83%	79%	83%	87%	87%	71%	79%	63%	4%	4%	83%	23
Grand Kru	100%	100%	100%	100%	67%	100%	100%	94%	72%	100%	33%	0%	0%	94%	18
Lofa	100%	100%	93%	98%	73%	75%	98%	91%	95%	98%	29%	4%	4%	100%	55
Margibi	89%	89%	80%	70%	60%	47%	70%	53%	30%	72%	20%	2%	2%	51%	36
Maryland	92%	92%	92%	88%	44%	92%	92%	92%	68%	84%	52%	8%	8%	84%	25
Montserrado	58%	56%	45%	43%	42%	42%	39%	25%	33%	41%	27%	2%	2%	27%	133
Nimba	90%	90%	86%	65%	77%	48%	77%	18%	8%	65%	20%	3%	5%	73%	61
River Cess	100%	100%	95%	95%	39%	95%	100%	84%	95%	100%	30%	0%	0%	95%	19
River Gee	85%	85%	80%	85%	80%	71%	85%	76%	76%	80%	80%	9%	9%	85%	20
Sinoe	91%	91%	88%	91%	62%	83%	91%	57%	60%	81%	23%	0%	0%	81%	36
Facility type															
Hospital	83%	83%	83%	72%	64%	61%	83%	69%	75%	81%	53%	22%	39%	81%	36
Health center	78%	78%	71%	72%	57%	59%	69%	57%	53%	69%	37%	4%	7%	68%	68
Clinic	81%	80%	73%	71%	57%	61%	71%	52%	51%	68%	25%	1%	1%	61%	464
Urban / rural															
Urban	62%	61%	51%	45%	45%	45%	46%	28%	35%	45%	28%	3%	5%	33%	186
Rural	97%	97%	92%	93%	69%	75%	93%	75%	68%	90%	27%	3%	2%	89%	382
Managing authority															
Government/ Public	98%	98%	92%	93%	69%	77%	94%	79%	68%	89%	27%	3%	3%	88%	448
NGO/not-for-profit	88%	88%	67%	82%	27%	61%	88%	33%	54%	88%	39%	6%	12%	82%	9
Mission/FBO	46%	46%	46%	46%	37%	24%	29%	21%	29%	44%	28%	3%	5%	29%	29
Private-for-profit	57%	56%	45%	34%	44%	41%	37%	13%	29%	36%	27%	1%	2%	22%	82

Table 28: Percentage of health facilities providing Child health preventative and curative care services, by county, facility type, rural/urban, and managing authority

	Preventative or curative care for children under 5	Preventative nutrition monitoring in children under 5	Diagnosis and/or treatment of malnutrition in children under 5	Diagnosis and treatment of acute malnutrition in children under 5	Referral of severely malnourished children elsewhere within facility for treatment	Provision of fortified protein supplements	Provision of therapeutic feeding onsite	Provision of feeding supplements for home treatment	Routine vitamin A supplementation	Diagnosis and treatment of anemia with iron supplementation in children under 5	Diagnosis and treatment of diarrhoea with ORS and zinc in children under 5	Diagnosis and first-line treatment of pneumonia in children under 5	Diagnosis of malaria with blood test, treatment with ACT and in children under 5	n
National	87%	64%	46%	36%	36%	29%	25%	38%	64%	57%	63%	67%	42%	568
County														
Bomi	100%	100%	92%	51%	76%	69%	20%	55%	100%	61%	92%	100%	80%	23
Bong	94%	79%	54%	47%	50%	30%	19%	37%	71%	54%	57%	72%	54%	44
Gbapolu	100%	100%	92%	69%	46%	69%	54%	69%	85%	23%	92%	92%	38%	13
Grand Bassa	97%	60%	38%	35%	35%	21%	32%	27%	89%	53%	51%	67%	45%	30
Grand Cape Mount	100%	88%	81%	53%	31%	50%	28%	72%	91%	97%	69%	100%	47%	32
Grand Gedeh	100%	92%	67%	59%	51%	51%	39%	55%	88%	51%	100%	96%	67%	23
Grand Kru	94%	72%	83%	56%	67%	56%	56%	78%	89%	94%	94%	89%	94%	18
Lofa	98%	87%	67%	58%	56%	31%	27%	67%	96%	62%	67%	71%	78%	55
Margibi	76%	50%	34%	28%	28%	34%	24%	34%	49%	43%	54%	58%	45%	36
Maryland	72%	56%	56%	28%	48%	44%	36%	48%	72%	56%	72%	64%	68%	25
Montserrado	74%	29%	14%	11%	11%	10%	11%	12%	34%	50%	54%	48%	8%	133
Nimba	96%	87%	61%	54%	49%	22%	24%	43%	71%	57%	50%	67%	64%	61
River Cess	100%	100%	65%	70%	61%	56%	61%	79%	84%	75%	58%	79%	86%	19
River Gee	100%	100%	67%	62%	54%	58%	49%	58%	96%	55%	82%	100%	73%	20
Sinoe	100%	100%	78%	52%	62%	44%	49%	62%	87%	71%	90%	90%	29%	36
Facility type														
Hospital	92%	81%	72%	64%	42%	61%	58%	61%	72%	83%	69%	86%	64%	36
Health center	88%	60%	54%	47%	32%	37%	37%	44%	66%	68%	78%	78%	54%	68

Clinic	87%	63%	43%	34%	36%	26%	22%	36%	64%	54%	61%	65%	40%	464
Urban / rural														
Urban	77%	38%	20%	17%	16%	15%	13%	16%	40%	53%	54%	51%	19%	186
Rural	96%	85%	68%	53%	54%	41%	35%	57%	86%	59%	70%	81%	62%	382
Managing authority														
Government/Public	93%	81%	71%	56%	55%	44%	39%	59%	83%	58%	67%	77%	58%	448
NGO/not-for-profit	100%	73%	33%	6%	21%	27%	6%	6%	88%	73%	100%	100%	73%	9
Mission/FBO	89%	60%	21%	21%	18%	12%	11%	21%	53%	46%	73%	71%	44%	29
Private-for-profit	76%	30%	4%	4%	5%	4%	4%	4%	31%	55%	49%	44%	9%	82

Table 29: Percentage distribution of facilities offering child immunization services by facility type, rural/urban, managing authority

	Any immunization services	Birth doses	Infant immunization	Child immunization	Adolescent/adult immunization	Routine child immunization offered daily at the facility or as outreach	Routine child immunization offered weekly at the facility or as outreach	Routine child immunization offered monthly at the facility or as outreach	Routine child immunization offered quarterly at the facility or as outreach	Hepatitis B vaccination birth dose	BCG vaccination birth dose	Oral polio vaccination (OPV) birth dose	n
National	87%	83%	83%	83%	83%	80%	3%	0%	0%	74%	82%	82%	568
County													
Bomi	100%	100%	100%	100%	100%	100%	0%	0%	0%	100%	100%	100%	23
Bong	74%	74%	74%	74%	74%	74%	0%	0%	0%	71%	74%	74%	44
Gbapolu	92%	92%	92%	92%	92%	92%	0%	0%	0%	92%	92%	92%	13
Grand Bassa	100%	100%	100%	97%	100%	100%	0%	0%	0%	92%	97%	97%	30
Grand Cape Mount	100%	100%	100%	100%	100%	100%	0%	0%	0%	78%	100%	100%	32
Grand Gedeh	100%	100%	100%	100%	100%	100%	0%	0%	0%	100%	100%	100%	23
Grand Kru	89%	89%	89%	89%	89%	89%	0%	0%	0%	89%	89%	89%	18
Lofa	96%	96%	95%	95%	95%	91%	5%	0%	0%	78%	91%	93%	55
Margibi	88%	88%	88%	88%	88%	76%	11%	0%	0%	88%	88%	88%	36
Maryland	88%	88%	88%	88%	88%	88%	0%	0%	0%	88%	88%	88%	25
Montserrado	66%	64%	64%	64%	66%	61%	4%	0%	0%	51%	62%	63%	133
Nimba	93%	93%	93%	93%	93%	90%	3%	0%	0%	85%	93%	93%	61
River Cess	100%	100%	100%	100%	100%	100%	0%	0%	0%	100%	100%	100%	19
River Gee	100%	100%	100%	100%	100%	100%	0%	0%	0%	91%	100%	100%	20
Sinoe	97%	97%	97%	97%	97%	95%	3%	0%	0%	82%	97%	95%	36
Facility type													
Hospital	89%	89%	89%	89%	89%	89%	0%	0%	0%	86%	89%	89%	36
Health center	91%	91%	91%	91%	91%	87%	4%	0%	0%	81%	91%	90%	68
Clinic	82%	82%	82%	82%	82%	79%	3%	0%	0%	72%	80%	81%	464
Urban / rural													

Urban	68%	67%	67%	67%	68%	63%	4%	0%	0%	57%	65%	65%	186
Rural	97%	97%	97%	97%	97%	95%	2%	0%	0%	88%	96%	96%	382
Managing authority													
Government/Public	93%	93%	93%	93%	93%	91%	2%	0%	0%	83%	92%	92%	448
NGO/not-for-profit	100%	100%	100%	100%	100%	100%	0%	0%	0%	94%	100%	100%	9
Mission/FBO	85%	85%	85%	85%	85%	85%	0%	0%	0%	68%	85%	85%	29
Private-for-profit	63%	62%	62%	62%	63%	57%	5%	0%	0%	56%	59%	60%	82

Table 30: Percentage distribution of facilities offering child immunization services by facility type, rural/urban, managing authority

	BCG vaccination for infants	Oral polio vaccination (OPV) for infants	DPT vaccination for infants	Rotavirus vaccination for infants	Inactivated polio vaccination (IPV) for infants	Measles vaccination for infants/children	Tetanus vaccination for adolescents/adults	Human papilloma virus (HPV) vaccination for adolescents/adults	Influenza vaccination for adolescents/adults	n
National	81%	83%	81%	81%	82%	81%	83%	74%	19%	568
County										
Bomi	100%	100%	100%	100%	100%	100%	100%	100%	39%	23
Bong	74%	74%	73%	74%	73%	71%	74%	74%	37%	44
Gbapolu	92%	92%	92%	92%	92%	92%	92%	92%	23%	13
Grand Bassa	97%	100%	97%	97%	100%	89%	97%	100%	5%	30
Grand Cape Mount	100%	100%	100%	100%	100%	100%	100%	97%	0%	32
Grand Gedeh	100%	100%	100%	100%	100%	100%	100%	96%	4%	23
Grand Kru	89%	89%	89%	89%	89%	89%	89%	89%	11%	18
Lofa	87%	93%	95%	95%	95%	93%	95%	89%	20%	55
Margibi	88%	88%	88%	88%	88%	88%	88%	88%	39%	36
Maryland	88%	88%	88%	88%	88%	88%	88%	84%	24%	25
Montserrado	61%	64%	62%	61%	63%	62%	66%	47%	16%	133
Nimba	92%	93%	85%	90%	93%	89%	92%	90%	17%	61
River Cess	100%	100%	100%	100%	100%	100%	100%	79%	16%	19
River Gee	100%	100%	100%	100%	100%	100%	100%	82%	13%	20
Sinoe	95%	95%	95%	97%	90%	95%	97%	92%	18%	36
Facility type										
Hospital	89%	89%	89%	86%	89%	89%	89%	83%	31%	36
Health center	90%	91%	90%	90%	88%	87%	91%	82%	24%	68
Clinic	80%	81%	79%	80%	81%	79%	82%	73%	18%	464
Urban / rural										

Urban	64%	67%	64%	64%	66%	64%	68%	53%	15%	186
Rural	95%	96%	95%	96%	96%	95%	96%	93%	22%	382
Managing authority										
Government/Public	91%	92%	92%	92%	92%	91%	92%	89%	23%	448
NGO/not-for-profit	100%	100%	100%	94%	100%	94%	100%	94%	12%	9
Mission/FBO	85%	85%	80%	85%	85%	76%	85%	73%	16%	29
Private-for-profit	59%	62%	59%	59%	61%	60%	63%	45%	12%	82

Table 31: Percentage distribution of facilities offering Antenatal care services by facility type, rural/urban, managing authority

	Antenatal care services	Iron supplementation	Folic acid supplementation	Intermittent preventive treatment in pregnancy for malaria (IPTp)	Tetanus toxoid vaccination	Monitoring for hypertensive disorder of pregnancy	Routine checks for urine protein	Calcium supplementation for women at risk of pre-eclampsia	Low-dose aspirin for women at risk of pre-eclampsia	HIV testing for pregnant women	Routine syphilis testing for pregnant women	Treatment for pregnant women with syphilis	Diagnosis and treatment for pregnant women with sexually transmitted infections	n
National	89%	86%	78%	86%	84%	85%	37%	36%	20%	80%	44%	63%	87%	568
Region														
Bomi	100%	100%	92%	100%	100%	100%	33%	76%	72%	100%	17%	84%	100%	23
Bong	79%	59%	51%	71%	73%	77%	7%	22%	13%	71%	6%	47%	79%	44
Gbapolu	100%	100%	85%	100%	100%	100%	0%	38%	15%	100%	15%	38%	100%	13
Grand Bassa	100%	100%	97%	100%	100%	92%	29%	34%	15%	100%	15%	15%	95%	30
Grand Cape Mount	100%	100%	84%	100%	100%	81%	13%	22%	13%	100%	66%	100%	100%	32
Grand Gedeh	100%	92%	80%	92%	96%	100%	65%	61%	41%	100%	41%	88%	100%	23
Grand Kru	100%	100%	89%	100%	94%	100%	22%	11%	6%	100%	22%	83%	100%	18
Lofa	98%	95%	93%	98%	98%	96%	24%	44%	15%	98%	31%	71%	96%	55
Margibi	88%	88%	75%	80%	88%	74%	37%	35%	20%	55%	35%	50%	85%	36
Maryland	96%	92%	76%	96%	92%	96%	36%	32%	12%	92%	36%	80%	96%	25
Montserrado	76%	76%	75%	71%	66%	74%	63%	36%	23%	58%	61%	62%	74%	133
Nimba	99%	92%	73%	96%	92%	93%	29%	33%	15%	97%	71%	72%	99%	61
River Cess	100%	91%	67%	100%	100%	91%	5%	35%	25%	100%	9%	9%	100%	19
River Gee	96%	96%	82%	100%	96%	100%	18%	45%	24%	96%	33%	78%	91%	20
Sinoe	100%	100%	92%	100%	97%	100%	5%	36%	8%	100%	35%	79%	100%	36
Facility type														
Hospital	89%	89%	89%	86%	89%	86%	81%	69%	42%	89%	78%	81%	89%	36

Health center	96%	96%	87%	94%	91%	94%	72%	54%	25%	91%	78%	88%	94%	68
Clinic	88%	85%	77%	85%	83%	84%	31%	33%	19%	78%	39%	60%	87%	464
Urban / rural														
Urban	78%	78%	77%	73%	69%	74%	59%	39%	24%	61%	62%	64%	77%	186
Rural	98%	93%	79%	97%	97%	94%	18%	34%	17%	96%	28%	63%	97%	382
Managing authority														
Government /Public	95%	90%	77%	94%	93%	90%	20%	34%	17%	93%	29%	61%	93%	448
NGO/not-for-profit	88%	88%	88%	88%	88%	88%	61%	61%	27%	88%	61%	61%	88%	9
Mission/FBO	87%	87%	87%	81%	85%	87%	57%	50%	38%	87%	76%	76%	87%	29
Private-for-profit	77%	77%	77%	71%	65%	75%	65%	35%	22%	51%	63%	64%	76%	82

Table 32: Percentage distribution of facilities offering Obstetric and new-born care services by facility type, rural/urban, and managing authority

.	Immediate and exclusive breastfeeding	Hygienic cord care	Manual removal of placenta	Parenteral administration of	Parenteral administration of	Antibiotics for preterm or prolonged PROM	Neonatal resuscitation	Thermometer	Mean availability of	Mean availability of	Injectable antibiotics for neonatal sepsis	Offers delivery services	Manual removal of retained products	Corticosteroids in	KMC for	Assisted vaginal	Administration of
National	100%	99%	98%	97%	95%	94%	86%	82%	79%	70%	70%	70%	69%	50%	51%	28%	3%
Bomi	100%	100%	100%	100%	100%	100%	96%	75%	87%	77%	84%	96%	80%	59%	45%	43%	0%
Bong	100%	100%	100%	100%	98%	100%	98%	81%	82%	79%	74%	79%	74%	51%	73%	31%	0%
Gbapolu	100%	100%	100%	100%	100%	100%	92%	100%	85%	68%	58%	92%	92%	42%	50%	25%	0%
Grand Bassa	100%	100%	100%	100%	100%	96%	96%	89%	83%	80%	69%	73%	87%	80%	60%	11%	0%
Grand Cape Mount	100%	100%	100%	100%	100%	94%	94%	69%	80%	64%	75%	100%	72%	25%	31%	6%	0%
Grand Gedeh	100%	100%	100%	94%	100%	94%	100%	88%	83%	80%	82%	67%	82%	76%	47%	24%	0%
Grand Kru	100%	100%	100%	100%	94%	94%	100%	82%	81%	65%	41%	94%	94%	29%	59%	6%	0%
Lofa	100%	100%	94%	100%	100%	100%	100%	84%	83%	77%	63%	89%	69%	51%	69%	35%	0%
Margibi	100%	100%	100%	100%	100%	100%	80%	91%	92%	82%	91%	46%	100%	67%	73%	53%	0%
Maryland	91%	100%	100%	100%	95%	100%	100%	100%	86%	70%	82%	88%	91%	41%	27%	27%	9%
Montserrado	100%	97%	100%	90%	84%	79%	61%	77%	69%	57%	80%	47%	53%	40%	27%	18%	8%
Nimba	100%	99%	90%	100%	100%	100%	94%	81%	83%	74%	40%	93%	69%	56%	80%	40%	5%
River Cess	100%	100%	100%	100%	100%	95%	100%	95%	82%	85%	79%	91%	62%	69%	79%	28%	0%

River Gee	100%	100%	93%	100%	100%	93%	100%	73%	83%	77%	87%	67%	73%	67%	40%	40%	0%
Sinoe	100%	100%	97%	100%	91%	97%	61%	76%	71%	59%	64%	86%	36%	45%	27%	39%	0%
Facility type																	
Hospital	100%	100%	100%	100%	97%	100%	100%	88%	94%	95%	91%	89%	97%	97%	88%	72%	0%
Health center	100%	100%	98%	98%	94%	89%	89%	79%	81%	76%	72%	78%	79%	70%	60%	25%	0%
Clinic	100%	99%	97%	97%	95%	94%	84%	82%	78%	68%	68%	68%	66%	45%	47%	25%	4%
Urban/rural																	
Urban	100%	98%	100%	94%	90%	87%	71%	84%	77%	67%	84%	52%	64%	55%	39%	36%	7%
Rural	99%	100%	96%	99%	98%	97%	93%	80%	80%	72%	62%	85%	72%	48%	58%	24%	1%
Managing authority																	
Government/ Public	99%	100%	98%	99%	97%	96%	92%	81%	81%	72%	63%	82%	74%	50%	58%	27%	1%
NGO/not-for-profit	100%	100%	100%	100%	100%	100%	100%	93%	87%	79%	76%	88%	100%	76%	45%	24%	0%
Mission/FBO	100%	100%	90%	100%	100%	94%	97%	100%	84%	86%	100%	57%	56%	71%	66%	57%	0%
Private-for-profit	100%	97%	100%	91%	88%	85%	59%	78%	69%	58%	83%	48%	52%	41%	24%	20%	12%

Table 33: Facility that offer Comprehensive emergency obstetric and newborn care (CEmONC) service by facility type, county, location and ownership

	Caesarean section	Blood transfusion	Comprehensive emergency obstetric care (CEmOC) -- facility reported	All 9 obstetric and newborn care signal functions (CEmONC)	n
National	7%	10%	14%	3%	568
County					
Bomi	4%	4%	20%	4%	23
Bong	4%	4%	20%	2%	44
Gbapolu	8%	8%	8%	8%	13
Grand Bassa	8%	11%	5%	3%	30
Grand Cape Mount	13%	9%	9%	6%	32
Grand Gedeh	4%	8%	4%	4%	23
Grand Kru	11%	11%	22%	0%	18
Lofa	7%	7%	44%	7%	55
Margibi	2%	6%	4%	2%	36
Maryland	4%	4%	16%	0%	25
Montserrado	10%	15%	8%	2%	133
Nimba	9%	9%	27%	6%	61
River Cess	5%	5%	5%	5%	19
River Gee	4%	4%	4%	4%	20
Sinoe	3%	5%	8%	3%	36
Facility type					
Hospital	89%	92%	86%	61%	36
Health center	19%	26%	25%	4%	68
Clinic	2%	3%	9%	0%	464
Urban / rural					
Urban	13%	18%	12%	7%	186
Rural	2%	3%	16%	0%	382
Managing authority					
Government/Public	6%	6%	17%	4%	448
NGO/not-for-profit	18%	31%	18%	0%	9
Mission/FBO	15%	15%	15%	8%	29
Private-for-profit	8%	14%	6%	1%	82

Table 34: Percentage of facility offering adolescent health services by county, facility type, rural/urban, and managing authority

	Any adolescent reproductive health services	Any family planning services for adolescents	Provision of combined oral contraceptive pills to adolescents	Provision of male condoms to adolescents	Provision of intrauterine contraceptive devices (IUCD) to adolescents	Provision of emergency contraceptive pills to adolescents	Abortion services for adolescents	HIV testing services for adolescents	ART services for adolescents	HIV care and support services for adolescents	Voluntary male medical circumcision (VMMC) services for adolescents	TB diagnosis for adolescents	TB treatment for adolescents	n
National	87%	73%	67%	65%	39%	27%	27%	60%	33%	29%	37%	22%	22%	568
County														
Bomi	92%	100%	100%	100%	88%	24%	12%	76%	72%	53%	51%	33%	37%	23
Bong	73%	75%	69%	69%	64%	17%	31%	67%	37%	32%	30%	24%	20%	44
Gbapolu	77%	100%	100%	100%	85%	8%	46%	100%	77%	69%	46%	38%	54%	13
Grand Bassa	100%	92%	68%	71%	24%	11%	49%	92%	44%	56%	51%	41%	53%	30
Grand Cape Mount	91%	97%	97%	97%	25%	0%	3%	28%	28%	25%	9%	28%	28%	32
Grand Gedeh	87%	83%	83%	83%	51%	59%	20%	79%	55%	67%	51%	55%	55%	23
Grand Kru	72%	100%	100%	100%	39%	67%	11%	83%	44%	39%	56%	28%	33%	18
Lofa	85%	96%	95%	95%	87%	25%	22%	75%	55%	29%	20%	18%	25%	55
Margibi	50%	75%	69%	69%	29%	22%	8%	39%	31%	33%	27%	10%	12%	36
Maryland	56%	92%	92%	92%	28%	52%	4%	88%	24%	28%	48%	24%	24%	25
Montserrado	50%	52%	45%	39%	29%	28%	27%	38%	16%	9%	39%	10%	8%	133
Nimba	85%	73%	68%	64%	8%	24%	33%	66%	28%	29%	27%	18%	20%	61
River Cess	100%	44%	35%	49%	30%	30%	79%	100%	70%	61%	70%	61%	47%	19
River Gee	96%	76%	76%	76%	62%	67%	38%	71%	49%	40%	18%	36%	36%	20
Sinoe	100%	91%	88%	91%	52%	23%	42%	87%	39%	47%	60%	39%	34%	36
Facility type														
Hospital	89%	83%	83%	83%	69%	53%	50%	92%	89%	86%	58%	72%	69%	36
Health center	76%	74%	69%	63%	40%	38%	22%	79%	68%	50%	37%	40%	49%	68
Clinic	69%	72%	66%	65%	38%	25%	27%	56%	27%	24%	36%	17%	17%	464
Urban / rural														
Urban	52%	55%	47%	43%	31%	28%	25%	42%	22%	17%	38%	17%	16%	186
Rural	87%	88%	84%	85%	47%	27%	29%	75%	43%	39%	37%	27%	28%	382
Managing authority														
Government/ Public	85%	90%	86%	87%	50%	29%	31%	77%	49%	42%	36%	29%	31%	448
NGO/not-for-profit	94%	88%	67%	67%	33%	18%	6%	94%	67%	75%	54%	54%	75%	9
Mission/FBO	61%	40%	40%	34%	27%	22%	18%	58%	18%	17%	38%	19%	21%	29
Private-for-profit	46%	48%	37%	32%	23%	27%	23%	25%	4%	3%	38%	8%	4%	82

Table 35: HIV counselling testing service availability by county, facility type, rural/urban, and managing authority

	HIV testing and counselling services	HIV testing and counselling services for minor adolescents	n
National	73%	60%	568
Region			
Bomi	96%	76%	23
Bong	81%	67%	44
Gbapolu	100%	100%	13
Grand Bassa	97%	92%	30
Grand Cape Mount	31%	28%	32
Grand Gedeh	100%	79%	23
Grand Kru	100%	83%	18
Lofa	100%	75%	55
Margibi	42%	39%	36
Maryland	92%	88%	25
Montserrado	52%	38%	133
Nimba	89%	66%	61
River Cess	100%	100%	19
River Gee	96%	71%	20
Sinoe	100%	87%	36
Facility type			
Hospital	94%	92%	36
Health center	87%	79%	68
Clinic	71%	56%	464
Urban / rural			
Urban	55%	42%	186
Rural	89%	75%	382
Managing authority			
Government/Public	90%	77%	448
NGO/not-for-profit	94%	94%	9
Mission/FBO	80%	58%	29
Private-for-profit	39%	25%	82

Table 36: Percentage of facilities that offer HIV/AIDS care and support service (CSS) by county, facility type, rural/urban, and managing authority

	Any HIV care and support services	HIV CSS for adult patients	HIV CSS for adolescent patients	Links with CHWs for any HIV-related services	Preventive treatment for TB	Primary preventive treatment for opportunistic infections	Treatment of opportunistic infections	Screening for cryptococcal infection	Intravenous treatment of fungal infections	Treatment for Kaposi's sarcoma	Palliative care	Nutritional rehabilitation services	n
National	31%	31%	29%	45%	15%	29%	26%	7%	8%	7%	19%	21%	568
Region													
Bomi	53%	53%	53%	72%	53%	53%	53%	21%	25%	8%	28%	31%	23
Bong	34%	32%	32%	60%	9%	28%	30%	7%	9%	7%	26%	26%	44
Gbapolu	69%	69%	69%	69%	62%	62%	62%	8%	15%	8%	38%	46%	13
Grand Bassa	61%	61%	56%	53%	40%	59%	51%	8%	8%	5%	40%	39%	30
Grand Cape Mount	25%	25%	25%	22%	22%	25%	22%	3%	3%	3%	6%	3%	32
Grand Gedeh	75%	67%	67%	47%	43%	71%	55%	20%	28%	24%	35%	35%	23
Grand Kru	44%	44%	39%	89%	22%	44%	44%	17%	22%	28%	39%	39%	18
Lofa	35%	36%	29%	91%	13%	36%	35%	5%	11%	13%	22%	15%	55
Margibi	33%	33%	33%	34%	12%	31%	29%	15%	10%	8%	29%	25%	36
Maryland	36%	32%	28%	72%	16%	32%	32%	12%	20%	20%	12%	16%	25
Montserrado	10%	10%	9%	14%	4%	9%	9%	3%	3%	3%	6%	7%	133
Nimba	33%	33%	29%	68%	6%	31%	28%	5%	6%	9%	23%	28%	61
River Cess	61%	61%	61%	70%	37%	56%	23%	5%	5%	5%	28%	51%	19
River Gee	40%	40%	40%	31%	31%	27%	31%	0%	0%	0%	22%	31%	20
Sinoe	47%	47%	47%	78%	13%	36%	34%	8%	13%	3%	34%	36%	36
Facility type													
Hospital	86%	86%	86%	75%	56%	83%	83%	50%	53%	58%	83%	56%	36
Health center	53%	53%	50%	59%	32%	50%	50%	19%	24%	21%	41%	38%	68
Clinic	26%	25%	24%	42%	11%	23%	20%	3%	4%	3%	14%	17%	464
Urban / rural													
Urban	17%	17%	17%	24%	10%	17%	16%	9%	9%	8%	13%	11%	186
Rural	43%	42%	39%	63%	20%	38%	35%	5%	8%	7%	25%	29%	382
Managing authority													
Government/Public	46%	45%	42%	64%	21%	42%	38%	9%	11%	10%	27%	30%	448
NGO/not-for-profit	75%	75%	75%	67%	69%	75%	75%	27%	27%	6%	54%	33%	9
Mission/FBO	17%	17%	17%	32%	12%	17%	17%	7%	8%	10%	15%	13%	29
Private-for-profit	3%	3%	3%	10%	2%	3%	3%	2%	1%	2%	3%	3%	82

Table 37: Percentage of facilities that offer HIV/AIDS care and support service (CSS) by county, facility type, rural/urban, and managing authority

	Fortified protein supplementation	Micronutrient supplementation	Screening for chronic cardiovascular diseases and diabetes	Family planning counselling	Condoms	Routine screening or testing for TB in HIV patients	Treatment for TB or TB and HIV coinfection	Counselling on risk reduction in TB/HIV co-infected patients	Routine screening and diagnosis for STIs	Treatment of STIs	Routine HIV testing and counseling for partners	HIV testing for children of HIV patients	Testing for hepatitis B and C	n
National	19%	25%	11%	31%	31%	25%	21%	28%	28%	30%	28%	26%	7%	568
Region														
Bomi	41%	49%	21%	53%	53%	53%	53%	53%	53%	53%	53%	53%	17%	23
Bong	22%	26%	13%	34%	34%	24%	17%	32%	30%	34%	30%	26%	4%	44
Gbapolu	38%	62%	8%	69%	69%	54%	69%	69%	38%	62%	54%	69%	15%	13
Grand Bassa	23%	43%	34%	59%	59%	56%	51%	53%	51%	56%	45%	45%	17%	30
Grand Cape Mount	9%	3%	0%	25%	25%	22%	19%	25%	16%	25%	25%	22%	9%	32
Grand Gedeh	47%	63%	16%	75%	75%	67%	55%	75%	67%	75%	71%	59%	8%	23
Grand Kru	33%	44%	17%	44%	44%	28%	33%	39%	44%	44%	39%	39%	17%	18
Lofa	22%	31%	15%	36%	33%	31%	24%	36%	33%	35%	35%	29%	5%	55
Margibi	23%	29%	17%	33%	33%	23%	19%	27%	31%	31%	29%	23%	15%	36
Maryland	28%	32%	16%	32%	36%	36%	20%	36%	36%	36%	32%	32%	4%	25
Montserrado	4%	7%	4%	9%	10%	8%	6%	8%	9%	9%	10%	8%	5%	133
Nimba	19%	29%	10%	32%	33%	31%	17%	31%	32%	33%	32%	31%	6%	61
River Cess	56%	51%	19%	61%	61%	51%	47%	61%	61%	61%	56%	56%	5%	19
River Gee	31%	36%	13%	40%	40%	31%	36%	36%	36%	40%	22%	27%	0%	20
Sinoe	34%	36%	10%	47%	47%	23%	18%	23%	39%	44%	34%	34%	3%	36
Facility type														
Hospital	47%	69%	67%	78%	83%	78%	75%	81%	86%	83%	83%	83%	69%	36
Health center	29%	41%	26%	51%	50%	50%	47%	49%	50%	51%	50%	49%	22%	68
Clinic	17%	21%	6%	26%	26%	20%	15%	23%	22%	25%	22%	20%	2%	464
Urban / rural														
Urban	10%	14%	11%	16%	17%	15%	14%	16%	16%	17%	16%	16%	11%	186
Rural	27%	34%	11%	43%	43%	34%	27%	38%	38%	42%	38%	34%	4%	382
Managing authority														
Government/ Public	28%	36%	14%	45%	45%	37%	29%	41%	41%	45%	40%	37%	8%	448
NGO/not-for-profit	48%	69%	69%	75%	75%	75%	75%	75%	75%	75%	75%	75%	48%	9
Mission/FBO	12%	13%	10%	13%	17%	15%	15%	15%	17%	15%	17%	17%	10%	29
Private-for-profit	2%	3%	2%	3%	3%	3%	2%	3%	3%	3%	3%	3%	3%	82

Table 38: Antiretroviral therapy service availability by county, facility type, rural/urban, and managing authority

	Any ART services for life-long treatment	ART services for adolescents	ART prescription	ART clinical treatment follow-up	Routine ART adherence counselling	Follow-up for adherence and/or medicine supply services for ART	n
National	41%	33%	36%	39%	41%	40%	568
Region							
Bomi	72%	72%	72%	72%	72%	72%	23
Bong	43%	37%	37%	45%	45%	41%	44
Gbapolu	85%	77%	77%	85%	85%	85%	13
Grand Bassa	61%	44%	56%	59%	64%	61%	30
Grand Cape Mount	28%	28%	28%	28%	28%	28%	32
Grand Gedeh	67%	55%	59%	63%	67%	63%	23
Grand Kru	50%	44%	44%	50%	50%	50%	18
Lofa	75%	55%	60%	75%	76%	75%	55
Margibi	33%	31%	29%	33%	33%	29%	36
Maryland	32%	24%	28%	28%	28%	28%	25
Montserrado	21%	16%	19%	20%	21%	20%	133
Nimba	42%	28%	32%	37%	38%	42%	61
River Cess	70%	70%	70%	70%	70%	70%	19
River Gee	67%	49%	54%	49%	62%	54%	20
Sinoe	44%	39%	42%	44%	44%	44%	36
Facility type							
Hospital	92%	89%	81%	89%	89%	89%	36
Health center	72%	68%	68%	71%	72%	71%	68
Clinic	35%	27%	30%	33%	35%	34%	464
Urban / rural							
Urban	27%	22%	26%	25%	27%	26%	186
Rural	53%	43%	45%	52%	52%	51%	382
Managing authority							
Government/Public	58%	49%	50%	57%	58%	56%	448
NGO/not-for-profit	94%	67%	82%	94%	94%	94%	9
Mission/FBO	25%	18%	29%	18%	24%	24%	29
Private-for-profit	7%	4%	7%	7%	7%	7%	82

Table 39: Percentage of PMTCT service availability by county, facility type, rural/urban, and managing authority

	Any PMTCT services	HIV testing for all pregnant women attending ANC	HIV testing at delivery if status not known	Repeat testing for HIV negative pregnant women	HIV testing for infants of HIV+ women (early infant diagnosis)	HIV testing for partners	HIV counseling for HIV+ pregnant women	ARV prophylaxis to all HIV+ pregnant women	ARV for HIV+ woman at delivery if not on life-long ART	ARV prophylaxis to infants of HIV+ women	Nutritional counselling for HIV+ pregnant women	Infant and young child feeding counselling for infants of HIV+ women	Family planning counselling to HIV+ women	n
National	73%	80%	56%	65%	41%	51%	68%	57%	43%	52%	65%	62%	64%	568
Region														
Bomi	100%	100%	100%	100%	76%	80%	100%	96%	96%	96%	100%	100%	100%	23
Bong	81%	74%	71%	63%	54%	60%	69%	65%	56%	67%	69%	65%	71%	44
Gbapolu	100%	100%	92%	100%	69%	77%	100%	100%	92%	100%	100%	100%	100%	13
Grand Bassa	100%	100%	73%	100%	49%	89%	89%	68%	51%	61%	100%	97%	95%	30
Grand Cape Mount	100%	100%	100%	97%	81%	84%	100%	91%	91%	94%	100%	97%	100%	32
Grand Gedeh	96%	100%	67%	88%	63%	51%	92%	76%	63%	83%	92%	75%	79%	23
Grand Kru	100%	100%	83%	100%	28%	100%	83%	67%	72%	67%	100%	100%	100%	18
Lofa	98%	98%	85%	91%	60%	80%	89%	76%	69%	80%	85%	78%	85%	55
Margibi	62%	55%	23%	51%	36%	40%	55%	55%	26%	43%	51%	47%	53%	36
Maryland	92%	92%	84%	76%	36%	72%	76%	56%	48%	52%	76%	72%	76%	25
Montserrado	37%	58%	18%	31%	20%	21%	36%	31%	13%	19%	30%	28%	27%	133
Nimba	96%	97%	83%	78%	50%	63%	88%	59%	54%	62%	81%	84%	82%	61
River Cess	100%	100%	86%	100%	65%	91%	100%	95%	75%	95%	100%	100%	100%	19
River Gee	85%	100%	62%	80%	45%	45%	80%	71%	62%	67%	80%	67%	80%	20
Sinoe	100%	100%	83%	86%	36%	42%	95%	60%	42%	60%	92%	79%	97%	36
Facility type														
Hospital	89%	89%	89%	86%	78%	78%	89%	86%	89%	89%	89%	89%	83%	36
Health center	82%	91%	66%	78%	56%	68%	81%	68%	56%	69%	81%	76%	76%	68
Clinic	71%	78%	53%	62%	37%	47%	65%	54%	39%	48%	62%	58%	62%	464
Urban / rural														
Urban	46%	61%	28%	38%	28%	28%	45%	36%	21%	29%	40%	38%	37%	186
Rural	96%	96%	80%	88%	52%	70%	88%	74%	62%	72%	88%	82%	88%	382
Managing authority														
Government/Public	93%	94%	77%	86%	54%	69%	87%	75%	63%	73%	86%	82%	88%	448
NGO/not-for-profit	88%	88%	88%	88%	67%	88%	88%	67%	88%	88%	88%	88%	88%	9
Mission/FBO	80%	87%	51%	68%	38%	54%	80%	59%	35%	42%	68%	68%	67%	29
Private-for-profit	30%	51%	14%	21%	15%	11%	27%	20%	4%	12%	23%	19%	17%	82

Table 40: Sexually-transmitted infection availability by county, facility type, rural/urban, and managing authority

	Any STI services (other than HIV)	STI diagnosis	STI treatment	n
National	92%	85%	91%	568
Region				
Bomi	100%	100%	100%	23
Bong	93%	68%	93%	44
Gbapolu	92%	92%	92%	13
Grand Bassa	100%	100%	100%	30
Grand Cape Mount	100%	25%	100%	32
Grand Gedeh	100%	96%	100%	23
Grand Kru	100%	100%	100%	18
Lofa	91%	78%	91%	55
Margibi	96%	96%	96%	36
Maryland	96%	92%	96%	25
Montserrado	85%	85%	83%	133
Nimba	92%	89%	92%	61
River Cess	100%	100%	100%	19
River Gee	91%	87%	91%	20
Sinoe	100%	100%	100%	36
Facility type				
Hospital	94%	94%	94%	36
Health center	94%	93%	94%	68
Clinic	92%	84%	91%	464
Urban / rural				
Urban	88%	87%	86%	186
Rural	96%	84%	96%	382
Managing authority				
Government/Public	95%	84%	95%	448
NGO/not-for-profit	100%	100%	100%	9
Mission/FBO	100%	100%	100%	29
Private-for-profit	83%	83%	81%	82

Table 41: Tuberculosis service by county, facility type, rural/urban, and managing authority

	Any TB services	Any services for drug-resistant TB	TB diagnosis for any types of patients	TB diagnosis in adults	TB diagnosis in minor adolescents	TB diagnosis in children	Any TB diagnostic testing (onsite)	TB diagnosis in adults by clinical symptoms and signs only	TB diagnosis in adults by sputum smear microscopy	TB diagnosis in adults by culture	TB diagnosis in adults by rapid test (GeneXpert MTB/RIF)	TB diagnosis in adults by chest X-ray	n
National	39%	18%	24%	23%	18%	17%	19%	14%	18%	3%	6%	2%	568
Region													
Bomi	65%	33%	33%	33%	8%	33%	33%	4%	33%	0%	4%	0%	23
Bong	52%	20%	26%	19%	20%	17%	15%	19%	15%	6%	2%	2%	44
Gbapolu	69%	15%	38%	38%	38%	31%	38%	8%	31%	0%	8%	0%	13
Grand Bassa	75%	25%	41%	39%	39%	31%	28%	33%	25%	3%	8%	3%	30
Grand Cape Mount	34%	13%	28%	28%	9%	16%	28%	6%	28%	0%	0%	0%	32
Grand Gedeh	79%	28%	59%	59%	47%	43%	59%	28%	59%	8%	8%	4%	23
Grand Kru	39%	28%	28%	28%	22%	22%	28%	28%	28%	0%	11%	0%	18
Lofa	64%	36%	33%	31%	11%	15%	22%	25%	22%	0%	7%	0%	55
Margibi	24%	19%	12%	15%	10%	8%	15%	6%	12%	4%	6%	2%	36
Maryland	24%	12%	28%	24%	20%	20%	20%	24%	20%	8%	4%	4%	25
Montserrado	15%	5%	10%	10%	10%	9%	9%	5%	7%	3%	6%	3%	133
Nimba	49%	27%	22%	20%	18%	12%	20%	14%	20%	1%	4%	4%	61
River Cess	95%	42%	65%	65%	61%	33%	14%	61%	14%	5%	5%	0%	19
River Gee	58%	18%	45%	45%	31%	31%	45%	9%	45%	0%	4%	0%	20
Sinoe	44%	36%	36%	36%	26%	29%	21%	23%	16%	3%	13%	0%	36
Facility type													
Hospital	81%	50%	75%	75%	61%	72%	75%	61%	75%	22%	42%	33%	36
Health center	57%	28%	46%	47%	35%	31%	44%	31%	43%	6%	9%	0%	68
Clinic	35%	16%	19%	18%	14%	12%	14%	10%	12%	1%	4%	1%	464
Urban / rural													
Urban	23%	11%	17%	18%	15%	15%	17%	10%	15%	4%	9%	4%	186
Rural	54%	25%	30%	28%	21%	19%	21%	18%	20%	1%	3%	0%	382
Managing authority													
Government/Public	54%	27%	32%	30%	23%	21%	24%	20%	23%	3%	7%	2%	448
NGO/not-for-profit	88%	42%	61%	61%	33%	54%	61%	33%	61%	6%	0%	6%	9
Mission/FBO	32%	12%	19%	19%	17%	12%	19%	13%	19%	5%	3%	3%	29
Private-for-profit	11%	3%	8%	8%	8%	7%	8%	3%	5%	2%	5%	2%	82

Table 42: Tuberculosis service availability by county, facility type, rural/urban, and managing authority

	Routine testing of TB patients for HIV	Prescription of medicines to TB patients	Provision of medicines to TB patients at follow-up visits	Clinical follow-up and adherence support for TB patients	System for detecting TB in general outpatient department	Dedicated ward for inpatient care of TB patients	Links with CHWs for any TB-related services	n
National	34%	24%	34%	32%	2%	22%	36%	568
Region								
Bomi	65%	37%	65%	61%	16%	12%	69%	23
Bong	47%	24%	54%	54%	0%	27%	60%	44
Gbapolu	62%	54%	69%	46%	0%	23%	62%	13
Grand Bassa	67%	56%	69%	69%	0%	69%	53%	30
Grand Cape Mount	28%	28%	28%	28%	0%	6%	22%	32
Grand Gedeh	79%	59%	79%	71%	4%	31%	63%	23
Grand Kru	39%	33%	39%	39%	0%	0%	44%	18
Lofa	58%	38%	69%	60%	15%	11%	82%	55
Margibi	17%	12%	17%	17%	0%	6%	17%	36
Maryland	24%	24%	24%	24%	0%	8%	20%	25
Montserrado	10%	8%	9%	8%	0%	27%	6%	133
Nimba	34%	20%	25%	25%	0%	9%	63%	61
River Cess	79%	47%	84%	75%	0%	25%	79%	19
River Gee	54%	36%	54%	45%	0%	0%	31%	20
Sinoe	44%	31%	42%	44%	3%	38%	49%	36
Facility type								
Hospital	81%	69%	81%	75%	0%	56%	69%	36
Health center	56%	51%	59%	54%	1%	29%	56%	68
Clinic	29%	18%	29%	27%	2%	19%	32%	464
Urban / rural								
Urban	19%	16%	19%	18%	0%	26%	15%	186
Rural	46%	30%	47%	44%	3%	18%	54%	382
Managing authority								
Government/Public	48%	33%	49%	45%	3%	19%	54%	448
NGO/not-for-profit	88%	82%	88%	88%	0%	73%	88%	9
Mission/FBO	26%	21%	26%	26%	0%	43%	25%	29
Private-for-profit	5%	4%	4%	4%	0%	18%	1%	82

Table 43: Malaria service availability by county, facility type, rural/urban, and managing authority

	Any malaria services	Malaria diagnosis	Malaria diagnosis by clinical symptoms and signs	Malaria diagnostic testing	Malaria diagnosis by RDT	Malaria diagnosis by microscopy	Malaria treatment	Intermittent preventive treatment for malaria in pregnancy (IPTp)	Links with CHWs for malaria services	n
National	100%	99%	66%	98%	96%	50%	99%	86%	69%	568
Region										
Bomi	100%	100%	29%	92%	92%	45%	100%	100%	96%	23
Bong	100%	98%	51%	98%	98%	35%	100%	71%	68%	44
Gbapolu	100%	100%	15%	100%	100%	8%	100%	100%	100%	13
Grand Bassa	100%	100%	67%	100%	100%	25%	100%	100%	87%	30
Grand Cape Mount	100%	100%	97%	100%	100%	9%	100%	100%	91%	32
Grand Gedeh	100%	100%	12%	100%	100%	84%	100%	92%	83%	23
Grand Kru	100%	100%	100%	100%	100%	33%	100%	100%	100%	18
Lofa	100%	100%	87%	100%	100%	36%	100%	98%	98%	55
Margibi	98%	96%	41%	81%	68%	56%	98%	80%	69%	36
Maryland	100%	100%	60%	100%	100%	28%	100%	96%	92%	25
Montserrado	100%	99%	73%	99%	96%	64%	99%	71%	34%	133
Nimba	100%	100%	71%	100%	96%	82%	100%	96%	96%	61
River Cess	100%	100%	44%	100%	100%	5%	100%	100%	95%	19
River Gee	100%	100%	38%	100%	100%	40%	100%	100%	85%	20
Sinoe	100%	100%	90%	100%	100%	25%	97%	100%	91%	36
Facility type										
Hospital	100%	100%	67%	100%	94%	94%	100%	86%	61%	36
Health center	100%	99%	72%	97%	88%	76%	100%	94%	72%	68
Clinic	100%	99%	65%	98%	97%	44%	99%	85%	69%	464
Urban / rural										
Urban	100%	99%	71%	98%	94%	71%	99%	73%	42%	186
Rural	100%	99%	61%	98%	97%	31%	100%	97%	93%	382
Managing authority										
Government/Public	100%	99%	63%	97%	96%	32%	99%	94%	90%	448
NGO/not-for-profit	100%	100%	67%	100%	88%	79%	100%	88%	75%	9
Mission/FBO	100%	100%	54%	100%	98%	85%	100%	81%	40%	29
Private-for-profit	100%	100%	74%	100%	96%	72%	100%	71%	35%	82

Table 44: Noncommunicable diseases service availability by county, facility type, rural/urban, and managing authority

	Any services for chronic noncommunicable diseases	Cardiovascular disease services	Diabetes services	Chronic respiratory disease services	Any cancer services	Routine screening services for cervical cancer	Any diagnostic or treatment services for cervical cancer	Any diagnostic or treatment services for breast cancer	Any diagnostic or treatment services for colorectal cancer	n
National	70%	46%	46%	48%	4%	3%	2%	2%	1%	568
Region										
Bomi	80%	65%	41%	69%	0%	0%	0%	0%	0%	23
Bong	47%	26%	32%	31%	0%	0%	0%	0%	0%	44
Gbapolu	62%	38%	31%	38%	0%	0%	0%	0%	0%	13
Grand Bassa	97%	89%	49%	81%	3%	3%	3%	0%	3%	30
Grand Cape Mount	31%	19%	13%	22%	6%	6%	6%	6%	6%	32
Grand Gedeh	80%	49%	49%	53%	12%	0%	0%	0%	0%	23
Grand Kru	94%	50%	39%	94%	6%	6%	0%	0%	0%	18
Lofa	87%	45%	51%	65%	4%	4%	2%	2%	2%	55
Margibi	61%	45%	50%	25%	4%	2%	2%	2%	2%	36
Maryland	68%	52%	24%	56%	8%	4%	4%	4%	4%	25
Montserrado	73%	57%	67%	49%	3%	3%	4%	2%	1%	133
Nimba	75%	18%	31%	42%	5%	3%	3%	3%	1%	61
River Cess	91%	72%	14%	77%	9%	5%	5%	9%	5%	19
River Gee	78%	45%	38%	54%	4%	0%	0%	0%	0%	20
Sinoe	21%	13%	5%	13%	0%	0%	0%	0%	0%	36
Facility type										
Hospital	94%	86%	92%	89%	28%	25%	22%	22%	17%	36
Health center	82%	63%	76%	62%	13%	7%	6%	4%	3%	68
Clinic	67%	42%	40%	45%	1%	1%	1%	0%	0%	464
Urban / rural										
Urban	74%	55%	65%	50%	6%	4%	4%	3%	2%	186
Rural	66%	38%	29%	47%	2%	1%	1%	1%	1%	382
Managing authority										
Government/Public	65%	40%	31%	44%	4%	2%	2%	2%	2%	448
NGO/not-for-profit	100%	100%	79%	100%	0%	0%	0%	0%	0%	9
Mission/FBO	77%	42%	64%	61%	3%	3%	3%	2%	2%	29
Private-for-profit	73%	56%	67%	49%	3%	3%	3%	1%	1%	82

Table 45: Noncommunicable diseases service readiness by county, facility type, rural/urban, and managing authority

	Cardiovascular disease services	Diabetes services	Chronic respiratory disease services	Routine screening services for cervical cancer	Prostate cancer	Any diagnostic or treatment services for breast cancer	Any diagnostic or treatment services for colorectal cancer
National	34%	46%	23%	48%	26%	23%	56%
Bomi	24%	29%	9%	0%	0%	0%	0%
Bong	28%	39%	13%	25%	0%	0%	0%
Gbapolu	40%	44%	28%	0%	0%	0%	0%

Grand Bassa	30%	51%	21%	0%	0%	0%	0%
Grand Cape Mount	25%	27%	14%	25%	0%	0%	0%
Grand Gedeh	38%	63%	15%	0%	0%	0%	0%
Grand Kru	21%	32%	11%	25%	0%	0%	0%
Lofa	37%	47%	28%	0%	0%	0%	0%
Margibi	42%	66%	51%	75%	0%	100%	0%
Maryland	38%	62%	16%	100%	0%	50%	75%
Montserrado	38%	46%	32%	55%	50%	27%	50%
Nimba	32%	50%	22%	38%	0%	0%	0%
River Cess	29%	40%	21%	25%	33%	0%	0%
River Gee	32%	46%	21%	0%	0%	0%	0%
Sinoe	32%	62%	10%	0%	0%	0%	0%
Hospital	46%	67%	40%	48%	22%	63%	17%
Health center	41%	53%	30%	100%	6%	50%	3%
Clinic	31%	40%	19%	25%	1%	0%	0%
Urban	40%	50%	33%	53%	4%	56%	2%
Rural	27%	35%	15%	25%	1%	0%	1%
Government/Public	27%	37%	16%	39%	2%	63%	2%
NGO/not-for-profit	33%	62%	31%	75%	0%	0%	0%
Mission/FBO	48%	57%	41%	75%	3%	50%	50%
Private-for-profit	40%	49%	32%	48%	3%	50%	37%

Table 46: Neglected tropical diseases service availability by county, facility type, rural/urban, and managing authority

	Any neglected tropical diseases	Dengue	Guinea worm disease (dracunculiasis)	Case management for hydrocele	Lymphatic filariasis	Lymphoedema	Onchocerciasis (river blindness)	Schistosomiasis	Soil-transmitted helminthic diseases	Trachoma	Visceral leishmaniasis	Community linkages with facility focal point for NTDs	n
National	43%	7%	17%	23%	30%	35%	33%	38%	39%	31%	10%	30%	568
Region													
Bomi	96%	31%	28%	53%	53%	69%	69%	80%	92%	53%	28%	80%	23
Bong	52%	30%	47%	20%	48%	52%	48%	54%	56%	54%	34%	37%	44
Gbapolu	54%	15%	15%	15%	15%	15%	31%	46%	46%	31%	15%	38%	13
Grand Bassa	64%	15%	34%	37%	45%	53%	53%	59%	68%	36%	9%	43%	30
Grand Cape Mount	38%	0%	0%	3%	22%	22%	25%	25%	16%	31%	0%	38%	32
Grand Gedeh	47%	0%	28%	12%	35%	31%	31%	43%	47%	35%	24%	20%	23
Grand Kru	72%	0%	0%	39%	72%	72%	72%	72%	72%	72%	0%	72%	18
Lofa	82%	9%	24%	42%	49%	69%	45%	71%	75%	53%	22%	71%	55
Margibi	27%	0%	2%	10%	27%	27%	27%	27%	23%	27%	9%	10%	36
Maryland	68%	12%	24%	48%	52%	68%	68%	68%	64%	64%	12%	52%	25
Montserrado	11%	0%	6%	6%	7%	6%	6%	9%	9%	6%	2%	2%	133
Nimba	66%	8%	27%	53%	47%	56%	55%	60%	65%	35%	10%	46%	61
River Cess	81%	0%	14%	19%	37%	53%	72%	77%	61%	72%	0%	51%	19
River Gee	45%	22%	31%	18%	31%	36%	36%	36%	40%	36%	31%	27%	20
Sinoe	52%	0%	23%	42%	52%	49%	49%	47%	49%	47%	5%	49%	36
Facility type													
Hospital	72%	14%	44%	64%	69%	64%	64%	67%	69%	58%	25%	53%	36
Health center	44%	6%	21%	35%	41%	44%	38%	44%	43%	35%	13%	32%	68
Clinic	41%	6%	15%	19%	27%	32%	31%	36%	37%	29%	9%	28%	464
Urban / rural													
Urban	23%	3%	10%	16%	18%	19%	18%	20%	21%	16%	6%	11%	186
Rural	60%	10%	23%	29%	41%	48%	47%	54%	55%	44%	14%	46%	382
Managing authority													
Government/ Public	57%	10%	22%	27%	40%	45%	43%	50%	52%	43%	14%	43%	448
NGO/not-for-profit	82%	21%	61%	82%	82%	75%	82%	82%	82%	61%	27%	75%	9
Mission/FBO	36%	7%	16%	27%	30%	34%	36%	36%	30%	27%	12%	25%	29
Private-for-profit	14%	0%	5%	9%	8%	11%	11%	12%	14%	7%	2%	2%	82

Table 47: Neglected tropical diseases service availability by county, facility type, rural/urban, and managing authority

	Mass drug administration (MDA) for NTDs	Active case finding for NTDs	Contact tracing for NTDs	Vector surveillance control for NTDs	Veterinary public health interventions for NTDs	Community awareness for NTD	School health services for NTDs	n
National	31%	33%	33%	25%	9%	33%	23%	568
Region								
Bomi	67%	80%	80%	61%	31%	80%	49%	23
Bong	39%	41%	39%	39%	19%	41%	24%	44
Gbapolu	38%	38%	38%	15%	8%	38%	8%	13
Grand Bassa	45%	51%	48%	37%	15%	45%	43%	30
Grand Cape Mount	38%	38%	38%	28%	0%	38%	0%	32
Grand Gedeh	16%	20%	20%	12%	0%	20%	20%	23
Grand Kru	72%	72%	72%	50%	11%	72%	61%	18
Lofa	60%	71%	69%	65%	24%	71%	71%	55
Margibi	18%	18%	18%	13%	11%	18%	4%	36
Maryland	64%	60%	64%	44%	4%	64%	32%	25
Montserrado	3%	3%	2%	2%	1%	3%	2%	133
Nimba	48%	50%	50%	42%	18%	50%	32%	61
River Cess	81%	81%	77%	42%	0%	77%	63%	19
River Gee	36%	40%	40%	22%	9%	36%	31%	20
Sinoe	49%	52%	52%	34%	16%	49%	42%	36
Facility type								
Hospital	44%	53%	50%	47%	17%	50%	39%	36
Health center	32%	37%	37%	32%	12%	37%	25%	68
Clinic	30%	32%	31%	23%	9%	32%	22%	464
Urban / rural								
Urban	10%	12%	12%	11%	5%	13%	9%	186
Rural	49%	51%	50%	38%	13%	50%	35%	382
Managing authority								
Government/Public	45%	47%	46%	35%	12%	46%	31%	448
NGO/not-for-profit	54%	75%	75%	75%	21%	75%	69%	9
Mission/FBO	26%	31%	31%	24%	15%	31%	29%	29
Private-for-profit	5%	4%	4%	4%	2%	5%	2%	82

Table 48: Minor surgery service availability by county, facility type, rural/urban, and managing authority

	Any minor surgical procedures	Wound debridement	Suturing of laceration	Acute burn management	Incision and drainage of abscesses	Chest tube insertion	Cricothyroidotomy	Male circumcision	Hydrocele reduction	Biopsy of lymph node or other mass	Removal of foreign body	Closed repair of fracture	Closed reduction of dislocated joint	n
National	53%	38%	52%	43%	47%	4%	2%	42%	12%	2%	26%	11%	9%	568
Region														
Bomi	75%	55%	75%	55%	71%	4%	0%	55%	8%	0%	67%	0%	0%	23
Bong	75%	46%	69%	56%	64%	0%	0%	43%	2%	0%	49%	20%	8%	44
Gbapolu	62%	54%	62%	54%	62%	8%	0%	62%	8%	8%	46%	15%	0%	13
Grand Bassa	70%	44%	65%	60%	44%	3%	9%	68%	32%	9%	31%	15%	17%	30
Grand Cape Mount	9%	9%	9%	9%	13%	3%	3%	9%	6%	3%	9%	9%	3%	32
Grand Gedeh	75%	59%	75%	67%	63%	4%	0%	63%	20%	0%	39%	28%	20%	23
Grand Kru	78%	72%	78%	78%	78%	11%	0%	78%	11%	0%	44%	11%	11%	18
Lofa	64%	53%	64%	64%	60%	7%	0%	15%	9%	0%	62%	9%	9%	55
Margibi	20%	4%	10%	8%	8%	2%	2%	6%	2%	2%	8%	6%	6%	36
Maryland	56%	56%	56%	52%	52%	4%	8%	24%	8%	4%	8%	12%	8%	25
Montserrado	44%	32%	45%	32%	44%	4%	2%	44%	16%	3%	16%	9%	8%	133
Nimba	45%	35%	43%	42%	35%	6%	0%	34%	9%	3%	23%	8%	8%	61
River Cess	91%	61%	91%	61%	91%	5%	0%	86%	19%	0%	0%	0%	0%	19
River Gee	73%	64%	73%	73%	69%	0%	0%	60%	9%	4%	38%	31%	18%	20
Sinoe	70%	29%	70%	57%	39%	3%	0%	57%	8%	0%	23%	21%	16%	36
Facility type														
Hospital	89%	89%	89%	89%	89%	67%	17%	83%	86%	31%	69%	61%	61%	36
Health center	53%	41%	53%	47%	51%	6%	3%	37%	24%	1%	26%	13%	13%	68
Clinic	51%	35%	50%	40%	44%	1%	1%	40%	7%	1%	24%	8%	5%	464
Urban / rural														
Urban	44%	32%	45%	35%	42%	8%	2%	42%	18%	4%	20%	12%	11%	186
Rural	61%	43%	58%	50%	51%	1%	1%	41%	7%	1%	32%	11%	7%	382
Managing authority														
Government/ Public	56%	40%	55%	48%	49%	4%	1%	41%	8%	1%	30%	10%	7%	448
NGO/not-for-profit	73%	67%	67%	67%	46%	12%	27%	54%	61%	33%	46%	33%	39%	9
Mission/FBO	63%	38%	57%	38%	51%	10%	3%	54%	24%	3%	32%	12%	13%	29
Private-for-profit	43%	32%	43%	34%	42%	3%	1%	39%	13%	2%	17%	11%	9%	82

Table 49: Major surgery availability by county, facility type, rural/urban, and managing authority

.	Any major surgical procedures	Amputation	Appendectomy	Cataract surgery	Contracture release	Cystostomy	Drainage of osteomyelitis/septic arthritis	Hernia repair	Irrigation and debridement of open fractures	Laparotomy	Open reduction and fixation for fracture	Placement of external fixator	Skin grafting	Tracheostomy	Urethral stricture dilation	n
National	12%	4%	5%	1%	2%	4%	3%	5%	4%	5%	2%	2%	2%	3%	4%	568
Bomi	12%	0%	4%	4%	0%	4%	4%	4%	4%	0%	0%	0%	0%	4%	0%	23
Bong	17%	14%	2%	0%	0%	2%	2%	2%	2%	2%	0%	0%	0%	0%	4%	44
Gbapolu	15%	0%	8%	0%	0%	8%	8%	8%	8%	8%	8%	0%	8%	8%	8%	13
Grand Bassa	11%	8%	5%	0%	3%	0%	3%	5%	5%	0%	3%	0%	3%	0%	3%	30
Grand Cape Mount	9%	3%	6%	0%	3%	9%	6%	9%	9%	9%	3%	3%	3%	6%	6%	32
Grand Gedeh	12%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	0%	0%	0%	4%	23
Grand Kru	22%	0%	11%	0%	0%	6%	0%	11%	11%	6%	6%	0%	6%	11%	0%	18
Lofa	7%	4%	7%	0%	2%	5%	5%	7%	4%	5%	2%	2%	2%	4%	4%	55
Margibi	6%	2%	2%	0%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	36
Maryland	8%	4%	4%	4%	0%	4%	4%	4%	4%	4%	4%	4%	4%	4%	0%	25
Montserrado	11%	3%	5%	2%	2%	4%	3%	5%	3%	5%	2%	2%	3%	3%	5%	133
Nimba	22%	5%	9%	1%	3%	5%	1%	9%	9%	9%	3%	3%	4%	1%	4%	61
River Cess	14%	5%	5%	0%	0%	0%	5%	5%	5%	5%	0%	5%	0%	0%	5%	19
River Gee	4%	0%	4%	4%	4%	0%	4%	4%	4%	4%	4%	4%	0%	0%	0%	20
Sinoe	5%	5%	3%	3%	0%	0%	3%	3%	3%	3%	3%	3%	0%	3%	8%	36
Facility type																
Hospital	83%	53%	81%	25%	28%	56%	58%	81%	72%	67%	42%	33%	42%	44%	53%	36
Health center	19%	4%	10%	1%	3%	10%	4%	12%	9%	10%	3%	3%	4%	4%	9%	68
Clinic	7%	1%	1%	0%	0%	0%	0%	1%	0%	1%	0%	0%	0%	0%	1%	464
Urban / rural																
Urban	14%	6%	9%	3%	3%	7%	6%	9%	7%	8%	4%	4%	5%	5%	7%	186
Rural	10%	3%	2%	0%	0%	1%	0%	2%	2%	1%	1%	0%	0%	1%	1%	382
Managing authority																
Government/Public	13%	4%	4%	2%	2%	3%	3%	5%	4%	4%	2%	2%	2%	3%	3%	448
NGO/not-for-profit	12%	6%	12%	0%	0%	0%	0%	12%	12%	6%	0%	0%	6%	0%	0%	9
Mission/FBO	13%	8%	12%	3%	5%	13%	12%	12%	8%	10%	7%	7%	8%	8%	10%	29
Private-for-profit	10%	4%	4%	0%	1%	2%	2%	4%	2%	4%	2%	1%	2%	1%	4%	82

Table 50: Major surgery (Obstetric, gynecological and family planning surgery) availability by county, facility type, rural/urban, and managing authority

	Caesarean section	Dilatation and curettage or vacuum aspiration	Episiotomy, cervical and vaginal laceration repair	Obstetric fistula repair	Tubal ligation	Vasectomy	n
National	7%	23%	41%	3%	9%	3%	568
Region							
Bomi	4%	16%	76%	0%	4%	4%	23
Bong	4%	31%	30%	2%	9%	2%	44
Gbapolu	8%	23%	46%	8%	8%	8%	13
Grand Bassa	8%	24%	31%	0%	11%	3%	30
Grand Cape Mount	13%	6%	16%	3%	50%	6%	32
Grand Gedeh	4%	47%	59%	0%	8%	0%	23
Grand Kru	11%	33%	39%	0%	6%	6%	18
Lofa	7%	42%	65%	4%	7%	4%	55
Margibi	2%	6%	12%	2%	2%	2%	36
Maryland	4%	4%	12%	0%	8%	4%	25
Montserrado	10%	20%	38%	6%	6%	4%	133
Nimba	9%	18%	57%	4%	10%	0%	61
River Cess	5%	42%	95%	0%	5%	5%	19
River Gee	4%	69%	73%	4%	9%	0%	20
Sinoe	3%	10%	13%	3%	0%	3%	36
Facility type							
Hospital	89%	86%	89%	42%	81%	47%	36
Health center	19%	34%	51%	6%	16%	6%	68
Clinic	2%	18%	37%	1%	4%	1%	464
Urban / rural							
Urban	13%	22%	38%	7%	11%	6%	186
Rural	2%	24%	43%	0%	6%	1%	382
Managing authority							
Government/Public	6%	26%	44%	2%	10%	2%	448
NGO/not-for-profit	18%	18%	39%	0%	12%	6%	9
Mission/FBO	15%	29%	45%	12%	13%	12%	29
Private-for-profit	8%	16%	35%	3%	5%	3%	82

Table 51: Paediatric surgery availability in last 3 months by county, facility type, rural/urban, and managing authority

	Any neonatal or paediatric surgical procedures	Anorectal malformation repair	Cleft lip and palate repair	Club foot repair	Congenital hernia repair	Paediatric escharotomy / fasciotomy contracture release	Paediatric intussusception reduction	n
National	6%	1%	0%	1%	3%	1%	2%	568
Region								
Bomi	4%	0%	0%	0%	4%	0%	4%	23
Bong	4%	0%	0%	0%	2%	0%	0%	44
Gbapolu	15%	8%	8%	0%	15%	0%	8%	13
Grand Bassa	5%	0%	0%	0%	3%	0%	0%	30
Grand Cape Mount	9%	3%	0%	3%	6%	3%	3%	32
Grand Gedeh	8%	0%	0%	0%	0%	0%	0%	23
Grand Kru	11%	0%	0%	0%	0%	0%	0%	18
Lofa	5%	2%	0%	0%	5%	0%	4%	55
Margibi	2%	2%	2%	2%	2%	2%	2%	36
Maryland	4%	0%	0%	4%	4%	0%	0%	25
Montserrado	6%	0%	0%	0%	3%	1%	2%	133
Nimba	8%	1%	0%	1%	6%	4%	3%	61
River Cess	9%	0%	0%	0%	5%	0%	5%	19
River Gee	9%	0%	0%	0%	0%	0%	0%	20
Sinoe	5%	0%	0%	0%	3%	0%	0%	36
Facility type								
Hospital	81%	17%	8%	14%	56%	17%	31%	36
Health center	10%	0%	0%	0%	7%	1%	3%	68
Clinic	2%	0%	0%	0%	0%	0%	0%	464
Urban / rural								
Urban	10%	2%	1%	1%	6%	2%	4%	186
Rural	3%	0%	0%	0%	1%	0%	0%	382
Managing authority								
Government/Public	7%	1%	0%	1%	4%	1%	2%	448
NGO/not-for-profit	12%	0%	0%	0%	6%	0%	0%	9
Mission/FBO	12%	0%	0%	0%	7%	2%	5%	29
Private-for-profit	3%	0%	0%	0%	2%	0%	1%	82

Table 52: Essential surgery readiness by county, facility type, rural/urban, and managing authority

	Staff and guidelines						Equipment						
	Guidelines on IMEESC	Staff trained in IMEESC	WHO surgical safety checklist	Staff trained in general surgery	Staff trained in general anaesthesia	Mean proportion of staff and guidelines items at facilities	Basic operating table	Overhead operating light	Examination light to aim at surgical site	Basic set of surgical instruments	Cricothyroidotomy set	Sterilization equipment in facility	n
National	28%	21%	28%	37%	56%	34%	57%	51%	41%	48%	11%	78%	79
Region													
Bomi	33%	33%	33%	33%	33%	33%	33%	33%	33%	0%	0%	67%	3
Bong	11%	11%	11%	11%	22%	13%	22%	11%	22%	22%	0%	89%	9
Gbapolu	50%	0%	100%	50%	50%	50%	50%	50%	0%	50%	50%	100%	2
Grand Bassa	0%	0%	25%	25%	25%	15%	25%	25%	0%	25%	0%	75%	4
Grand Cape Mount	67%	100%	67%	33%	100%	73%	67%	67%	100%	100%	33%	100%	3
Grand Gedeh	33%	33%	0%	33%	33%	27%	33%	33%	67%	33%	33%	100%	3
Grand Kru	25%	0%	25%	0%	25%	15%	50%	50%	50%	50%	0%	25%	4
Lofa	50%	0%	50%	75%	100%	55%	100%	100%	50%	75%	0%	100%	4
Margibi	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	67%	3
Maryland	50%	50%	50%	0%	50%	40%	50%	50%	50%	50%	50%	0%	2
Montserrado	29%	14%	21%	59%	81%	41%	85%	78%	47%	66%	14%	74%	19
Nimba	18%	24%	29%	29%	41%	28%	41%	35%	35%	35%	0%	94%	17
River Cess	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	100%	3
River Gee	0%	100%	0%	0%	100%	40%	100%	0%	100%	100%	0%	100%	1
Sinoe	50%	50%	50%	0%	50%	40%	50%	50%	50%	50%	0%	0%	2
Facility type													
Hospital	53%	53%	67%	67%	97%	67%	97%	87%	77%	87%	23%	80%	30
Health center	31%	23%	15%	46%	77%	38%	85%	69%	69%	77%	23%	85%	13
Clinic	10%	0%	7%	15%	22%	11%	22%	22%	10%	15%	0%	75%	36
Urban / rural													
Urban	41%	34%	38%	63%	89%	53%	89%	80%	60%	73%	21%	78%	38
Rural	12%	7%	17%	7%	17%	12%	20%	17%	20%	20%	0%	78%	41
Managing authority													
Government/Public	23%	23%	34%	20%	38%	28%	38%	34%	34%	38%	11%	75%	56
NGO/not-for-profit	50%	50%	100%	100%	100%	80%	100%	50%	50%	100%	0%	100%	2
Mission/FBO	50%	38%	25%	75%	100%	57%	100%	100%	88%	63%	13%	88%	8
Private-for-profit	28%	9%	9%	61%	81%	37%	85%	76%	42%	65%	13%	81%	13

Table 53: Essential surgery readiness by county, facility type, rural/urban, and managing authority (continued)

	Equipment												
	Blood pressure apparatus	**Stethoscope**	**Cardiac monitor and ECG electrodes**	**Defibrillator**	**Anaesthesia machine**	**Capnograph**	**Gasometer**	**Intubation equipment (adult)**	**Intubation equipment (paediatric)**	**Resuscitation bag, and mask (adult, paediatric, and neonatal)**	**Suction apparatus with catheter**	**Thermometer**	n
National	74%	74%	22%	12%	39%	9%	24%	20%	0%	21%	48%	57%	79
Region													
Bomi	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	3
Bong	89%	78%	0%	11%	11%	0%	0%	11%	0%	11%	22%	11%	9
Gbapolu	100%	50%	0%	0%	50%	0%	0%	0%	0%	0%	0%	0%	2
Grand Bassa	25%	25%	0%	0%	25%	0%	0%	0%	0%	0%	25%	25%	4
Grand Cape Mount	100%	100%	33%	0%	67%	0%	0%	100%	0%	67%	100%	100%	3
Grand Gedeh	67%	67%	0%	0%	0%	0%	33%	0%	0%	0%	33%	67%	3
Grand Kru	100%	100%	25%	25%	25%	0%	25%	25%	0%	50%	50%	75%	4
Lofa	75%	100%	50%	25%	75%	25%	25%	0%	0%	25%	100%	100%	4
Margibi	67%	67%	33%	33%	33%	33%	33%	33%	0%	0%	33%	67%	3
Maryland	100%	100%	50%	50%	50%	50%	50%	50%	0%	50%	50%	100%	2
Montserrado	73%	73%	33%	10%	59%	19%	41%	24%	0%	33%	69%	69%	19
Nimba	71%	76%	12%	6%	29%	0%	12%	18%	0%	6%	29%	41%	17
River Cess	100%	100%	33%	33%	33%	0%	33%	33%	0%	0%	33%	100%	3
River Gee	100%	100%	100%	100%	100%	0%	100%	0%	0%	0%	100%	100%	1
Sinoe	100%	100%	0%	0%	0%	0%	0%	0%	0%	50%	50%	100%	2
Facility type													
Hospital	93%	90%	43%	37%	70%	17%	37%	47%	0%	40%	90%	87%	30
Health center	92%	92%	23%	0%	54%	0%	23%	31%	0%	23%	69%	85%	13
Clinic	57%	59%	7%	0%	15%	7%	15%	0%	0%	7%	15%	30%	36
Urban / rural													
Urban	81%	79%	37%	21%	67%	18%	42%	31%	0%	30%	75%	75%	38
Rural	66%	68%	5%	2%	7%	0%	2%	7%	0%	10%	17%	37%	41
Managing authority													
Government/ Public	73%	73%	13%	13%	25%	5%	16%	18%	0%	16%	34%	48%	56
NGO/not-for-profit	100%	100%	0%	0%	50%	0%	0%	0%	0%	0%	50%	100%	2
Mission/FBO	100%	100%	75%	38%	88%	13%	38%	75%	0%	50%	100%	100%	8
Private-for-profit	65%	65%	28%	4%	57%	19%	39%	9%	0%	24%	65%	61%	13

Table 54: Essential surgery readiness by county, facility type, rural/urban, and managing authority (continued)

	Equipment			Medicines and commodities									
	Tourniquet	Spinal needle	Mean proportion of equipment items at facilities	Sutures with needles (any)	Disposable latex gloves (non-sterile)	Skin disinfectant	Oxygen with administration equipment	Nasogastric tubes	Urinary catheters	Atropine (injectable)	Adrenaline / epinephrine injection	Bupivacaine (injectable)	n
National	66%	53%	40%	59%	61%	44%	0%	42%	60%	30%	36%	29%	79
Region													
Bomi	0%	0%	8%	33%	0%	33%	0%	0%	0%	33%	0%	33%	3
Bong	56%	33%	25%	22%	44%	33%	0%	11%	33%	11%	22%	11%	9
Gbapolu	50%	0%	28%	0%	100%	0%	0%	0%	50%	0%	50%	0%	2
Grand Bassa	25%	25%	16%	25%	25%	50%	0%	25%	25%	25%	25%	25%	4
Grand Cape Mount	100%	100%	67%	100%	100%	100%	0%	67%	100%	33%	67%	100%	3
Grand Gedeh	67%	33%	33%	67%	67%	33%	0%	0%	33%	0%	33%	0%	3
Grand Kru	50%	50%	41%	50%	50%	25%	0%	50%	50%	0%	0%	0%	4
Lofa	100%	75%	60%	50%	75%	50%	0%	100%	75%	75%	25%	0%	4
Margibi	33%	33%	37%	67%	33%	100%	0%	33%	33%	33%	33%	33%	3
Maryland	50%	50%	53%	50%	100%	50%	0%	50%	50%	0%	50%	0%	2
Montserrado	81%	73%	51%	83%	73%	54%	0%	62%	73%	48%	66%	47%	19
Nimba	59%	41%	32%	65%	53%	24%	0%	24%	71%	24%	12%	24%	17
River Cess	67%	67%	45%	67%	67%	67%	0%	67%	33%	33%	33%	33%	3
River Gee	100%	100%	70%	0%	100%	0%	0%	100%	100%	0%	0%	0%	1
Sinoe	100%	50%	38%	0%	50%	50%	0%	0%	100%	0%	0%	0%	2
Facility type													
Hospital	97%	90%	64%	77%	87%	57%	0%	70%	90%	47%	63%	50%	30
Health center	85%	85%	53%	62%	92%	77%	0%	62%	92%	46%	46%	54%	13
Clinic	40%	19%	21%	47%	35%	27%	0%	17%	30%	15%	15%	7%	36
Urban / rural													
Urban	87%	77%	56%	75%	77%	51%	0%	65%	77%	50%	60%	45%	38
Rural	41%	24%	22%	41%	41%	37%	0%	15%	39%	7%	7%	10%	41
Managing authority													
Government/Public	54%	38%	33%	43%	50%	34%	0%	30%	48%	13%	23%	14%	56
NGO/not-for-profit	100%	100%	50%	100%	100%	50%	0%	50%	100%	50%	50%	100%	2
Mission/FBO	88%	100%	71%	88%	100%	100%	0%	75%	100%	75%	63%	75%	8
Private-for-profit	85%	70%	48%	87%	70%	50%	0%	57%	70%	57%	57%	42%	13

Table 55: Essential surgery readiness by county, facility type, rural/urban, and managing authority (continued)

	Medicines and commodities										
	Diazepam (injectable)	Ephedrine	Halothane	Ketamine	Lidocaine 5%	Suxamethonium	Thiopental	Mean proportion of medicines and commodities items at facilities	Mean proportion of all items at facilities	Proportion of facilities with all items	n
National	48%	7%	12%	44%	24%	13%	13%	33%	37%	0%	79
Region											
Bomi	0%	0%	0%	33%	67%	0%	0%	15%	14%	0%	3
Bong	44%	11%	0%	22%	0%	0%	0%	17%	20%	0%	9
Gbapolu	50%	50%	0%	50%	50%	0%	0%	25%	29%	0%	2
Grand Bassa	25%	0%	0%	25%	0%	0%	0%	17%	16%	0%	4
Grand Cape Mount	67%	0%	0%	67%	0%	0%	0%	50%	61%	0%	3
Grand Gedeh	67%	0%	0%	33%	0%	0%	0%	21%	28%	0%	3
Grand Kru	50%	0%	0%	0%	0%	0%	0%	17%	29%	0%	4
Lofa	75%	0%	0%	100%	0%	0%	0%	39%	51%	0%	4
Margibi	33%	33%	33%	33%	33%	33%	33%	38%	37%	0%	3
Maryland	50%	0%	0%	50%	50%	0%	0%	31%	43%	0%	2
Montserrado	66%	7%	26%	66%	52%	33%	29%	49%	49%	0%	19
Nimba	24%	6%	12%	24%	6%	6%	12%	24%	28%	0%	17
River Cess	100%	0%	0%	33%	0%	0%	0%	33%	39%	0%	3
River Gee	0%	0%	0%	100%	0%	0%	0%	25%	49%	0%	1
Sinoe	0%	0%	0%	0%	0%	0%	0%	13%	28%	0%	2
Facility type											
Hospital	73%	20%	13%	83%	17%	17%	23%	49%	59%	0%	30
Health center	62%	0%	23%	54%	54%	23%	0%	47%	49%	0%	13
Clinic	28%	0%	7%	15%	19%	7%	10%	18%	18%	0%	36
Urban / rural											
Urban	65%	13%	22%	73%	40%	24%	22%	47%	52%	0%	38
Rural	29%	0%	0%	10%	5%	0%	2%	15%	18%	0%	41
Managing authority											
Government/Public	32%	5%	4%	29%	9%	4%	5%	21%	28%	0%	56
NGO/not-for-profit	100%	0%	0%	100%	0%	0%	0%	50%	54%	0%	2
Mission/FBO	100%	25%	25%	100%	25%	13%	38%	63%	66%	0%	8
Private-for-profit	65%	4%	28%	57%	61%	37%	24%	48%	46%	0%	13

Table 56: Percentage of hospital that offer laboratory diagnostic tests by county, facility type, rural/urban, and managing authority

	General microscopy	Culture and sensitivity	Diagnostics for fungal infections	Malaria diagnostic capacity	Syphilis RDT test	HIV diagnostic capacity	Tuberculosis diagnostic test	Urine pregnancy test	Urine dipstick-protein	Urine dipstick-glucose	Urine ketone test	Haemoglobin	n
National	47%	6%	26%	78%	48%	67%	19%	71%	41%	37%	31%	36%	568
Region													
Bomi	45%	0%	17%	65%	17%	61%	41%	49%	21%	17%	13%	33%	23
Bong	32%	6%	19%	53%	27%	44%	19%	55%	27%	18%	16%	25%	44
Gbapolu	8%	0%	8%	77%	23%	69%	31%	46%	8%	8%	8%	15%	13
Grand Bassa	36%	8%	19%	84%	23%	79%	28%	43%	32%	32%	26%	23%	30
Grand Cape Mount	31%	0%	13%	88%	28%	81%	25%	28%	16%	13%	13%	13%	32
Grand Gedeh	92%	0%	13%	96%	69%	79%	63%	92%	76%	72%	57%	61%	23
Grand Kru	28%	6%	0%	94%	39%	94%	28%	72%	17%	11%	11%	17%	18
Lofa	31%	2%	36%	87%	38%	89%	22%	87%	35%	29%	25%	29%	55
Margibi	27%	2%	2%	34%	27%	25%	4%	36%	36%	36%	12%	36%	36
Maryland	28%	8%	36%	68%	40%	60%	16%	60%	24%	20%	20%	24%	25
Montserrado	62%	10%	42%	83%	69%	64%	10%	83%	67%	63%	51%	54%	133
Nimba	75%	6%	31%	88%	75%	71%	22%	88%	32%	27%	30%	40%	61
River Cess	14%	0%	0%	75%	9%	70%	19%	65%	9%	9%	9%	14%	19
River Gee	45%	0%	0%	82%	29%	67%	36%	64%	18%	13%	9%	18%	20
Sinoe	8%	0%	10%	90%	17%	90%	23%	84%	3%	3%	3%	5%	36
Facility type													
Hospital	97%	33%	58%	94%	92%	92%	75%	89%	86%	83%	78%	89%	36
Health center	71%	15%	37%	85%	75%	84%	40%	82%	72%	68%	60%	69%	68
Clinic	42%	3%	23%	77%	43%	63%	14%	69%	36%	32%	25%	30%	464
Urban / rural													
Urban	63%	11%	39%	81%	69%	64%	15%	80%	66%	61%	52%	54%	186
Rural	33%	1%	15%	76%	30%	69%	23%	63%	20%	17%	13%	21%	382
Managing authority													
Government/Public	33%	3%	15%	73%	27%	68%	24%	60%	19%	17%	14%	21%	448
NGO/not-for-profit	79%	12%	46%	94%	79%	94%	61%	79%	73%	73%	67%	73%	9
Mission/FBO	74%	12%	46%	83%	83%	72%	19%	89%	72%	66%	49%	49%	29
Private-for-profit	64%	9%	41%	86%	76%	60%	8%	88%	73%	67%	56%	61%	82

Table 57: Percentage of hospital that offer laboratory diagnostic tests by county, facility type, rural/urban, and managing authority

	Full blood count	Blood typing and grouping	Blood glucose	Serum electrolyte tests	Renal function tests	Liver function tests	n
National	14%	26%	32%	7%	8%	11%	568
Region							
Bomi	13%	17%	17%	13%	13%	13%	23
Bong	10%	12%	16%	2%	0%	0%	44
Gbapolu	0%	8%	8%	0%	0%	0%	13
Grand Bassa	13%	13%	20%	8%	8%	8%	30
Grand Cape Mount	3%	9%	13%	3%	0%	6%	32
Grand Gedeh	4%	21%	37%	0%	0%	0%	23
Grand Kru	0%	17%	11%	0%	0%	0%	18
Lofa	11%	13%	15%	4%	5%	5%	55
Margibi	20%	30%	25%	6%	6%	13%	36
Maryland	8%	20%	20%	4%	8%	4%	25
Montserrado	27%	47%	61%	13%	17%	25%	133
Nimba	5%	13%	18%	3%	3%	3%	61
River Cess	0%	5%	9%	0%	0%	0%	19
River Gee	0%	4%	24%	0%	0%	0%	20
Sinoe	0%	12%	3%	3%	0%	0%	36
Facility type							
Hospital	53%	92%	86%	39%	39%	47%	36
Health center	28%	49%	56%	21%	19%	21%	68
Clinic	11%	20%	27%	4%	5%	9%	464
Urban / rural							
Urban	27%	47%	59%	15%	17%	24%	186
Rural	3%	7%	10%	0%	0%	1%	382
Managing authority							
Government/Public	4%	8%	10%	2%	1%	2%	448
NGO/not-for-profit	46%	58%	79%	39%	46%	46%	9
Mission/FBO	22%	50%	72%	13%	15%	17%	29
Private-for-profit	30%	51%	61%	13%	17%	25%	82

Table 58: Percentage of hospital that offer Imaging equipment and procedures by county, facility type, rural/urban, and managing authority

	Ultrasound	X-ray	CT scan	n
National	15%	6%	1%	568
Region				
Bomi	4%	4%	0%	23
Bong	10%	2%	0%	44
Gbapolu	0%	0%	0%	13
Grand Bassa	13%	15%	3%	30
Grand Cape Mount	9%	6%	0%	32
Grand Gedeh	12%	4%	0%	23
Grand Kru	0%	6%	0%	18
Lofa	7%	0%	0%	55
Margibi	4%	2%	0%	36
Maryland	12%	4%	0%	25
Montserrado	30%	9%	1%	133
Nimba	10%	6%	1%	61
River Cess	0%	0%	0%	19
River Gee	9%	0%	0%	20
Sinoe	3%	0%	0%	36
Facility type				
Hospital	81%	56%	11%	36
Health center	31%	9%	0%	68
Clinic	10%	3%	0%	464
Urban / rural				
Urban	30%	11%	1%	186
Rural	3%	1%	0%	382
Managing authority				
Government/Public	6%	3%	0%	448
NGO/not-for-profit	31%	25%	6%	9
Mission/FBO	24%	7%	2%	29
Private-for-profit	30%	10%	0%	82

Table 59: Percentage of facilities offering Blood transfusion service readiness by county, facility type, rural/urban, and managing authority

.	Staff and guidelines		.	Equipment	Diagnostics		.	Medicines and commodities					
.	Guidelines on appropriate use of blood and safe blood transfusion	Staff trained in appropriate use of blood and safe blood transfusion	Mean proportion of staff and guidelines items at facilities	Blood storage refrigerator functioning and temperature in required range for last 30 days	Blood typing capacity	Cross-match testing capacity	Mean proportion of diagnostics items at facilities	Blood supply sufficiency	Blood supply safety	Mean proportion of medicines and commodities items at facilities	Mean proportion of all items at facilities	Proportion of facilities with all items	n
National	31%	49%	40%	24%	29%	26%	27%	63%	74%	69%	42%	1%	59
Bomi	100%	0%	50%	0%	0%	0%	0%	0%	100%	50%	29%	0%	1
Bong	50%	100%	75%	0%	50%	50%	50%	50%	50%	50%	50%	0%	2
Gbapolu	0%	100%	50%	100%	100%	0%	50%	0%	100%	50%	57%	0%	1
Grand Bassa	50%	25%	38%	0%	75%	50%	63%	75%	100%	88%	54%	0%	4
Grand Cape Mount	33%	0%	17%	33%	67%	67%	67%	33%	100%	67%	48%	0%	3
Grand Gedeh	50%	50%	50%	50%	50%	0%	25%	50%	0%	25%	36%	0%	2
Grand Kru	100%	100%	100%	50%	0%	0%	0%	50%	100%	75%	57%	0%	2
Lofa	100%	75%	88%	0%	25%	25%	25%	50%	75%	63%	50%	0%	4
Margibi	0%	0%	0%	0%	33%	33%	33%	67%	67%	67%	29%	0%	3
Maryland	100%	100%	100%	100%	0%	0%	0%	100%	100%	100%	71%	0%	1
Montserrado	18%	56%	37%	21%	18%	20%	19%	68%	68%	68%	38%	3%	25
Nimba	14%	29%	21%	29%	43%	29%	36%	57%	100%	79%	43%	0%	7
River Cess	100%	0%	50%	100%	100%	100%	100%	100%	100%	100%	86%	0%	1
River Gee	100%	0%	50%	0%	0%	0%	0%	100%	100%	100%	43%	0%	1
Sinoe	0%	50%	25%	50%	0%	50%	25%	100%	50%	75%	43%	0%	2
Facility type													
Hospital	61%	58%	59%	39%	52%	39%	45%	58%	85%	71%	56%	3%	33
Health center	17%	39%	28%	6%	22%	33%	28%	67%	72%	69%	37%	0%	18
Clinic	0%	46%	23%	15%	0%	0%	0%	70%	61%	65%	27%	0%	8
Urban / rural													
Urban	30%	53%	42%	25%	29%	24%	26%	63%	75%	69%	43%	2%	48
Rural	36%	27%	32%	18%	27%	36%	32%	64%	73%	68%	40%	0%	11

Managing authority													
Government/Public	59%	52%	56%	37%	41%	30%	35%	48%	78%	63%	49%	0%	27
NGO/not-for-profit	20%	40%	30%	20%	60%	80%	70%	80%	100%	90%	57%	20%	5
Mission/FBO	56%	67%	61%	33%	44%	33%	39%	78%	78%	78%	56%	0%	9
Private-for-profit	3%	44%	23%	11%	9%	12%	11%	70%	67%	68%	31%	0%	18

Table 60: A routine system for eliciting community input into facility management decisions, by county, facility type, rural/urban and managing authority.

	A facility management committee responsible for overall facility management that has met within past 3 months	A routine system for eliciting community input into facility management decisions	Formal systems for linking services with CHWs for any services	n
National	73%	62%	71%	568
Region				
Bomi	80%	100%	100%	23
Bong	81%	61%	73%	44
Gbapolu	69%	85%	85%	13
Grand Bassa	87%	87%	97%	30
Grand Cape Mount	84%	88%	97%	32
Grand Gedeh	76%	63%	83%	23
Grand Kru	44%	39%	100%	18
Lofa	95%	96%	98%	55
Margibi	37%	72%	74%	36
Maryland	40%	40%	92%	25
Montserrado	63%	28%	38%	133
Nimba	100%	97%	90%	61
River Cess	79%	79%	79%	19
River Gee	67%	62%	80%	20
Sinoe	100%	100%	91%	36
Facility type				
Hospital	86%	67%	64%	36
Health center	74%	62%	78%	68
Clinic	72%	62%	70%	464
Urban / rural				
Urban	66%	39%	44%	186
Rural	80%	82%	94%	382
Managing authority				
Government/Public	80%	81%	93%	448
NGO/not-for-profit	94%	82%	94%	9
Mission/FBO	55%	43%	38%	29
Private-for-profit	64%	29%	35%	82

Table 61: External supervision received in the past 3 months with documentation observed, by county, facility type, rural/urban and managing authority

	A reported external supervision visit within the past 3 months	Documentation observed of external supervision visit during the past 3 months	n
National	87%	78%	568
Region			
Bomi	100%	96%	23
Bong	100%	90%	44
Gbapolu	100%	100%	13
Grand Bassa	100%	95%	30
Grand Cape Mount	94%	88%	32
Grand Gedeh	100%	92%	23
Grand Kru	100%	100%	18
Lofa	96%	95%	55
Margibi	38%	38%	36
Maryland	88%	88%	25
Montserrado	78%	59%	133
Nimba	100%	97%	61
River Cess	95%	95%	19
River Gee	100%	100%	20
Sinoe	97%	95%	36
Facility type			
Hospital	92%	83%	36
Health center	90%	82%	68
Clinic	87%	78%	464
Urban / rural			
Urban	78%	63%	186
Rural	95%	91%	382
Managing authority			
Government/Public	94%	90%	448
NGO/not-for-profit	100%	94%	9
Mission/FBO	93%	81%	29
Private-for-profit	71%	54%	82

Table 62: Percent of Health facilities accounting for system for IPC, by county, facility type, rural/urban and managing authority

	Guidelines for infection prevention and control	Guidelines for isolation	Guidelines for respiratory-based transmission precautions	Staff trained in a certified infection prevention and control course	At least one dedicated full-time IPC staff	An IPC technical committee	Multidisciplinary meetings to review IPC results	A meeting of the IPC committee or with the person responsible for IPC within past 6 months	n
National	58%	20%	26%	61%	74%	70%	64%	59%	568
Region									
Bomi	76%	20%	55%	63%	79%	84%	72%	47%	23
Bong	64%	15%	17%	47%	74%	72%	73%	63%	44
Gbapolu	100%	23%	38%	77%	85%	62%	77%	54%	13
Grand Bassa	81%	44%	56%	87%	75%	87%	73%	84%	30
Grand Cape Mount	88%	9%	9%	63%	97%	91%	100%	88%	32
Grand Gedeh	84%	49%	65%	72%	80%	100%	96%	80%	23
Grand Kru	83%	22%	44%	61%	72%	83%	61%	56%	18
Lofa	65%	22%	22%	60%	42%	95%	76%	56%	55
Margibi	58%	19%	24%	52%	67%	20%	24%	37%	36
Maryland	100%	36%	32%	56%	84%	60%	60%	72%	25
Montserrado	30%	11%	14%	54%	69%	52%	49%	48%	133
Nimba	63%	25%	29%	82%	88%	96%	88%	84%	61
River Cess	70%	23%	28%	81%	91%	77%	44%	86%	19
River Gee	87%	31%	55%	45%	67%	76%	67%	58%	20
Sinoe	71%	26%	31%	69%	87%	95%	82%	34%	36
Facility type									
Hospital	78%	61%	56%	83%	89%	89%	89%	83%	36
Health center	65%	28%	28%	60%	75%	69%	63%	63%	68
Clinic	56%	17%	24%	60%	73%	69%	63%	57%	464
Urban / rural									
Urban	38%	15%	19%	56%	69%	56%	53%	49%	186
Rural	75%	24%	32%	66%	78%	81%	73%	68%	382
Managing authority									
Government/Public	75%	26%	32%	66%	78%	80%	73%	67%	448
NGO/not-for-profit	88%	39%	39%	79%	79%	94%	94%	73%	9
Mission/FBO	61%	33%	20%	60%	71%	71%	63%	56%	29
Private-for-profit	24%	4%	16%	51%	66%	47%	45%	42%	82

Table 63: Percent of Health facilities accounting for system for Information management system, by county, facility type, rural/urban and managing authority

	Designated fulltime staff for managing facility data and reporting	Data management staff with specific data training	Any routine and systematic process for facility-level quality checking of data compiled for reports	Written policy or guidelines for data quality checking	n
National	87%	72%	90%	42%	568
Region					
Bomi	100%	100%	100%	61%	23
Bong	74%	60%	94%	78%	44
Gbapolu	100%	85%	100%	46%	13
Grand Bassa	81%	87%	92%	37%	30
Grand Cape Mount	50%	25%	100%	56%	32
Grand Gedeh	100%	80%	100%	29%	23
Grand Kru	50%	94%	61%	22%	18
Lofa	85%	80%	98%	64%	55
Margibi	98%	85%	96%	80%	36
Maryland	92%	92%	60%	32%	25
Montserrado	88%	59%	85%	25%	133
Nimba	94%	82%	93%	38%	61
River Cess	100%	95%	100%	25%	19
River Gee	100%	67%	100%	27%	20
Sinoe	95%	90%	97%	57%	36
Facility type					
Hospital	89%	83%	92%	47%	36
Health center	91%	71%	93%	43%	68
Clinic	87%	71%	90%	41%	464
Urban / rural					
Urban	88%	67%	86%	33%	186
Rural	87%	76%	94%	49%	382
Managing authority					
Government/Public	87%	76%	94%	48%	448
NGO/not-for-profit	100%	100%	94%	54%	9
Mission/FBO	85%	67%	89%	37%	29
Private-for-profit	88%	63%	83%	31%	82

Annex 2: List of Facilities Assessed

Annex 3: HHFA Adapted Tool