

# Lagos State Health Facility Assessment Report

July 2022



## TABLE OF CONTENT

TABLE OF CONTENT.....	1
LIST OF TABLES.....	5
LIST OF FIGURES.....	7
ACKNOWLEDGMENT.....	9
LIST OF ABBREVIATIONS AND ACRONYMS.....	10
EXECUTIVE SUMMARY.....	11
Background.....	11
Methodology.....	11
Key findings Human Resources.....	11
Basic Infrastructure.....	11
Electricity.....	11
Water Supply and Toilet Facility.....	12
Waste Disposal System.....	12
In-patient Capacity (Beds).....	12
Communication.....	12
Emergency Response and Referral System.....	12
Availability of Basic Medical Equipment and Infection Prevention.....	13
Respiratory System.....	13
Health Services in Health Facilities.....	13
Family Planning.....	13
Maternal, Newborn and Child Health (MNCH).....	13
Malaria Prevention and Treatment Services.....	13
HIV/AIDS and Tuberculosis Services.....	14
Other Infectious and Non-communicable Diseases.....	14
Surgical, Dental and Eye Services.....	14
Primary Emergency Care.....	14
Medical Supplies and Commodities.....	14
Health Insurance Coverage.....	14
Financial Management System.....	14
Clinical Governance.....	14
Recommendation.....	15
Human Resources.....	15
Basic Infrastructure.....	15
Basic Medical Equipment and Infection Prevention.....	15
Health Services in Health Facilities.....	15
Health Insurance Coverage.....	15
Financial Management System.....	15

Clinical Governance .....	16
1.0. INTRODUCTION.....	17
Background.....	17
Rationale for the Assessment.....	17
Main Objectives of the Assessment.....	17
Specific Objectives of the Assessment .....	17
2.0. TECHNICAL APPROACH.....	18
3.0. METHODOLOGY FOR HEALTH FACILITY ASSESSMENT .....	19
4.0. RESULTS.....	22
Human Resources .....	22
Availability of Health Care Workers in Health Facilities.....	22
Availability of Basic Infrastructure.....	24
Power Supply .....	24
Water Supply .....	27
Toilet Facility.....	28
Waste Management Practices .....	28
In-patient Capacity (Beds) .....	29
Communication .....	30
Emergency Response and Referral System.....	31
Availability of Basic Medical Equipment and Infection Prevention .....	32
Availability of Diagnostic Tests Equipment.....	32
Availability of Basic Surgical Equipment.....	33
Respiratory System.....	33
Standard Precautions for Prevention of Infection Supplies.....	34
Availability of Health Services in Health Facilities .....	36
Family Planning Services.....	36
Antenatal Care Services.....	37
Obstetric and Newborn Care .....	38
Postnatal Services.....	40
Paediatric Health Services .....	41
HIV Services.....	42
Tuberculosis Services .....	43
Other Infectious and Non-Communicable Diseases .....	44
Malaria .....	46
Surgery.....	49
Dental Care .....	51
Eye Care .....	52
Primary Emergency care .....	53

Diagnostics Services .....	54
Availability of Medical Supplies and Commodities .....	56
Available Medicines .....	56
Supply Chain.....	58
Health Insurance Coverage .....	61
Average Number of Patients, Outpatients and Inpatients that Visited Facilities a Month prior to the survey .....	61
Percentage of Facilities Currently Providing Services to Health Insurance Enrollees.....	61
Average Number of Patients, Outpatients, and Inpatients that Visited Facilities a Month Prior to the Survey (by LGAs) .....	62
Average Number of Patients Covered by Health Insurance and Revenue Generated from the HMOs a month Before the Survey .....	62
Financial Management System .....	63
Financial Management .....	63
Financial Book-keeping .....	65
Quality Improvement Plan .....	68
Business Plan .....	69
Clinical Governance .....	70
SCOVID-19 Response .....	72
<b>5.0. DISCUSSIONS .....</b>	<b>80</b>
Human Resources .....	80
Basic Infrastructure .....	80
Electricity.....	80
Water Supply .....	80
Waste Disposal System .....	80
Beds.....	80
Communication .....	80
Referral Capacity.....	80
Basic Medical Equipment and Infection Prevention .....	80
Health Services in Health Facilities .....	81
Family Planning .....	81
Maternal, New born and Child Health (MNCH).....	81
Malaria Prevention and Treatment Services .....	81
HIV/AIDS and Tuberculosis Services.....	81
Other Infectious and Non-Communicable Diseases .....	81
Surgical Services.....	81
Emergency Care .....	81
Medical Supplies and Commodities .....	82
Health Insurance Coverage .....	82

Financial Management System.....	82
Clinical Governance .....	82
6.0. LIMITATIONS AND CHALLENGES .....	83
Limitations.....	83
Challenges.....	83
Lessons Learnt.....	83
7.0. RECOMMENDATION .....	84
Human Resources .....	84
Basic Infrastructure .....	84
Basic Medical Equipment and Infection Prevention .....	84
Health Services in Health Facilities .....	84
Health Insurance Coverage .....	84
Financial Management System .....	84
Clinical Governance .....	85
8.0 CONCLUSION .....	86
9.0 REFERENCES.....	87

## LIST OF TABLES

Table 1: Distribution of Health Facilities Assessed by LGAs .....	20
Table 2: Distribution of Health Facilities Assessed by Level of Care .....	21
Table 3: Distribution of Health Facilities Assessed by Category .....	21
Table 4: Percentage of Health Facilities having at least One Health Specialist .....	22
Table 5: Percentage of Health Facilities having at least One Specialist Medical Doctor .....	23
Table 6: Percentage of Health Facilities having at least One Health Specialist Working in the Facilities on a Full- and Part-time Basis.....	23
Table 7: Average Number of Health Specialists Working in the Facilities on a Full- and Part-time Basis .....	24
Table 8: Most Commonly Used Source of Water in Facilities .....	27
Table 9: Most Commonly Used Sources of Water in Facilities by LGAs .....	27
Table 10: Percentage of Facilities having Access to e Functional Mobile Phones, Computers, Email, Internet, and Electronic Medical Records .....	30
Table 11: Percentage of Facilities having Access to Functional Mobile Phones, Computers, Email, Internet, and Electronic Medical Records by LGAs.....	31
Table 12 : Percentage of Facilities with Referral and Emergency Response Capacities.....	31
Table 13: Percentage of Facilities with Referral and Emergency Response Capacities (by LGAs).....	32
Table 14: Percentage of Facilities having Available and Functional General-Purpose Equipment or Items .....	32
Table 15: Percentage of Facilities having Available and Functional Basic Surgical Equipment or Items .....	33
Table 16: Facilities having Available and Functional Infection Prevention Equipment or Items.....	34
Table 17: Percentage of Methods mostly Used by Facilities for Disinfecting or Sterilizing Medical Equipment before it is Re-used .....	36
Table 18: Percentage of Facilities Providing Antenatal Care Services.....	38
Table 19: Percentage of Health Facilities Providing Obstetric and New-born Care.....	40
Table 20: Proportion of Facilities Providing Other Infectious and Non-Communicable Disease Treatments.....	45
Table 21: Proportion of Facilities Offering Diagnosis or Treatment of Malaria Services .....	47
Table 22: Proportion of Facilities Offering Surgical Services .....	50
Table 23: Proportion of Facilities Offering Surgical Services .....	51
Table 24: Percentage of Facilities Offering Eye Care Services/Treatment of Primary Eye Conditions..	53
Table 25: Proportion of Facilities Offering Emergency Services .....	54
Table 26: Sources of Blood/Blood Products.....	55
Table 27: Percentage of Facilities that Offer On-site Tests .....	55
Table 28: Percentage of Available Medicines .....	57
Table 29: Percentage of Facilities having Specific Medicines Available (by LGAs) .....	57
Table 30: Principal Persons Responsible for Managing the Ordering of Medical Supplies at the Facilities .....	58
Table 31: Mechanisms Used to Determine Facilities' Resupply Quantities (by LGAs) .....	59
Table 32: Direct Suppliers of Routine Pharmaceutical Commodity Supplies to facilities .....	60
Table 33: How Pharmaceutical Commodity supplies from the Leading Suppliers are Delivered to Facilities (by LGAs) .....	60
Table 34: How long it takes between the Ordering and Receiving of Pharmaceutical Commodity Supplies (by LGAs).....	61
Table 35: Average Number of Patients, Outpatients, and Inpatients that Visited the Facilities a Month Prior to the Survey .....	61
Table 36: Average Number of Patients, Outpatients, and inpatients who Visited the Facilities a Month Prior to the Survey (by LGAs) .....	62
Table 37: Average Number of Patients Covered by Health Insurance and Average Revenue Generated from the HMOs a month Before the Survey.....	63
Table 38: Financial Management Tools Used by Facilities .....	65
Table 39: Frequency at which Facilities are Visited by a State/LGA/Ward Level Accounts Person in the Last Calendar Year .....	67

Table 40: Availability of Clinical Governance Committee, Clinical Services Guiding Framework, Processes to Capture Relevant Statistics, and Reports of Statistics Shared with Stakeholders .....	71
Table 41: Types of Tools Used to Guide Decisions During the Assessment and Care of Patients in Facilities (by LGAs).....	72
Table 42: Mechanisms in Place for COVID-19 Prevention (by LGAs) .....	76

## LIST OF FIGURES

Figure 1: Percentage Distribution of Health Facilities Assessed by ‘Locality’ and ‘Facility Ownership Type’ .....	20
Figure 2: Facilities’ Primary Source of Electricity.....	25
Figure 3: Facilities’ Primary Source of Electricity by LGAs .....	25
Figure 4: Percentage of Facilities having Access to Secondary or Backup Source of Electricity .....	26
Figure 5: Percentage of Facilities having Access to a Secondary or Backup Source of Electricity (by LGAs) .....	26
Figure 7: Percentage Availability of Toilet(s) (latrine) in Functioning Condition for General Outpatient Client Use .....	28
Figure 8: Percentage of HFs that Practice Segregation of Wastes at the Point of Generation/Time of collection .....	28
Figure 9: Percentage of Facilities that Use Waste Segregation Methods at the Time of Collection .....	29
Figure 10 : Average Number of Overnight/In-patient and Observation Beds in the Facilities for both Adults and Children (excluding delivery beds/couches) .....	29
Figure 11 : Percentage Availability of Emergency Rooms in Facilities.....	30
Figure 12: Percentage of Facilities having Available and Functional Respiratory System Supplies Equipment or Items .....	33
Figure 13: Percentage Availability of Oxygen within Healthcare Facilities .....	34
Figure 14: Percentage of Facilities having a Process, Separate area, and Documented Procedure for Sterilization of Medical Equipment .....	35
Figure 15: Percentage of Facilities having a Process, Separate area, and Documented Procedure for Sterilization of Medical equipment (by LGAs).....	35
Figure 16: Percentage of Facilities Offering Family Planning Services .....	36
Figure 17: Percentage of Facilities Offering Family Planning Services (by LGAs).....	37
Figure 18: Percentage of Facilities Offering Antenatal Care Services.....	37
Figure 19: Percentage of Facilities Offering Antenatal Care Services (by LGAs) .....	38
Figure 20: Percentage of Facilities Offering Obstetric and New-born Care .....	39
Figure 21: Percentage of Facilities Offering Obstetric and New-born Care (by LGAs) .....	39
Figure 22: Percentage of Facilities Offering Postnatal Services .....	40
Figure 23: Percentage of Facilities Offering Postnatal Services (by LGAs).....	41
Figure 24: Percentage of Facilities Offering Paediatric Health Services.....	41
Figure 25: Percentage of Facilities Offering Paediatric Health Services ( by LGAs) .....	42
Figure 26: Percentage of Facilities Offering HIV/AIDS Services .....	42
Figure 27: Percentage of Facilities Offering HIV/AIDS Services (by LGAs) .....	43
Figure 28: Percentage of Facilities Offering Tuberculosis Services .....	43
Figure 29: Percentage of Facilities Offering Tuberculosis Services (by LGAs) .....	44
Figure 30: Percentage of Facilities Offering Other Infectious and Non-Communicable Disease Services.....	44
Figure 31: Percentage of Facilities Offering Other Infectious and Non-Communicable Disease Services (by LGAs).....	45
Figure 32: Percentage of Facilities Offering Diagnosis or Treatment of Malaria Services .....	46
Figure 33: Percentage of Facilities Offering Diagnosis or Treatment of Malaria Services (by LGAs).....	47
Figure 34: Percentage of Facilities having Malaria Rapid Diagnostic Test Kits (with valid expiration dates) in Stock .....	48
Figure 35: Percentage of Facilities having Malaria Rapid Diagnostic Test Kits (with valid expiration dates) in Stock (by LGAs) .....	48
Figure 36: Percentage of Facilities Offering Surgical Services.....	49
Figure 37: Percentage of Facilities Offering Surgical Services (by LGAs).....	50
Figure 38: Percentage of Facilities Offering Dental Care Services .....	51
Figure 39: Percentage of Facilities Offering Eye Care Services/Treatment of Primary Eye Conditions	52
Figure 40: Percentage of Facilities Offering Eye Care Services/Treatment of Primary Eye Conditions (by LGAs).....	52
Figure 41: Percentage of Facilities Offering Emergency Services.....	53
Figure 42: Percentage of Facilities that Conduct Diagnostic Testing, Offering of Blood Transfusion Services, and Service Level Agreement with HEFAMAA Accredited Centres.....	54



Figure 43: Percentage of Facilities that Stock Medicines, Vaccines, or Contraceptive Commodities....	56
Figure 44: Percentage of Facilities having Medicines Available (by LGAs).....	58
Figure 45: How Facilities' Resupply Quantities are Determined .....	59
Figure 46: Percentage of Facilities Currently Providing Services to Health Insurance Enrolees .....	62
Figure 47: Availability of Staff Responsible for the Financial/Accounting System of Facilities .....	63
Figure 48: Availability of Staff Responsible for the Financial/Accounting System of Facilities (by LGAs) .....	64
Figure 49: Receipt of Financial Training by any Organization/Partner for the Responsible Staff Involved in the Financial/Accounting System .....	64
Figure 50: Percentage Availability of a Dedicated Bank Account for Facility's Operation .....	65
Figure 51: Submission of a Financial Report for the Quarter Prior to the Survey .....	66
Figure 52: Percentage Availability of a Monthly Financial Report (Income and Expenditure Books) by LGAs .....	66
Figure 53: Percentage of Facilities that Share Financial Information with the Facility Management Committee/Ward Development Committee .....	67
Figure 54: How Facilities Share Financial Information (by LGAs).....	68
Figure 55: Percentage Availability/Development of Quality Improvement Plan .....	69
Figure 56: Proportion of Facility Allocation/Budget Spent on QIP (Quality improvement Plan) (by LGAs) .....	69
Figure 57: Availability/Development of Quality Improvement Plans .....	69
Figure 58: Percentage Availability/Development of Quality Improvement Plans (by LGAs) .....	70
Figure 59: Ownership of a Tool that Guides Decisions During the Assessment and Care of Patients in the Facilities (e.g., Treatment guidelines and algorithms) .....	71
Figure 60: Frequency at which Tools are Used to Guide Decisions During the Assessment and Care of Patients in the Facilities.....	72
Figure 61: Availability of PPEs in Facilities.....	73
Figure 62: Percentage of Facilities that underwent a Training or Course on Infection Prevention and Control, and the Use of PPEs in the Four Months Prior to the Survey.....	73
Figure 63: Percentage Availability of Information Materials/Posters to Educate Staff and Patients on COVID-19 (by LGAs) .....	74
Figure 64: Percentage Availability of Guidelines for Use by Clinical Staff in Detecting Suspected Cases of COVID-19 .....	74
Figure 65: Percentage Availability of Isolated Rooms or Wards to keep Suspected Cases Pending Referral to an Approved Treatment Centre .....	75
Figure 66: Percentage Availability of Guidelines in Place for Referring Suspected Cases to an Approved Isolation Centre .....	75
Figure 67: Percentage of Trained and Untrained Staff on Appropriate COVID-19 Preparedness and Response .....	77
Figure 68: Percentage Availability of a Process for Notifying Appropriate Authorities about a Suspected Case .....	77
Figure 69: Availability of an Emergency Plan for COVID-19 Outbreaks .....	78
Figure 70: Existence of any Suspected COVID-19 Case in Facilities (by LGAs) .....	78
Figure 71: Proportion of Facilities that Claimed that COVID-19 Significantly Affected their Facilities' Business Continuity .....	79

## ACKNOWLEDGMENT

We acknowledge the support and assistance that the project team received for this remote census of health facilities in Lagos State, despite its novel nature. We are incredibly thankful to the Lagos State Health Management Agency (LASHMA) for their invaluable support from the inception of the project to its completion. We appreciate the Executive Secretary of Health Facility Monitoring and Accreditation Agency (HEFAMAA) in Lagos State, Dr. Abiola Idowu, for providing outstanding support in mobilizing health facilities in the state for the Assessment. We sincerely thank the leadership of the Lagos State Chapters of the Association of General Private Medical Practitioners of Nigeria (AGPMPN), and the Association of General Private Nursing Practitioners (AGPNP) for their invaluable support and assistance in ensuring the participation of private facilities throughout the conduct of the health facilities' assessment. We would not have recorded success without their support.

We are delighted and appreciate that the project team comprising NOIPolls and Health Systems Consult Limited (HSC) received a positive reception from the critical stakeholders in the state throughout the project implementation, despite the nature of the data collection, which is the first of its kind in Lagos State.

## LIST OF ABBREVIATIONS AND ACRONYMS

AED	Automated External Defibrillator
AGPMPN	Association of General Private Medical Practitioners of Nigeria
AGPNP	Association of General Private Nursing Practitioners
AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Care
CATI	Computer Assisted Telephone Interviews
CHEW	Community Health Extension Worker
CHO	Community Health Workers
DBS	Dry Blood Spot
EID	Electronic Infusion Device
FBO	Faith-Based Organization
GOPD	General Out-Patient Department
HEFAMA	Health Facilities Monitoring and Accreditation Agency
HFs	Health Facilities
HIV	Human Immunodeficiency Virus
HMO	Health Management Organization
IPT	Intermittent Preventive Treatment In Pregnancy (IPT) for Malaria
JCHEW	Junior Community Health Extension Worker
LASHEF	Lagos State Health Fund
LASHMA	Lagos State Health Management Agency
LGA	Local Government Area
LSHS	Lagos State Health Scheme
MNCH	Maternal and New Child Health
NGO	Non-Governmental Organization
PHC	Primary Health Care
POP	Plaster of Paris
PPE	Personal Protective Equipment
QIP	Quality Improvement Plan
QPSMR	Questionnaire Processing Software for Market Research
RDT	Rapid Diagnostic Test
SHC	Secondary Health Centre
SLA	Service Level Agreement
UHC	Universal Health Coverage

### Background

Lagos State established the Lagos State Health Management Agency (LASHMA) through the Lagos State Health Scheme Law (Law No. 4 of 25 May 2015). LASHMA is the agency in charge of the Lagos State Health Scheme (LSHS), a scheme that is focused on providing access to effective, quality, and equitable healthcare services while providing financial protection from the cost of healthcare to all residents of Lagos State. To have an effective LSHS, appropriate data on health facilities in Lagos State is required. This informed the need for a baseline assessment of health facilities to provide data that will inform the review of design elements of the scheme, including benefits packages, premium packages, operational guidelines, implementation strategies, and monitoring and evaluation for the LSHS as well as the level of readiness of facilities to provide services on the LSHS. Health Systems Consult Limited (HSCL) conducted a health facility assessment as part of its technical assistance to LASHMA. The data collected during the health facility assessment will provide the necessary information for the effective implementation of the LSHS.

### Methodology

A quantitative research methodology was adopted for the health facility assessment. HSCL developed a list of health facilities using the State Ministry of Health information. The list served as a sample frame for health facilities in Lagos State. The sample frame consisted of a total number of 2,398 health facilities, and a census approach was adopted. The data collection method used was Computer Assisted Telephone Interview (CATI). Health facilities' target respondents (Chief Medical Directors, Medical Directors, CMAC) were interviewed on the telephone using a data collection software: Questionnaire Processing Software for Market Research (QPSMR). The telephone interview call protocol specifies that each health facility in the sample frame should be assessed six times through an interview before the health facility is put in the category of unsuccessful calls. A total of 1,256 health facilities were successfully assessed out of 2,398 sample frames.

### Key findings Human Resources

The findings revealed that nurses were the most common health workers found in health facilities across Lagos State, as about 75.8% of HFs in the state have at least one nurse present, and 74.2% have at least one nurse working on a full-time basis. There was an average of four nurses and three nursing assistants or technicians who work on a full-time basis across health facilities in the state.

It was found out that midwives are the second most common health workers working full time, with 54.5% of health facilities having at least one midwife. Generalist (non-specialist) medical doctors make up the top three health workers working full time, with 40.3% of health facilities having at least one medical doctor. 31.7% of health facilities have at least one specialist medical doctor.

### Basic Infrastructure

#### Electricity

The majority of health facilities in the state (84.6%) have national electricity or community grid as their main source of electricity. Their second primary source of electricity is generators, which are available at 11.5%; 2.1% of HFs have a solar system. However, 1.6% of HFs in Lagos State does not have any power source, and 0.2% of HFs use inverters/ rechargeable lanterns as their primary source of power. About 20 out of 194 (10.3%) of health facilities owned by the government do not have any source of power. Specifically, local government areas within the state where HFs are, without any power source are Agege, Badagry, Ojo, Apapa, Lagos Island, Epe, and Ibeju/Lekki. The situation is notably more severe in Badagry, Epe, and Ibeju/Lekki, where 16.2%, 16.7%, and 16.1% of health facilities do not have any power source. The findings from the assessment showed that 92.6% of health facilities have access to a secondary or backup source of electricity. Generator (88.0%) is the highest secondary source of electricity. Comparing access to secondary or backup source concerning health facility ownership-type shows that government-owned HFs have the highest percentage of health facilities without access to a secondary or backup source at 35.1%. This implies that there are more government-owned HFs without a secondary or backup source of electricity than private-for-profit owned and FBO/NGO-owned HFs without a secondary or backup source of electricity.

## Water Supply and Toilet Facility

The most common source of water supply in health facilities across Lagos State is tube well/borehole, as most HFs (74.6%) in the state have tube wells/boreholes as their primary sources of water. 15% have water piped into their facilities as their primary source of water. The results from this assessment showed that apart from Epe LGA where their primary source of water is piped into their facilities, 19 out of 20 LGAs in the state have tube wells/boreholes as their main source of water supply. There are functioning toilets (latrine) in 95.8% of health facilities for the general outpatient client section. 86.6% i.e. 168 out of 195 government/public-owned health facilities across the state have functional toilet/latrines, while 13.4% of other HFs does not have.

## Waste Disposal System

Majority of health facilities in the state have waste management practices in place, and 97.9% of them practice segregation of wastes at the point of generation. 94% of HFs in the state use colour-coded waste bins to segregate wastes at the time of collection. However, 14.3% of health facilities owned by non-governmental organizations do not practice segregation of wastes at the point of generation.

## In-patient Capacity (Beds)

On the average, overnight/in-patient bed capacity and observation beds in the facilities across the state showed that health facilities have only seven beds available. The beds exclude delivery beds and couches.

Emergency rooms were found available in 51% of health facilities accessed. Government-owned health facilities accounted for the highest percentage (60.8%) of HFs without an available emergency room. Analysis based on facility level of care showed that more secondary health care facilities (73.8%) were without emergency rooms.

## Communication

50% Of health facilities accessed have different means of communication in terms of access to functioning mobile phones (78.1%), computers (63.9%), e-mail (76.3%), and internet connection (58.0%). However, access to electronic health/medical records in the health facilities was at the lowest percentage (36.1%). Assessing health facilities by ownership type showed that government-owned facilities have the lowest percentage in terms of the different communication methods mentioned above. Epe (25%) and Ibeju/Lekki (45.2%) are the only LGAs where facilities with access to functional mobile phones are less than 50%.

Generally, 78.1% of HFs in the state have access to a functional mobile telephones. Access to mobile phones was particularly poor (13.4%) in government-owned HFs in the state when compared to private-for-profit HFs and others (NGO/Mission/Faith-Based-owned HFs) at 89.7% and 100% respectively.

On access to functional computers, 63.9% of HFs in the State have functioning computers. Also, across facility ownership types, it was found out that access to computers was poor in government-owned HFs at 13.4% when compared to 73.2% in private-for-profit and 71.4% in other (NGOs/Mission/Faith-Based) owned HFs. 76.3% of HFs in the State have access to functional email, and 58.0% have access to functional internet connection within the facility. However, only 36.1% have access to electronic health/medical records. Assessing health facilities in the State by ownership type show that government-owned facilities have the lowest percentage of health facilities with the different means of communication mentioned.

## Emergency Response and Referral System

Emergency services are offered by 67.2% of health facilities in Lagos State. Government-owned HFs have the lowest percentage (59.3%) of health facilities offering emergency services among facility ownership types. A significant percentage of health facilities (56.3%) have service level agreements. Out of this percentage (56.3%), private-for-profit and NGO/Faith-based health facilities form the

minority with 50.4% and 66.7%, respectively. The percentage of health facilities referring patients out to other facilities is high at 94.3%, and the percentage that receives referred patients from other facilities (68.4%) is lower than those that refer patients. Government-owned health facilities have the lowest percentage (43.3%) of facilities that receive referred patients. Across facility ownership types, HFs having an emergency transportation service or ambulance for patient transport to other facilities is low at 30%.

### Availability of Basic Medical Equipment and Infection Prevention

The availability of diagnostic equipment in HFs is an essential indicator of their service readiness, and most health facilities assessed have general-purpose equipment or items available and functional in them. These include: Blood pressure machines or cuffs (91%), thermometers (90.2%), adult weighing scales (87%), stethoscopes (86.5%), Light sources (86.5%), infusion kits for intravenous solution (74.1%), weighing equipment for under five-year-olds (70.9%), and infant scales (70.5%).

There are two general purpose equipment that is not available in some health facilities. These include: Ultra-sound machines/devices (36.1%), and Automated External Defibrillator (AED) – (21.3%).

Similarly, more than 50% of health facilities have the most basic surgical equipment: Skin disinfectants (87.8%), tourniquet (84.8%), needle holder (80.3%), surgical scissors (79.2%), absorbable and non-absorbable sutures (76.1%), chapel handle with blade (72.8%), retractors (63.5%), nasogastric tube (60%), and katamine (58.7%). Although, retractors, nasogastric tube, and katamine have the lowest percentages of availability among government-owned health facilities at 26.3%, 19.1%, 26.8% respectively.

### Respiratory System

64.6% of health facilities use self-inflating bags and masks for resuscitation, and 54.8% use micro-nebulizer/nebulizer. Across health facilities assessed, 62.6 % have oxygen available, and 37.4% do not have. Oxygen availability based on facility ownership-type revealed that in government-owned health facilities, 75.3% do not have oxygen.

## Health Services in Health Facilities

### Family Planning

Family planning services are offered by 58.0% of all health facilities, majority (93.8%) of which are government-owned, while 51.8% and 38.1% are NGO/FBO-owned respectively. Likewise, 63.3% of facilities offer antenatal services, majority of which are government-owned (84.0%). General counselling (diet, nutrition, exercise) at 10.4% is the lowest among services rendered during antenatal. Obstetric and new-born care is provided by over 50% of private-for-profit and NGO/faith-based health facilities. They make up the majority of the 57.2% of health facilities offering obstetric and new-born care in Lagos State.

### Maternal, Newborn and Child Health (MNCH)

The percentage of government-owned facilities providing incubator care for newborns is 5.1%. This is low compared to private-for-profit facilities at 21.3% and NGO/FBO-owned facilities at 41.7%. Health facilities providing paediatric health services are 53.3%, compared to those providing postnatal and antenatal services at 60% and 63.3% respectively. Not all health facilities providing postnatal and antenatal services.

### Malaria Prevention and Treatment Services

78.1% of health facilities offer diagnosis or treatment of malaria services. Government HFs (96.4%) offer more diagnosis or treatment of malaria services, compared to private for-profit HFs (74.4%). For malaria diagnosis methods, clinical symptoms (64.7%) are used in more health facilities than rapid diagnostic testing (55.4%) and microscopy (55.4%). The use of the clinical symptoms' method is due to the availability of equipment, available human resources, and adherence to clinical procedures for malaria treatment.

### HIV/AIDS and Tuberculosis Services

Health facilities offering HIV/AIDS services (30.7%) were less than half of the health facilities surveyed. Private-for-profit health facilities (71.3%) account for the highest percentage of health facilities not offering HIV/AIDS services. Similarly, about 42.8% of health facilities offer tuberculosis services. Government and NGO/FBO-owned facilities account for the majority of the health facilities offering tuberculosis services.

### Other Infectious and Non-communicable Diseases

64.7% of health facilities offer other infectious and non-communicable diseases services. Private-for-profit and NGO/FB health facilities offering this service are 60.5% and 76.2%, respectively.

### Surgical, Dental and Eye Services

This health facility assessment revealed that 48.9% of health facilities offer surgical services, while 12.4% and 28.5% offer dental and eye care services, respectively.

### Primary Emergency Care

Generally, 64.0% of health facilities offer primary emergency care. Findings from the health facilities' assessments reveal that not less than 40% of health facilities in LGAs offer primary emergency services. This service across LGAs creates room for immediate emergency issues to be quickly addressed within LGAs. About half of health facilities offer diagnostics services, blood transfusion services, and SLA with any HEFAMAA accredited diagnostic centre. However, less than 30% of government facilities offer blood transfusion services or have SLA with any HEFAMAA accredited diagnostic centre.

### Medical Supplies and Commodities

53.8% of health facilities across local government areas in Lagos State stock medicines. The pull and the push distribution system are the two mechanisms used by health facilities; however, government-owned health facilities use more of the push distribution system. On the contrary, private-for-profit and NGO/FBO-owned health facilities adopt more of the pull distribution system. Health facilities' resupply quantities are mainly determined by using formula. Pharmaceutical commodity supplies mostly take less than two weeks. Results from the assessment showed that most HFs in the state have essential medicines in their dispensary. The essential medicines available include antibiotics, antimalarial, Oral Rehydration Salts, emergency drugs and commodities, IV-fluids, epinephrine, hydrocortisone, oxytocin, anti-hypertensive, family planning commodities, and injectable. The supply of antiretroviral was poor across HFs, as only 23.8% of them have antiretroviral.

### Health Insurance Coverage

Health insurance is provided by 34.5% of health facilities, and the average number of patients covered by health insurance who visited the facilities a month before the survey is 113. This assessment reveals that the health insurance coverage in Lagos State is not up to 50%, from both the health facilities and clients.

### Financial Management System

60.2% of health facilities in the state have dedicated staff responsible for their financial accounting systems, and 72.1% have dedicated bank accounts for their facilities' operation.

### Clinical Governance

The health facilities' assessment revealed that 33.0% of health facilities have a clinical governance committee, and 43.9% have a clinical governance framework guiding clinical services rendered by the facilities. 55.4% of health facilities have a process or tool to capture relevant statistics of clinical outcomes for the facilities. They also have statistics reports taken and shared with stakeholders within and outside the facilities.

## Recommendation

### Human Resources

1. To improve the availability of health specialists, medical doctors, and specialist medical doctors, the state government should employ more specialists in government hospitals to make the health workforce adequate.
2. The employment strategy should involve private-for-profit and NGO/FBO-owned health facilities by regulating and encouraging them to employ specialist medical doctors. This approach shifts the focus of private-for-profit and NGO/FBO health facilities on specialist services, apart from those offered by the gynecologists and general surgeons.
3. Health workers should be encouraged and regulated on having current BLS and ALS certification.

### Basic Infrastructure

4. Lagos State still has health facilities without electricity, national grids or other alternative power source. Most of these facilities are government-owned and located in riverine LGAs (Badagry, Epe, Ibeju/Lekki), where the national grid electricity may be difficult to assess. The state government should provide alternative power sources, such as generators and solar systems.
5. In other to improve access to water supply and WASH (Water, Sanitation, and Hygiene) across health facilities in the state, a regulation should be put in place for all health facilities to have available water sources within 500 metres.
6. The waste management system should be standardized across health facility ownership types, to entrench best waste management practices across HFs in the state.
7. Lagos State Government should co-ordinate and make it easy for health facilities to have Service Level Agreements across health facility ownership types. A standard means of transportation for referral should also be established.

### Basic Medical Equipment and Infection Prevention

8. The State Government should intensify efforts to make sure all essential medical diagnostic equipment is available in all government-owned facilities. There are two general purpose equipment that most health facilities do not have: Ultrasound machines and Automated External Defibrillators (AEDs).

### Health Services in Health Facilities

9. For the maternal, new-born, and child health care services, government-owned health facilities require equipment needed to provide incubator care for new-borns.
10. The State Ministry of Health should encourage microscopy and rapid diagnostic testing for malaria treatment services among health facilities.
11. Private-for-profit health facilities should be encouraged to provide HIV/AIDS and tuberculosis services, as they make part of the highest number of health facilities in the state.
12. The government should encourage private-for-profit and NGO/FBO-owned health facilities to offer more health care services for other infectious and non-communicable diseases, as they have the highest number of health care facilities.

### Health Insurance Coverage

13. The State Government needs to promote health insurance, and to encourage the general public to enrol. This promotion will create a fund pool for the government to manage the state's health sector.

### Financial Management System

14. The financial management system across ownership types of health facilities is encouraging. However, the State Government needs to encourage a standardized structure of the financial system.



## Clinical Governance

15. The State Ministry of Health should develop a standard framework for clinical governance for government, private-for-profit, and NGO/FBO-owned facilities. This ensures uniform service delivery and data at all levels.

## 1.0. INTRODUCTION

### Background

A well-functioning health system aims to improve health outcomes, to remain responsive to people's legitimate health needs, and to provide financial security against the costs of ill-health. Health financing is one of the building blocks of health systems, and it performs three primary functions: Collecting of revenue/fund and mobilization, pooling of funds, and purchase of health care services. These inter-linked functions ensure that adequate funds are available and allocated to provide quality, affordable, and equitable health services to the population. This underlines the concept of Universal Health Coverage (UHC), which ensures that all people obtain the health services they need without suffering financial hardship from paying for them.

The recognition of these considerations and reforms in the health financing policy directions in Lagos State culminated into the passage of the Lagos State Health Scheme Law (Law No. 4 of 25 May 2015). The law led to the establishment of the Lagos State Health Management Agency (LASHMA), Lagos State Health Scheme (LSHS), and the Lagos State Health Fund (LASHEF).

LASHMA is saddled with the responsibility of co-ordinating all activities relating to implementing the Lagos State Health Scheme. The Lagos State Health Scheme focuses on providing access to adequate, quality, and equitable healthcare services while providing financial protection from the cost of healthcare to all residents of Lagos State.

As part of activities towards the full roll-out of the LSHS, a baseline assessment is required. Findings from the assessment might inform the review of various design elements of the scheme, including benefits package, premium packages, operational guidelines, implementation strategies, monitoring and evaluation for the LSHS, and the level of facilities' readiness to provide services on the LSHS.

As part of the technical assistance of Health Systems Consult Limited (HSCL) to strengthen the strategic purchasing function of LASHMA, HSCL conducted a health facilities' assessment to provide the data required for an effective roll-out of the LSHS.

### Rationale for the Assessment

Baseline data on the level of readiness of health facilities in the state, and the policy context in which the LSHS will operate is crucial for planning the successful implementation of the scheme and for providing the basis for assessing its progress through future evaluations. However, the state had not conducted a baseline assessment prior to the scheme's design and early pilots, prompting the need to expedite conducting the assessment before the planned full roll-out.

HSCL, as part of its technical assistance to LASHMA under the BMGF funded Strategic Purchasing for Family Planning (SP4FP) project, conducted this baseline assessment. In addition to collecting information on facilities' readiness for health insurance, HSCL also supported the state to conduct an equality assessment using the Multi-dimensional Inequality Framework (MIF), in collaboration with the London School of Economics' MIF Center. The MIF will help the state and LASHMA understand the current state and key drivers of inequality in the state, their likely effect on health insurance uptake, and the potential strategies for reducing inequality.

### Main Objectives of the Assessment

The overall purpose of the baseline assessment is to obtain facilities' readiness data, and to understand their effect on the design and uptake of the Lagos State Health Insurance.

### Specific Objectives of the Assessment

The specific objectives for the supply side (health facility assessment) are as follows:

- i. To determine the distribution pattern of the different types of health facilities in Lagos State.
- ii. To determine the current level of service availability in Lagos State.
- iii. To determine the current level of general service readiness in health facilities in Lagos State.
- iv. To determine the level of service-specific readiness of health care facilities in Lagos State, and to provide high-priority services on the LSHS.

## 2.0. TECHNICAL APPROACH

The technical approach of the health facility assessment was informed by the COVID-19 pandemic situation in Lagos State at the time of the assessment. A telephone interview method was adopted for data collection. This approach was most appropriate at the assessment time, and it reduced the risk of contracting and spreading coronavirus.

The coronavirus disease 2019 (COVID-19) pandemic, caused by the SARS-CoV-2 virus, has had unprecedented impacts on health systems, public health, societies, and individuals globally<sup>1</sup>. In response to outbreaks, physical distancing measures, national lockdowns, and travel restrictions to control the spread of COVID-19 have been implemented in many countries<sup>2</sup>. In response to these measures, many public health researchers have chosen to switch from standard face-to-face data collection methods to remote data collection methods in support of continued research. Remote data collection is defined here as the collection of data via phone, internet, or other virtual platforms, with study participants and researchers physically distanced. Bauchi State has adopted universal pandemic prevention strategies. This informed the shift from the initially planned approach of in-person facility visits by data collectors, as it is no longer realistic due to the COVID-19 pandemic.

Surveys for which data collection is conducted via telephone interview represent a significant source of all current survey data. Even as internet surveys have significantly gained popularity in the past several years, telephone surveys remain a significant source of the data gathered for media, marketing, academic, and other types of research. Since the 1970s, the prevalence of telephone interviewing has steadily increased and has surpassed face-to-face interviewing, which had previously been the most used method of conducting survey research. Currently, the use of other data collection modes of survey research, particularly internet surveys, has been increasing, but telephone interviewing remains a widely used method<sup>3</sup>

In addition, real-time interviews allow for the interviewer to probe, check to understand, and follow the direction of the conversation. The telephone is commonly used for interviewing because it is much less expensive than face-to-face<sup>4</sup>; it is generally acknowledged that telephone interview has all but revolutionized health survey research.

Virtual methods of health assessment have been widely used in developed countries, but it's still not common in developing countries, especially in Sub-Saharan Africa<sup>5</sup>.

In Nigeria, 71% of the population use mobile phones as a primary platform for communication and accessing the Internet, with 89.79% of the population covered by 2G signal, 62.05% by 3G signal, and 11.04% by 4G signal<sup>6</sup>

Among the Nigerian states, Lagos State recorded the highest number of active GSM internet subscriptions within the country, with 13,631,562 representing 13.81% of all active internet subscriptions<sup>7</sup>.

Researchers have advocated for telephone interviews when assessing more extensive database of facilities' assessment like the Bauchi and Lagos States facilities' assessment<sup>8</sup>.

---

<sup>1</sup> Fact sheet: Quality health services. Who.int. (2021), <https://www.who.int/news-room/fact-sheets/detail/quality-health-services>.

<sup>2</sup> Universal health coverage (UHC). Who.int. (2021), <https://www.who.int/news-room/fact-sheets/detail/universal-health-coverage-%28uhc%29>.

<sup>3</sup> Tyebjee, T., & Lavrakas, P. (1988). Telephone Survey Methods: Sampling, Selection, and Supervision. *Journal Of Marketing Research*, 25(2), 217. <https://doi.org/10.2307/3172656>

<sup>4</sup> Block, E., & Erskine, L. (2012). Interviewing by Telephone: Specific Considerations, Opportunities, and Challenges. *International Journal of Qualitative Methods*, 11(4), 428-445. <https://doi.org/10.1177/160940691201100409>

<sup>5</sup> Gignoux1, E. (2020). A telephone based assessment of the health situation in the far north region of Cameroon [EBook]. Retrieved 17 November 2021, <https://conflictandhealth.biomedcentral.com/track/pdf/10.1186/s13031-020-00327-4.pdf>.

<sup>6</sup> Assessment of diagnostic gaps and relevant digital health solutions in Nigeria. (2020). [Ebook]. [https://www.finddx.org/wp-content/uploads/2020/11/NIGERIA\\_Executive-summary\\_20201109\\_v1.0.pdf](https://www.finddx.org/wp-content/uploads/2020/11/NIGERIA_Executive-summary_20201109_v1.0.pdf).

<sup>7</sup> (2021). Retrieved 18 November 2021, from <http://www.nigerianstat.gov.ng/download/729>.

<sup>8</sup> Gignoux1, E. (2020). A telephone based assessment of the health situation in the far north region of Cameroon [EBook]. Retrieved 17 November 2021, <https://conflictandhealth.biomedcentral.com/track/pdf/10.1186/s13031-020-00327-4.pdf>.

### 3.0. METHODOLOGY FOR HEALTH FACILITY ASSESSMENT

A quantitative research methodology was adopted for the health facility assessment. HSCL developed a list of health facilities, and the list served as a sample frame for health facilities in Lagos State. The sample frame consisted of 2,398 health facilities, and a census approach was adopted. The data collection method used was Computer Assisted Telephone Interview (CATI). The health facilities' target respondents (Chief Medical Directors and Medical Directors) were interviewed through the telephone using the Questionnaire Processing Software for Market Research (QPSMR). The software allows for custom logic, skip question/filter questions, data entry error control, quality control checks, specific quota, and overall project management. The entered data in QPSMR CATI can be converted to other spread sheets and statistical software (Excel, SPSS, Stats) for further data processing.

Before actual data collection, survey training and pilot were conducted. The survey training involved a two-day training for survey personnel consisting of enumerators, supervisors, quality controllers, research assistants, data managers, project managers, and technical leads on survey objectives, methodology, call protocol, and COVID-19 protocol. After the two-day training, the third day was used for the pilot exercise. The pilot survey involved calling five randomly selected hospitals. The pilot interviews assessed the survey instruments, call protocols, and COVID-19 protocols. Observations during the training and pilot exercise were incorporated into the final survey instruments before commencing the interviews. These processes were observed before the commencement of the survey to ensure that all enumerators understood the survey instruments. The five hospitals called during the pilot were re-interviewed with the final survey instrument during actual data collection, and their data were included in the survey data set.

Some of the measures adopted for quality assurance:

Enumerators, supervisors, and research assistants involved in the survey underwent project-specific training and piloting before take-off.

- **Piloting:** Five pilot interviews were conducted to confirm that the survey instruments worked as planned. Recommendations were made to the client for fine-tuning the questionnaires based on pilot results.
- **Random call monitoring:** Supervisors randomly monitored telephone interviews of enumerators to ensure proper administration of questionnaire from start to finish without the knowledge of the enumerators. This process allowed the supervisors to maintain strict quality control over the data collection process.
- **Call-backs:** During surveys, quality control officers and supervisors conducted regular call-backs on completed calls. This was done by randomly selecting 20% of the completed calls of all enumerators working on the survey to verify the authenticity and accuracy of data collected from the respondents.

Also, the QPSMR allows quality control checks in data entry as it enables enumerators to capture the start time and end time of any interview automatically.

The telephone interview call protocol specified that each health facility in the sample frame was attempted six times for an interview before being placed into the category of the unsuccessful. 2,206 hospitals were attempted from the sample frame of 2,398 health facilities, 950 had uncompleted calls/interviews, and 199 had duplicate numbers. In total, 1,256 completed interviews were conducted for the survey.

Table 1: Distribution of Health Facilities Assessed by LGAs

LGA	Number of Health Facilities	%
Alimosho	221	17.6
Surulere	114	9.1
Ikorodu	100	8.0
Eti-Osa	93	7.4
Kosofe	80	6.4
Ojo	75	6.0
Ikeja	73	5.8
Oshodi-Isolo	70	5.6
Ifako-Ijaye	56	4.5
Ajeromi-Ifelodun	52	4.1
Amuwo-Odofin	51	4.1
Mushin	48	3.8
Badagry	37	2.9
Agege	36	2.9
Shomolu	36	2.9
Ibeju/Lekki	31	2.5
Lagos Island	28	2.2
Lagos Mainland	27	2.1
Apapa	16	1.3
Epe	12	1.0
<b>Total</b>	<b>1,256</b>	<b>100</b>

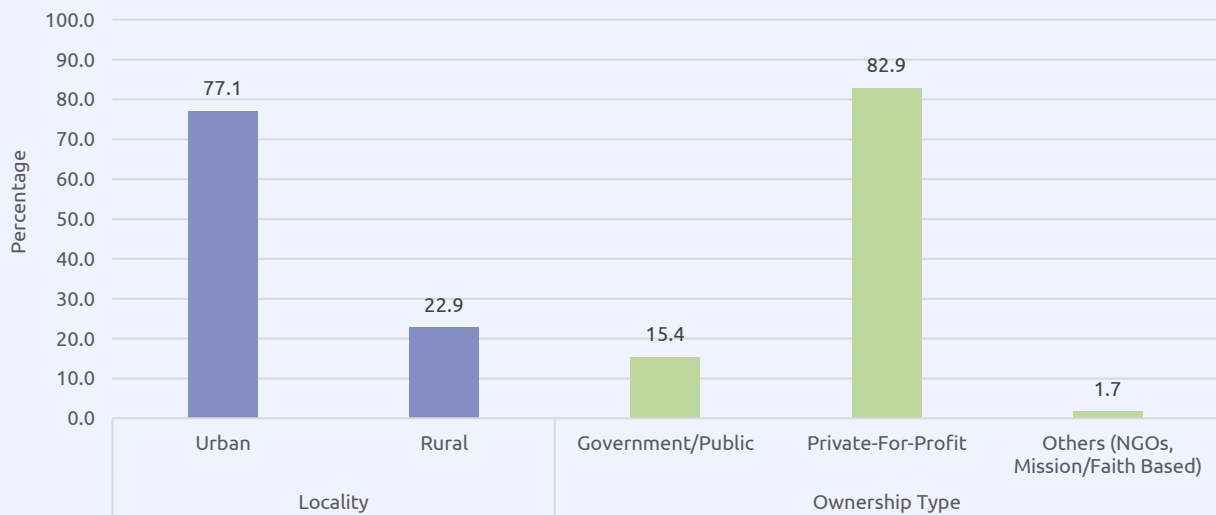


Figure 1: Percentage Distribution of Health Facilities Assessed by 'Locality' and 'Facility Ownership Type'

Table 2: Distribution of Health Facilities Assessed by Level of Care

	Number of Health Facilities	%
Tertiary Facility	1	0.1
SHC Facility	309	24.6
PHC Facility	946	75.3
Tertiary Facility		
Government/Public	1	100.0
SHC Facility		
Government/Public	6	1.9
Private-For-Profit	298	96.4
Others (NGOs, Mission/Faith-Based)	5	1.6
PHC Facility		
Government/Public	187	19.8
Private-For-Profit	743	78.5
Others (NGOs, Mission/Faith-Based)	16	1.7

Table 3: Distribution of Health Facilities Assessed by Category

	Number of Health Facilities	%
Private Hospital	489	38.9
(Medical) Clinic (PHC)	245	19.5
Laboratory	82	6.5
Maternity Home	79	6.3
Convalescent/Nursing Home	76	6.1
Eye Clinic	61	4.9
Diagnostic (Lab, Scan, ECG, MRI+CT Scan)	55	4.4
Government Hospital/Clinic	53	4.2
Dental Clinic	51	4.1
Specialist Clinic/Hospital	35	2.8
Specialist Clinic	25	2.0
Industrial Facility	3	0.2
Physio	2	0.2

## 4.0. RESULTS

### Human Resources

#### Availability of Health Care Workers in Health Facilities

##### Health Facilities having at least One Health Specialist

Nurses are the most common health workers available in health facilities across the state, with 75.8% of health facilities having at least one nurse. Altogether, nurses (75.8%), midwives (57.8%), and generalist medical doctors (49.0%) make up the top three most common health workers in health facilities (Table 4).

Table 4: Percentage of Health Facilities having at least One Health Specialist

	Total (LAGOS)	Facility Ownership Type			Facility's Level of Care	
		Government/ Public	Private-For-Profit	Others (NGOs, Mission/Faith Based)	SHC Facility	PHC Facility
Nurses	75.8	87.1	73.3	90.5	35.9	88.6
Midwives	57.8	63.4	56.5	71.4	21.1	69.7
Generalist (non-specialist) medical doctors	49.0	36.6	51.1	57.1	21.1	58.0
Specialist medical doctors	46.1	5.2	53.5	57.1	57.2	42.4
Nursing assistant or technician	40.3	8.2	46.2	47.6	17.8	47.6
Community Health Workers (CHEW)	35.6	78.4	27.6	33.3	10.9	43.6
Laboratory technicians (medical and pathology)	33.9	45.9	31.2	57.1	40.1	32.0
Laboratory scientists	31.3	16.0	33.8	47.6	52.6	24.4
Pharmacy technician/scientists	28.1	61.9	21.5	38.1	11.8	33.3
Medical records officers	27.3	34.5	26.1	19.0	13.5	31.7
Community Health Workers (CHO)	17.6	55.2	10.7	9.5	3.6	22.1
Pharmacists	11.8	21.6	9.7	28.6	6.3	13.7
Physiotherapists	9.4	1.0	10.9	14.3	7.6	10.1
Community Health Workers (JCHEW)	8.6	14.4	7.7	0.0	3.0	10.5
Radiographers	8.3	0.5	9.7	14.3	15.5	6.0
Others	9.4	6.7	10.0	9.5	14.1	7.9

##### Health Facilities having at least 1 Specialist Medical Doctor

Gynecologists and general surgeons are the two most common medical specialists in health facilities with a percentage of 24.1% and 21.1%, respectively.

The top 3 specialist medical doctors available across HFs in the state were found to be obstetricians / gynaecologists (24.1%), general surgeons (21.1%), and paediatricians (15%). Additionally, disaggregation results across HF types revealed that government-owned HFs had a limited number of these top 3 specialist medical doctors compared to private for-profit and NGO/Mission/FBO- owned HFs.

Table 5: Percentage of Health Facilities having at least One Specialist Medical Doctor

	Total (LAGOS)		Facility Ownership Type						Facility's Level of Care		
			Government/Public		Private-For-Profit		Others (NGOs, Mission/Faith-Based)		SHC Facility	PHC Facility	
Obstetrician/Gynecologist	24.1		2.1		28.0		33.3		15.1		27.0
General surgeon	21.1		2.1		24.5		28.6		13.5		23.6
Pediatrician	15.0		0.5		17.7		14.3		13.8		15.3
Anesthetist	11.7		0.5		13.8		9.5		8.2		12.8
Orthopedic Surgeon	11.3		1.0		13.2		9.5		10.2		11.6
Optometrist	10.7		0.5		12.6		14.3		18.1		8.3
Cardiologist	10.6		0.5		12.6		4.8		11.8		10.2
Dentist	9.1		0.5		10.8		4.8		15.1		7.2
Urologist	7.8		1.0		9.0		9.5		6.6		8.1
Psychiatrist	6.3		0.5		7.3		9.5		5.9		6.5
Radiologist	6.3		0.5		7.5		0.0		7.2		6.0
Ophthalmologist	5.9		1.0		7.0		0.0		9.2		4.8
Hematologist//Oncologist	5.4		0.0		6.3		9.5		3.9		5.8
Endocrinologist	5.3		0.5		6.3		0.0		6.9		4.8
Neurosurgeon	4.2		0.0		5.0		4.8		4.3		4.2
Dermatologist	3.6		0.0		4.3		4.8		3.9		3.5
Intensivist	2.6		0.0		3.1		4.8		3.3		2.4
Pulmonologist	2.0		0.0		2.4		0.0		2.0		2.0
Others	2.9		0.0		3.5		0.0		2.0		3.2

Health Facilities having at least One Health Specialist Working in them on a Full and Part-time Basis

The top three health specialists working full-time were found to be nurses (74.2%), midwives (54.5%), and general specialist medical doctors (40.3%). Most health facilities (31.7%) have at least one specialist medical doctor on a part-time basis.

Table 6: Percentage of Health Facilities having at least One Health Specialist Working in the Facilities on a Full- and Part-time Basis

	Total (LAGOS)		Facility Ownership Type						Facility's Level of Care			
			Government/Public		Private-For-Profit		Others (NGOs, Mission/Faith-Based)		SHC Facility		PHC Facility	
	Full-time	Part-time	Full-time	Part-time	Full-time	Part-time	Full-time	Part-time	Full-time	Part-time	Full-time	Part-time
Nurses	74.2	14.1	85.1	10.8	71.9	14.8	90.5	9.5	36.6	7.4	86.5	16.3
Midwives	54.5	7.8	62.4	5.2	52.7	8.3	66.7	9.5	20.7	1.9	65.5	9.7
Generalist (non-specialist) Medical Doctors	40.3	22.5	28.4	11.3	42.2	24.9	57.1	9.5	20.1	9.1	46.9	27.0
Nursing Assistant or Technician	38.9	2.5	7.2	2.1	44.6	2.7	47.6	0.0	17.2	1.3	46.0	3.0
Community Health Extension Worker (CHEW)	34.2	3.6	76.8	10.3	26.2	2.3	33.3	4.8	10.7	0.0	41.9	4.8
Specialist Medical Doctors	30.6	31.7	3.6	3.1	35.4	36.8	38.1	42.9	47.2	31.7	25.1	31.7
Laboratory Technicians (medical and pathology)	29.9	5.6	41.8	7.2	27.2	5.3	57.1	4.8	36.6	5.2	27.8	5.7
Laboratory Scientists	28.4	5.7	16.0	2.1	30.4	6.3	47.6	4.8	50.8	6.8	21.1	5.3
Pharmacy Technician/Scientists	26.0	2.9	60.8	3.1	19.3	2.8	38.1	9.5	10.7	1.6	31.1	3.4
Medical Records Officers	25.6	2.5	32.5	3.6	24.5	2.3	19.0	4.8	13.6	0.0	29.6	3.4
Community Health Officer (CHO)	17.2	1.5	55.2	2.6	10.3	1.3	9.5	0.0	3.9	0.3	21.6	1.9
Pharmacists	9.9	2.3	21.6	1.0	7.4	2.5	23.8	4.8	5.2	1.3	11.4	2.6
Community Health Extension Worker (JCHEW)	6.9	2.2	9.3	5.2	6.6	1.7	0.0	0.0	2.9	0.3	8.2	2.9
Radiographers	5.7	3.5	0.5	0.0	6.5	4.1	14.3	4.8	12.6	5.2	3.5	3.0
Physiotherapists	1.8	8.0	0.0	1.0	2.0	9.1	4.8	14.3	1.6	6.5	1.8	8.5
Others	7.4	2.7	4.6	3.6	7.9	2.6	9.5	0.0	12.6	2.3	5.7	2.9



## Average Number of Health Specialists Working in the Facilities on a Full- and Part-time basis

There is an average of four nurses and three nursing assistants or technicians working in health facilities on a full-time basis. On a part-time basis, we have an average of two nurses and one nursing assistant or technician. Specialist medical doctors working on a part-time basis have the highest average of five.

Table 7: Average Number of Health Specialists Working in the Facilities on a Full- and Part-time Basis

	Total (LAGOS)		Facility Ownership Type						Facility's Level of Care			
			Government /Public		Private-For-Profit		Others (NGOs, Mission/Faith-Based)		SHC Facility		PHC Facility	
	Full-time	Part-time	Full-time	Part-time	Full-time	Part-time	Full-time	Part-time	Full-time	Part-time	Full-time	Part-time
Nurses	4	2	3	2	4	2	5	3	4	2	3	2
Nursing Assistant or Technician	3	2	2	2	3	2	4	.	3	2	3	2
Generalist (non-specialist) Medical Doctors	2	2	3	2	2	2	3	1	2	1	2	2
Specialist Medical Doctors	2	5	3	2	2	5	2	3	2	4	2	5
Midwives	2	1	2	2	2	1	4	1	2	2	2	1
Physiotherapists	2	1	.	1	2	1	1	1	2	1	2	1
Radiographers	2	1	2	.	2	1	1	1	2	1	1	1
Community Health Officers (CHO)	2	1	2	1	2	1	2	.	2	1	2	1
Community Health Workers (CHEW)	2	1	2	1	2	1	3	1	2	.	2	1
Pharmacists	1	1	1	3	1	1	1	3	1	1	1	1
Pharmacy Technician/Scientists	1	1	2	1	1	1	2	1	1	1	1	1
Laboratory Scientists	1	1	1	1	2	1	1	1	2	1	1	1
Laboratory Technicians (medical and pathology)	1	1	1	1	1	1	1	1	1	1	1	1
Medical Records Officers	1	1	2	1	1	1	2	1	1	.	1	1
Community Health Workers (JCHEW)	1	1	1	1	1	1	.	.	2	1	1	1
Others	2	2	3	2	2	1	3	.	2	2	2	1

## Availability of Basic Infrastructure

### Power Supply

#### Facilities' Main Source of Electricity

Health facilities were assessed based on their primary source of electricity; 84.6% of them have a central supply of electricity (national or community grid) as their primary source. The second primary source of electricity is generators with 11.5%, followed by 2.1% having a solar system. However, 1.6% of HFs in Lagos State do not have any power source, while 0.2% use inverters/ rechargeable lanterns as their primary source of power. Approximately 10.3% of health facilities owned by the government do not have a main power supply (see Figure 2).

Assessments by local governments show that 17 out of 20 LGAs have at least 75% of health facilities in their localities mainly powered by the national grid. The three LGAs that have less than 75% of HFs powered by the national grid are Badagry (56.8%), Epe (58.3%), and Ibeju-Lekki (58.1%), respectively. These LGAs (Badagry, Epe, and Ibeju-Lekki) have 16.2%, 16.7%, and 16.1% of their respective health facilities not having a primary source of electricity respectively (See figure 3 below).

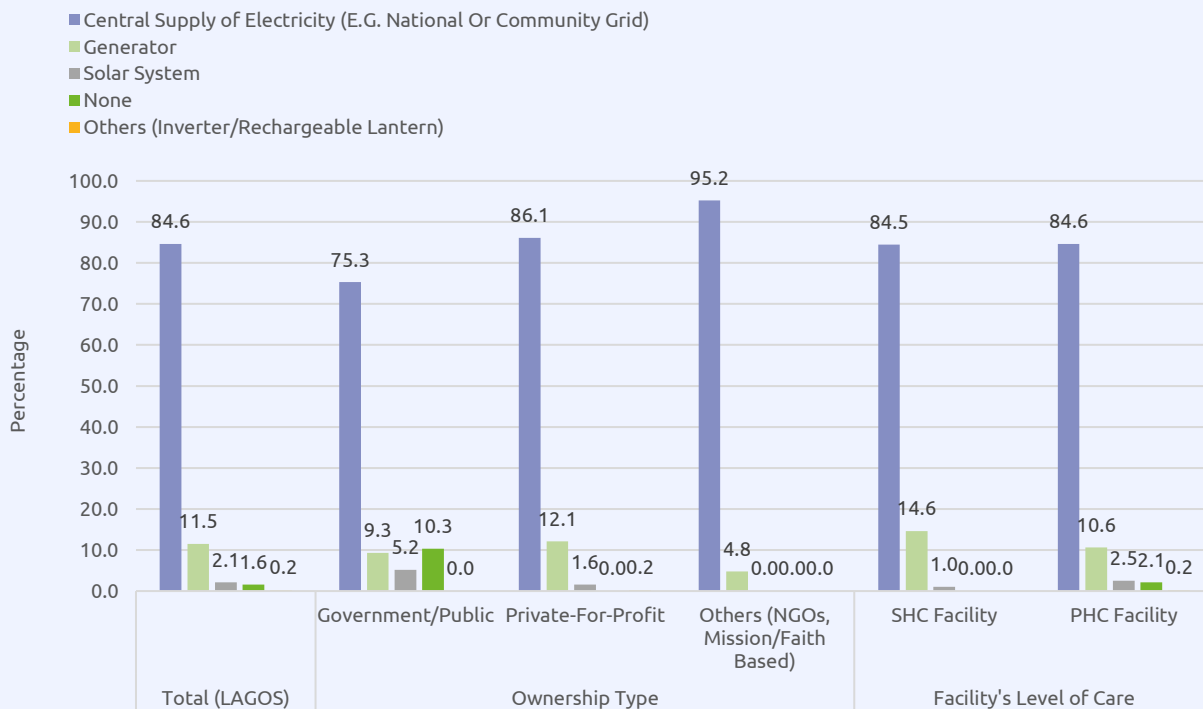


Figure 2: Facilities' Primary Source of Electricity

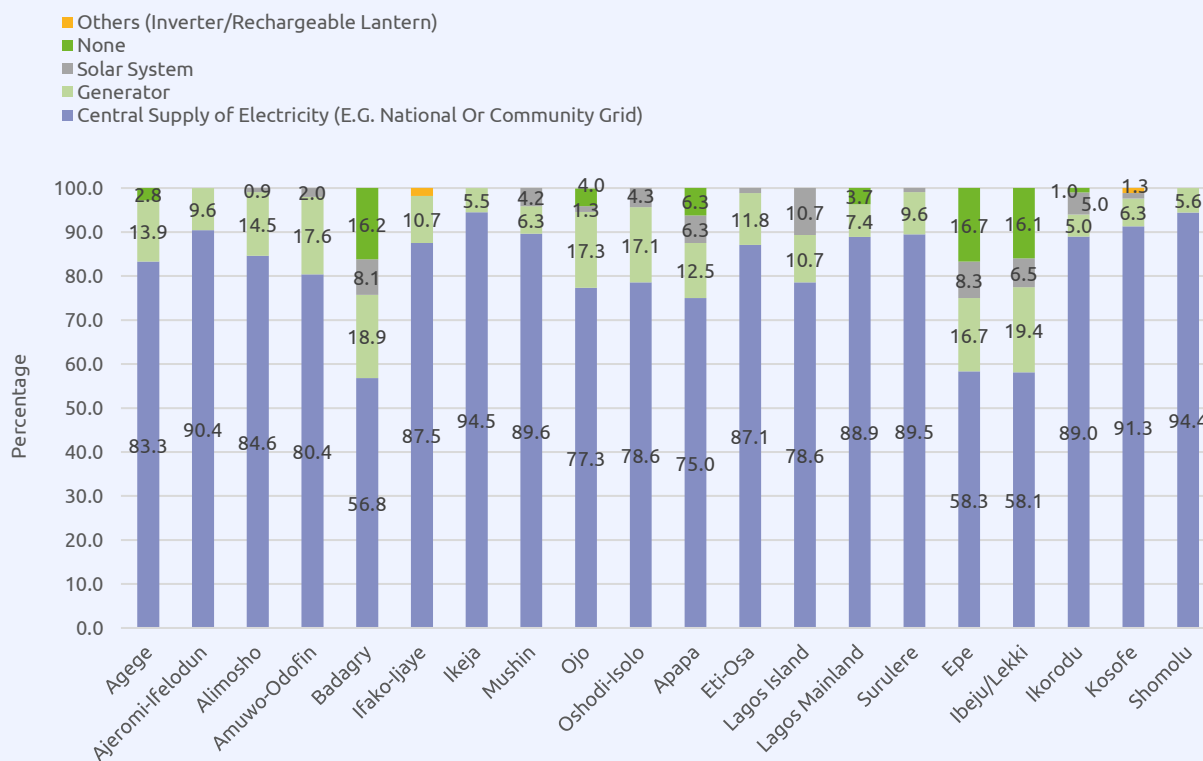


Figure 3: Facilities' Primary Source of Electricity by LGAs

### Facilities having Access to a Secondary or Backup Source of Electricity

In Lagos State, most health facilities (92.6%) have access to a secondary or backup source of electricity; more than 96% of private-for-profit and non-governmental health facilities have a backup source of electricity. Access to a secondary or backup source of electricity is particularly deficient in government/public-owned health facilities in Lagos State, as 35.1% of HFs in this category does not have any secondary or backup source of electricity. All HFs owned by NGOs/Missions/FBOs have a secondary or backup source of electricity. (Figure 3)

Across local government areas, 19 out of 20 LGAs still have deficiencies concerning access to secondary or backup sources of electricity. Access to secondary or backup sources of electricity is more in Ajeromi-Ifelodun LGA, where 100% of HFs have access to secondary or backup sources of electricity. Furthermore, Epe (50%), Ibeju/Lekki (32.3%), Badagry (24.3%), and Apapa (18.8%) accounted for LGAs where HFs have the most limited access to secondary or backup sources of electricity (see Figure 5).

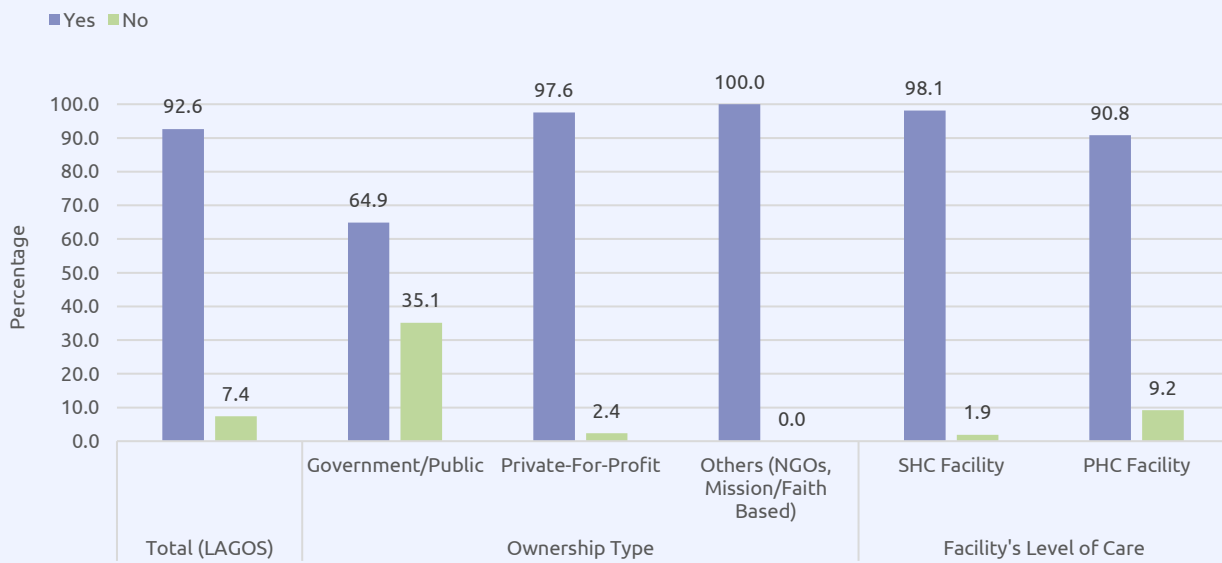


Figure 4: Percentage of Facilities having Access to Secondary or Backup Source of Electricity

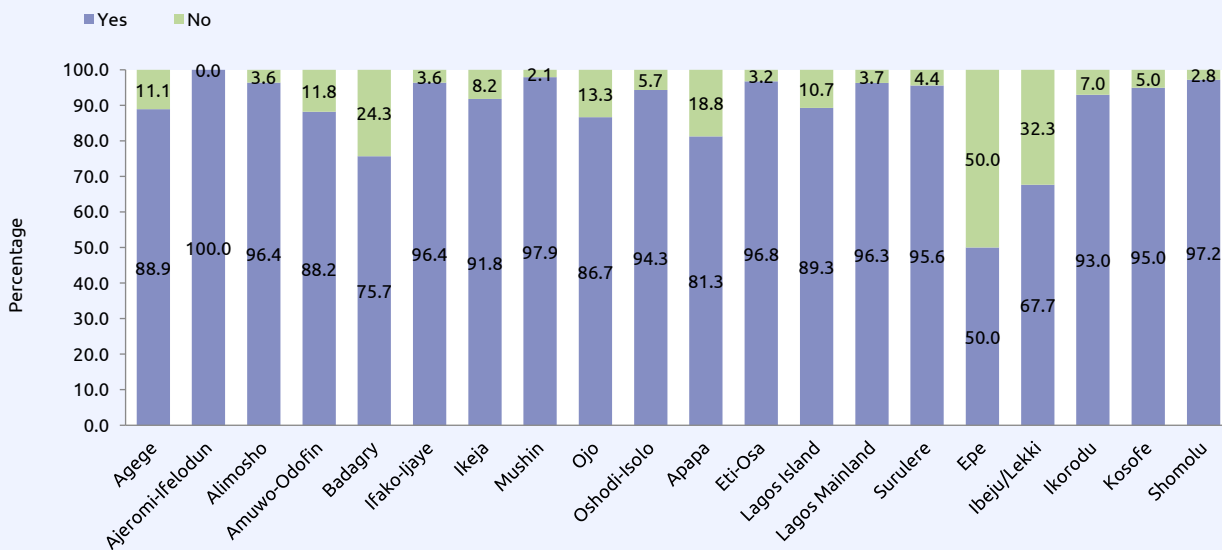


Figure 5: Percentage of Facilities having Access to a Secondary or Backup Source of Electricity (by LGAs)

## Water Supply

### Most Commonly Used Source of Water in Facilities

The most common source of water supply in health facilities across Lagos State is tube well/borehole. The majority of HFs (74.6%) in the State have tube wells/boreholes as their primary water source. 15% have water piped into them, and 3.3% have public taps/ standpipes (Table 8). Across LGAs in the state, the most common source of water was discovered to be tube wells/boreholes, except in Epe, where 66.7% of HFs use pipe-borne water (Table 9).

Table 8: Most Commonly Used Source of Water in Facilities

	Total (LAGOS)	Facility Ownership Type			Facility's Level of Care	
		Government/ Public	Private-For-Profit	Others (NGOs, Mission/Faith-Based)	SHC Facility	PHC Facility
Tubewell/Borehole	74.6	38.1	81.1	90.5	80.9	72.6
Water Piped Into Facilities	15.0	37.1	11.0	9.5	9.4	16.8
Public Tap/Standpipe	3.3	10.3	2.0	0.0	2.9	3.4
Protected Dug Wells	2.9	4.6	2.7	0.0	2.9	3.0
Water Piped into Facilities' Grounds	1.7	2.1	1.6	0.0	1.9	1.6
Unprotected Dug Wells	0.9	5.2	0.1	0.0	0.0	1.2
Cart With Kegs/Drum	0.6	0.5	0.7	0.0	1.0	0.5
No Water Source	0.5	2.1	0.2	0.0	0.0	0.6
Tanker Trucks	0.2	0.0	0.3	0.0	0.3	0.2
Rainwater Collection	0.1	0.0	0.1	0.0	0.3	0.0
Others	0.2	0.0	0.2	0.0	0.3	0.1

Table 9: Most Commonly Used Sources of Water in Facilities by LGAs

	Agege	Ajeromi-Ifelodun	Alimosho	Amuwo-Odofin	Badagry	Ifako-Ijaye	Ikeja	Mushin	Ojo	Oshodi-Isolo	Apapa	Eti-Osa	Lagos Island	Lagos Mainland	Surulere	Epe	Ibeju/Lekki	Ikorodu	Kosofe	Shomolu
Tubewells/Boreholes	77.8	80.8	77.8	78.4	62.2	85.7	68.5	77.1	74.7	84.3	68.8	76.3	82.1	81.5	65.8	25.0	48.4	71.0	77.5	80.6
Water Piped Into Facilities	13.9	17.3	14.9	9.8	13.5	7.1	17.8	16.7	12.0	10.0	6.3	11.8	3.6	7.4	19.3	66.7	25.8	25.0	13.8	5.6
Public Taps/Standpipes	5.6	0.0	1.8	3.9	0.0	1.8	5.5	6.3	0.0	1.4	6.3	3.2	10.7	7.4	4.4	8.3	3.2	1.0	3.8	11.1
Protected Dug Wells	0.0	1.9	4.5	2.0	13.5	5.4	1.4	0.0	4.0	0.0	0.0	4.3	0.0	0.0	3.5	0.0	3.2	2.0	2.5	0.0
Water Piped into Facilities' Grounds	2.8	0.0	0.9	0.0	2.7	0.0	2.7	0.0	4.0	1.4	6.3	2.2	0.0	3.7	3.5	0.0	0.0	1.0	1.3	2.8
Unprotected Dug Wells	0.0	0.0	0.0	0.0	8.1	0.0	0.0	0.0	1.3	0.0	0.0	1.1	0.0	0.0	0.0	0.0	19.4	0.0	0.0	0.0
Carts With Kegs/Drums	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	2.9	6.3	0.0	0.0	0.0	2.6	0.0	0.0	0.0	1.3	0.0
No Water Source	0.0	0.0	0.0	2.0	0.0	0.0	1.4	0.0	4.0	0.0	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tanker Trucks	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rainwater Collection	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Others	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0

## Toilet Facility

### Availability of Toilet(s) (Latrine) in Functioning Condition for General Outpatient Clients' Use

There are functioning toilets (latrine) in 95.8% of health facilities for the general outpatient client section. 86.6% of government/public-owned health facilities across the state have functional toilet/latrines, and 13.4% of HFs does not have functional toilet/latrines. Facility level of care shows that 4.4% of primary healthcare facilities and 3.6% of secondary health facilities do not have a functioning toilet/latrine.

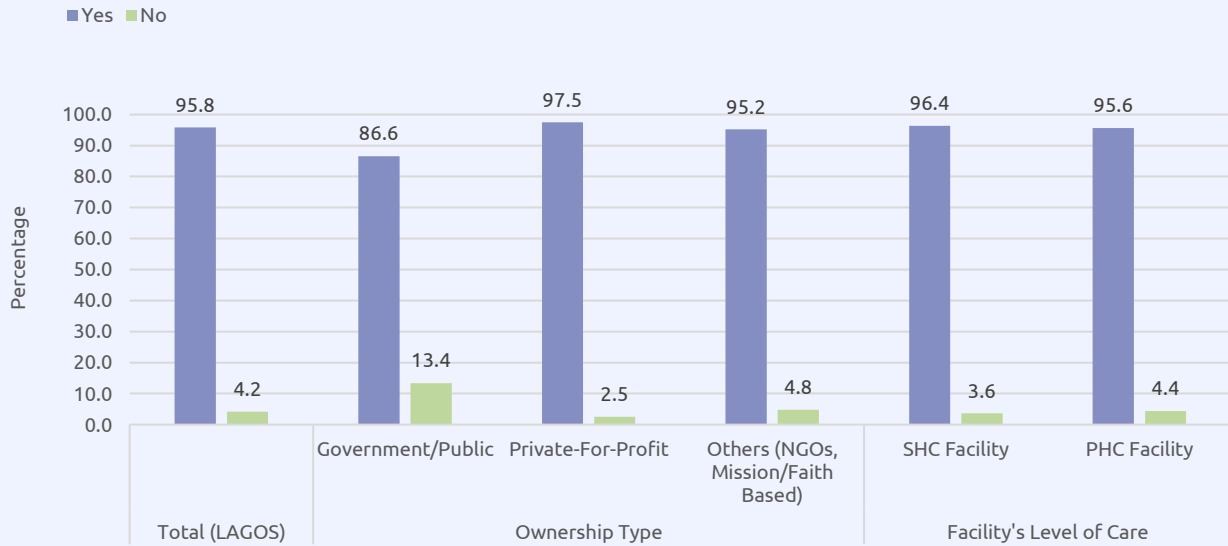


Figure 6: Percentage Availability of Toilet(s) (latrine) in Functioning Condition for General Outpatient Client Use

## Waste Management Practices

### Segregation of Wastes at the Point of Generation/Time of Collection

Assessment of waste management practices across HFs in Lagos State shows that most HFs (97.9%) practice wastes segregation at the point of generation. However, 14.3% of health facilities owned by non-governmental organizations do not practice segregation of wastes at the point of generation.

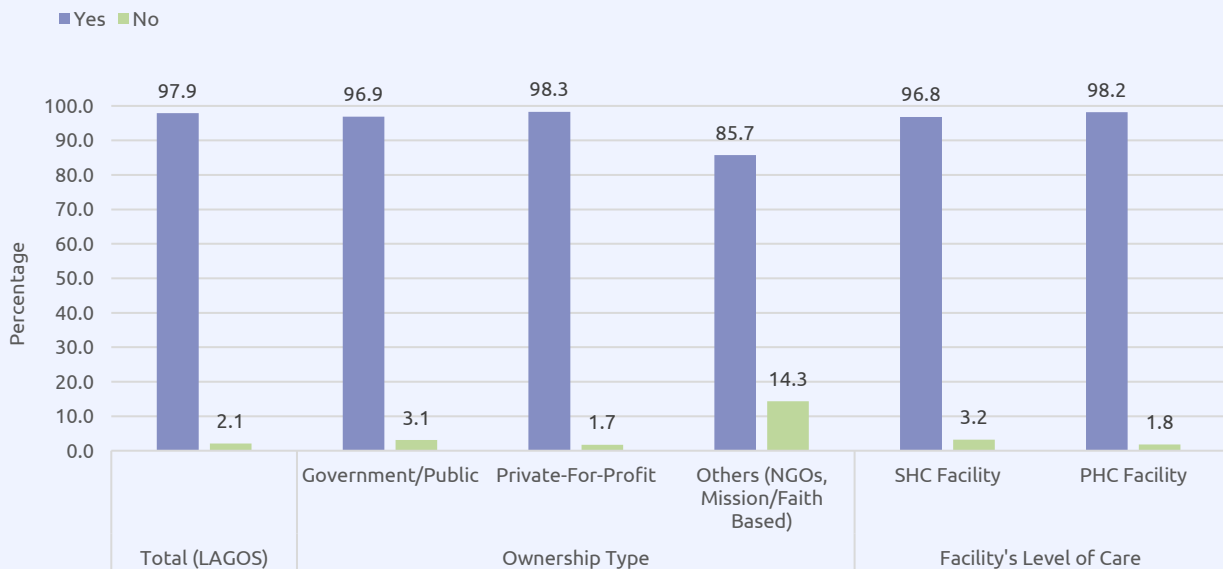


Figure 7: Percentage of HFs that Practice Segregation of Wastes at the Point of Generation/Time of collection

## Types of Waste Segregation Methods Used by Facilities at the Time of Collection

Regarding the waste segregation methods used by HF in Lagos State, 94% of HF use colour-coded waste bins at the time of collection, while 5.6% use other methods. Assessment of Health facilities by ownership type shows that 14.3% of NGO/Mission/FBO-owned facilities use other methods for waste segregation. Altogether, 0.5% of HF in the state do not use any waste segregation method to collect waste. The results show that all facilities with government/ public ownership have a method of waste segregation in place at the time of collection. 0.4% of private-for-profit owned HF, and 9.5% of HF owned by NGOs/Mission/FBOs do not have any method of waste segregation in place. Additionally, the use of colour-coded waste bins at the collection point is higher in private-for-profit HF (94.6%) and lower in NGO/Mission/FBO-owned HF (76.2%). However, private for-profit HF (9.5%) in the state account for HF types that use other waste segregation methods apart from colour-coded waste bins at the point of waste collection.

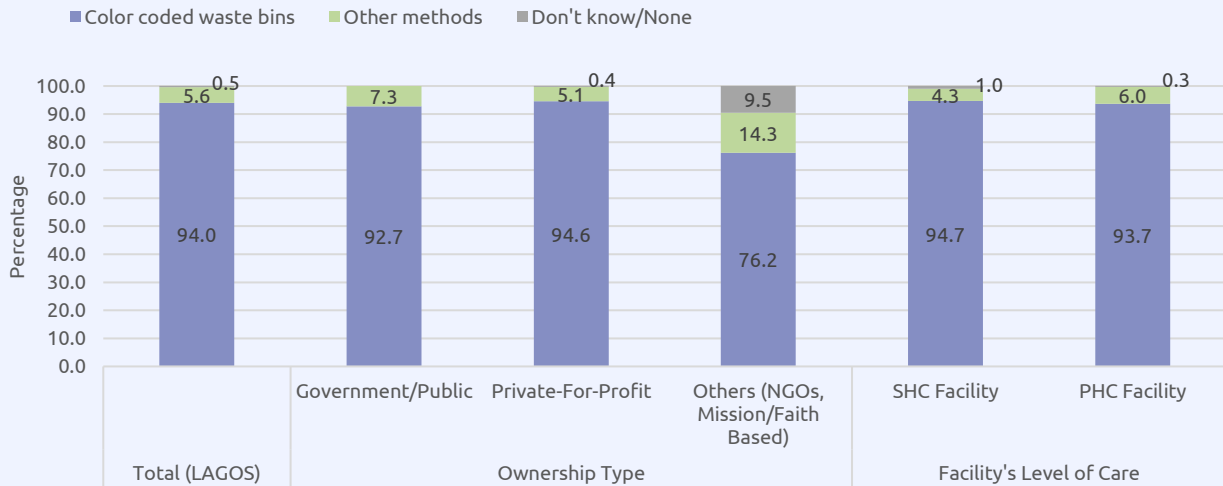


Figure 8: Percentage of Facilities that Use Waste Segregation Methods at the Time of Collection

## In-patient Capacity (Beds)

Overnight/In-patient and Observation Beds in Facilities for Both Adults and Children (excluding delivery beds/couches).

Assessment of in-patient capacity beds for facilities across Lagos State shows that, on average, health facilities have seven beds available for overnight/in-patient and observation for both adults and children. The beds exclude delivery beds and couches. Based on facility ownership type, government/public-owned HF have an average of four beds, private-for-profit, seven beds, and NGO/Missions/FBO-owned HF, 11 beds. In terms of facility level of care, secondary health care facilities have an average of eight beds, and primary health care facilities have an average of seven beds.

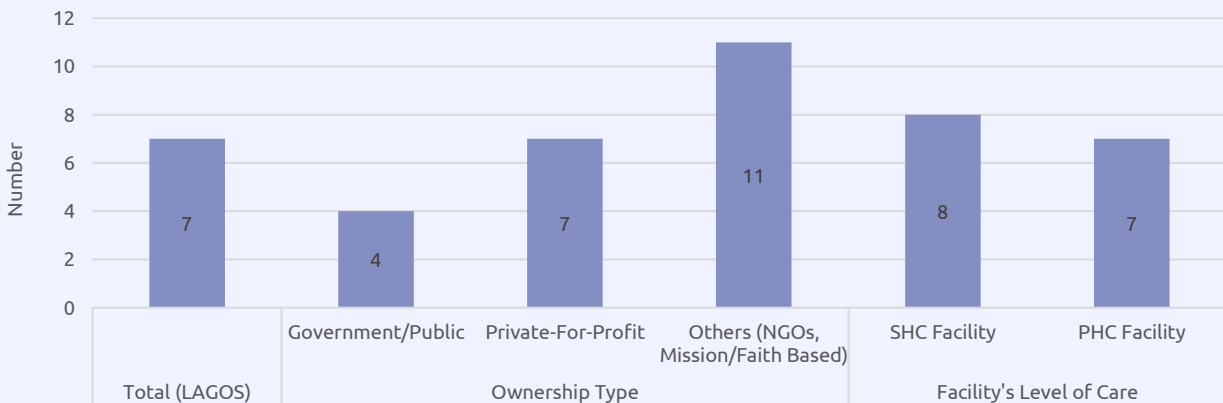


Figure 9: Average Number of Overnight/In-patient and Observation Beds in the Facilities for both Adults and Children (excluding delivery beds/couches)

## Availability of Emergency Rooms in Facilities

51% of HFs in the State have emergency rooms, and 49% do not have. The secondary facility level of care has the highest percentage (73.8%) of health facilities without an emergency room. It was observed that in government-owned health facilities, 39.2% are the minuscule percentage of HFs with emergency rooms.

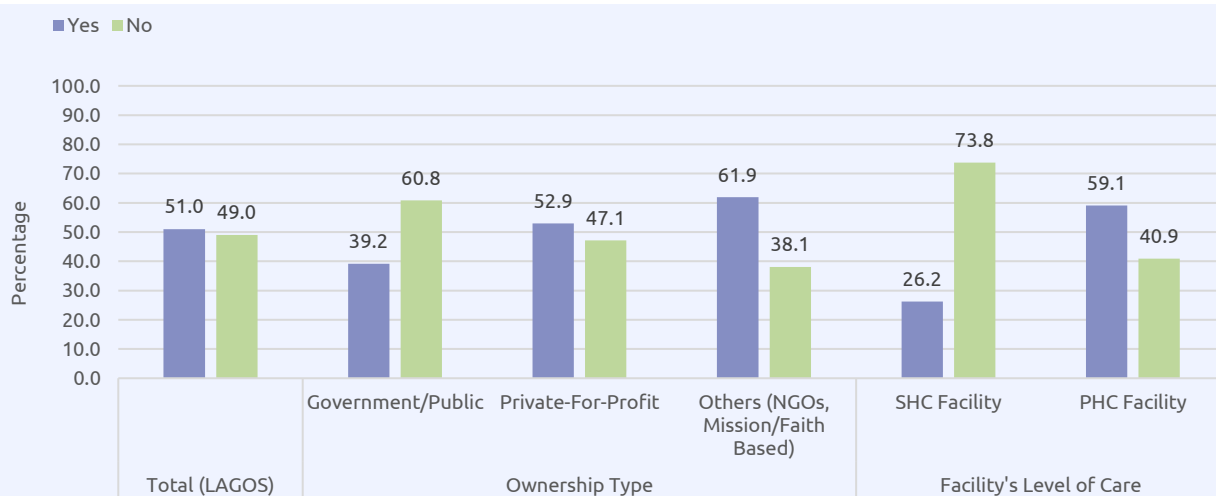


Figure 10: Percentage Availability of Emergency Rooms in Facilities

## Communication

### Facilities having Access to Functional Mobile Phones, Computers, E-mail, Internet, and Electronic Medical Records

Health facilities were assessed on functional communication infrastructure, and it was found out that most health facilities (78.1%) in Lagos have access to functioning mobile phones, computers (63.9%), email (76.3%), and internet connection (58.0%). Access to electronic health/medical records is lowest at 36.1%. Assessing health facilities by ownership type shows that government-owned facilities have the lowest percentage of health facilities with access to the communication infrastructures earlier mentioned (see Table 10). There are only two LGAs, Epe (25%) and Ibeju/Lekki (45.2%), whose access to functional mobile phones is less than 50% (see Table 11).

Table 10: Percentage of Facilities having Access to e Functional Mobile Phones, Computers, Email, Internet, and Electronic Medical Records

	Total (LAGOS)	Facility Ownership Type			Facility's Level of Care	
		Government/Public	Private-For-Profit	Others (NGOs, Mission/Faith-Based)	SHC Facility	PHC Facility
Access to functioning mobile phones	78.1	13.4	89.7	100.0	94.2	72.8
Access to functioning computers	63.9	13.4	73.2	71.4	90.3	55.3
Access to functioning email within the facility	76.3	7.2	88.9	90.5	93.2	70.7
Access to functioning internet connectivity within the facility	58.0	7.7	66.8	85.7	74.1	52.6
Access to electronic health/medical records in the facility	36.1	13.4	40.6	23.8	53.1	30.5

Table 11: Percentage of Facilities having Access to Functional Mobile Phones, Computers, Email, Internet, and Electronic Medical Records by LGAs

	Agege	Ajeromi-Ifelodun	Alimosho	Amuwo-Odofin	Badagry	Ifako-Ijaye	Ikeja	Mushin	Ojo	Oshodi-Isolo	Apapa	Eti-Osa	Lagos Island	Lagos Mainland	Surulere	Epe	Ibeju/Lekki	Ikorodu	Kosofe	Shomolu
Access to functioning mobile phones	72.2	84.6	83.3	68.6	62.2	85.7	76.7	70.8	68.0	80.0	68.8	88.2	82.1	88.9	86.8	25.0	45.2	71.0	81.3	88.9
Access to functioning computers	61.1	57.7	62.4	66.7	40.5	76.8	79.5	54.2	49.3	65.7	56.3	88.2	64.3	74.1	71.1	8.3	32.3	54.0	67.5	69.4
Access to functioning email within the facility	61.1	76.9	76.9	80.4	56.8	82.1	79.5	81.3	65.3	78.6	56.3	88.2	82.1	85.2	89.5	25.0	45.2	68.0	81.3	77.8
Access to functioning internet connectivity within the facility	47.2	46.2	53.8	64.7	37.8	75.0	67.1	41.7	48.0	62.9	43.8	86.0	64.3	66.7	68.4	16.7	38.7	49.0	60.0	50.0
Access to electronic health/ medical records in the facility	22.2	23.1	33.5	41.2	16.2	30.4	57.5	33.3	32.0	32.9	37.5	68.8	28.6	48.1	38.6	8.3	29.0	32.0	37.5	11.1

## Emergency Response and Referral System

### Facilities with Referral and Emergency Response Capacities

In Lagos State, emergency services are offered by 67.2% of health facilities, with government-owned health facilities (59.3%) offering the lowest percentage of emergency services among facility ownership types. A significant percentage of primary health care facilities (76.6%) offer emergency services compared to secondary health care facilities (38.5%). 56.3% of health facilities have Service Level Agreements (SLA) with other health facilities. Assessing SLA by facility ownership type shows that the majority, 86.6%, of government-owned health facilities have SLA. At the same time, 66.7% of health facilities owned by NGOs/Missions/FBOs have SLA, compared to 50.4% owned by private for-profit facilities. Emergency transportation service or ambulance has the lowest percentage with 30% of health facilities having this capacity (see Table 12). Epe LGA (8.3 %) health facilities have the lowest percentage offering emergency transportation service (see Table 13).

Table 12 : Percentage of Facilities with Referral and Emergency Response Capacities

	Total (LAGOS)	Facility Ownership Type			Facility's Level of Care	
		Government/ Public	Private- For-Profit	Others (NGOs, Mission/Faith-Based)	SHC Facility	PHC Facility
Offering emergency services	67.2	59.3	68.6	71.4	38.5	76.6
Having Service Level Agreement (SLA) with other health facilities for the management of trauma or emergency cases beyond the scope of service rendered	56.3	86.6	50.4	66.7	38.8	61.9
Having an emergency transportation service or ambulance for patient transport to other facilities	30.0	28.9	30.0	42.9	17.5	34.1
Refer patients out to other facilities	94.3	97.4	93.8	95.2	85.1	97.4
Receives referred patients from other facilities	68.4	43.3	73.0	71.4	83.5	63.4



Table 13: Percentage of Facilities with Referral and Emergency Response Capacities (by LGAs)

	Agege	Ajeromi-Ife-Ilo-Ilo	Alimosho	Amuwo-Odofin	Badagry	Ifako-Ijaye	Ikeja	Mushin	Ojo	Oshodi-Isolo	Apapa	Eti-Osa	Lagos Island	Lagos Mainland	Surulere	Epe	Ibeju/Lekki	Ikorodu	Kosofe	Shomolu
Offering emergency services	52.8	84.6	70.6	68.6	70.3	87.5	53.4	52.1	69.3	62.9	68.8	61.3	53.6	63.0	64.0	50.0	67.7	78.0	70.0	58.3
Having Service Level Agreement (SLA) with other health facilities for management of trauma or emergency cases beyond the scope of service rendered	47.2	67.3	53.8	56.9	73.0	69.6	57.5	56.3	60.0	50.0	62.5	62.4	39.3	51.9	43.0	83.3	77.4	59.0	50.0	47.2
Having an emergency transportation service or ambulance for patient transport to other facilities	27.8	55.8	28.1	37.3	40.5	37.5	31.5	31.3	29.3	41.4	31.3	28.0	10.7	25.9	28.1	8.3	16.1	30.0	21.3	16.7
Refer patients out to other facilities	97.2	96.2	94.6	96.1	94.6	100.0	93.2	93.8	94.7	95.7	87.5	91.4	92.9	100.0	93.0	100.0	96.8	93.0	90.0	97.2
Receives referred patients from other facilities	63.9	69.2	68.8	74.5	56.8	76.8	72.6	52.1	57.3	70.0	62.5	81.7	71.4	66.7	73.7	50.0	51.6	66.0	68.8	69.4

## Availability of Basic Medical Equipment and Infection Prevention

### Availability of Diagnostic Tests Equipment

Facilities having General Purpose Equipment or Items Available and Functional in the Facility

Functional general purpose equipment available in health facilities in the state include: Blood pressure machines or cuff (91%), thermometers (90.2%), adult weighing scales (87%), stethoscopes (86.5%), light sources (86.5%), infusion kits for intravenous solution (74.1%), weighing equipment for under five year olds (70.9%), and Infant scales (70.5%). However, ultra-sound machines/devices (36.1%) and Automated External Defibrillators (AEDs) – (21.3%) are the two equipment that are not available in more than 50% of health facilities in Lagos State.

Table 14: Percentage of Facilities having Available and Functional General-Purpose Equipment or Items

	Total (LAGOS)	Facility Ownership Type			Facility's Level of Care	
		Government/Public	Private-For-Profit	Others (NGOs, Mission/Faith-Based)	SHC Facility	PHC Facility
Blood pressure machines or cuffs	91.0	88.1	91.6	85.7	80.3	94.5
Thermometers	90.2	95.4	89.2	90.5	74.4	95.3
Adult weighing scales	87.0	92.3	86.1	85.7	67.3	93.6
Stethoscopes	86.5	93.8	85.0	90.5	59.5	95.2
Light sources	86.5	81.4	87.3	90.5	79.0	88.9
Infusion kits for intravenous solution	74.1	67.0	75.4	76.2	44.0	84.0
Weighing equipment for under 5 year olds	70.9	91.2	67.1	76.2	38.5	81.6
Infant scales	70.5	92.8	66.6	61.9	34.0	82.6

Ultrasound machines/devices	36.1	7.2	41.1	57.1	41.1	34.6
Automated External Defibrillators (AED)	21.3	11.3	23.3	14.3	20.7	21.6

## Availability of Basic Surgical Equipment

Facilities having Essential Surgical Equipment or Items Available and Functional in the Facility

The health facilities' assessment shows that more than 50% of health facilities have skin disinfectants (87.8%), tourniquet (84.8%), needle holder (80.3%), surgical scissors (79.2%), absorbable and non-absorbable sutures (76.1%), scapel handle with blade (72.8%), retractors (63.5%), nasogastric tube (60%) and ketamine (58.7%). Although, retractors, nasogastric tube, and ketamine have the lowest percentages, 26.3%, 19.1%, 26.8%, of availability among government-owned health facilities respectively.

Table 15: Percentage of Facilities having Available and Functional Basic Surgical Equipment or Items

	Total (LAGOS)	Facility Ownership Type			Facility's Level of Care	
		Government/ Public	Private-For-Profit	Others (NGOs, Mission/Faith-Based)	SHC Facility	PHC Facility
Skin disinfectants	87.8	79.9	89.4	81.0	74.1	92.3
Tourniquets	84.8	79.4	85.9	81.0	68.3	90.2
Needle holders	80.3	79.9	80.4	81.0	55.3	88.5
Surgical Scissors	79.2	77.8	79.4	81.0	50.8	88.6
Absorbable and non-absorbable sutures	76.1	58.2	79.3	81.0	49.5	84.9
Scalpel handle with blades	72.8	55.7	75.9	76.2	48.2	80.9
Retractors	63.5	26.3	70.5	61.9	46.6	69.1
Nasogastric tubes	60.0	19.1	67.3	76.2	37.2	67.4
Ketamine	58.7	26.8	64.6	61.9	35.0	66.4

## Respiratory System

Facilities having Available and Functional Respiratory System Supplies' equipment or Items.

The assessment of health facilities having available and functional respiratory system supplies' equipment or items shows that 64.6% of health facilities use self-inflating bags and masks for resuscitation, while 54.8% use micro-nebulizer/nebulizer.

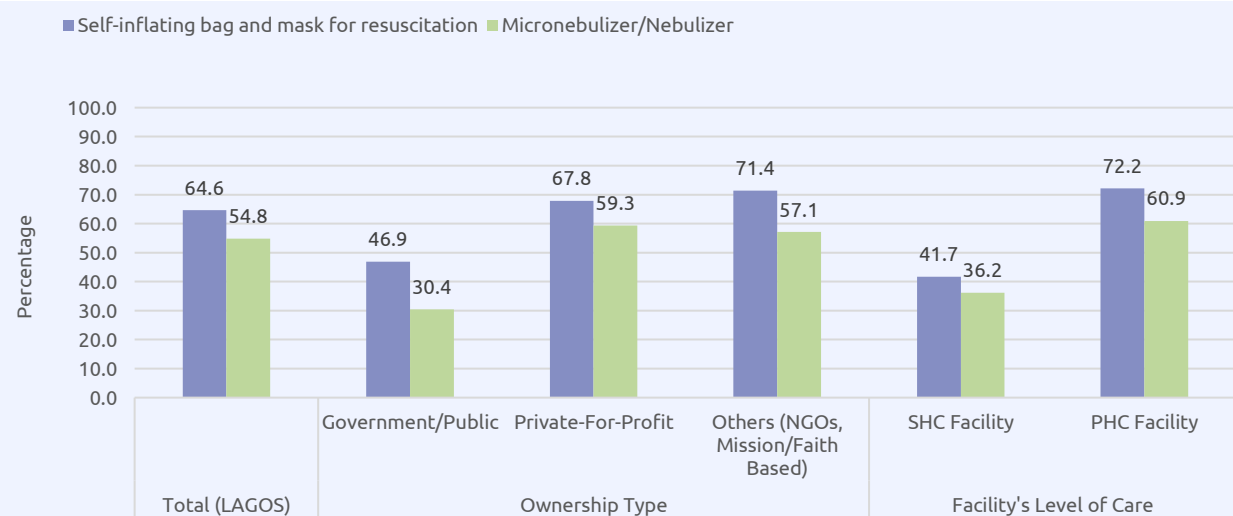


Figure 11: Percentage of Facilities having Available and Functional Respiratory System Supplies Equipment or Items

## Oxygen within Healthcare Facilities

Across health facilities assessed, 62.6 % had oxygen supply available, and 37.4% did not have oxygen supply readily available. Based on facility ownership-type, 24.7% of government/public-owned health facilities , have oxygen readily available, while 75.3% do not have oxygen available. For private-for-profit-owned facilities, 69.2% have oxygen available, and for NGO/Mission/FBO-owned facilities, 85.7% have oxygen readily available. 72.8% of primary health care facilities have oxygen, and 68.9% of secondary health facilities do not have oxygen readily available.

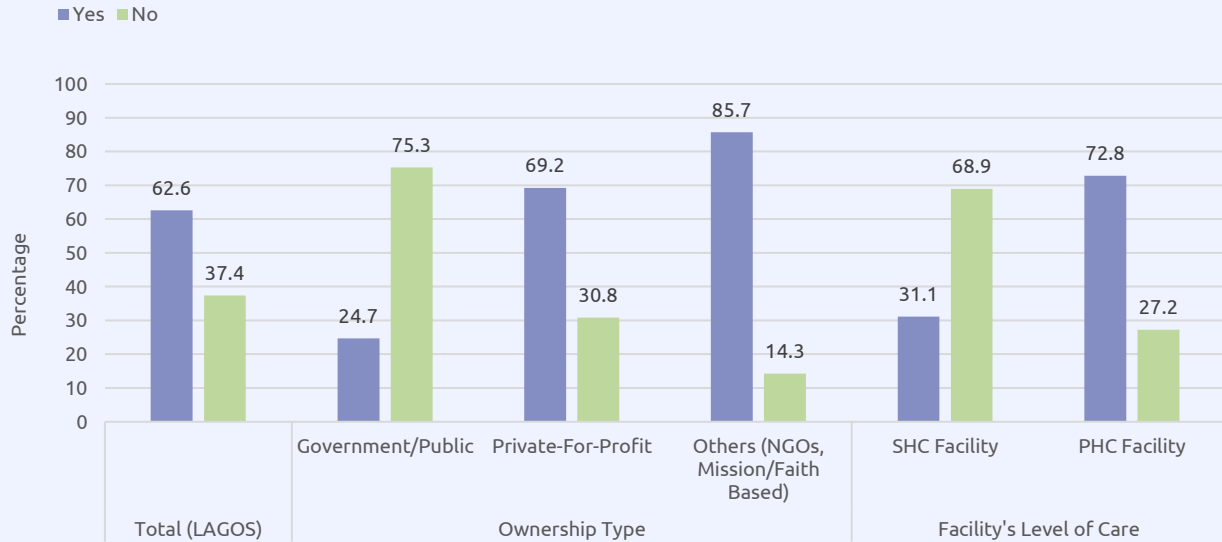


Figure 12: Percentage Availability of Oxygen within Healthcare Facilities

## Standard Precautions for Prevention of Infection Supplies

### Facilities having Available and Functional Infection Prevention Equipment or Items

All health facilities have a significant supply of infection prevention equipment or items available; 99.2% have soap available, 98.6% have bleach or alcohol, 98.2% have latex gloves, 97.6%, medical masks, 94%, needles and syringes, and 93.0%, alert boxes for the disposal of used needles and syringes. However, 86.1% and 84.8% of secondary health facilities have needles and syringes and alert boxes to dispose of used needles and syringes, respectively.

Table 16: Facilities having Available and Functional Infection Prevention Equipment or Items

	Total (LAGOS)	Facility Ownership Type			Facility's Level of Care	
		Government/ Public	Private-For-Profit	Others (NGOs, Mission/Faith Based)	SHC Facility	PHC Facility
Soap	99.2	97.9	99.4	100.0	99.0	99.3
Bleach or alcohol	98.6	96.4	99.0	100.0	99.0	98.5
Latex gloves	98.2	93.3	99.1	100.0	98.7	98.1
Medical masks	97.6	90.2	99.0	95.2	98.1	97.5
Needles and syringes	94.0	97.4	93.5	90.5	86.1	96.6
Sharps boxes for the disposal of used needles and syringes	93.0	99.0	91.9	90.5	84.8	95.7

## Facilities having a Process, Separate area, and Documented Procedure for Sterilization of Medical Equipment

Health facilities were assessed on the process and procedure for sterilization of medical equipment. 84.2% of them have available units/processes and separate areas for sterilization of medical equipment, while 71.3% have a documented process/procedure for sterilizing medical equipment. However, government-owned health facilities have the lowest number of HFs (57.2% and 40.7%) having a process, separate area, and documented procedure, for sterilization of medical equipment, respectively. Epe LGA (8.3%) has the lowest number of health facilities that have a documented process/procedure for sterilizing medical equipment (see Figure 14).

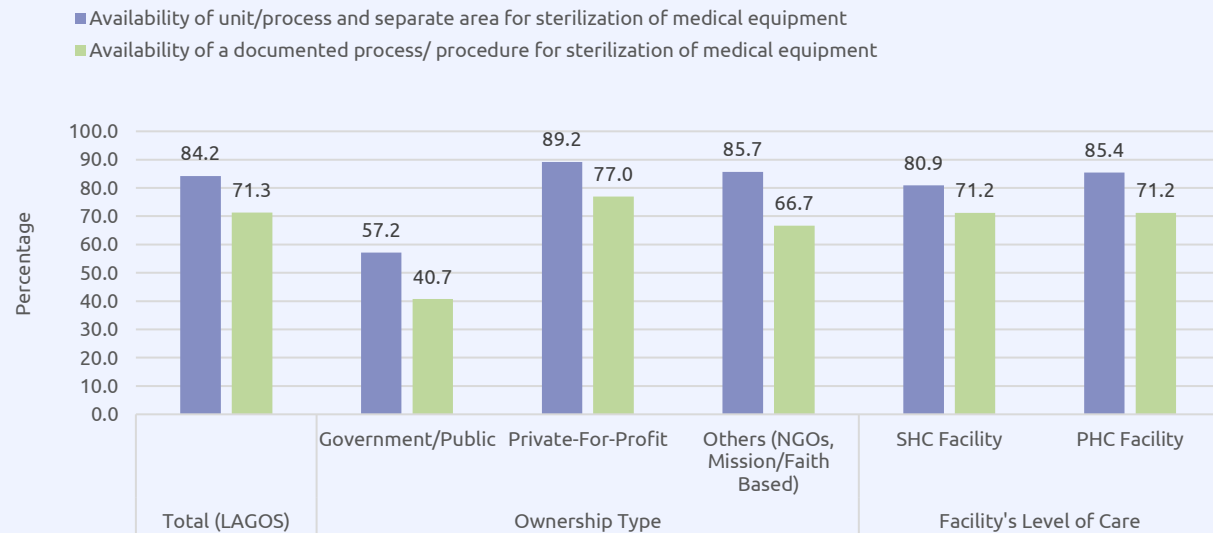


Figure 13: Percentage of Facilities having a Process, Separate area, and Documented Procedure for Sterilization of Medical Equipment

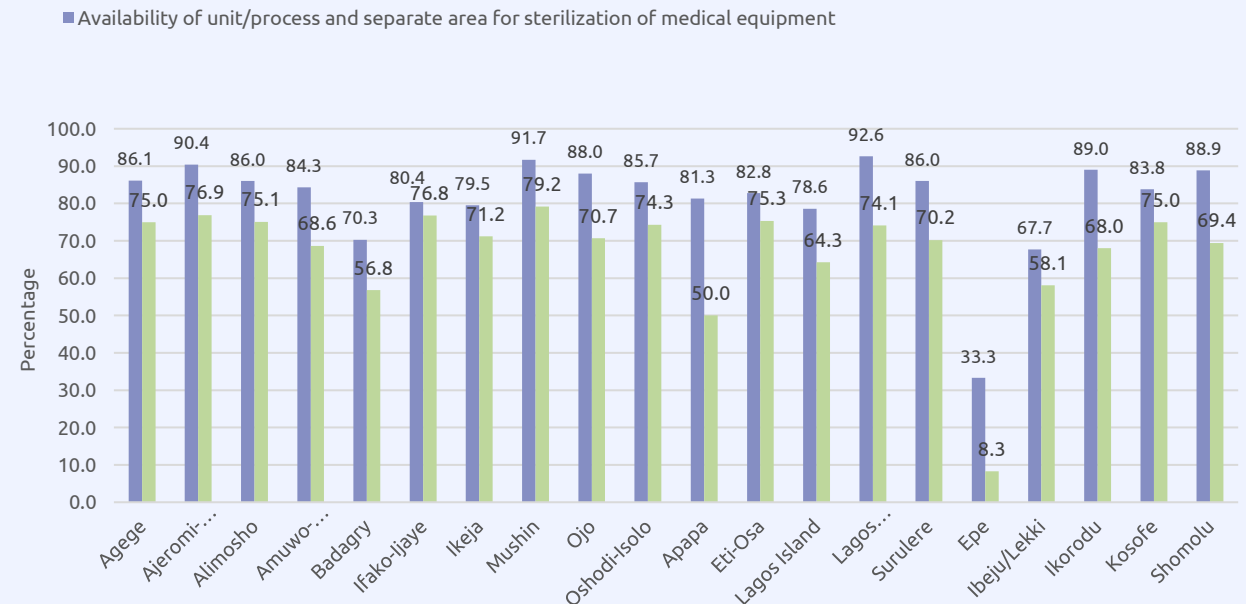


Figure 14: Percentage of Facilities having a Process, Separate area, and Documented Procedure for Sterilization of Medical equipment (by LGAs)

## Methods mostly Used by Facilities for Disinfecting or Sterilizing Medical Equipment before it is Re-used

The top three most used methods for the disinfection or sterilization of medical equipment before re-use across health facilities, were found to be autoclaving (75.5%), chemical method (13.9%), and dry heat sterilization method (9.7%).

Table 17: Percentage of Methods mostly Used by Facilities for Disinfecting or Sterilizing Medical Equipment before it is Re-used

	Total (LAGOS)	Facility Ownership Type			Facility's Level of Care	
		Government/ Public	Private-For-Profit	Others (NGOs, Mission/Faith Based)	SHC Facility	PHC Facility
Autoclaving	75.5	36.6	82.5	85.7	75.7	75.4
Chemical method	13.9	35.6	9.8	14.3	8.4	15.6
Dry heat sterilization	9.7	6.2	10.3	14.3	8.1	10.3
Boiling	8.5	21.1	6.2	4.8	2.9	10.4
Steam	3.2	2.1	3.5	0.0	2.6	3.4
No equipment processed	2.9	7.2	2.0	4.8	3.6	2.6
Process outside facility	0.2	0.5	0.1	0.0	0.3	0.1
Do not know/Refused/Not applicable	4.5	2.6	5.0	0.0	9.7	2.9

## Availability of Health Services in Health Facilities

### Family Planning Services

#### Percentage of Facilities Offering Family Planning Services

The assessment sought to know the percentage of facilities that offer family planning services in Lagos State, and 58% stated that they offer them. The survey results also revealed that 93.8% of government/public facilities offer family planning services. This indicates that government facilities offer more family planning services than private-for-profit and NGO/Mission/FBO-owned facilities. In addition, primary health care facilities have the highest proportion of respondents (71%) who offer family planning services compared to secondary health facilities with the lowest proportion (18.4%).

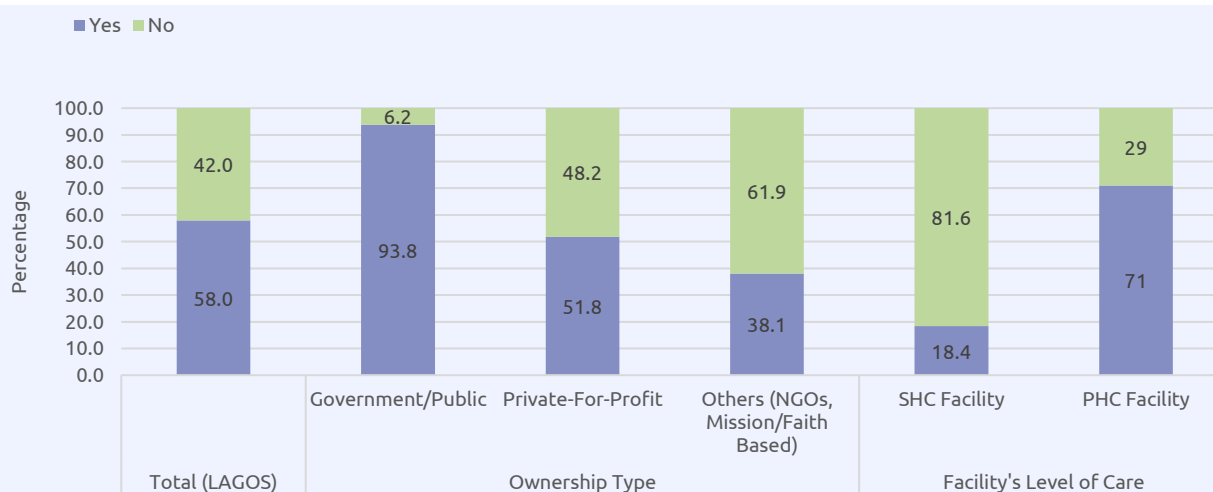


Figure 15: Percentage of Facilities Offering Family Planning Services

Across the LGAs, Ibeju/Lekki local government had the highest (83.9 %) number of HFs who offer family planning services, followed by Epe local government with 83.3%. However, Mushin LGA had a minuscule proportion (39.6%) of HFs that offer family planning services.

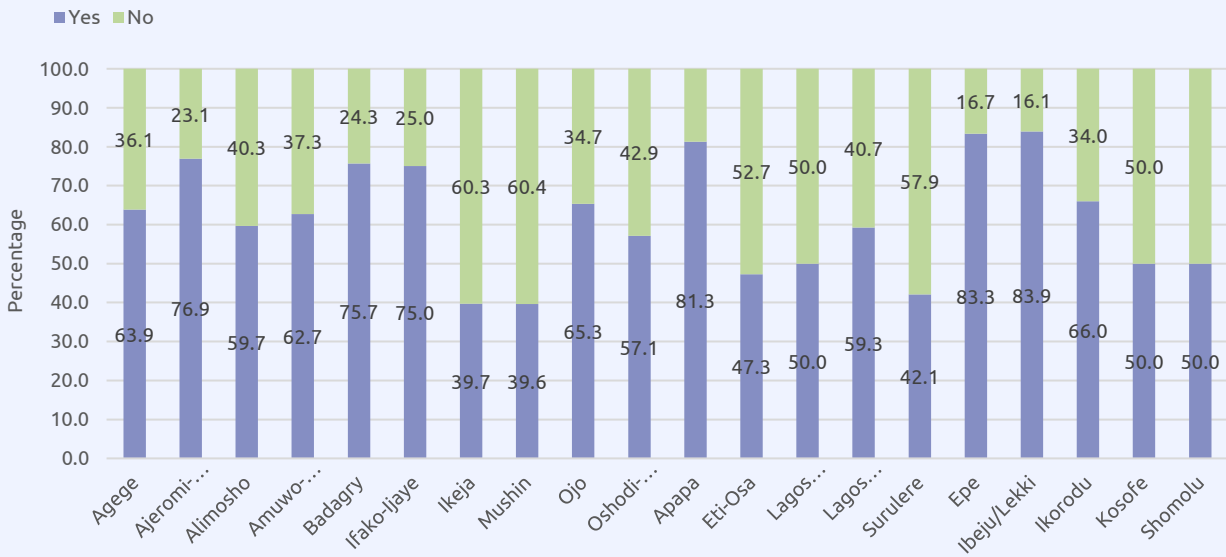


Figure 16: Percentage of Facilities Offering Family Planning Services (by LGAs)

### Antenatal Care Services

#### Percentage of Facilities Offering Antenatal Care Services

A finding from the assessment shows that 63.3% of health facilities in Lagos State offer antenatal services. The ANC services are more common in government-owned health facilities at 84%, compared to NGO/Missions/FBO-owned health facilities at 66.7%, and private-for-profit at 59.4%. Primary health care facilities offering ANC services (76.5%) are more than secondary health care facilities (23.0%) offering ANC services. Lagos Island LGA provides a minor antenatal service (32.1%) compared to other LGAs in the state. Ifako/Ijaye LGA has the highest proportion (82.1%) of health facilities offering antenatal care services (see Figure 19).

Most (98.6%) of the health facilities assessed have common drugs to cover the pregnancy period. 96.1% have iron and folic acid supplementation, while 93.3% have intermittent preventive treatment in pregnancy for malaria. However, general consulting on diet, nutrition, and exercise are the least offered antenatal services (10.4%) (see Table 18).

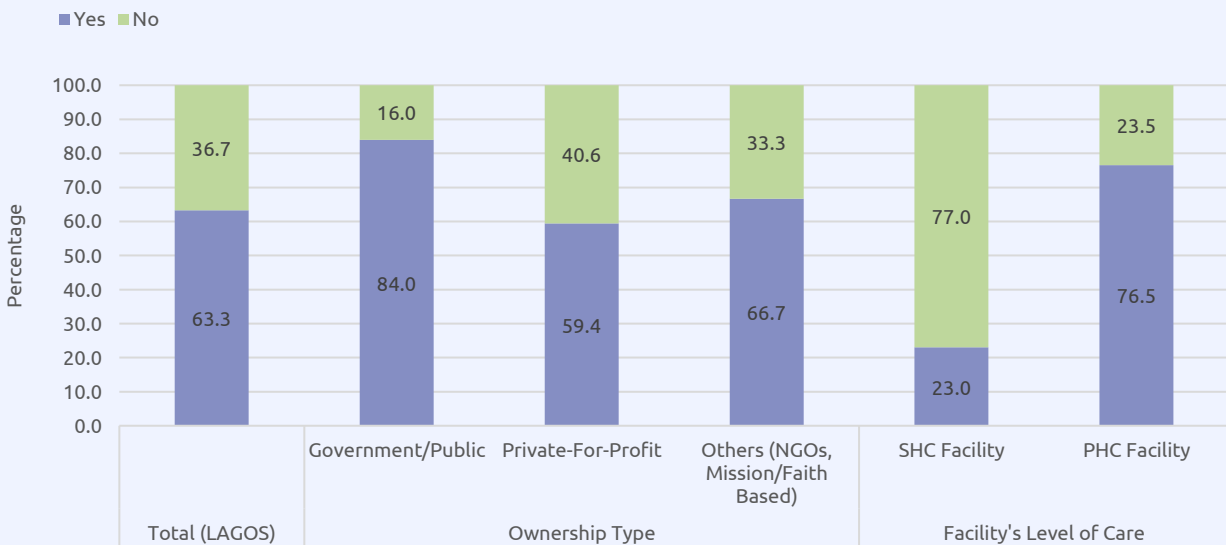


Figure 17: Percentage of Facilities Offering Antenatal Care Services

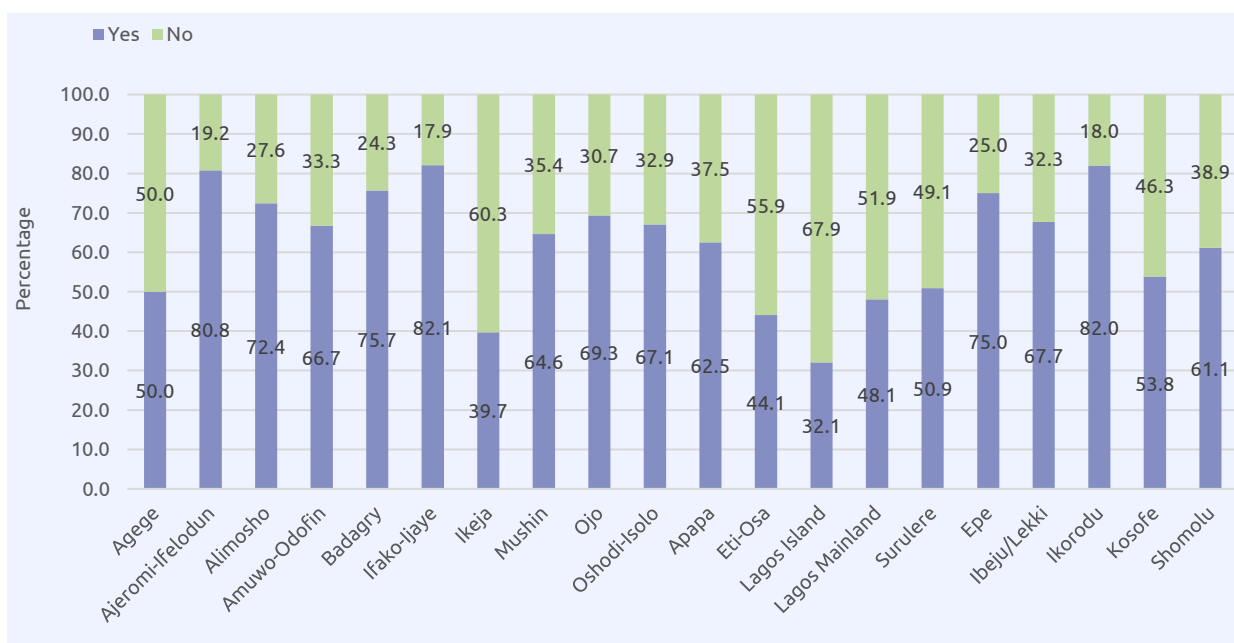


Figure 18: Percentage of Facilities Offering Antenatal Care Services (by LGAs)

Table 18: Percentage of Facilities Providing Antenatal Care Services

	Total (LAGOS)	Facility Ownership Type			Facility's Level of Care	
		Government/ Public	Private- For-Profit	Others (NGOs, Mission/Faith-Based)	SHC Facility	PHC Facility
Routine drugs to cover the duration of pregnancy	98.6	94.5	99.7	100.0	97.2	98.8
Iron and Folic Acid supplementation	96.1	91.4	97.2	100.0	98.6	95.9
Intermittent preventive treatment in pregnancy (IPT) for malaria	93.3	77.3	97.4	100.0	94.4	93.2
Provision of ultrasound services	50.4	19.0	58.1	78.6	80.3	47.5
General counselling (Diet, Nutrition, Exercise)	10.4	2.5	12.6	7.1	5.6	10.9

## Obstetric and Newborn Care

### Percentage of Facilities Offering Obstetric and New-born Care

57.2% of health facilities in the state offer obstetric and newborn care services, while 42.8% do not. The facility ownership type assessment shows that more private-for-profit owned HFs (60.3%) offer obstetric and newborn care services compared to other facility types. The survey also revealed that primary health care facilities offer more obstetric and newborn care than the secondary facilities in the state; 68.5% and 22.7%, respectively.

Local governments assessment revealed that Ajeromi/Ifelodun local government has the highest proportion (80.8 %) of health facilities that offer obstetric and newborn care in their facilities. Followed by Ikeja LGA (see Figure 21).

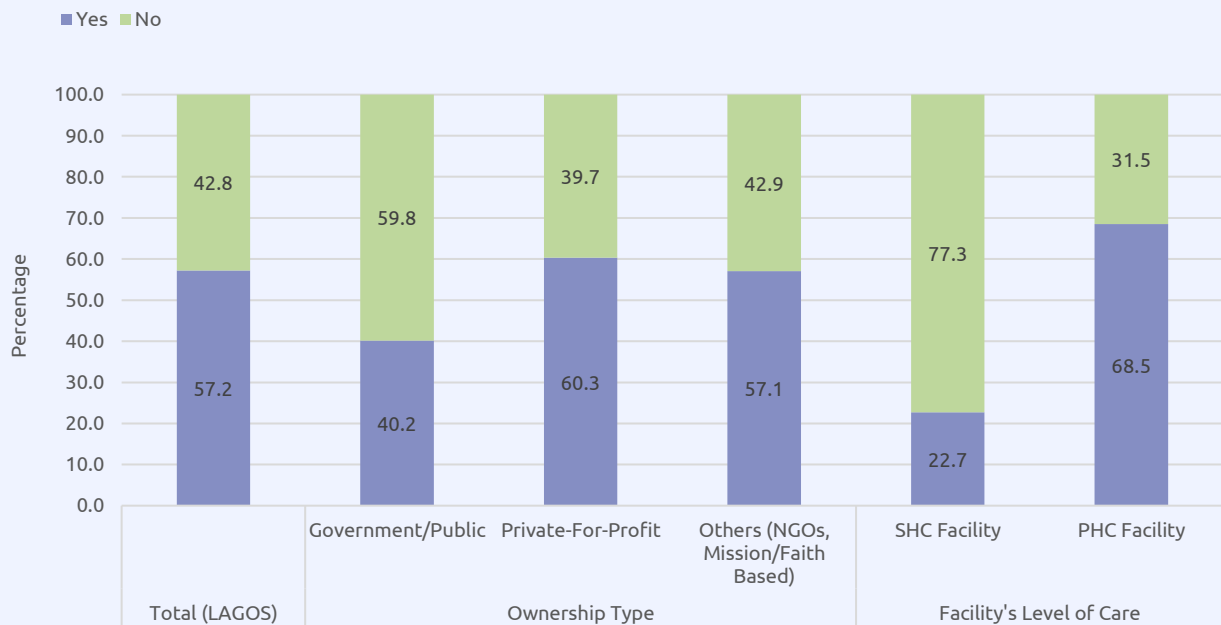


Figure 19: Percentage of Facilities Offering Obstetric and New-born Care



Figure 20: Percentage of Facilities Offering Obstetric and New-born Care (by LGAs)



Table 19: Percentage of Health Facilities Providing Obstetric and New-born Care

	Total (LAGOS)	Facility Ownership Type			Facility's Level of Care	
		Government/ Public	Private-For-Profit	Others (NGOs, Mission/Faith-Based)	SHC Facility	PHC Facility
Routine administration of oxytocin injection immediately after birth to all women for the prevention of postpartum hemorrhage	94.6	97.4	94.3	91.7	94.3	94.6
Newborn care up to 6 weeks (Cord care, eye care, and management of simple neonatal infections)	84.5	93.6	83.1	100.0	94.3	83.5
Assisted vaginal delivery	74.9	26.9	80.9	75.0	85.7	73.8
Caesarean section	65.0	9.0	71.5	91.7	91.4	62.2
Phototherapy care for newborn	43.2	7.7	47.0	75.0	68.6	40.4
Incubator care for newborn	19.9	5.1	21.3	41.7	45.7	17.1

## Postnatal Services

### Percentage of Facilities Offering Postnatal Services

Health facilities offering postnatal services stand at 60%, while 40% do not. Government-owned health care facilities have the highest proportion (82%) of respondents who stated that they offer post-natal services in their facilities. Also, primary health care facilities (72.5%) in Lagos State provide more postnatal services than the secondary facilities (22.0%) (see Figure 22).

Local governments' assessment revealed that Lagos Island has the lowest proportion of respondents (32.1%), who stated that they offer postnatal services in their facilities. In contrast, Ifako-ijaye local government has the highest proportion of respondents who stated that they offer postnatal services. It is worthy to note that at least 50% of HFs in 16 out of 20 local governments in Lagos State offer postnatal services (see Figure 23).

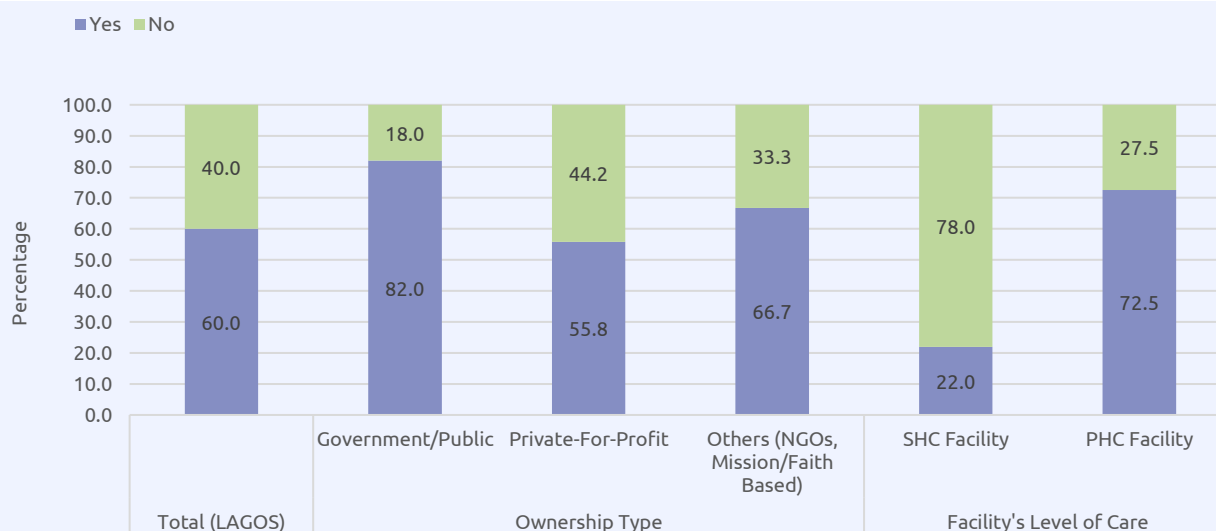


Figure 21: Percentage of Facilities Offering Postnatal Services

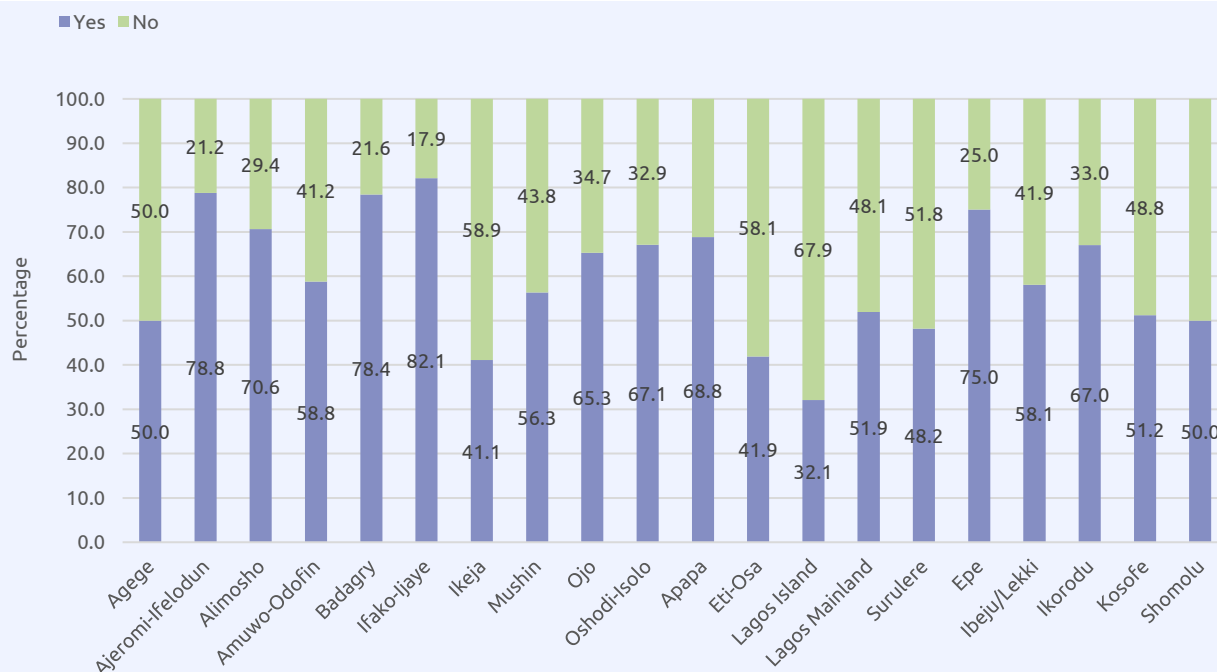


Figure 22: Percentage of Facilities Offering Postnatal Services (by LGAs)

## Paediatric Health Services

### Percentage of Facilities Offering Paediatric Health Services

53.3% of health facilities in Lagos State offer paediatric services. Government-owned health facilities offer more (72.7%) paediatric services than private-for-profit (49.5%), and NGO/Missions/FBO-owned (61.9%) health facilities. The assessment also revealed that primary health care facilities offer more paediatric services than the secondary health care facilities surveyed in the state (see Figure 24).

LGA assessment of health facilities revealed that Ifako- Ijaye local government has the highest proportion of paediatric services, while Lagos Island LGA has the lowest proportion (35.7%). The local government areas that offer below 50% of paediatric services include; Agege, Ikeja, Mushin, Oshodi-Isolo, Eti-Osa, Lagos Island, Surulere, and Shomolu local governments (see Figure 25).

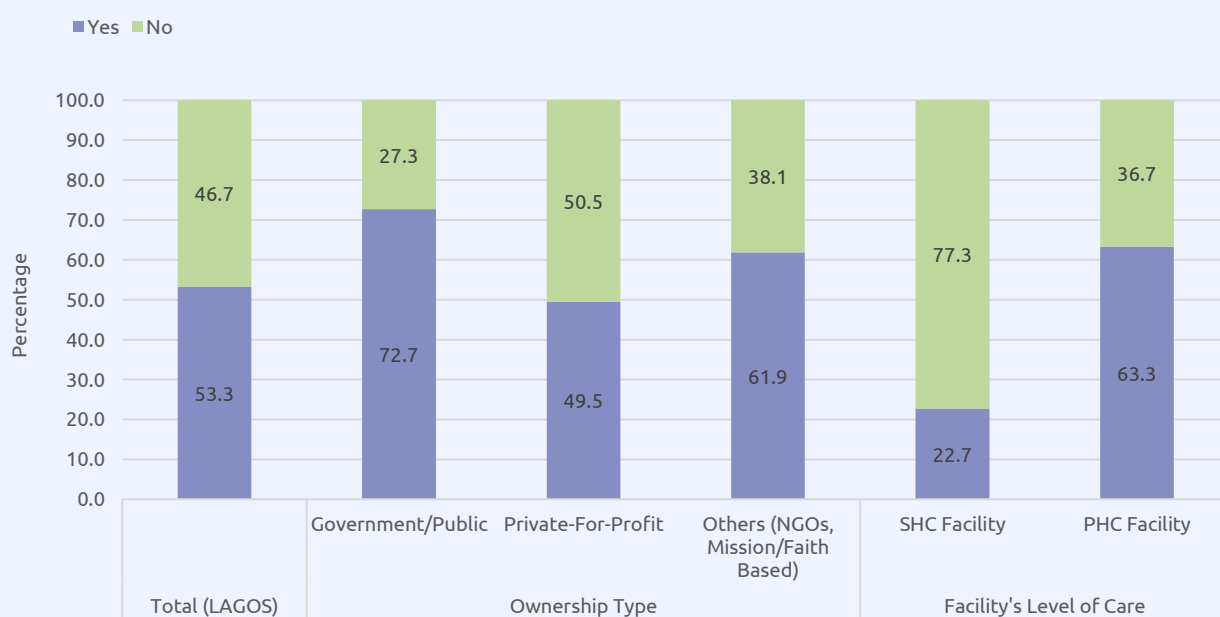


Figure 23: Percentage of Facilities Offering Paediatric Health Services

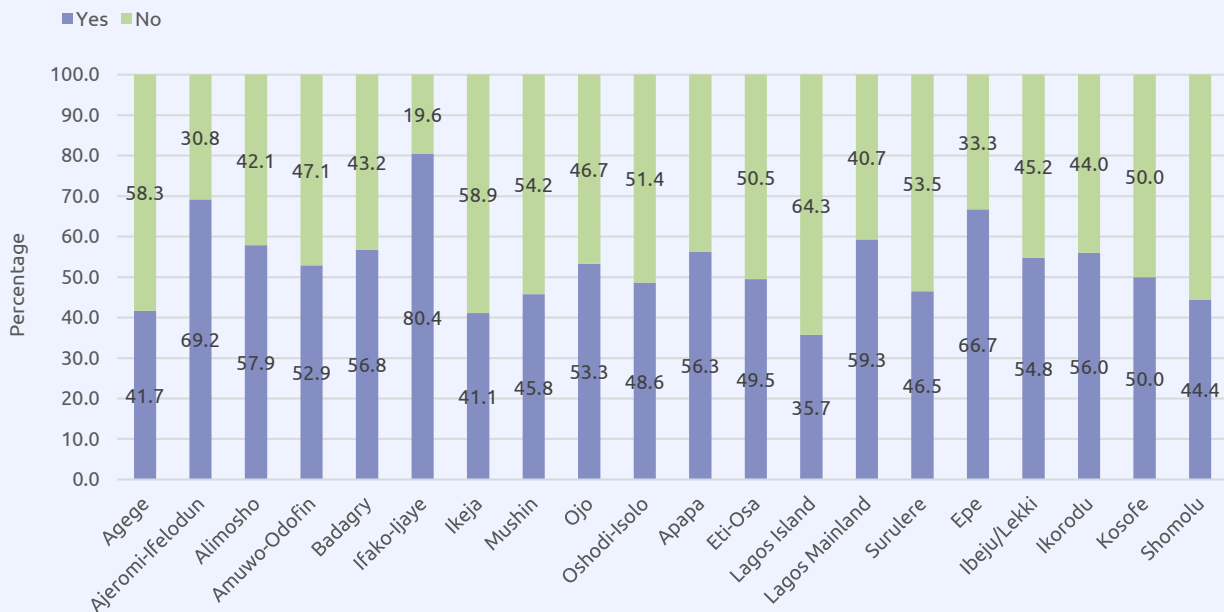


Figure 24: Percentage of Facilities Offering Paediatric Health Services ( by LGAs)

## HIV Services

### Percentage of Facilities Offering HIV/AIDS Services

Only 31% of the health facilities in the state offer HIV/AIDS services. Consequently, government-owned/public facilities offer more (41.2%) HIV/AIDS services than private-for-profit (28.7%) and NGO/Missions/FBO-owned facilities (33.3%). Also, both secondary and primary health facilities in the state offer less HIV/AIDS services as both have 25.2% and 32.6%, respectively, which is below 50% (see Figure 26).

The HIV/AIDS services assessment revealed that Shomolu LGA has the least proportion (11.1%) of facilities that offer HIV/AIDS services, while Apapa local government has the highest proportion (56.3%). It is worthy to note that all other local governments in Lagos State have less than 50% of respondents who stated that they offer HIV/AIDS services, save Apapa and Epe LGAs, which has 56.3% and 50%, respectively (see Figure 27).

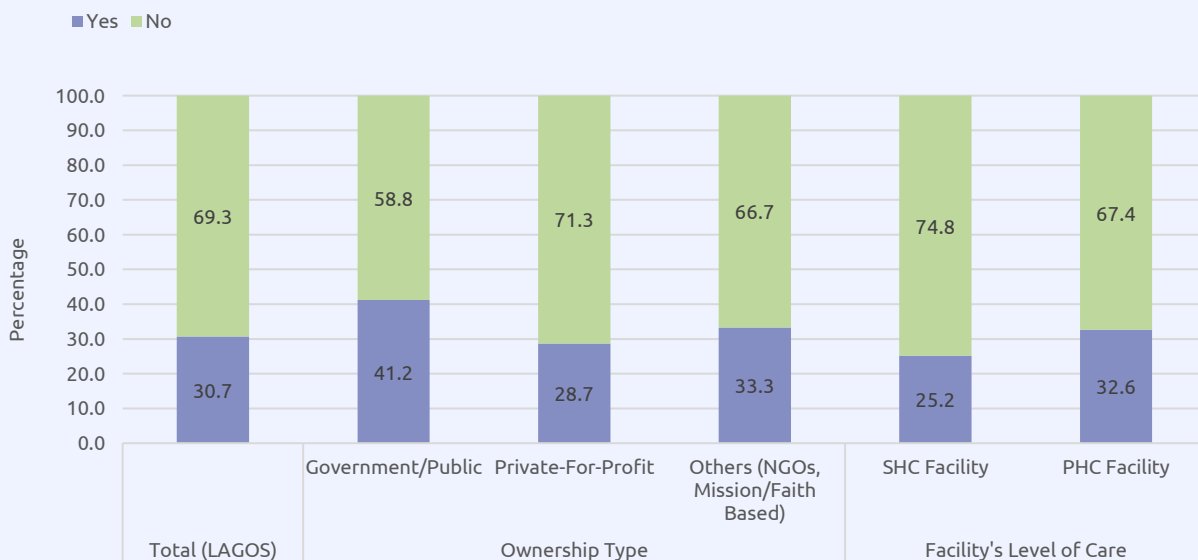


Figure 25: Percentage of Facilities Offering HIV/AIDS Services

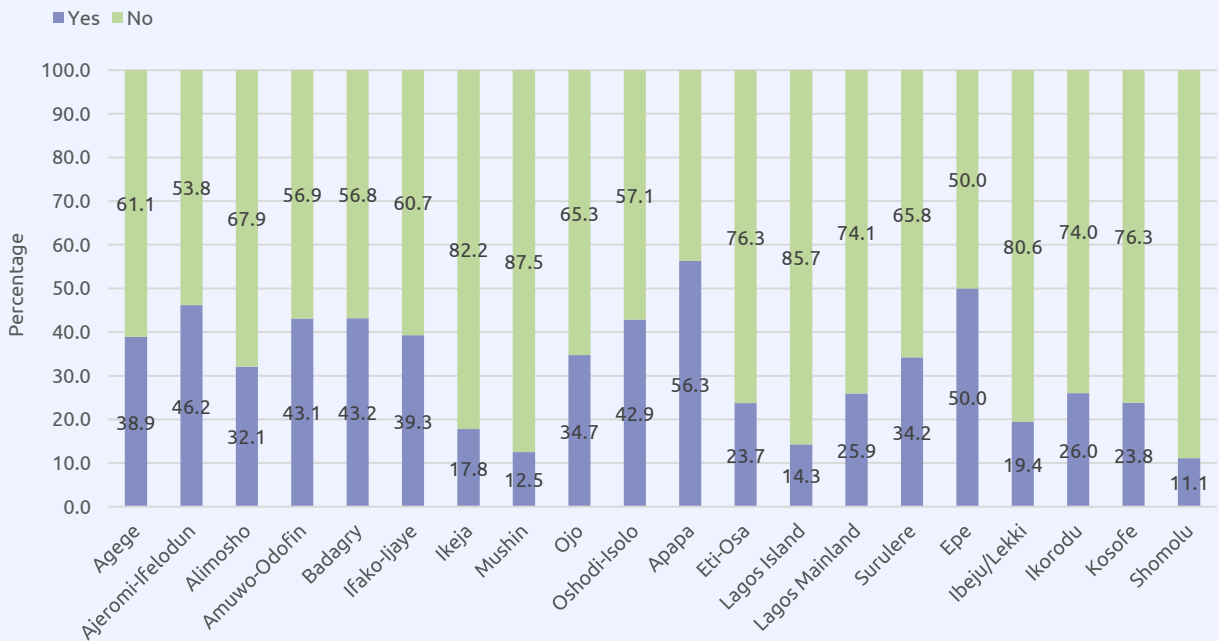


Figure 26: Percentage of Facilities Offering HIV/AIDS Services (by LGAs)

## Tuberculosis Services

### Percentage of Facilities Offering Tuberculosis Services

57.2% of facilities in Lagos State do not offer tuberculosis services. Private-for-profit health facilities have the least proportion (36.7%) of facilities that offer tuberculosis services in the state. It was also discovered that primary health care facilities offer more tuberculosis services than their secondary counterparts in the state (see Figure 28). Local government assessment of health facilities revealed that Apapa local government has the highest proportion (75%) of facilities that offer tuberculosis services in Lagos State. In comparison, Ikeja has the least proportion (24.7%) of facilities who offer same. Only seven local governments namely: Agege, Ajeromi-ifelodun, Alimosho, Badagry, Ifako-ijaye, Ojo, and Apapa provide more than 50% of tuberculosis services in the state (see Figure 29).

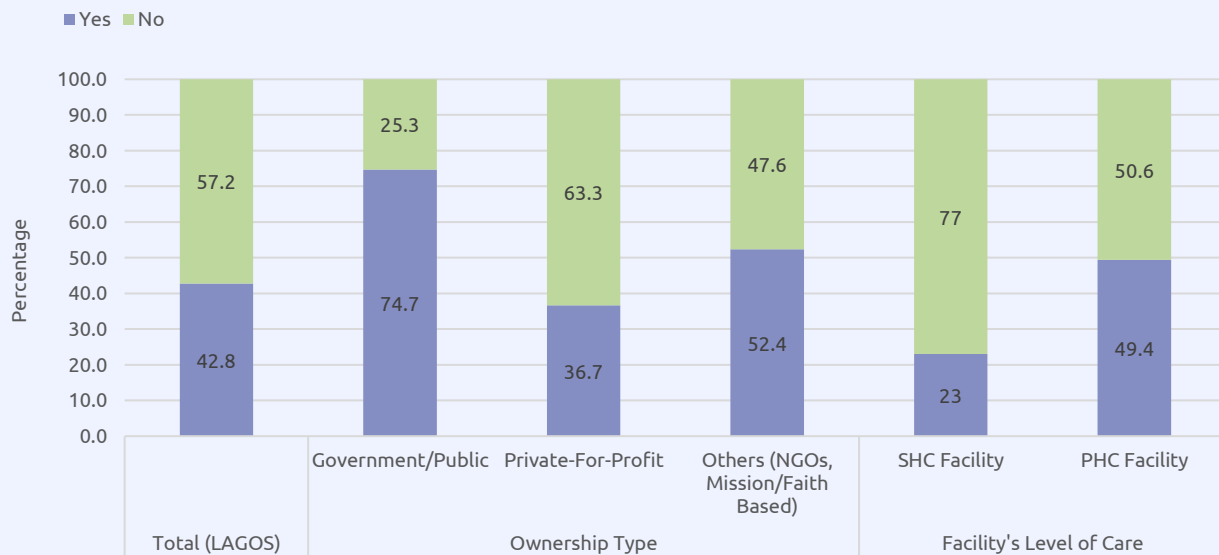


Figure 27: Percentage of Facilities Offering Tuberculosis Services

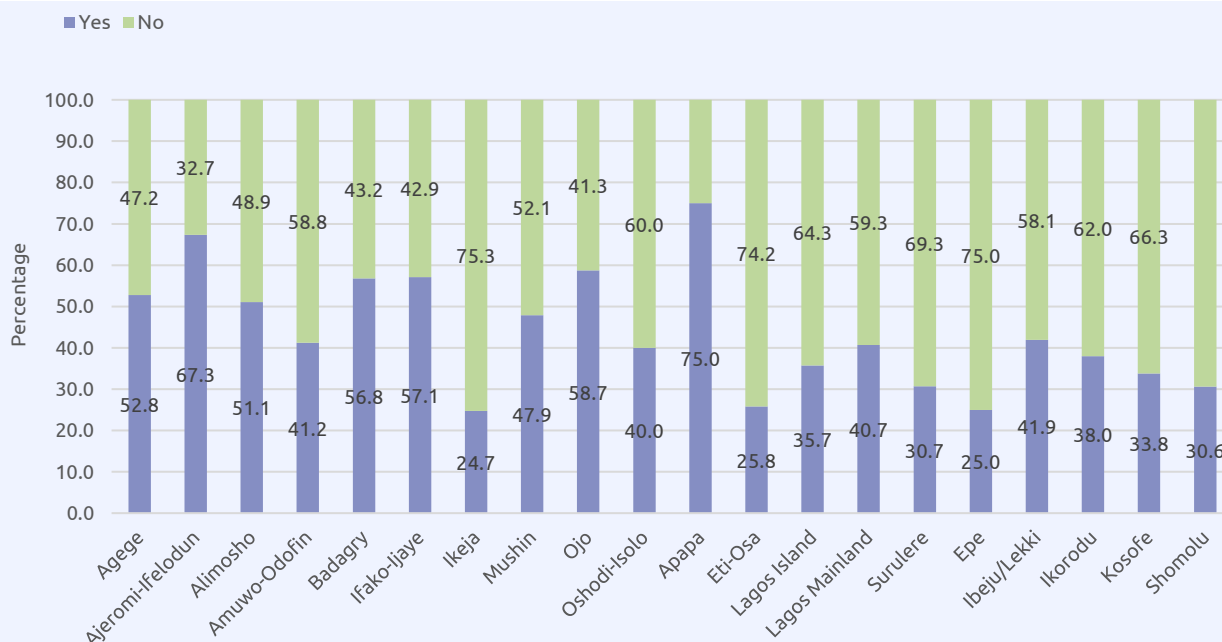


Figure 28: Percentage of Facilities Offering Tuberculosis Services (by LGAs)

## Other Infectious and Non-Communicable Diseases

### Percentage of Facilities Offering Other Infectious and Non-Communicable Disease Services

64.7% of the health facilities' respondents in Lagos State stated that they offer other infectious and non-communicable disease services. Health facilities owned by the government have the highest proportion (86.1%) of facilities that offer other infectious and non-communicable disease services. Assessments show that primary health care facilities offer other infectious and non-communicable disease services than the secondary health care facilities in Lagos State (see Figure 30).

Local government health facilities' assessment reveal that about 90% of local government facilities offer other infectious and non-communicable disease services. However, Ikeja and Lagos Island have the least proportion (41.1% and 46.4%, respectively) of local governments offering other infectious and non-communicable disease services (see Figure 31).

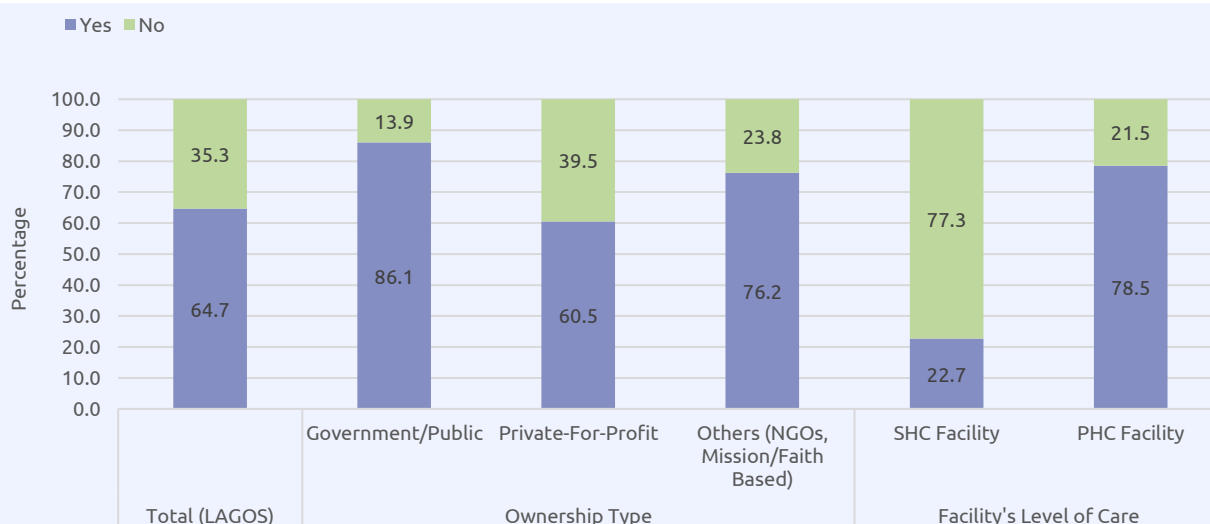


Figure 29: Percentage of Facilities Offering Other Infectious and Non-Communicable Disease Services



Figure 30: Percentage of Facilities Offering Other Infectious and Non-Communicable Disease Services (by LGAs)

### Proportion of Facilities Providing Other Infectious and Non-Communicable Disease Services

Regarding other infectious and non-Communicable Diseases service offered in facilities across Lagos State, the assessment revealed that most (97.4%) of the health facilities in the state offer urinary tract infections treatment. However, a lesser percentage (83.9%) of facilities offers primary ear, nose, and throat infection treatments. All NGO, Mission, and FBO--owned health facilities in the state offer respiratory tract infections and diarrheal diseases treatments.

Table 20: Proportion of Facilities Providing Other Infectious and Non-Communicable Disease Treatments

	Total (LAGOS)	Facility Ownership Type			Facility's Level of Care	
		Government/ Public	Private- For-Profit	Others (NGOs, Mission/Faith Based)	SHC Facility	PHC Facility
Urinary Tract Infections	97.4	95.2	98.1	93.8	97.1	97.4
Respiratory Tract Infections	96.9	99.4	96.2	100.0	97.1	96.9
Enteritis/Typhoid Fever	96.8	97.0	96.8	93.8	97.1	96.8
Diarrheal Diseases	96.7	98.8	96.0	100.0	94.3	96.9
High Blood Pressure Screening and Referral	96.4	96.4	96.5	93.8	94.3	96.6
Gastroenteritis	95.8	92.2	97.1	81.3	97.1	95.7
High Blood Pressure Treatment and Management	92.9	89.2	93.8	93.8	95.7	92.6
Diabetes Mellitus Screening	90.0	75.4	94.1	81.3	91.4	89.9
Skin Infections/Infestations such as Chicken Pox and Fungal Diseases	89.2	84.4	90.5	87.5	88.6	89.2
Helminthiasis	87.0	91.0	85.9	87.5	88.6	86.8

Management of Diabetes Mellitus	84.7	65.3	90.0	81.3	90.0	84.3
Primary Ear, Nose, and Throat Infections	83.9	77.2	85.7	81.3	87.1	83.6

## Malaria

### Percentage of Facilities Offering Diagnosis or Treatment of Malaria Services

Findings from the assessment of HFs show that most (78.1%) health facilities in Lagos State offer diagnosis or treatment of malaria services. Assessments based on facility ownership types show that government-owned hospitals treat malaria more (96.4%) than the private-for-profit (74.4%) and NGO/Mission/FBO-owned (90.5%) health facilities. Additionally, assessment based on the level of care reveal that primary health care facilities have the highest proportion (89.4%) of respondents who stated that they diagnose or treat malaria compared to the secondary health care facilities (43.7%) in the state (see Figure 32).

Local government health facilities' assessment revealed that all (100%) the health facilities, irrespective of the ownership and level of care in Epe local government, offer diagnosis or treatment of malaria services. In contrast, Ikeja local government is the least local government involved in these services. Generally, across all the local governments, all facilities offer the diagnosis or treatment of malaria services (see Figure 33).

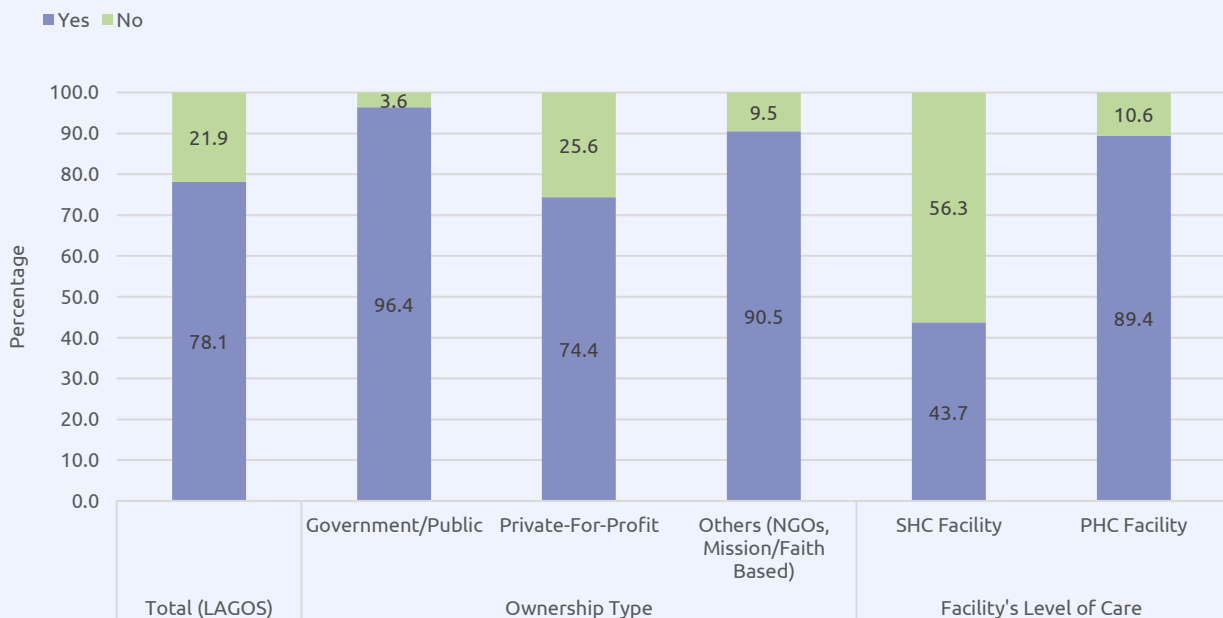


Figure 31: Percentage of Facilities Offering Diagnosis or Treatment of Malaria Services

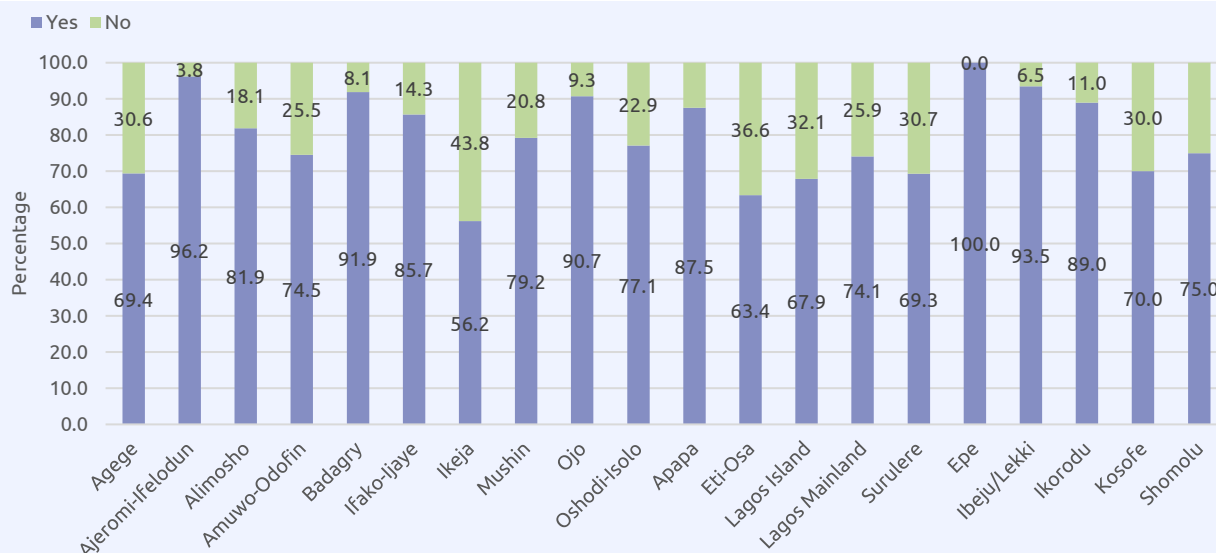


Figure 32: Percentage of Facilities Offering Diagnosis or Treatment of Malaria Services (by LGAs)

### Proportion of Facilities Offering Diagnosis or Treatment of Malaria Services

64.7% of health facilities in Lagos State offer clinical symptoms diagnosis, or treatment of malaria service. Also, Government/Public health facilities offer more (84.5%) malaria services than private-for-profit and NGO/Mission/FBO-owned health facilities. Assessments according to the facility's level of care, show that primary health care facilities offer more (77.3%) clinical symptoms diagnosis or treatment of malaria service than the secondary health facilities (26.5%) in the State.

Additionally, the assessment reveals that 55.4% of health facilities in Lagos State offer Rapid Diagnostic Testing (RDT). Out of the above proportion which offer RDTs in the state, the highest proportion of them are NGO/Mission/FBO-owned health facilities (61.9%), followed by government and private-for-profit owned health facilities.

Moreover, the assessment shows that 54.4% of health facilities in Lagos State offer microscopy diagnosis services. Assessment according to facility ownership type shows that government-owned hospitals offer more (66.5%) microscopy services than private-for-profit and NGO/Mission/FBO-owned health facilities.

Table 21: Proportion of Facilities Offering Diagnosis or Treatment of Malaria Services

	Total (LAGOS)	Facility Ownership Type			Facility's Level of Care	
		Government/ Public	Private-For- Profit	Others (NGOs, Mission/Faith-Based)	SHC Facility	PHC Facility
Clinical symptoms	64.7	84.5	60.8	76.2	26.5	77.3
Rapid Diagnostic Testing (RDT)	55.4	56.2	55.1	61.9	28.5	64.3
Microscopy	54.4	66.5	52.0	61.9	39.5	59.3

### Percentage of Facilities having Malaria Rapid Diagnostic Test Kits (with valid expiration dates) in Stock

An assessment was carried out to know the facilities with malaria rapid diagnostic test kits with valid expiration dates. The assessment shows that 54.9% of the health facilities in Lagos State do not have malaria rapid diagnostic test kits with valid expiration dates. It is imperial to note that government-owned health facilities have the least percentage (32%) of malaria rapid diagnostic test kits with valid expiration dates compared to private-for-profit and NGO/Mission/FBO-owned facilities. Additionally, assessments according to the facility's level of care revealed that most of the secondary facilities (73.5%) do not have malaria rapid diagnostic test kits with valid expiration dates compared to primary health facilities (51.3%) (see Figure 34).



Assessment of local government facilities having malaria rapid diagnostic test kits (with valid expiration dates) in stock shows that most of the health facilities in Ikeja local government have the least proportion of malaria rapid diagnostic test kits (with valid expiration dates) in stock. In contrast, Ajeromi-Ifelodun local government facilities have the highest proportion (63.5%) of malaria rapid diagnostic test kits (with valid expiration dates) in stock. However, about 80% of facilities in all the local government areas do not have sufficient malaria rapid diagnostic test kits (with valid expiration dates) in stock; this could be seen in Figure 34 below.

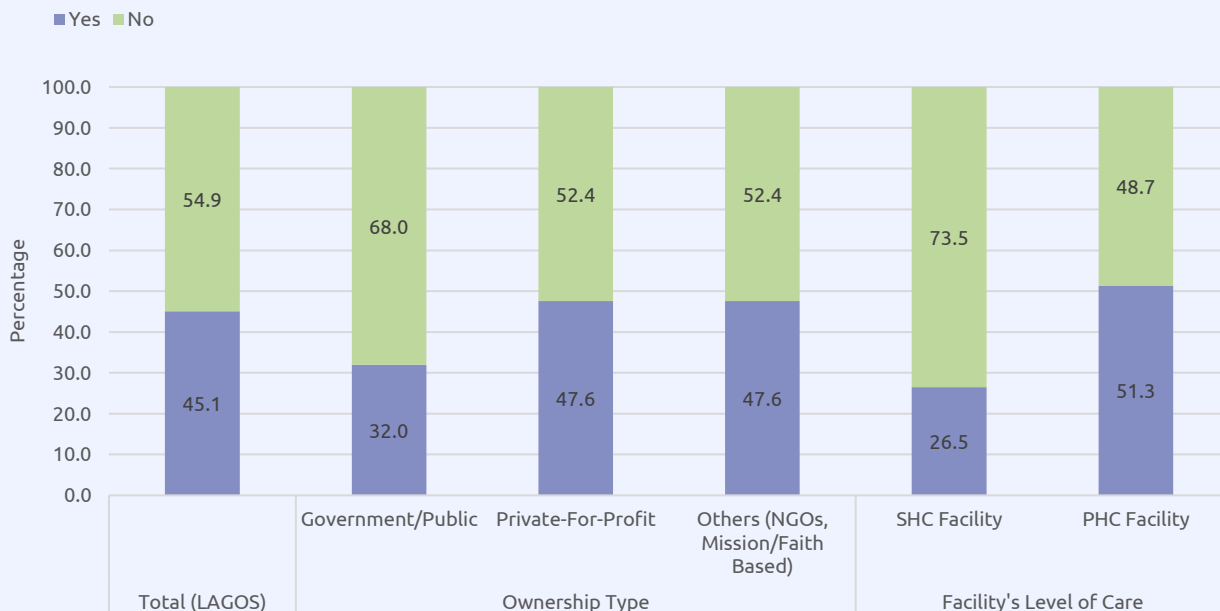


Figure 33: Percentage of Facilities having Malaria Rapid Diagnostic Test Kits (with valid expiration dates) in Stock

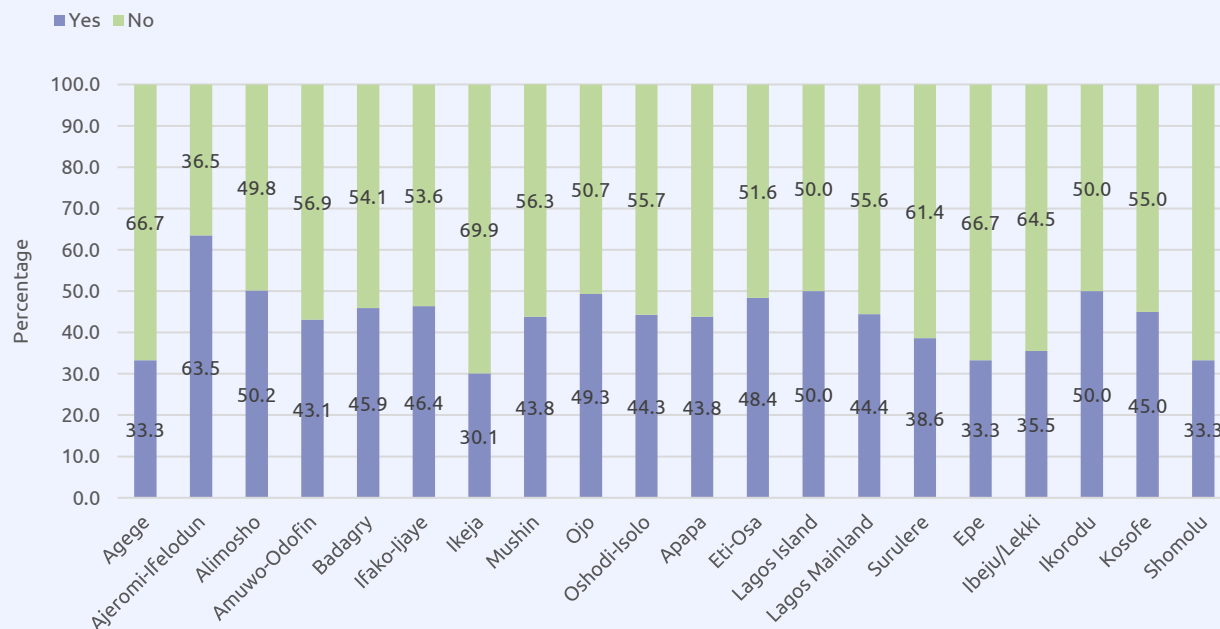


Figure 34: Percentage of Facilities having Malaria Rapid Diagnostic Test Kits (with valid expiration dates) in Stock (by LGAs)

## Surgery

### Percentage of Facilities Offering Surgical Services

The assessment revealed that only 48.9% of health facilities in Lagos State carry out surgical operation services. It was also discovered that only 18% (35) of government-owned hospitals in Lagos State offer surgical services, compared to private-for-profit and NGO/Mission/FBO- owned facilities (66.7%), which have the highest proportion of facilities that offer surgical services.

Assessment according to the facility level of care shows that secondary health care facilities have the least proportion (25.9%) of surgical services being offered, compared to primary health facilities (56.4%) in the state (see Figure 36).

Assessment of local government facilities offering surgical services reveal that health facilities in Ikeja (24.7%) and Epe (25%) local government areas offer the least surgical services compared to other LGAs in the state. On the other hand, Ifako-Ijaye local government has the highest proportion (67.9%) of health facilities that offer surgical services in Lagos State.

Furthermore, the assessment reveals that health facilities in 10 out of the 20 local governments in Lagos State offer less than 50% surgical services. These local governments include: Agege, Badagry, Ikeja, Mushin, Ojo, Eti-Osa, Lagos-Island, Lagos Mainland, Epe, and Ibeju-lekki. The facilities in the remaining 10 local government areas offer above 50% surgical services with Ifako-Ijaye offering the highest proportion (67.9%) (see Figure 37).

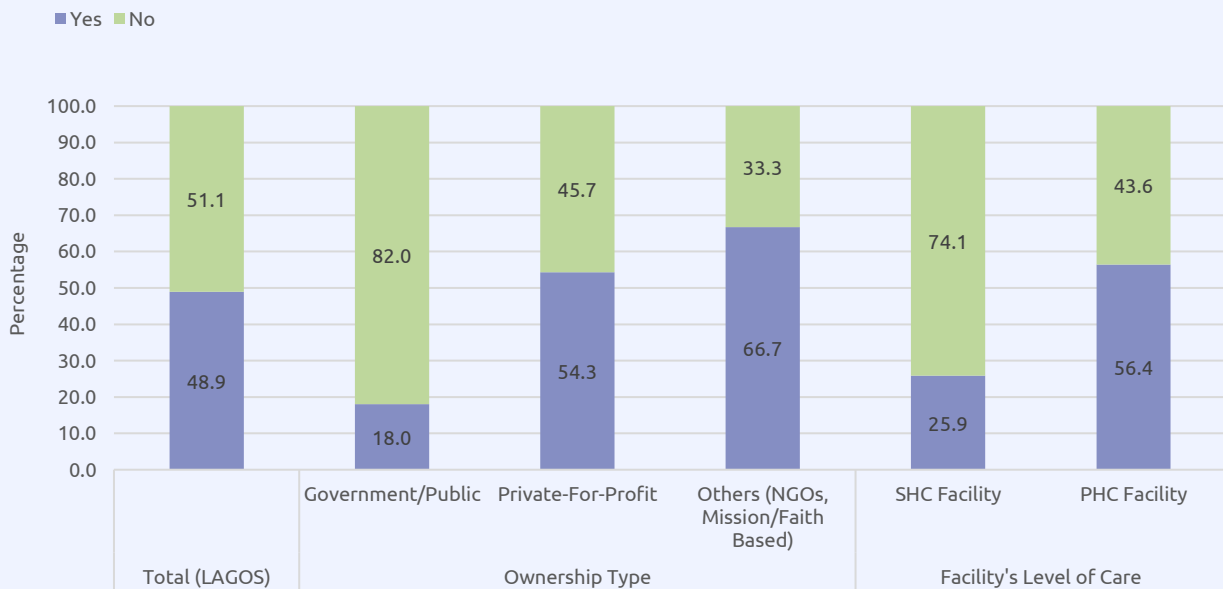


Figure 35: Percentage of Facilities Offering Surgical Services

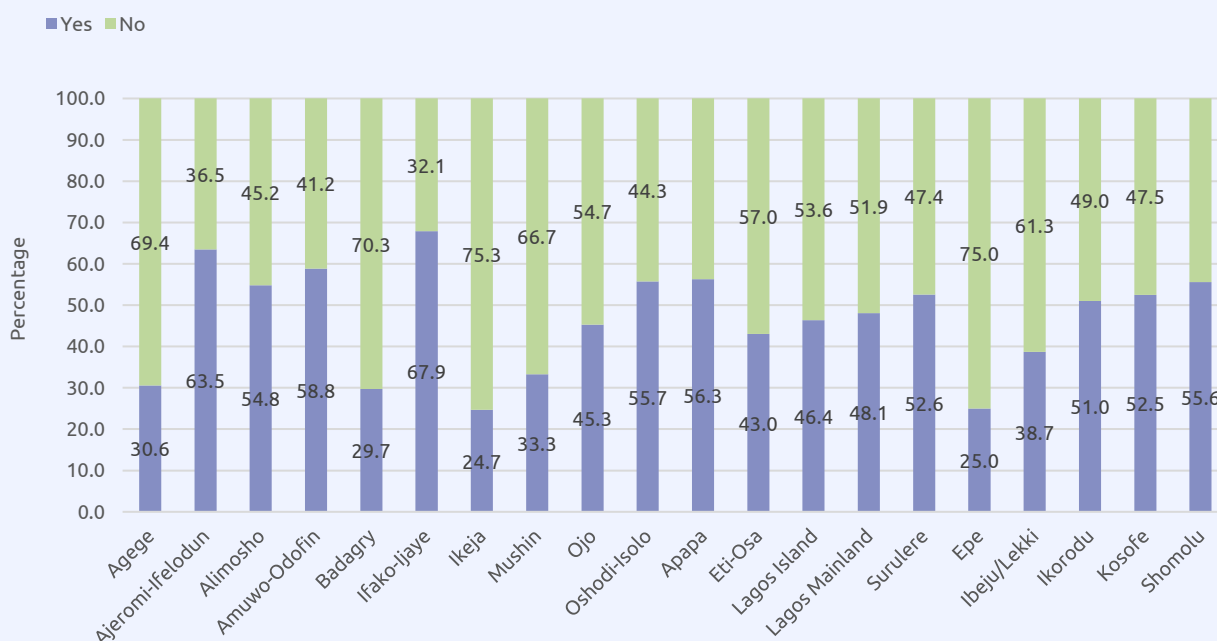


Figure 36: Percentage of Facilities Offering Surgical Services (by LGAs)

### Proportion of Facilities Offering Surgical Services

Regarding the different surgical services offered by health facilities in Lagos State, the assessment revealed that 95.9% of health facilities offer minor wound debridement. A similar proportion is seen across all levels of facility ownership and level of care in health facilities in the state. The survey reveals that 94% of health facilities in the state offer minor surgical procedures like incision and drainage, suturing of lacerations, minor burns, and simple abrasions, which cuts across facility ownership and level of care.

The survey also shows that health facilities in Lagos State offer surgical services which include: Male infant circumcision (91.4%), relief of urinary retention (88.9%), evacuation of impacted faeces (83.9%), appendectomy (74.1%), herniorrhaphy (72.8%), correction of cases of simple polydactyl (60.1%), and application of POP and closed reduction of fracture (58.1%).

Table 22: Proportion of Facilities Offering Surgical Services

	Total (LAGOS)	Facility Ownership Type			Facility's Level of Care	
		Government/ Public	Private- For-Profit	Others (NGOs, Mission/Faith- Based)	SHC Facility	PHC Facility
Minor wound debridement	95.9	94.3	96.1	92.9	88.8	97.0
Minor surgical procedures: Incision and drainage, suturing of lacerations, minor burns, and simple abrasions	94.0	85.7	94.7	85.7	82.5	95.7
Male infant circumcision	91.4	68.6	93.1	78.6	82.5	92.7
Relief of urinary retention	88.9	48.6	91.3	92.9	80.0	90.3
Evacuation of impacted faeces	83.9	40.0	86.5	85.7	77.5	84.8
Appendectomy	74.1	14.3	77.5	85.7	77.5	73.6
Herniorrhaphy	72.8	17.1	76.5	64.3	76.3	72.3
Correction of cases of simple polydactyl	60.1	17.1	63.2	42.9	63.7	59.6
Application of POP and closed reduction of fracture	58.1	17.1	61.2	35.7	61.3	57.7

## Dental Care

### Percentage of Facilities Offering Dental Care Services

The assessment revealed that 87.6% of health facilities in Lagos State do not offer dental services, while only 12.4% offer. Across HF's ownership-type, results show that only 7.3% of government/public-owned health facilities in the state offer dental services. Additionally, only 13.4% of private-for-profit-owned HFs offer dental services, compared to 14.3% of NGO/Mission/FBO--owned HFs. According to the facility's level of care, only 19.1% of secondary health facilities in the state offer dental care services, compared to 10.3% of primary health care facilities which offer same.

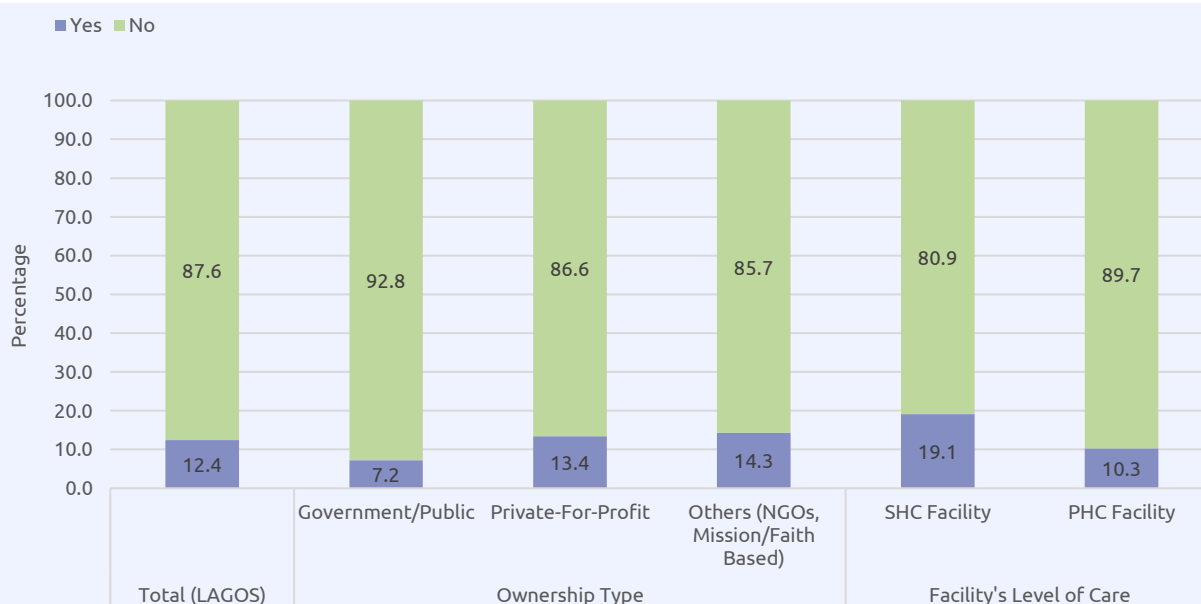


Figure 37: Percentage of Facilities Offering Dental Care Services

### Proportion of Facilities Offering Dental Care Services

93.6% of HFs across the state offer primary dental care services, including education and oral hygiene (preventive dental services). 89.7% of health facilities offer dental diagnostic evaluations, while 73.1% offer restorative services. All government/public-owned health facilities do not offer auto-dental services & care/surgery, while NGO/Mission/FBO-owned facilities offer 100% primary dental care services, including education and oral hygiene (preventive dental services), and dental diagnostic evaluations; however, none offers auto-dental services & care / surgery, teeth polishing, scaling, replacement, etc.

Table 23: Proportion of Facilities Offering Surgical Services

	Total (LAGOS)	Facility Ownership Type			Facility's Level of Care	
		Government/ Public	Private-For-Profit	Others (NGOs, Mission/Faith-Based)	SHC Facility	PHC Facility
Primary dental care services including education and oral hygiene (Preventive dental services)	93.6	78.6	95.0	100.0	94.9	92.8
Diagnostic dental evaluations	89.7	85.7	89.9	100.0	94.9	86.6
Restorative services	73.1	42.9	76.3	66.7	91.5	61.9
Periodontal services	71.8	50.0	74.8	33.3	86.4	62.9
Radiographs	54.5	21.4	58.3	33.3	72.9	43.3
Auto-dental services & care / surgery	26.3	0.0	29.5	0.0	45.8	14.4
Teeth polishing, scaling, replacement, etc.)	9.0	7.1	9.4	0.0	5.1	11.3

## Eye Care

### Percentage of Facilities Offering Eye Care Services/Treatment of Primary Eye Conditions

Only 28.5% of health facilities in the state offer eye care services/treatment of primary eye care conditions. On the contrary, 71.5% do not offer these services. Eye care services/treatment of primary eye conditions were found higher in private-for-profit-owned health facilities (28.8%), and lower across government/public-owned health facilities (26.8%) (see Figure 39).

Ifako-ljaye LGA had the highest number of health facilities that offer eye care services/treatment of primary eye conditions at 48.2%. However, the general outlook on the number of HFs across LGAs offering eye care services/treatment of primary eye conditions reveals that this service is notably lacking in all LGAs. The situation is grave in Apapa LGA, where only 6.3% of health facilities across the LGA offer eye care services/ treatment of primary eye conditions (see Figure 40).

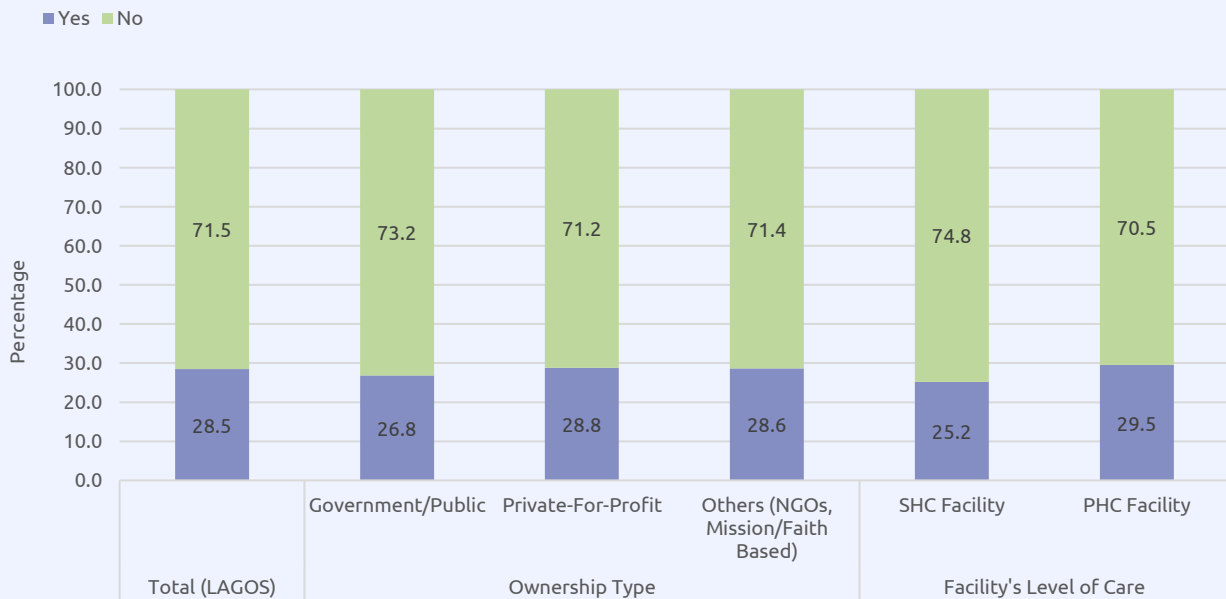


Figure 38: Percentage of Facilities Offering Eye Care Services/Treatment of Primary Eye Conditions

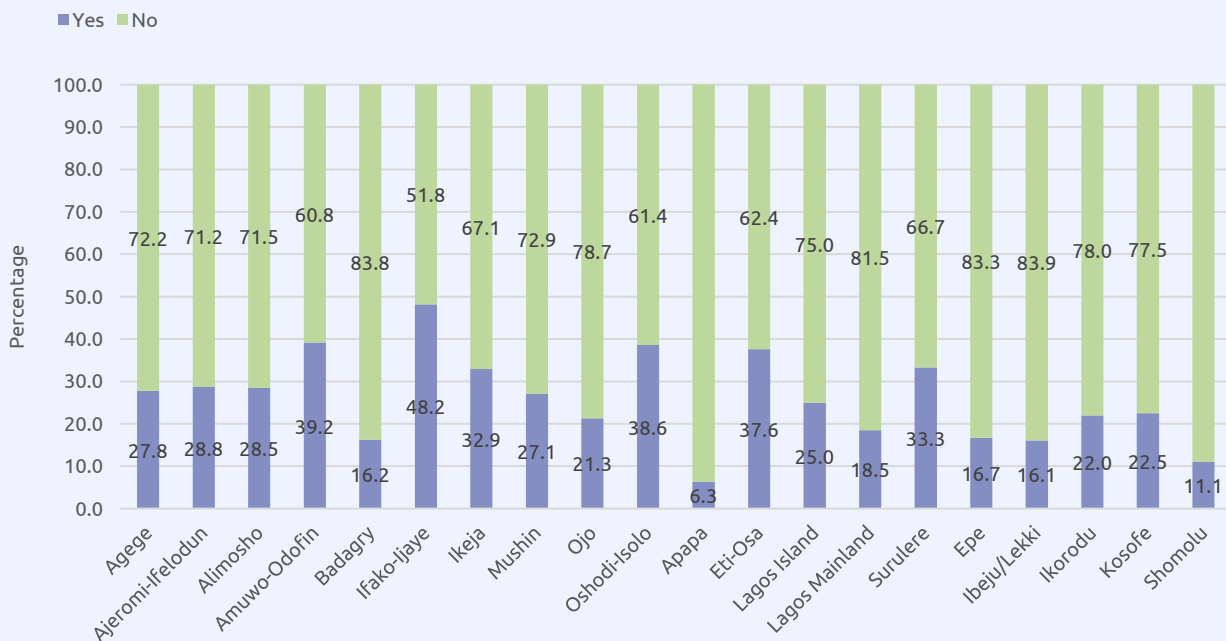


Figure 39: Percentage of Facilities Offering Eye Care Services/Treatment of Primary Eye Conditions (by LGAs)

## Proportion of Facilities Offering Eye Care Services/Treatment of Primary Eye Conditions

The assessment shows that 98.3% of health facilities across Lagos State offer conjunctivitis and other simple eye infection treatments, while 76% offer simple contusions or abrasions not affecting the cornea, and 48.9% offer optical services (glasses). All government/ public and NGO/Mission/FBO-owned health facilities offer conjunctivitis and other simple eye infection treatments.

Table 24: Percentage of Facilities Offering Eye Care Services/Treatment of Primary Eye Conditions

	Total (LAGOS)	Facility Ownership Type			Facility's Level of Care	
		Government/ Public	Private-For-Profit	Others (NGOs, Mission/Faith-Based)	SHC Facility	PHC Facility
Conjunctivitis and other simple eye infection treatments	98.3	100.0	98.0	100.0	98.7	98.2
Simple contusions or abrasions not affecting the cornea	76.0	80.8	75.3	66.7	82.1	74.2
Optical services (Glasses)	48.9	44.2	49.3	66.7	79.5	40.5

## Primary Emergency care

### Percentage of Facilities Offering Primary Emergency Services

Altogether, 64% of HF in the state offer primary emergency services, and 36 % do not offer these services. Analysis based on facility ownership type shows that more NGO/Mission/FBO-owned facilities offer 76.2% primary emergency services compared to other ownership types.

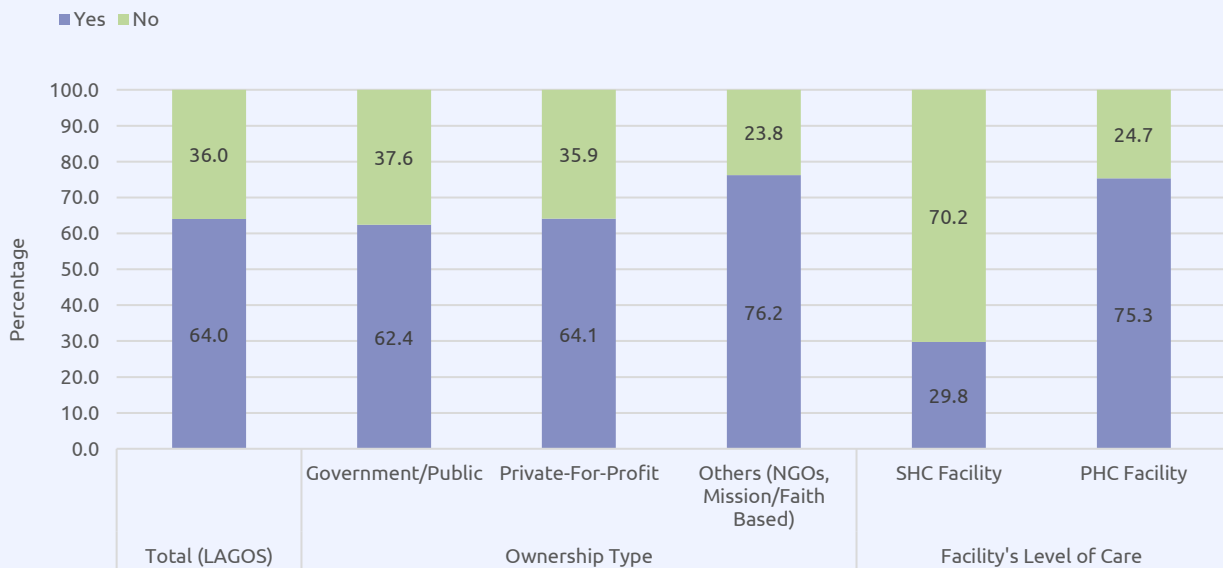


Figure 40: Percentage of Facilities Offering Emergency Services

### Proportion of Facilities Offering Emergency Services

Regarding the specific primary emergency services offered in HF across the state, it was found out that 95.4% of health facilities in the state offer control of bleeding services, 93.4% offer IV line establishment services, 88.1% offer primary emergency services in the management of convulsions and comas, 79.9% offer cardio-pulmonary resuscitation services, and 71.6% offer primary emergency services on the immobilization of fractures.

NGO/Mission/FBO-owned HF offers 100% establishment of IV line service with the highest proportion prevalent across the ownership type assessment (see Table 25).

Table 25: Proportion of Facilities Offering Emergency Services

	Total (LAGOS)	Facility's Ownership Type			Facility's Level of Care	
		Government/ Public	Private-For-Profit	Others (NGOs, Mission/Faith-Based)	SHC Facility	PHC Facility
Control of bleeding	95.4	96.7	95.2	93.8	82.6	97.1
Establishment of an IV line	93.4	78.5	96.0	100.0	87.0	94.2
Management of convulsions and comas	88.1	90.1	87.7	87.5	77.2	89.5
Cardio-Pulmonary resuscitation	79.9	60.3	83.5	75.0	78.3	80.1
Immobilization of fractures	71.6	44.6	76.5	75.0	72.8	71.5

### Diagnosics Services

Conduct of Diagnostic Testing, Offering of Blood Transfusion Services and Service Level Agreement with HEFAMAA Accredited Centre

The Assessment of health facilities revealed that 58.6% of health facilities conduct diagnostics testing, including rapid diagnostic testing. 53.9% have SLAs with HEFAMAAA accredited diagnostic centres, and 51.8% offer blood transfusion services. Blood transfusion services were found deficient in government/ public-owned health facilities at 5.7%. Also, Service Level Agreement (SLAs) with HEFAMAA accredited centres were found lowest in government/public-owned health facilities at 23.7%.

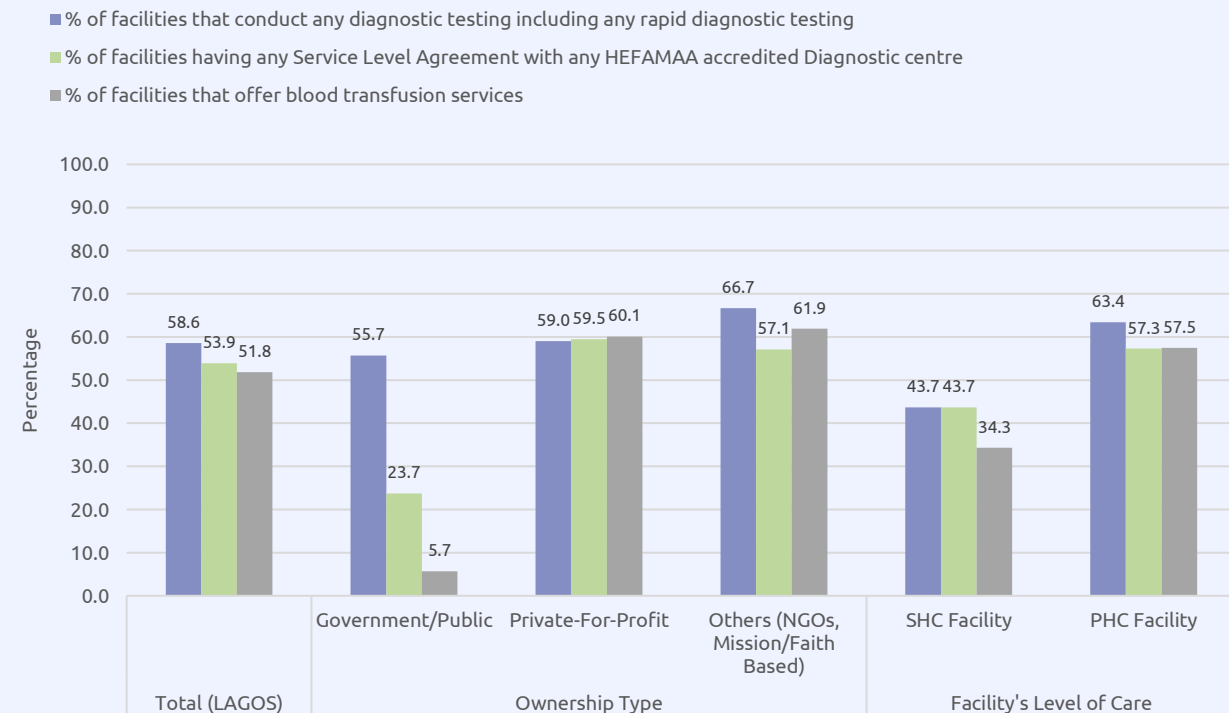


Figure 41: Percentage of Facilities that Conduct Diagnostic Testing, Offering of Blood Transfusion Services, and Service Level Agreement with HEFAMAA Accredited Centres

## Sources of Blood/Blood Products

The primary source of blood products across health facilities is HEFAMAA accredited diagnostic centres (52.8%). Other sources are State Transfusion Services (31.5%), Private Transfusion Services (23.2%), and Donors (0.9%).

Table 26: Sources of Blood/Blood Products

	Total (LAGOS)	Facility Ownership Type			Facility's Level of Care	
		Government/Public	Private-For-Profit	Others (NGOs, Mission/Faith-Based)	SHC Facility	PHC Facility
HEFAMAA Accredited Diagnostic Centres	52.8	63.6	52.4	61.5	55.7	52.2
State Transfusion Services	31.5	27.3	31.8	23.1	32.1	31.4
Private Transfusion Services	23.2	9.1	23.3	30.8	15.1	24.8
Donors	0.9	0.0	1.0	0.0	4.7	0.2

## Percentage of Facilities that Offer On-Site Tests

The health facilities' assessment of the type of on-site test offered across health facilities in Lagos State shows that 67.8% offer on-site HIV testing, blood grouping and cross-matching (47.8%), urinalysis (46.3%), urine rapid test for pregnancy (45.5%), haemoglobin testing (41.6%), urine microscopy (40.4%), stool microscopy (39.1%), blood microscopy (37%), and Dry Blood Spot (DBS) collection for HIV viral load EID.

Table 27: Percentage of Facilities that Offer On-site Tests

	Total (LAGOS)	Facility Ownership Type			Facility's Level of Care	
		Government/Public	Private-For-Profit	Others (NGOs, Mission/Faith-Based)	SHC Facility	PHC Facility
HIV testing	67.8	62.9	68.7	71.4	63.1	69.5
Blood grouping and cross matching	47.8	32.0	50.4	61.9	48.9	47.5
Urinalysis	46.3	49.0	45.4	61.9	53.4	44.0
Urine rapid tests for pregnancy	45.5	48.5	44.6	61.9	52.4	43.2
Haemoglobin testing	41.6	42.8	41.1	57.1	47.6	39.7
Urine microscopy	40.4	37.1	40.6	61.9	54.0	36.0
Stool microscopy	39.1	33.5	39.8	57.1	53.4	34.5
Blood microscopy	37.0	33.5	37.5	47.6	52.4	32.0
Dry Blood Spot (DBS) collection for HIV viral load or EID	20.2	21.1	19.9	28.6	17.5	21.1



## Availability of Medical Supplies and Commodities

The overall assessment on the availability of medical supplies and commodities was 53.8%, as reported in the chart below. Government-owned facilities have the highest percentage (84%) of available medical supplies and commodities, while private for-profit-owned facilities have the lowest percentage with 47.7%. However, primary health facilities in the state were recorded to have the highest percentage (64.2%) of level of care.

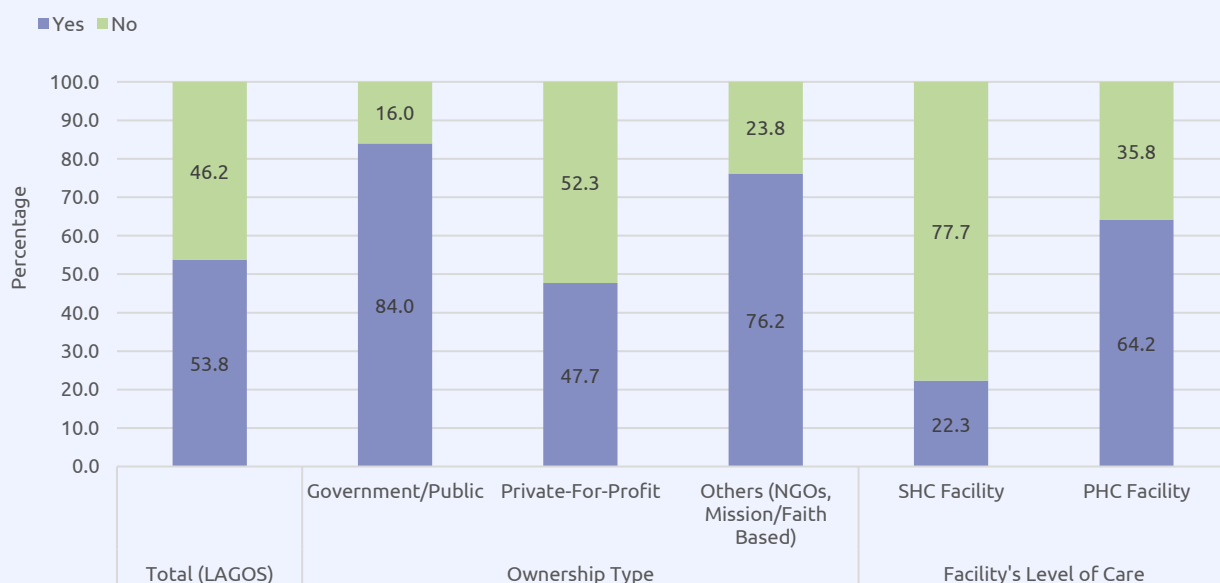


Figure 42: Percentage of Facilities that Stock Medicines, Vaccines, or Contraceptive Commodities

## Available Medicines

### Percentage of Available Medicines

The overall top three medicines found available in all HFs were antibiotics at 96%, antimalarial at 93.2%, and oral rehydration salts at 92%.

Concerning the availability of medicines across government/ public-owned health facilities, results revealed that medicines were readily available in government-owned HFs, except for anti-retroviral, which were only available in 27.6% of government/public-owned HFs across the state. However, vaccines, oral contraceptives, and family planning commodities were the most readily available medicines/commodities at 96.9% in government/public-owned HFs.

The top three medicines and commodities readily available in private for-profit health facilities were antibiotics at 97.2%, antimalarial at 96.4%, and emergency drugs and commodities at 93.8%.

In NGO/FBO/Mission-owned HFs across the state, antibiotics and antimalarial at 93.8% were the most readily available medicines/commodities, followed by oral rehydrating salts at 87.5% which were readily available in NGO/FBO/ Mission-owned HFs across the state.

Assessment of the availability of medicines and commodities based on facility level of care revealed that secondary health centres had 97.17% of antibiotics, while primary health centres had 95.9%. Also, primary health centre had 94.1% of antimalarial, while secondary health centres had 85.5%. Primary health centres had 93.1% of oral rehydration salts availability compared to secondary health centres with 82.6% (see Table 28). Assessment of available medicines by LGAs revealed that Ikeja, Mushin, Kosofe, and Shomolu LGAs had 100% antibiotics availability respectively, while Lagos Mainland had the least (80%). Also, Agege and Shomolu LGAs had 100% antimalarial medicines available, while Epe LGA had the least (77.8%). However, Oshodi-Isolo and Shomolu LGAs had a 100% availability of oral rehydration salt, while Lagos mainland had 73.3%, which is the least across the LGAs. Similarly, Oshodi-Isolo, Epe, and Shomolu LGAs had a 100% availability of emergency drugs and commodities, while Lagos Mainland had 73.3%. Also, Epe LGA had a 100% availability of anti-hypertensive drugs, while Agege LGA had the least (72.2%). Badagry LGA had 93.6% availability of family planning commodities.

In addition, Mushin LGA had the least availability of injectables (70.8%), while Badagry LGA had the highest (92.6%) (see Table 29).

Local government areas level of care results on the availability of medicines show that medicines were more available in HFs located under Apapa LGA at 81.3%, Epe LGA at 75%, and Ajeromi-Ifelodun at 73.1% (see Figure 43).

Table 28: Percentage of Available Medicines

	Total (LAGOS)	Facility Ownership Type			Facility's Level of Care	
		Government/ Public	Private-For- Profit	Others (NGOs, Mission/Faith- Based)	SHC Facility	PHC Facility
Antibiotics	96.0	92.6	97.2	93.8	97.1	95.9
Antimalarials	93.2	83.4	96.4	93.8	85.5	94.1
Oral rehydration salts	92.0	94.5	91.3	87.5	82.6	93.1
Emergency drugs and commodities, IV fluids, Epinephrine, Hydrocortisone, Oxytocin etc)	90.1	80.4	93.8	75.0	85.5	90.6
Anti-Hypertensives	89.1	78.5	93.0	75.0	82.6	89.8
Family planning commodities	86.1	96.9	84.3	31.3	72.5	87.6
Injectables	82.7	94.5	80.5	31.3	71.0	84.0
Oral contraceptives	81.1	96.9	77.5	31.3	65.2	82.9
Anti-Diabetic drugs	79.9	54.6	88.5	68.8	79.7	79.9
Intra Uterine Devices	76.6	85.9	75.3	25.0	63.8	78.1
Implants	75.1	92.0	71.2	25.0	60.9	76.8
Condoms	73.2	96.3	67.6	12.5	62.3	74.5
Vaccines	57.4	96.9	45.5	25.0	50.7	58.2
TB Medicines	56.7	81.6	49.3	31.3	44.9	58.0
Antiretrovirals	23.8	27.6	22.3	31.3	24.6	23.7

Table 29: Percentage of Facilities having Specific Medicines Available (by LGAs)

	Agege	Ajeromi- Ifelodun	Alimosho	Amuwo-Odofin	Badagry	Ifako-Ijaye	Ikeja	Mushin	Ojo	Oshodi-Isolo	Apapa	Eti-Osa	Lagos Island	Lagos Mainland	Surulere	Epe	Ibeju/Lekki	Ikorodu	Kosofe	Shomolu
Antibiotics	83.3	94.7	98.3	96.7	92.6	94.4	100.0	100.0	92.1	97.2	92.3	97.7	92.9	80.0	98.4	100.0	94.7	94.7	100.0	100.0
Antimalarials	100.0	94.7	99.1	86.7	81.5	91.7	89.3	95.8	94.7	94.4	84.6	90.9	92.9	86.7	93.8	77.8	89.5	91.2	97.1	100.0
Oral rehydration salts	94.4	84.2	97.4	93.3	88.9	80.6	96.4	87.5	97.4	91.7	100.0	95.5	92.9	73.3	90.6	88.9	89.5	93.0	94.3	85.7
Emergency drugs and commodities, IV fluids, Epinephrine, Hydrocortisone, Oxytocin etc)	83.3	97.4	92.3	86.7	92.6	91.7	89.3	83.3	81.6	100.0	84.6	88.6	85.7	73.3	89.1	100.0	84.2	87.7	97.1	100.0
Anti-Hypertensives	72.2	97.4	94.0	86.7	81.5	88.9	89.3	91.7	76.3	88.9	84.6	81.8	78.6	73.3	90.6	100.0	94.7	93.0	97.1	92.9
Family planning commodities	88.9	86.8	92.3	80.0	92.6	91.7	78.6	70.8	94.7	91.7	76.9	81.8	78.6	80.0	76.6	88.9	89.5	91.2	80.0	85.7
Injectables	83.3	86.8	90.6	76.7	92.6	86.1	78.6	70.8	92.1	91.7	69.2	75.0	71.4	80.0	68.8	88.9	84.2	84.2	77.1	85.7
Oral contraceptives	88.9	84.2	87.2	80.0	88.9	86.1	78.6	66.7	84.2	91.7	69.2	72.7	71.4	80.0	68.8	88.9	84.2	87.7	68.6	78.6
Anti-diabetic drugs	72.2	89.5	85.5	83.3	59.3	77.8	64.3	91.7	65.8	83.3	69.2	75.0	71.4	73.3	84.4	66.7	73.7	84.2	88.6	92.9
Intra-uterine devices	77.8	84.2	86.3	73.3	77.8	80.6	75.0	70.8	84.2	86.1	61.5	68.2	64.3	60.0	67.2	66.7	73.7	75.4	68.6	85.7
Implants	72.2	84.2	83.8	70.0	77.8	77.8	75.0	70.8	81.6	86.1	69.2	65.9	64.3	73.3	56.3	55.6	73.7	82.5	68.6	78.6

Condoms	83.3	78.9	81.2	66.7	88.9	77.8	67.9	58.3	76.3	75.0	69.2	63.6	64.3	80.0	59.4	88.9	68.4	82.5	60.0	64.3
Vaccines	61.1	65.8	59.8	60.0	51.9	47.2	57.1	58.3	65.8	69.4	76.9	70.5	28.6	53.3	40.6	88.9	68.4	43.9	60.0	50.0
TB medicines	72.2	71.1	73.5	53.3	48.1	58.3	46.4	54.2	68.4	66.7	69.2	40.9	50.0	53.3	35.9	33.3	47.4	50.9	51.4	50.0
Antiretrovirals	38.9	39.5	24.8	26.7	18.5	25.0	21.4	16.7	10.5	36.1	30.8	27.3	0.0	13.3	28.1	44.4	21.1	10.5	28.6	7.1

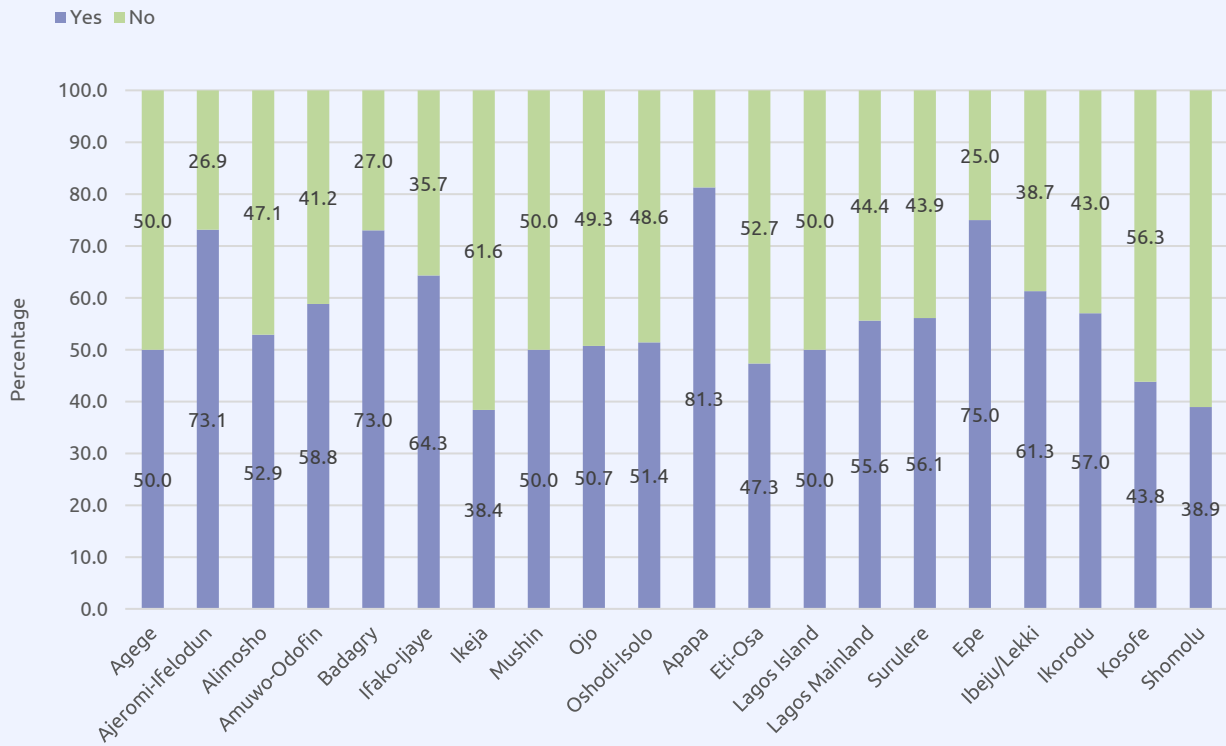


Figure 43: Percentage of Facilities having Medicines Available (by LGAs)

## Supply Chain

### Principal Persons Responsible for Managing the Ordering of Medical Supplies at the Facilities

Of the persons responsible for ordering medical supplies at health facilities, medical doctors make up 35.2%, pharmacists make up 18.5%, while pharmacy technicians make up 15.7%. These cadres of health workers are the top three principal persons responsible for ordering medical supplies at the facilities. At private-for-profit health facilities, up to 44.7% of medical doctors are the primary health workers responsible for ordering medical supplies.

Table 30: Principal Persons Responsible for Managing the Ordering of Medical Supplies at the Facilities

	Total (LAGOS)	Facility Ownership Type			Facility's Level of Care	
		Government/ Public	Private-For-Profit	Others (NGOs, Mission/Faith Based)	SHC Facility	PHC Facility
Medical Directors	35.2	6.7	44.7	31.3	42.0	34.4
Pharmacists	18.5	37.4	12.3	18.8	21.7	18.1
Pharmacy Technicians	15.7	32.5	10.3	12.5	17.4	15.5
Nurses	14.6	8.0	16.7	18.8	21.7	13.8
Owners	9.2	9.2	9.5	0.0	4.3	9.7
Clinical Officers	3.7	0.6	4.8	0.0	4.3	3.6
Pharmacy Assistants	3.1	3.7	3.0	0.0	4.3	3.0
Environmental Technicians / Health Officers	3.0	0.6	3.8	0.0	0.0	3.3
Admin. Managers/ Officers	2.7	0.0	3.2	12.5	2.9	2.6
Procurement / Record Officers	1.8	0.0	2.2	6.3	0.0	2.0
CHEWs	1.2	3.1	0.6	0.0	0.0	1.3

## Mechanisms Used to Determine Facilities' Resupply Quantities (by LGAs)

Assessment of facilities' resupply quantities (by LGAs) revealed that Lagos mainland LGA had the highest (73.3%) pull distribution system in Lagos State, while Epe LGA had the least (11.1%).

On the other hand, Epe LGA had the highest push distribution of 88.9%, while Ajeromi-Ifelodun had the least at 15.8%. Lagos Island had the highest restock, demand, and supply rate, while Epe LGA had a 100% push distribution across all the LGAs.

Table 31: Mechanisms Used to Determine Facilities' Resupply Quantities (by LGAs)

	Agege	Ajeromi-Ifelodun	Alimosho	Amuwo-Odofin	Badagry	Ifako-Ijaye	Ikeja	Mushin	Ojo	Oshodi-Isolo	Apapa	Eti-Osa	Lagos Island	Lagos Mainland	Surulere	Epe	Ibeju/Lekki	Ikorodu	Kosofe	Shomolu
<b>The facility itself (pull distribution system)</b>																				
Yes	44.4	71.1	55.6	60.0	51.9	58.3	60.7	70.8	65.8	44.4	69.2	63.6	50.0	73.3	57.8	11.1	36.8	68.4	65.7	21.4
No	38.9	18.4	31.6	20.0	44.4	27.8	28.6	16.7	21.1	36.1	23.1	20.5	42.9	13.3	29.7	88.9	52.6	22.8	28.6	64.3
Don't know	16.7	10.5	12.8	20.0	3.7	13.9	10.7	12.5	13.2	19.4	7.7	15.9	7.1	13.3	12.5	0.0	10.5	8.8	5.7	14.3
<b>A higher level facility (push distribution system)</b>																				
Yes	22.2	15.8	41.0	33.3	44.4	30.6	25.0	45.8	23.7	22.2	61.5	22.7	35.7	33.3	26.6	88.9	42.1	26.3	42.9	42.9
No	61.1	76.3	45.3	46.7	51.9	58.3	64.3	41.7	68.4	55.6	38.5	59.1	57.1	53.3	60.9	11.1	47.4	59.6	48.6	42.9
Don't know	16.7	7.9	13.7	20.0	3.7	11.1	10.7	12.5	7.9	22.2	0.0	18.2	7.1	13.3	12.5	0.0	10.5	14.0	8.6	14.3
<b>By taking stock, demand and supply rate</b>																				
Yes	22.2	10.5	12.8	16.7	11.1	8.3	3.6	16.7	13.2	8.3	15.4	13.6	28.6	26.7	7.8	0.0	5.3	17.5	11.4	14.3
No	55.6	60.5	60.7	50.0	77.8	66.7	78.6	66.7	60.5	63.9	84.6	54.5	64.3	46.7	68.8	100.0	73.7	63.2	65.7	71.4
Don't know	22.2	28.9	26.5	33.3	11.1	25.0	17.9	16.7	26.3	27.8	0.0	31.8	7.1	26.7	23.4	0.0	21.1	19.3	22.9	14.3

## How Facilities' Resupply Quantities are Determined

Health facilities determine their resupply of quantities majorly (75.4%) by formula (any calculation, for example, reorder level) and 8.6% by other means (out of stock, based on need, and demand). Also, other means (out of stock, based on need and demand) had the highest formula (81.3%), compared to public facilities which had the least.

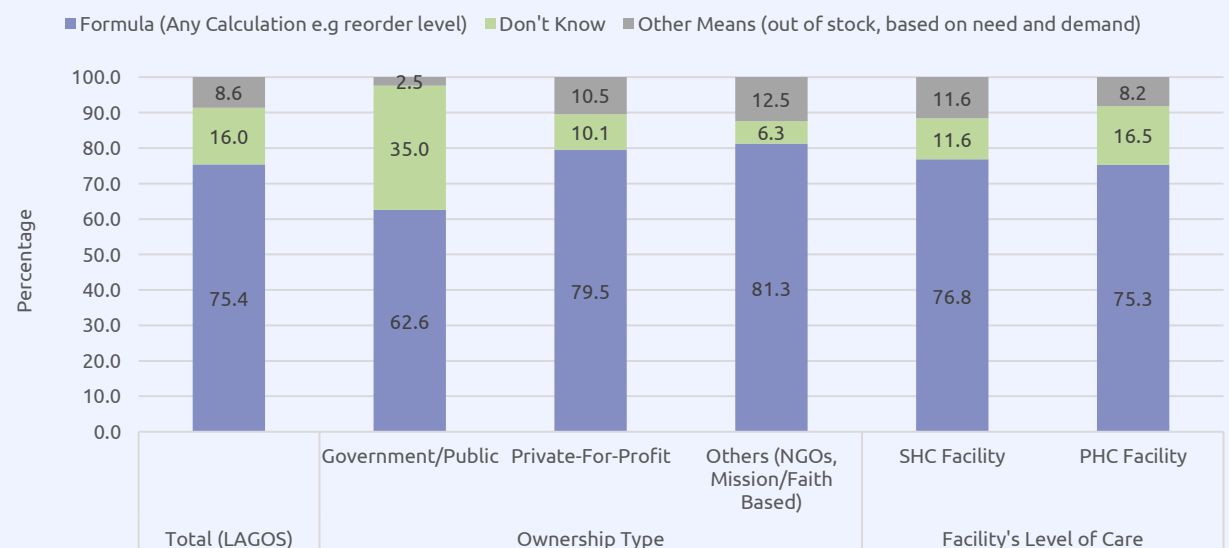


Figure 44: How Facilities' Resupply Quantities are Determined

## Direct Suppliers of Routine Pharmaceutical Commodity Supplies to Facilities

Assessment on the direct supply of routine pharmaceutical commodity supplies to the facilities revealed that the highest suppliers (33%) are nearby pharmacists, while 32.8% are drug distributors/suppliers, and chain managers. Also, 22.6% are state/central medical store agents, and 6.1% are the open market sellers. 2.7% of the direct suppliers are primary health centres, 1.8% are accredited pharmacies, and 0.3% are NGOs/donors.

Table 32: Direct Suppliers of Routine Pharmaceutical Commodity Supplies to facilities

	Total (LAGOS)	Facility Ownership Type			Facility's Level of Care	
		Government/ Public	Private-For-Profit	Others (NGOs, Mission/Faith Based)	SHC Facility	PHC Facility
Nearby Pharmacies	33.0	4.3	42.5	31.3	27.5	33.6
Drug Distributors/ Supply Chain Managers	32.8	4.3	41.6	50.0	59.4	29.8
State/Central Medical Stores	22.6	75.5	5.6	12.5	8.7	24.2
Open Market	6.1	0.0	8.0	6.3	2.9	6.4
PHCs	2.7	9.2	0.6	0.0	0.0	3.0
Accredited Pharmacies	1.8	5.5	0.6	0.0	0.0	2.0
NGOs/Donors	0.3	0.0	0.4	0.0	0.0	0.3
Don't know	0.7	1.2	0.6	0.0	1.4	0.7

## How Pharmaceutical Commodity supplies from the Main Suppliers are Delivered to Facilities (by LGAs)

Assessment on how pharmaceutical commodity supplies from the leading suppliers are delivered to the facilities (by LGAs), revealed that in Ikeja LGA, 71.4% of the suppliers deliver to health facilities, while in Epe LGA, 22.2% of suppliers deliver to facilities.

However, 77% of health facilities in Epe LGA arrange for their delivery, while Ikeja had the least direct supplies. Lagos Mainland (13.3%) had the highest third party pick up/delivery, while Agege, Badagry, Ikeja, Mushin, Oshodi-Isolo, Apapa, Eti-Osa, Surulere, Epe, and Shomolu had none. Additionally, Mushin LGA had 12.5% of the highest facilities that pick up supplies, while Agege, Ifako-Ijaye, Apapa, Lagos Island, Lagos mainland, Epe, Ibeju-Lekki, and Shomolu LGAs had none.

Table 33: How Pharmaceutical Commodity supplies from the Leading Suppliers are Delivered to Facilities (by LGAs)

	Agege	Ajeromi-Ifelodun	Alimosho	Amuwo-Odofin	Badagry	Ifako-Ijaye	Ikeja	Mushin	Ojo	Oshodi-Isolo	Apapa	Eti-Osa	Lagos Island	Lagos Mainland	Surulere	Epe	Ibeju/Lekki	Ikorodu	Kosofe	Shomolu
Suppliers who deliver to facilities	50.0	60.5	48.7	53.3	51.9	41.7	71.4	54.2	50.0	55.6	38.5	63.6	64.3	60.0	57.8	22.2	52.6	40.4	54.3	50.0
Facilities that arrange for their own delivery	50.0	28.9	47.0	36.7	40.7	52.8	21.4	33.3	44.7	38.9	61.5	31.8	35.7	26.7	39.1	77.8	36.8	49.1	40.0	50.0
Third party pick ups/delivery	0.0	7.9	2.6	6.7	0.0	2.8	0.0	0.0	2.6	0.0	0.0	0.0	0.0	13.3	0.0	0.0	5.3	5.3	2.9	0.0
Facilities which arrange to pick up themselves	0.0	2.6	1.7	3.3	7.4	0.0	3.6	12.5	2.6	5.6	0.0	2.3	0.0	0.0	1.6	0.0	0.0	5.3	2.9	0.0
Don't know	0.0	0.0	0.0	0.0	0.0	2.8	3.6	0.0	0.0	0.0	0.0	2.3	0.0	0.0	1.6	0.0	5.3	0.0	0.0	0.0

How long it takes between the Ordering and Receiving of Pharmaceutical Commodity supplies (by LGAs)

Assessments on how long it takes between the ordering and receiving of pharmaceutical commodities (by LGAs) revealed that Amuwo-Odofin LGA had 100% delivery in less than two weeks, while Epe LGA had 55.6% (the least). Also, Epe LGA had 44.4% delivery between two weeks and one month, while Amuwo-Odofin and Kosofe had 0%, respectively.

Kosofe LGA had 2.9% delivery between one and two months, while Kosofe had 0.9% (the least). Also, Ojo LGA had 2.6% delivery in more than two months, while Alimosho LGA had the least delivery (0.9%).

Table 34: How long it takes between the Ordering and Receiving of Pharmaceutical Commodity Supplies (by LGAs)

	Agege	Ajeromi-Ifelodun	Alimosho	Amuwo-Odofin	Badagry	Ifako-Ijaye	Ikeja	Mushin	Ojo	Oshodi-Isolo	Apapa	Eti-Osa	Lagos Island	Lagos Mainland	Surulere	Epe	Ibeju/Lekki	Ikorodu	Kosofe	Shomolu
Less Than 2 Weeks	77.8	94.7	88.0	100.0	81.5	75.0	71.4	87.5	86.8	91.7	76.9	90.9	92.9	86.7	84.4	55.6	78.9	84.2	97.1	78.6
2 Weeks To 1 Month	16.7	5.3	9.4	0.0	14.8	19.4	17.9	12.5	5.3	2.8	23.1	2.3	7.1	13.3	9.4	44.4	15.8	12.3	0.0	21.4
Between 1 And 2 Months	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	2.6	2.8	0.0	2.3	0.0	0.0	0.0	0.0	0.0	1.8	2.9	0.0
More Than 2 Months	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.3	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0
Don't know	5.6	0.0	0.9	0.0	3.7	5.6	10.7	0.0	2.6	2.8	0.0	2.3	0.0	0.0	4.7	0.0	5.3	1.8	0.0	0.0

## Health Insurance Coverage

### Average Number of Patients, Outpatients and Inpatients that Visited Facilities a Month prior to the survey

The average number of patients who visited health facilities across the state a month before the survey was 168. Also, the average number of outpatients who attended health facilities the month before the survey was 150, and the average number of inpatients who visited was 35. In total, the average number of outpatients and inpatients that visited health facilities across the state a month before the survey was notably higher in government/public owned-health facilities with 253 and 252, respectively.

Table 35: Average Number of Patients, Outpatients, and Inpatients that Visited the Facilities a Month Prior to the Survey

	Total (LAGOS)	Facility Ownership Type			Facilities' Level of Care	
		Government/Public	Private-For-Profit	Others (NGOs, Mission/Faith-Based)	SHC Facility	PHC Facility
Average number of patients that visited facilities a month before the survey	168	253	150	132	165	169
Average number of outpatients that visited facilities a month before the survey	150	252	129	109	152	150
Average number of inpatients that visited facilities a month before the survey	35	12	37	29	49	34

### Percentage of Facilities Currently Providing Services to Health Insurance Enrollees

Only 34.5% of health facilities across Lagos State currently provide services to health insurance enrollees, and 65.5% do not provide these services. Health insurance services to enrollees are notably lower in government/public-owned facilities, as 91.8% of HF's owned by the government does not provide health insurance services to enrollees.

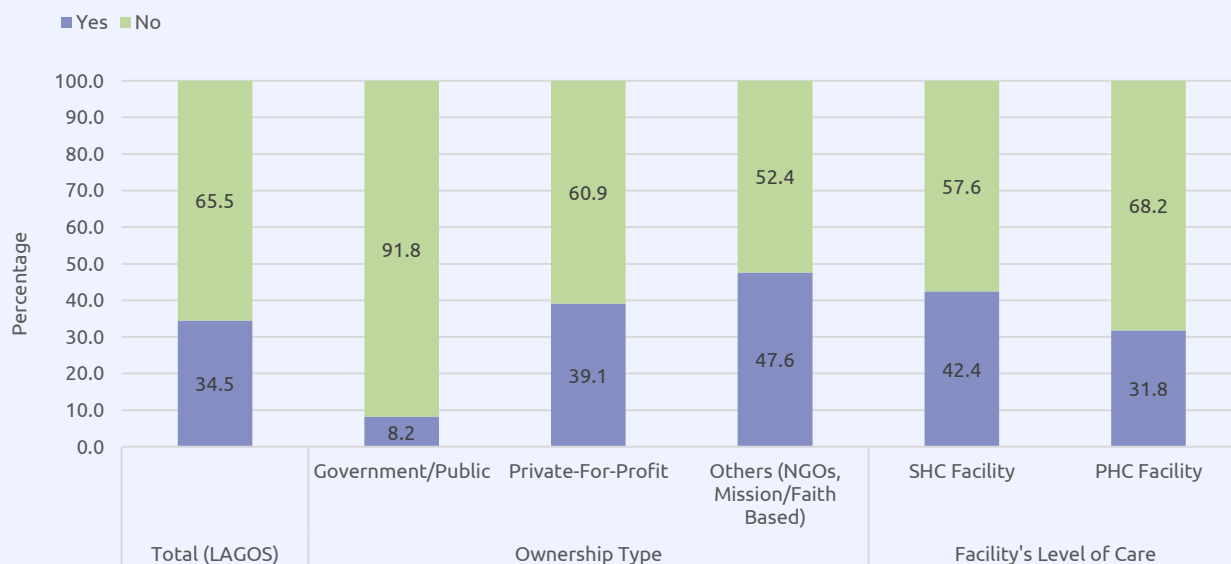


Figure 45: Percentage of Facilities Currently Providing Services to Health Insurance Enrolees

### Average Number of Patients, Outpatients, and Inpatients that Visited Facilities a Month Prior to the Survey (by LGAs)

Assessment on the average number of patients, outpatients, and inpatients that visited health facilities a month prior to the survey revealed that Oshodi-Isolo LGA had (326) the highest number patients who have visited the facilities, followed by Ifako-Ijaye (260 patients). In comparison, Agege LGA had 222 patients who have visited the facilities. However, the LGAs with the least number of patients who visited facilities a month before the survey was Lagos Island and Badagry with 58 and 79, respectively.

Table 36: Average Number of Patients, Outpatients, and inpatients who Visited the Facilities a Month Prior to the Survey (by LGAs)

	Agege	Ajeromi-Ifelodun	Alimosho	Amuwo-Odofin	Badagry	Ifako-Ijaye	Ikeja	Mushin	Ojo	Oshodi-Isolo	Apapa	Eti-Osa	Lagos Island	Lagos Mainland	Surulere	Epe	Ibeju/Lekki	Ikorodu	Kosofe	Shomolu
Average number of patients who visited the facilities a month before the survey	222	160	165	189	79	260	158	200	184	326	160	137	58	123	183	128	144	119	121	118
Average number of outpatients who visited the facilities a month before the survey	211	136	145	179	66	240	152	187	169	281	159	116	55	123	159	125	117	103	112	96
Average number of inpatients who visited the facilities a before the survey	30	32	31	20	26	35	45	35	35	85	4	50	9	14	42	11	52	24	27	38

### Average Number of Patients Covered by Health Insurance and Revenue Generated from the HMOs a month Before the Survey

Assessment on the average number of patients covered by health insurance and revenue generated from HMOs a month before the survey revealed that private for-profit facilities had a total of 117 patients covered by health insurance with an average revenue of #1,602,903 generated, compared to public health facilities with a total of 34 t patients covered by health insurance and an average revenue of #8,940 generated from health insurance.

However, primary health centres have the highest number (132) of patients covered by health insurance, with an average revenue of #1,891,375 generated from health insurance, compared to SHC facilities with 68 patients covered by health insurance, and an average revenue of #672,350 generated from health insurance.

Table 37: Average Number of Patients Covered by Health Insurance and Average Revenue Generated from the HMOs a month Before the Survey

	Total (LAGOS)	Facility Ownership Type			Facilities' Level of Care	
		Government/ Public	Private- For-Profit	Others (NGOs, Mission/Faith-Based)	SHC Facility	PHC Facility
Average number of patients covered by health insurance that visited the facilities as month before the survey	113	34	117	26	68	132
Average revenue generated from health insurance (HMOs) a month before the survey (in Naira)	1,568,098	8,940	1,602,903	85,000	672,350	1,891,375

## Financial Management System

### Financial Management

#### Availability of Staff Responsible for the Financial/Accounting System of Facilities

Assessment of available staff responsible for the financial/ accounting system of facilities revealed that about 60.2% of health workers in Lagos State are responsible for the accounting system of facilities, while 39.8% are not responsible (see Figure 46). Assessment on available staff responsible for the financial/ accounting system of facilities (by LGAs) revealed that Eti-Osa LGA had 81.7% of the highest staff responsible for the financial system of the facility, compared to Epe LGA with 16.7% (see Figure 48).

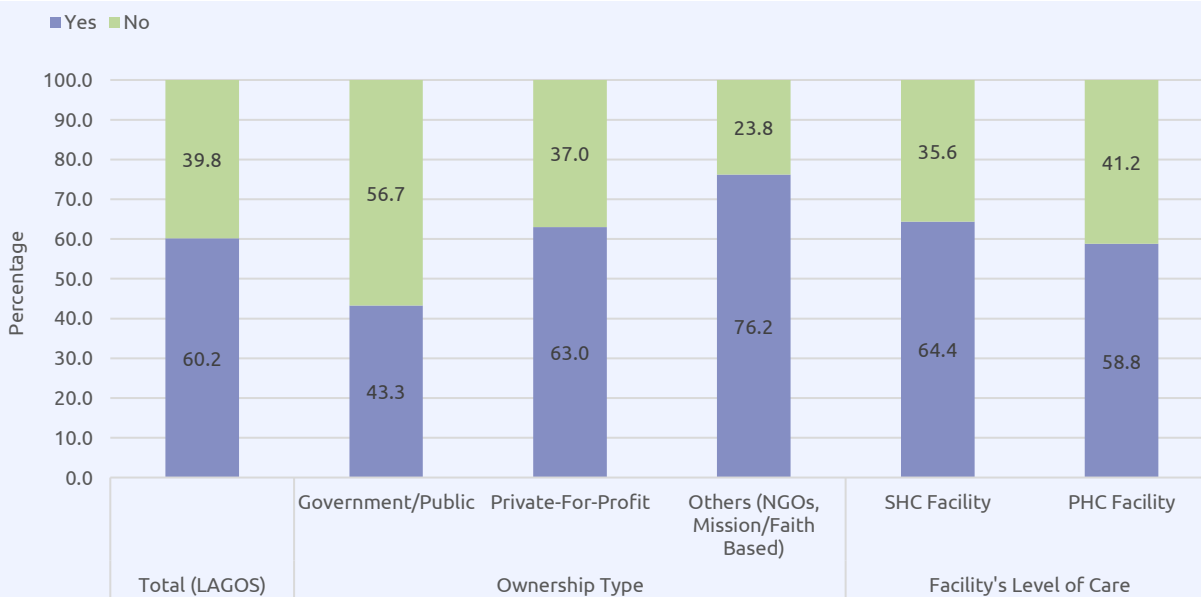


Figure 46: Availability of Staff Responsible for the Financial/Accounting System of Facilities



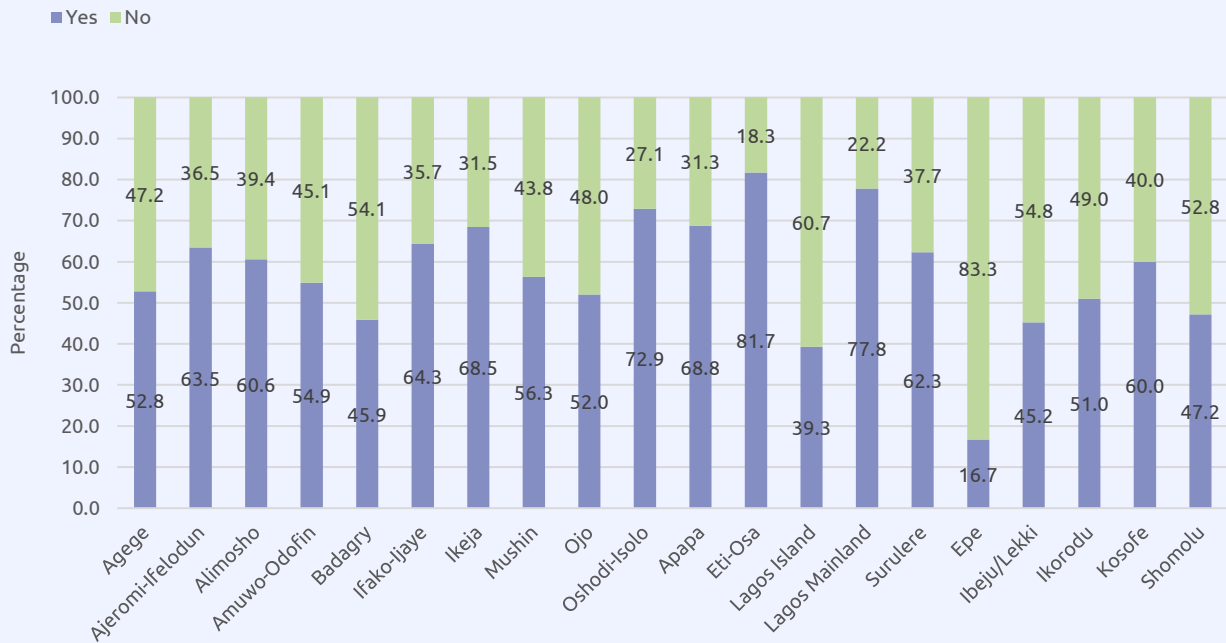


Figure 47: Availability of Staff Responsible for the Financial/Accounting System of Facilities (by LGAs)

### Receipt of Financial Training by any Organization/Partner for the Responsible Staff Involved in the Financial/Accounting System

Assessment on the receipt of financial training by any organization/partner for the responsible staff involved in the financial/accounting system, revealed that 46% of facilities in Lagos State have this receipt. In comparison, 54% do not have the receipt of financial training.

Subsequently, the assessment revealed that 46.2% of private for-profit facilities have received the highest financial training of responsible staff involved in the financial system, and 53.8% have no receipt compared to other NGO/mission/faith-based facilities with 43.8%, which are the least in the category of those who have received financial training and 56.3% having no receipt.

Additionally, there is no significant difference between secondary health centres and primary health centres (level of care) with 46.2% and 46%, respectively. 53.8% OF secondary health facilities according to facility level of care had no receipt of financial training, compared to primary health facilities which have 54% (see Figure 49).

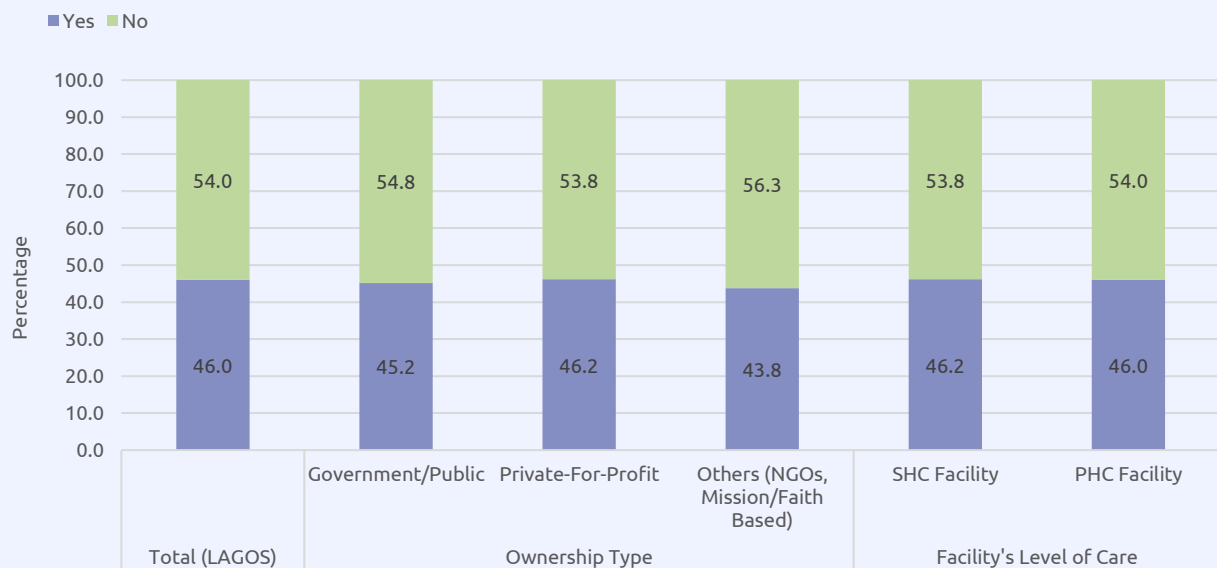


Figure 48: Receipt of Financial Training by any Organization/Partner for the Responsible Staff Involved in the Financial/Accounting System

## Availability of a Dedicated Bank Account for the Facility's Operation

Health facilities in Lagos State were assessed on the availability of a dedicated bank account for their operation; the assessment revealed that about 72.1% of health facilities in Lagos have a dedicated bank account, and while 27.9% do not have.

Furthermore, majority (90.5%) of NGO/Mission/FBO-owned facilities have a dedicated bank account for the facility's operation, while 9.5% have no dedicated bank account, compared to public facilities in which 32% have, and 68% do not have respectively.

Additionally, assessment on facilities based on their level of care revealed that majority of secondary health centres (85.1%) have a dedicated bank account for their facilities' operation, compared to primary health centres with 67.8% (see Figure 50).

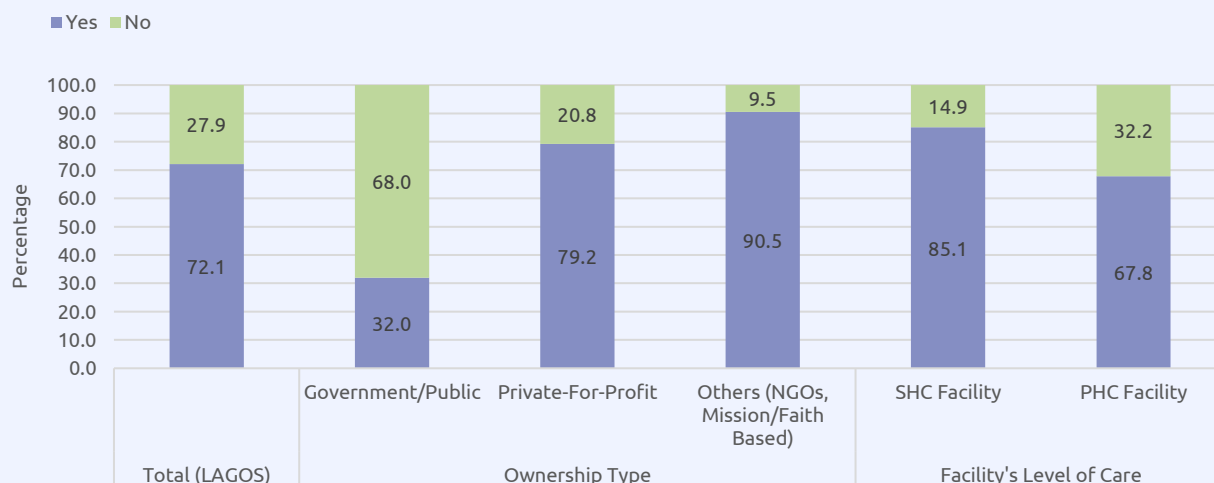


Figure 49: Percentage Availability of a Dedicated Bank Account for Facility's Operation

## Financial Book-keeping

### Financial Management Tools Used by Facilities

Assessment of financial management tools used by facilities revealed that 44.2% use receipt books, while 43.6% do not have any tool. 12.7% use cash books and 9.7% use general ledger/vote books. Similarly, 7.9% use payment vouchers and store records, while 6.1% use the statement of expenditure, and 5.5% use cheque issued/register.

Table 38: Financial Management Tools Used by Facilities

	Lagos	Ownership Type	Facility's Level of Care
		Government/Public	PHC Facility
Receipt books	44.2	44.2	44.2
Does not have any tool	43.6	43.6	43.6
Cash books	12.7	12.7	12.7
General ledger/Vote book	9.7	9.7	9.7
Payment voucher	7.9	7.9	7.9
Stores records	7.9	7.9	7.9
Statement of expenditure	6.1	6.1	6.1
Cheque issued/register	5.5	5.5	5.5
Do not know/None	1.8	1.8	1.8

### Submission of Financial Report for the Quarter Prior to the Survey

Assessment on the submission of financial reports for the quarter prior to the survey revealed that 34.3% of facilities in Lagos State submitted their report for the quarter prior to the survey, while 65.7% did not submit. Also, analysis on ownership type revealed that 38.1% of NGO/Mission/FBO-owned facilities submitted a financial report for the quarter prior to survey, while 61.9% did not submit and 33.7% of private-for-profit submitted. Additionally, analysis on facilities' level of care revealed that 34.7% of primary health centres submitted a financial report, and 65.3% did not submit, compared to 33.3% of secondary health centres that submitted, and 66.7% that did not submit (see Figure 51).

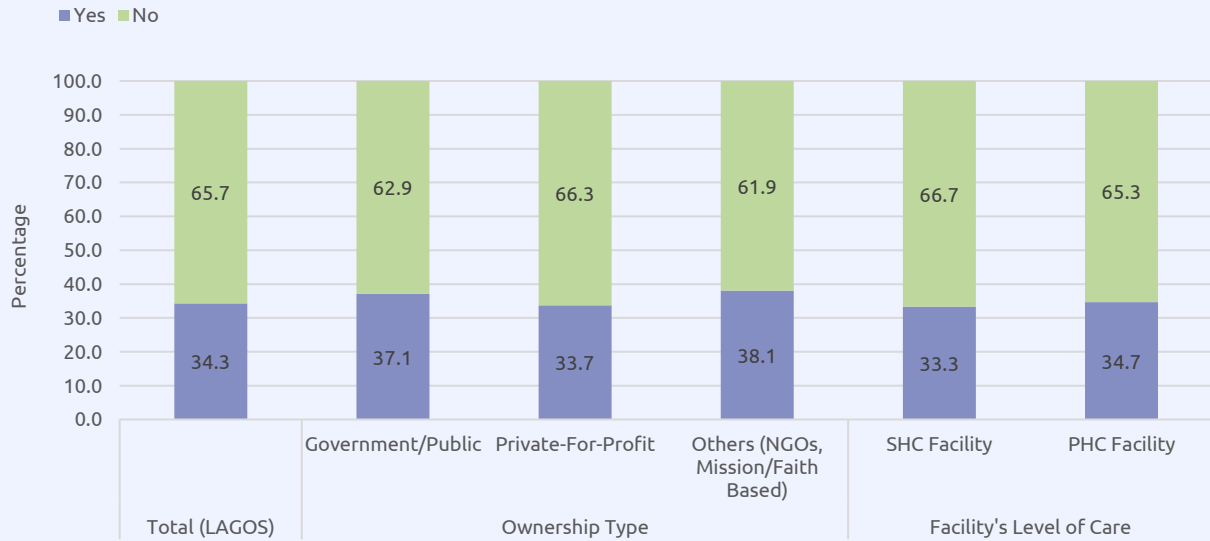


Figure 50: Submission of a Financial Report for the Quarter Prior to the Survey

### Availability of Monthly Financial Report (Income and Expenditure Books) by LGAs

Health facilities assessed on the availability of monthly financial reports (income and expenditure books) by LGAs revealed that 83.3% of the facilities in Epe LGA do not have a monthly financial report, and 16.7% have, compared to 86% of facilities in Eti-Osa LGA which have a monthly financial report.



Figure 51: Percentage Availability of a Monthly Financial Report (Income and Expenditure Books) by LGAs

## Frequency at which Facilities are Visited by a State/LGA/Ward level Accounts Person in the Last Calendar Year

Assessment of health facilities on the frequency at which they were visited by a State/LGA/Ward level person in the last calendar year revealed that 61.5% were never visited by an accounts person, compared to 0.2% that were visited biweekly.

Table 39: Frequency at which Facilities are Visited by a State/LGA/Ward Level Accounts Person in the Last Calendar Year

	Total (LAGOS)	Facility Ownership Type			Facility's Level of Care	
		Government/Public	Private-For-Profit	Others (NGOs, Mission/Faith Based)	SHC Facility	PHC Facility
Weekly	1.0	4.1	0.4	0.0	0.0	1.3
Biweekly (every two weeks)	0.2	0.0	0.3	0.0	0.6	0.1
Monthly	8.6	15.5	7.4	4.8	8.4	8.7
Quarterly	12.3	11.3	12.5	14.3	14.2	11.7
Yearly	11.8	2.6	13.3	23.8	15.9	10.5
Never visited/Not Applicable	61.5	62.9	61.6	47.6	55.3	63.5
Anytime	1.1	1.5	1.1	0.0	1.3	1.1
Don't know	1.0	1.0	0.9	4.8	1.3	0.8
Other time intervals	2.5	1.0	2.7	4.8	2.9	2.3

## Facilities that Share Financial Information with the Facility Management Committee/Ward Development Committee

Assessment of facilities that share financial information with the facility management committee/ward development committee revealed that 79.3% of health facilities in Lagos State do not share financial information with the facility management committee/ward development committee, while 20.7% share.

Additionally, 80.5% of private for-profit facilities do not share financial information with the facility management/ward development committee, and 19.8% share, compared to 74.7% of public facilities that share (see Figure 53).

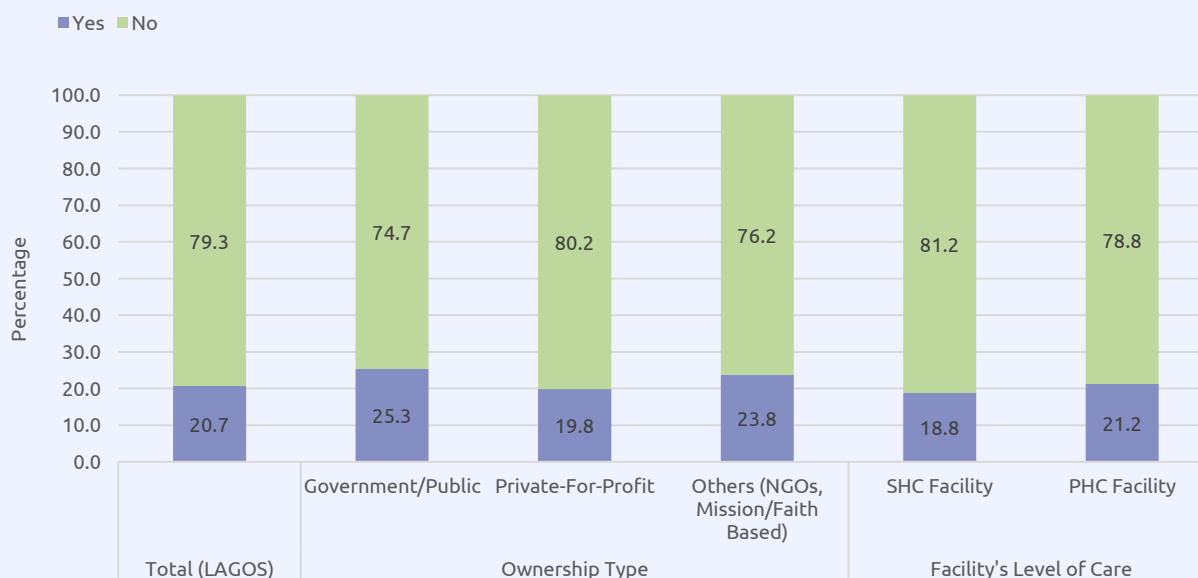


Figure 52: Percentage of Facilities that Share Financial Information with the Facility Management Committee/Ward Development Committee

## How Facilities Share Financial Information (by LGAs)

Assessment on how facilities share financial information (by LGAs) revealed that 100% of facilities in Lagos Island LGA share their financial information verbally during the meeting. 100% of facilities in Epe LGA share their financial information through complex copy reports. 11% (which is the least) of facilities in Amuwo-Odofin LGA share their financial information through electronic reports, compared to Apapa LGA which is 50% (the highest).

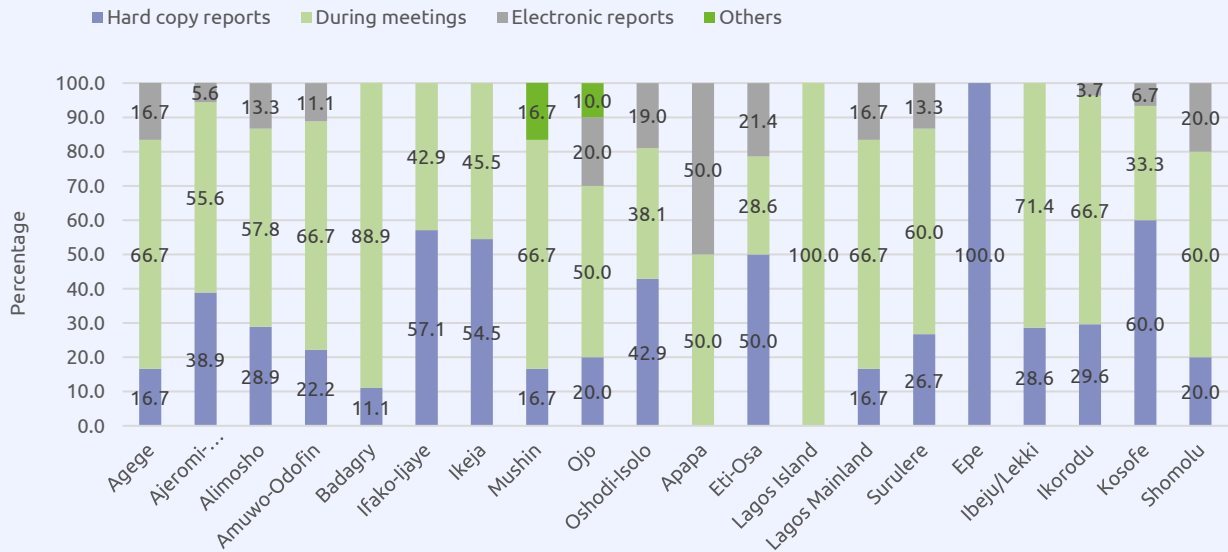


Figure 53: How Facilities Share Financial Information (by LGAs)

## Quality Improvement Plan

### Availability/Development of Quality Improvement Plan

Assessment on the availability/development of quality improvement plan revealed that 67.7% of health facilities in Lagos State have a quality improvement plan, while 32.3% have none. Also, 70.9% of private for-profit health facilities have quality improvement plans compared to NGO/Mission/FBO-owned health facilities which have 47.6%, the least (see Figure 55).

Assessment of the proportion of facility allocation/budget spent on a quality improvement plan (by LGAs) revealed that in 71.4% of most Ibeju-lekki health facilities, there is no alignment between spending and the plans. Oshodi-Isolo LGA had 45.8% of health facilities with greater than 30% of the allocation, and Lagos Mainland LGA is the highest with less than 30% of the allocation spent on QIP (see Figure 56).

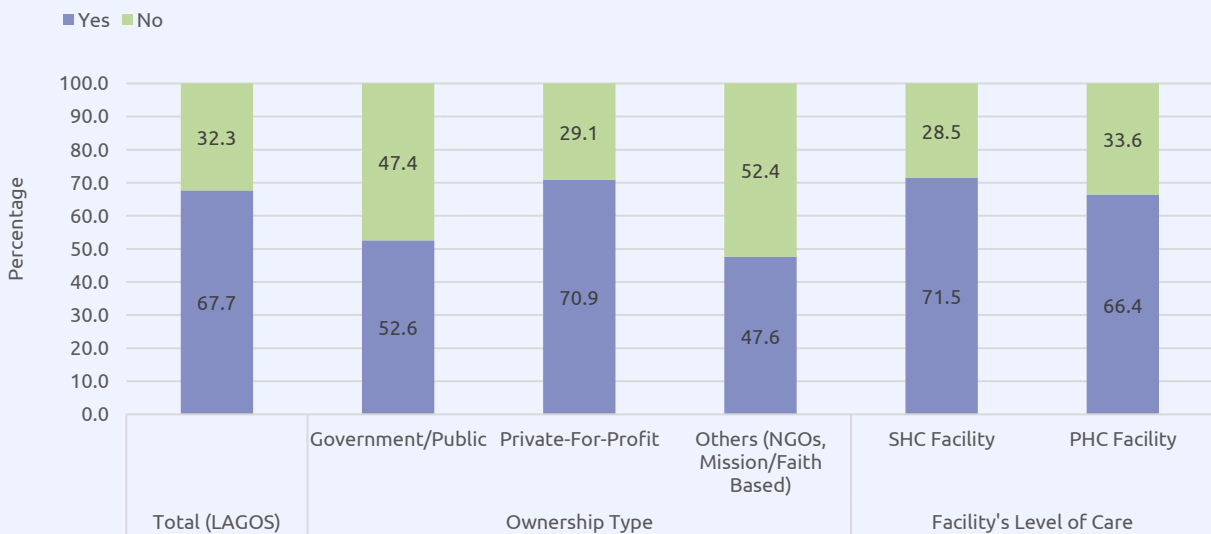


Figure 54: Percentage Availability/Development of Quality Improvement Plan

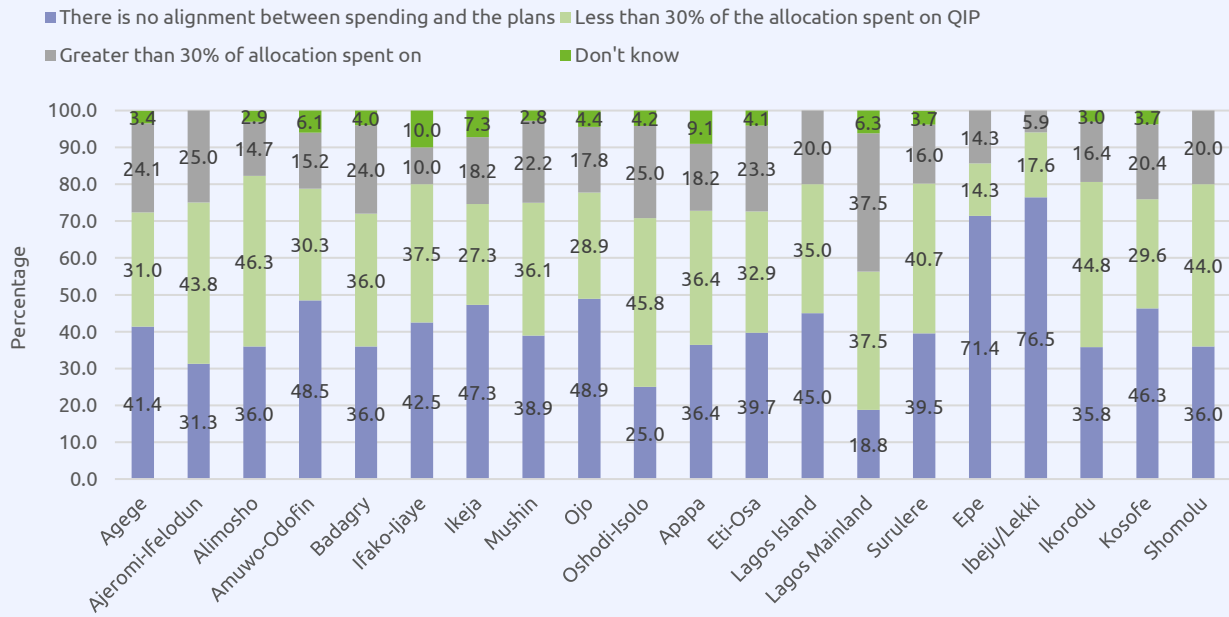


Figure 55: Proportion of Facility Allocation/Budget Spent on QIP (Quality improvement Plan) (by LGAs)

## Business Plan

### Availability/Development of Quality Improvement Plans

Assessment on the availability or development of quality improvement plans revealed that 47.9% of facilities in Lagos State have developed a quality plan, while 52.1% have not.

Also, 54.3% of private for-profit facilities have developed a quality improvement plan, and 45.7% have not, compared to 14.4% of public facilities with the least development of a quality improvement plan, and 85.6% with none.

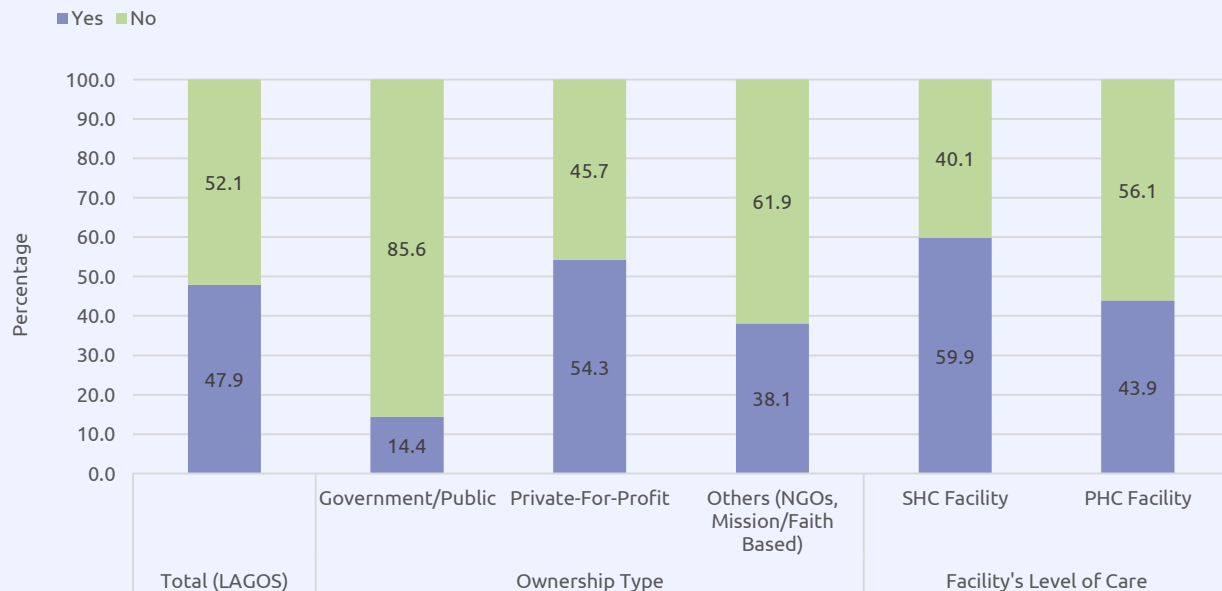


Figure 56: Availability/Development of Quality Improvement Plans

## Availability/Development of Quality Improvement Plans (by LGAs)

Assessment on the availability of quality improvement plans (by LGAs) revealed that 65.6% of health facilities in Eti-Osa LGA have developed quality improvement plans compared to Epe LGA with the least development of quality improvement plans.



Figure 57: Percentage Availability/Development of Quality Improvement Plans (by LGAs)

## Clinical Governance

Availability of Clinical Governance Committee, Clinical Services Guiding Framework, Processes to Capture Relevant Statistics, and Reports of Statistics Shared with Stakeholders

Assessment of the availability of a clinical governance committee for health facilities revealed that 33% of facilities in Lagos State have a clinical governance committee. Also, 43.9% have a clinical governance framework guiding clinical services rendered.

55.4% of health facilities in Lagos State have processes or tools in place to capture relevant statistics of clinical outcomes, while 50.6% have reports of statistics shared with stakeholders within or outside them.

Additionally, NGO/Mission/FBO-owned health facilities have the highest availability (33.3%) of clinical governance committees, while private-for-profit health facilities have the least (32.9%). NGO/Mission/FBO-owned health facilities have 47.6%, (the highest clinical governance framework guiding clinical services rendered by the facilities), while public health facilities have the least (34.5%).

Furthermore, public health facilities have 79.9% of the facilities' highest processes or tools to capture relevant statistics of clinical outcomes, while private for-profit have 50.5% (the least). Also, 80.4% of public health facilities had the availability of reports statistics taken, shared with stakeholders within and outside, while private-for-profit facilities had the least.

Table 40: Availability of Clinical Governance Committee, Clinical Services Guiding Framework, Processes to Capture Relevant Statistics, and Reports of Statistics Shared with Stakeholders

	Total (LAGOS)	Facility Ownership Type			Facility's Level of Care	
		Government/ Public	Private-For-Profit	Others (NGOs, Mission/Faith-Based)	SHC Facility	PHC Facility
Availability of clinical governance committee for the health facilities	33.0	33.0	32.9	33.3	30.4	33.7
Availability of clinical governance framework guiding clinical services rendered by facilities	43.9	34.5	45.6	47.6	37.2	46.1
Availability of any process or tool in place to capture relevant statistics of clinical outcomes for facilities	55.4	79.9	50.5	71.4	40.8	60.1
Availability of reports of statistics taken/ shared with any stakeholder within or outside facilities	50.6	80.4	44.8	61.9	26.5	58.4

### Ownership of a Tool that Guides Decisions During the Assessment and Care of Patients in Facilities (e.g. Treatment guidelines and algorithms)

Assessment of ownership of a tool that guides decisions during the assessment and care of patients in the facilities revealed that 68.2% of health facilities in Lagos State own tools that guide decisions during the assessment and care of patients, while 31.8% do not have such tool.

Additionally, 87.6% of government-owned facilities have this tool, that guides decisions during the assessment and care of patients, while 12.4% do not have, compared to NGO/Mission/FBO-owned facilities which have the least (52.4%) (see Figure 59).

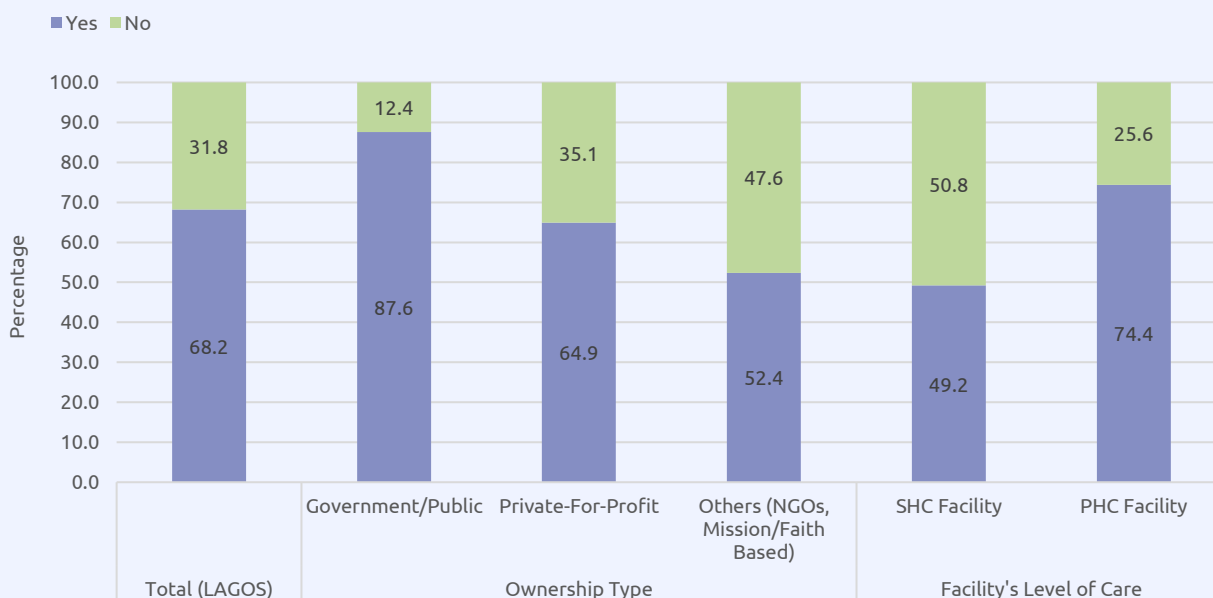


Figure 58: Ownership of a Tool that Guides Decisions During the Assessment and Care of Patients in the Facilities (e.g., Treatment guidelines and algorithms)

### Type of Tools Used to Guide Decisions During the Assessment and Care of Patients in Facilities (by LGAs)

Results on type of tools used to guide decisions during the assessment and care of patients in LGA facilities revealed that Ibeju-Lekki had the highest (100%) of Nigerian standard treatment guidelines, while Mushin LGA had the least. Regarding state treatment guidelines, Apapa LGA had the highest of 45.5%, while Ibeju-Lekki had the least (0%).



Shomolu LGA had (17.9%) the highest tool on other algorithms, while Ibeju-Lekki, Epe, Lagos Island, Lagos Mainland, Apapa, and Ojo LGAs had none. Lagos Island LGA had the highest (18.2%) in the PACK guide, while Agege, Ajeromi-Ifelodun, Badagry, Apapa, Epe, and Ibeju-Lekki had none. Furthermore, Ojo LGA had 4.3% of the highest facility-developed guidelines, while Agege, Amuwo-Odofin, Badagry, Ikeja, Mushin, Apapa, Lagos Island, Lagos Mainland, Epe, Ibeju-Lekki, Ikorodu, and Shomolu had none.

Table 41: Types of Tools Used to Guide Decisions During the Assessment and Care of Patients in Facilities (by LGAs)

	Agege	Ajeromi-Ifelodun	Alimosho	Amuwo-Odofin	Badagry	Ifako-Ijaye	Ikeja	Mushin	Ojo	Oshodi-Isolo	Apapa	Eti-Osa	Lagos Island	Lagos Mainland	Surulere	Epe	Ibeju/Lekki	Ikorodu	Kosofe	Shomolu
Nigeria standard treatment guidelines	78.3	58.8	63.8	55.9	58.6	65.3	72.3	51.5	69.6	67.4	54.5	57.4	77.8	63.6	66.7	91.7	100.0	64.8	60.0	53.6
State treatment guidelines	17.4	29.4	22.1	23.5	34.5	30.6	14.9	27.3	15.2	21.7	45.5	17.6	11.1	18.2	26.4	8.3	0.0	26.8	20.0	17.9
Other algorithms	4.3	5.9	4.7	14.7	3.4	2.0	4.3	9.1	0.0	4.3	0.0	11.8	0.0	0.0	1.4	0.0	0.0	5.6	6.7	17.9
PACK guide	0.0	0.0	2.7	5.9	0.0	2.0	8.5	6.1	6.5	2.2	0.0	7.4	5.6	18.2	1.4	0.0	0.0	2.8	6.7	7.1
Facility developed guidelines	0.0	2.9	0.7	0.0	0.0	0.0	0.0	0.0	4.3	2.2	0.0	1.5	0.0	0.0	4.2	0.0	0.0	0.0	4.4	0.0
Can't say / Don't know	0.0	2.9	6.0	0.0	3.4	0.0	0.0	6.1	4.3	2.2	0.0	4.4	5.6	0.0	0.0	0.0	0.0	0.0	2.2	3.6

### Frequency at which Tools were Used to Guide Decisions During the Assessment and Care of Patients in the Facilities

Results revealed that 81.6% of health facilities always use tools to guide decisions. In comparison, 16.6% sometimes use tools, and 0.5% do not use at all. All NGO/Mission/FBO-owned health facilities use tools, while private for-profit have the least (79.6%) (see Figure 60).

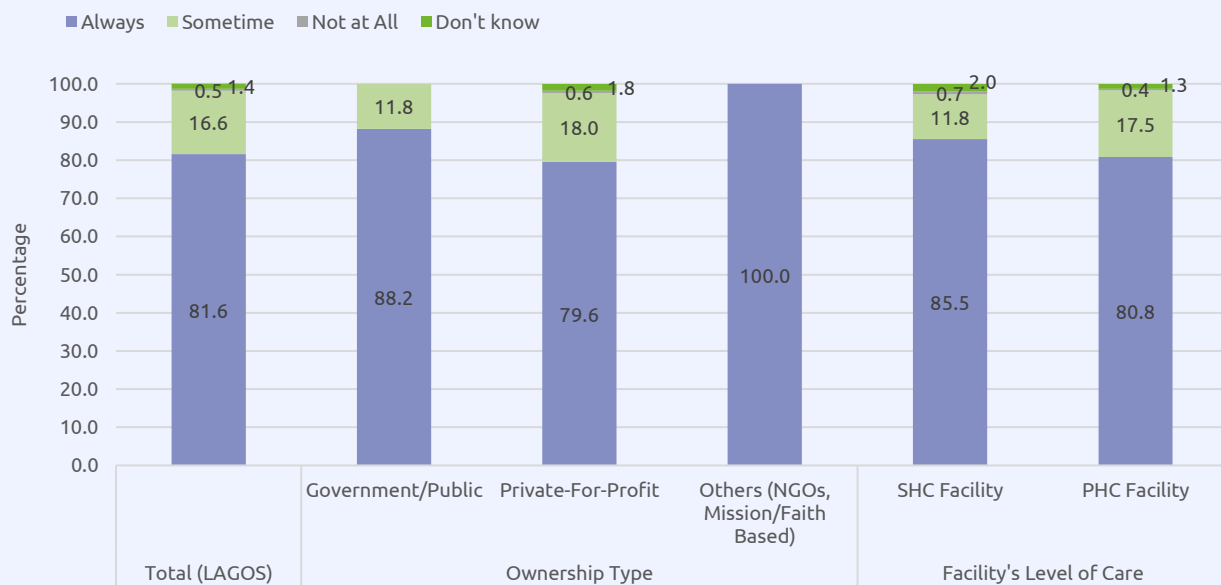


Figure 59: Frequency at which Tools are Used to Guide Decisions During the Assessment and Care of Patients in the Facilities

## SCOVID-19 Response

### Availability of PPEs in the Facilities

About 77.1% of health facilities had PPEs, while 22.9% did not have. However, 81% of NGO/Mission/Faith-based-owned facilities in the state had PPEs available at their facilities, while 19% of them did not have. 76.8% of public facilities had, compared to 23.2% that did not have.

Additionally, secondary health centers with 81.9% level of care had the highest number of PPEs available, while 18.1% did not have. 75.5% of primary health centres according to their level of care had the least PPEs, while 24.5% did not have.

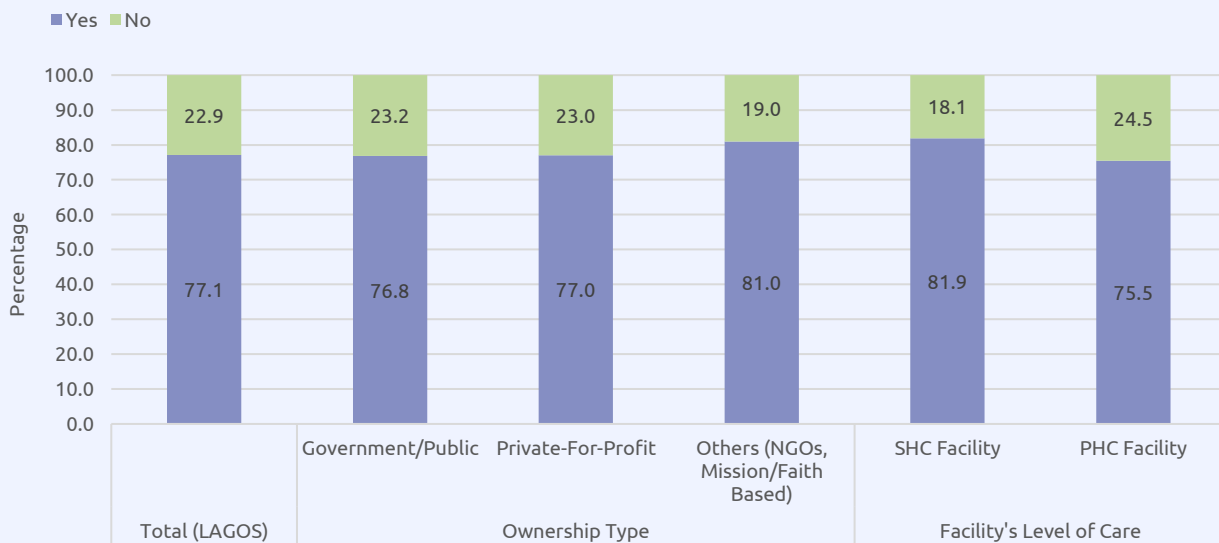


Figure 60: Availability of PPEs in Facilities

### Trainings or Courses taken in the Four Months Prior to the Survey) on Infection Prevention, Control, and the Use of PPE

The majority of facilities (76.3%) had trainings or courses taken in the four) months prior to the survey on infection prevention and control, and the use of PPE, while 23.7% did not undergo any training on such.

However, 83.5% of public facilities underwent trainings on infection prevention and control before the survey, while 16.5% had no training. 74.9% of private-for-profit facilities had trainings on infection prevention and control, and the use of PPE, while 25.1% did not.

Additionally, 76.5% of primary health centres according to level of care were trained on infection prevention and control and PPE use. In comparison, 23.5% of secondary health centres did not undergo any training or course, with a difference of 1.1% on both sides.

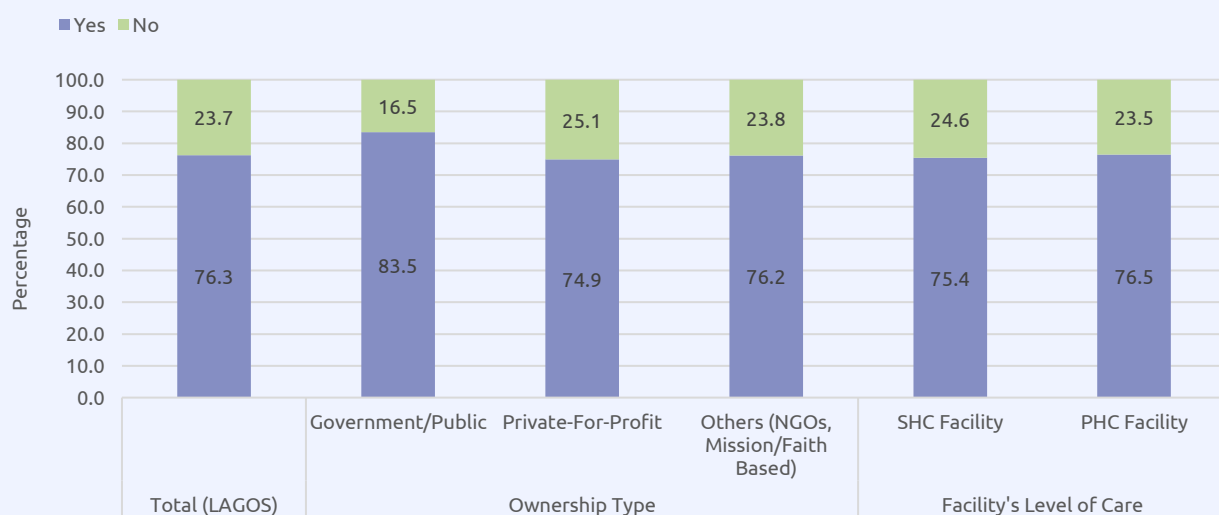


Figure 61: Percentage of Facilities that underwent a Training or Course on Infection Prevention and Control, and the Use of PPEs in the Four Months Prior to the Survey

### Availability of Information Materials/Posters to Educate Staff and Patients on COVID-19 (by LGAs)

In Lagos State, Epe LGA facilities had 100% information materials/posters to educate staff and patients on COVID-19. Surulere LGA had 86.58%, the least across the LGAs in Lagos State, while 13.2% did not have.

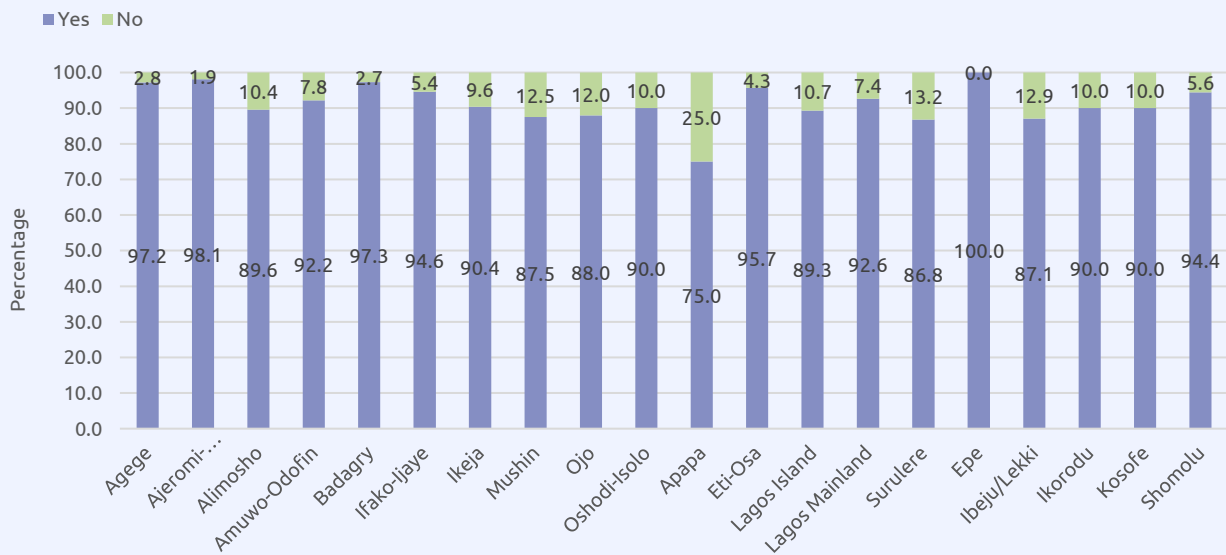


Figure 62: Percentage Availability of Information Materials/Posters to Educate Staff and Patients on COVID-19 (by LGAs)

### Availability of Guidelines for Use by Clinical Staff in Detecting Suspected Cases of COVID-19

89.1% of health facilities had guidelines for clinical staff to detect suspected cases of COVID-19, while 10.9% of facilities did not have. Public facilities had the highest number of facilities (92.3%) with guidelines for clinical staff in detecting suspected cases of COVID-19, while 10.9% did not have. Private-for-profit facilities according to ownership type had the least (88.5%) guidelines for clinical staff in detecting suspected cases of COVID-19, while 11.5% did not have.

Additionally, 90.8% of primary health centres according to their level of care had the highest number of guidelines for use by clinical staff in detecting suspected cases of COVID-19, while 9.2% did not have, and Secondary health centres had 83.8%.

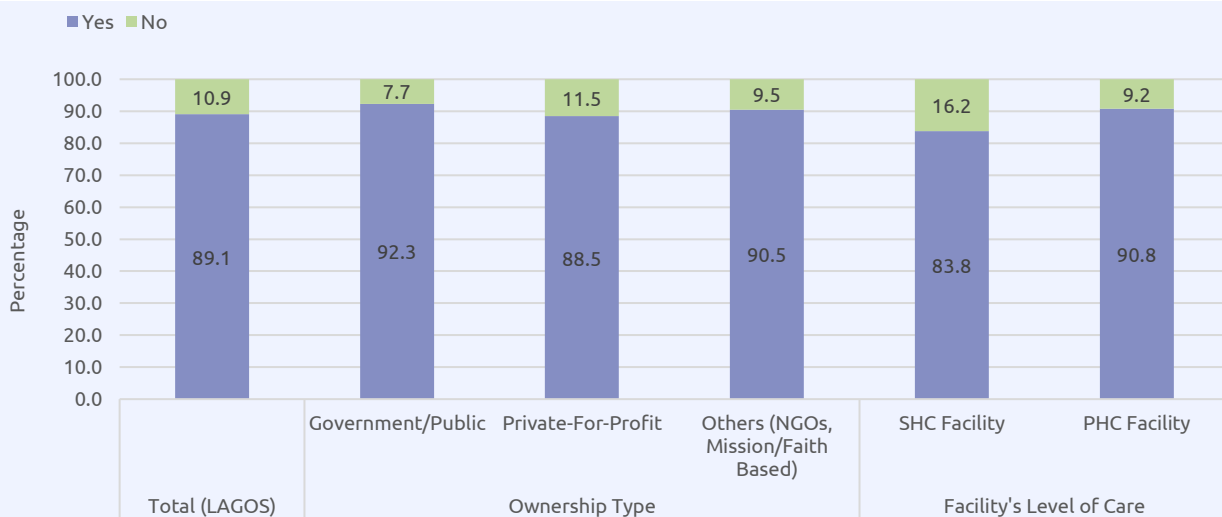


Figure 63: Percentage Availability of Guidelines for Use by Clinical Staff in Detecting Suspected Cases of COVID-19

### Availability of an Isolated Room or Ward to keep Suspected Cases Pending Referral to an Approved Treatment Centre

The majority of the health facilities (75.9%) do not have an isolation room or ward to keep suspected cases pending referral to an approved treatment centre, while 24.1% have.

Also, the majority of public health facilities (72.2%), do not have isolation rooms or wards for suspected cases pending referral to an approved treatment center, while 27.8% have. 76.6% of private-for-profit facilities have these isolation rooms or wards, while 23.4% do not have.

Additionally, majority (84.5%) of the secondary health care centres, according to level of care do not have isolation rooms or wards for suspected cases pending referral to an approved treatment centre, while 15.5% have. 73% of primary health care centres, according to level of care, do not have isolation rooms or wards for suspected cases, while 27% have.

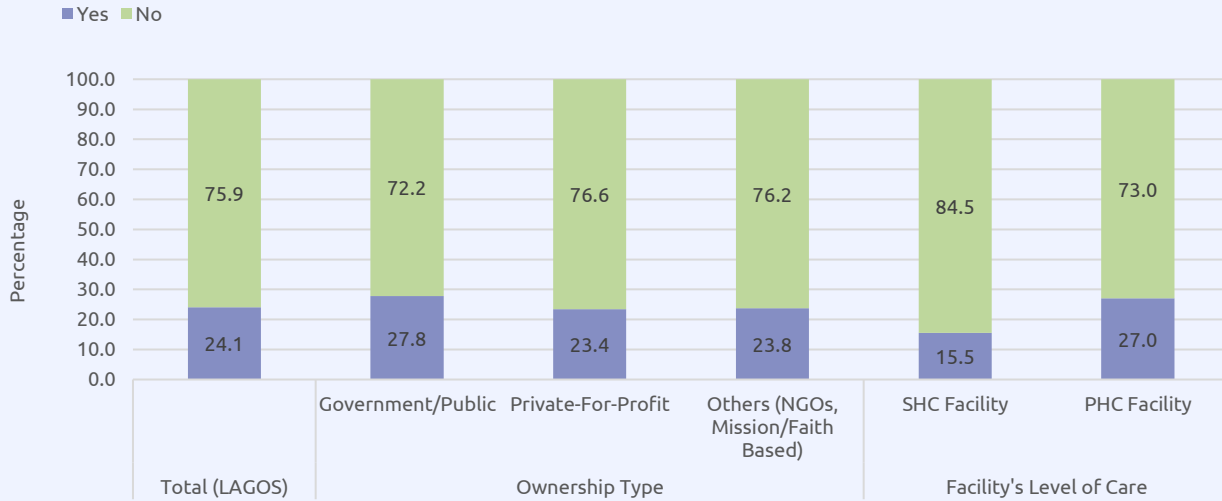


Figure 64: Percentage Availability of Isolated Rooms or Wards to keep Suspected Cases Pending Referral to an Approved Treatment Centre

#### Availability of Guidelines in Place for Referring Suspected Cases to an Approved Isolation Centre

72.1% of health care facilities have guidelines for referring suspected cases to an approved isolation centre, while 27.9% do not have any guidelines in place.

77.8% of public facilities have the highest guideline in place for referring suspected cases to an approved isolation centre, while 22.2% do not have, and 70.9% of private-for-profit facilities have.

Additionally, according to level of care, 76.2% of primary health centres have guidelines for referring suspected cases to an approved isolation centre, while 23.8% do not have. 59.2% of secondary health facilities have guidelines in place, while 40.8% do not have (see Figure 66).

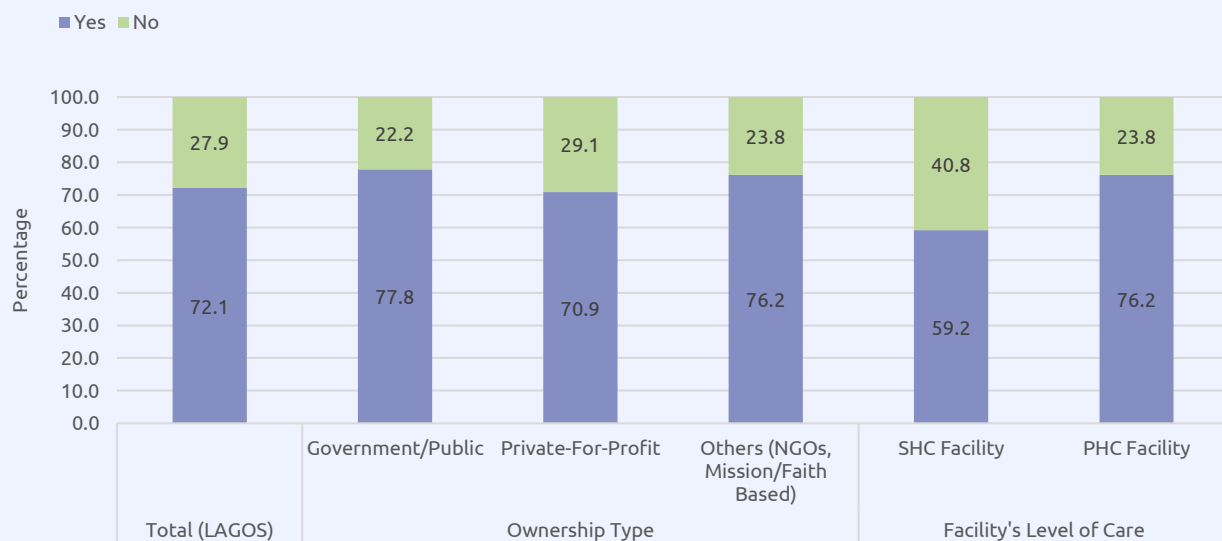


Figure 65: Percentage Availability of Guidelines in Place for Referring Suspected Cases to an Approved Isolation Centre

## Mechanisms in Place for COVID-19 Prevention (by LGAs)

Assessment of the mechanisms in place for COVID-19 prevention (by LGAs) revealed that Agege and Shomolu LGAs had the highest number of facilities with hand washing at their entrances and at other designated areas, respectively, while Lagos Island LGA had 85.7%.

Lagos Island LGA had the highest number of facilities (96.4%) with mandatory face masks for all persons within them. In comparison, Oshodi-Isolo had the least number of facilities (82.9%) that do not mandate face masks for all persons within them.

Whereas, Ifako-Ijaye LGA had the highest number of facilities (69.6%) that observed physical distancing measures at GOPD and patient waiting areas. At the same time, Agege and Lagos Island LGAs were considered to have facilities that do not maintain physical distancing measures at GOPD and patient waiting areas.

Additionally, Eti-Osa LGA had the highest number of facilities (74.2%) with regular temperature checks for everyone going in and out of them, while Epe LGA was considered the least of them (16.7%), without regular temperature checks for everyone going in and out of their facilities.

Also, Shomolu LGA had the highest number of facilities (41.7%) restricting visitor access and movement. In comparison to this, 8.3% of facilities in Epe LGA had no measures in place to restrict visitors' access and movement within them.

Furthermore, Shomolu LGA (18.8%) had the highest number of facilities that used hand sanitizers, while Oshodi-Isolo (2.9%) was considered the least LGA with facilities that use hand sanitizers.

However, Ifako-Ijaye LGA (3.6%) had the highest use of hand gloves at their facilities. In contrast, Agege, Ajeromi-Ifelodun, Alimosho, Amuwo-Odofin, Badagry, Ikeja, Mushin, Oshodi-Isolo, Apapa, Eti-Osa, Lagos Island, Lagos Mainland, Epe, Kosofe, and Shomolu LGAs had 0%, the least (see Table 42).

Table 42: Mechanisms in Place for COVID-19 Prevention (by LGAs)

	Agege	Ajeromi-Ifelodun	Alimosho	Amuwo-Odofin	Badagry	Ifako-Ijaye	Ikeja	Mushin	Ojo	Oshodi-Isolo	Apapa	Eti-Osa	Lagos Island	Lagos Mainland	Surulere	Epe	Ibeju/Lekki	Ikorodu	Kosofe	Shomolu
Available facilities for handwashing at their entrances and other designated areas	100.0	94.2	91.9	94.1	97.3	92.9	93.2	91.7	94.7	90.0	87.5	90.3	85.7	96.3	91.2	91.7	93.5	88.0	96.3	100.0
Mandatory use of face mask for all persons within the facilities	88.9	88.5	85.5	94.1	91.9	91.1	86.3	93.8	89.3	82.9	87.5	83.9	96.4	88.9	83.3	91.7	90.3	85.0	83.8	91.7
Physical distancing measures at GOPD and patient waiting areas	50.0	51.9	59.3	66.7	56.8	69.6	58.9	66.7	56.0	52.9	62.5	59.1	50.0	66.7	59.6	66.7	54.8	56.0	63.7	63.9
Regular temperature checks for everyone going in and out of the facilities	58.3	55.8	51.1	51.0	48.6	58.9	74.0	58.3	42.7	52.9	62.5	74.2	53.6	63.0	64.0	16.7	48.4	50.0	62.5	63.9
Measures for restricting visitors' access and movement within the facilities	27.8	17.3	18.6	19.6	27.0	21.4	23.3	35.4	14.7	20.0	37.5	28.0	21.4	29.6	23.7	8.3	25.8	32.0	30.0	41.7
Use of hand sanitizers	5.6	7.7	6.8	9.8	10.8	3.6	9.6	4.2	10.7	2.9	18.8	3.2	7.1	3.7	8.8	8.3	3.2	3.0	7.5	22.2
None	0.0	0.0	0.5	2.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.9	0.0	3.2	1.0	2.5	0.0
Use of hand gloves	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.9	0.0	3.2	1.0	0.0	0.0

## Training of Staff on Appropriate COVID-19 Preparedness and Response

In Lagos State, most facilities had 85% of trained staff on appropriate COVID-19 preparedness and response, and 15% of untrained staff.

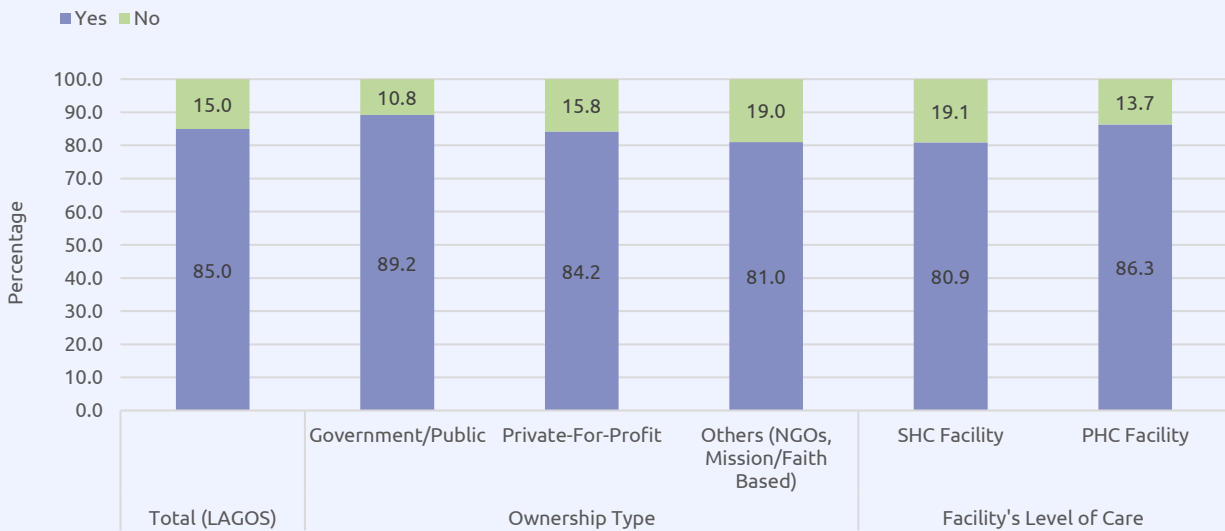


Figure 66: Percentage of Trained and Untrained Staff on Appropriate COVID-19 Preparedness and Response

## Availability of a Process for Notifying Appropriate Authorities about Suspected Cases

The majority of health facilities (85%), had a process for notifying appropriate authorities about a suspected case within the state, while 15% did not have. Also, most (90.5%) of NGO Mission/FBO-owned facilities had a process of notifying the appropriate authority about suspected cases, while 9.5% did not have. 90.2% of public facilities had notified appropriate authorities about a suspected case of COVID-19, while 9.8% had not. Private-for-profit facilities had the least (83.9%) process for notifying appropriate authorities, while 16.1% did not have.

Assessment of facilities level of care revealed that 88.1% of primary health centres had a process for notifying appropriate authorities about a suspected case, while 11.8% did not have. However, secondary health facilities had the least (74.5%).

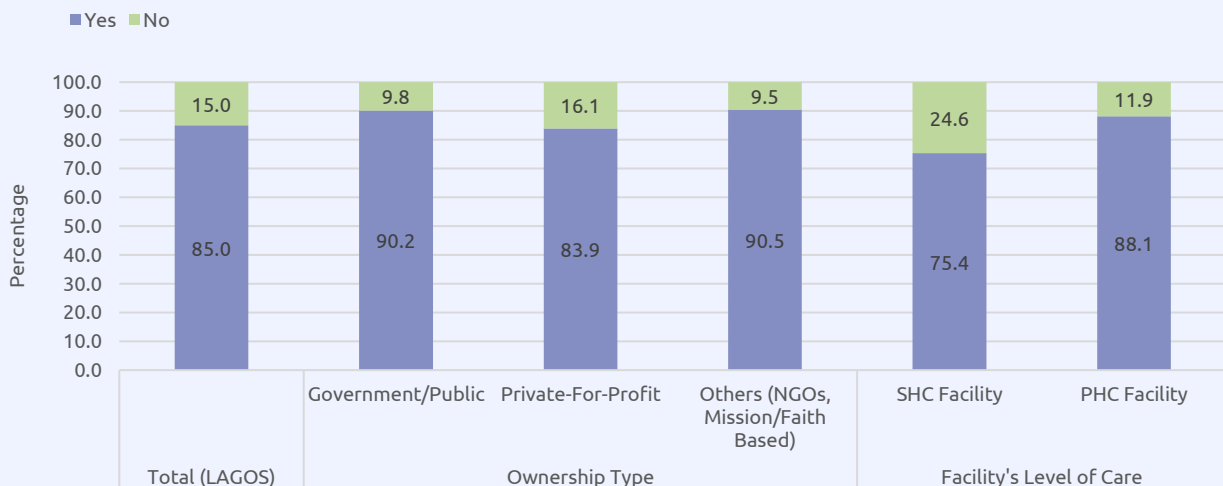


Figure 67: Percentage Availability of a Process for Notifying Appropriate Authorities about a Suspected Case

### Availability of an Emergency Plan for COVID-19 Outbreaks

58% of health facilities in the state did not have an adequate emergency plan for the COVID-19 outbreak, while only 42% had . Assessment based on ownership type revealed that 47.6% of NGO/Mission/FBO-owned facilities had the highest emergency plan for COVID-19 outbreak, while 52.4% did not have. 41.1% of private-for-profit facilities had an emergency plan for COVID-19 outbreak, while 58.9% did not have.

Also, 43.6% of primary health centres had an adequate emergency plan based on their level of care, and 56.4% did not have. In contrast, 37.2% of secondary health facilities had an adequate emergency plan for COVID-19 outbreak, while 62.8% did not have.

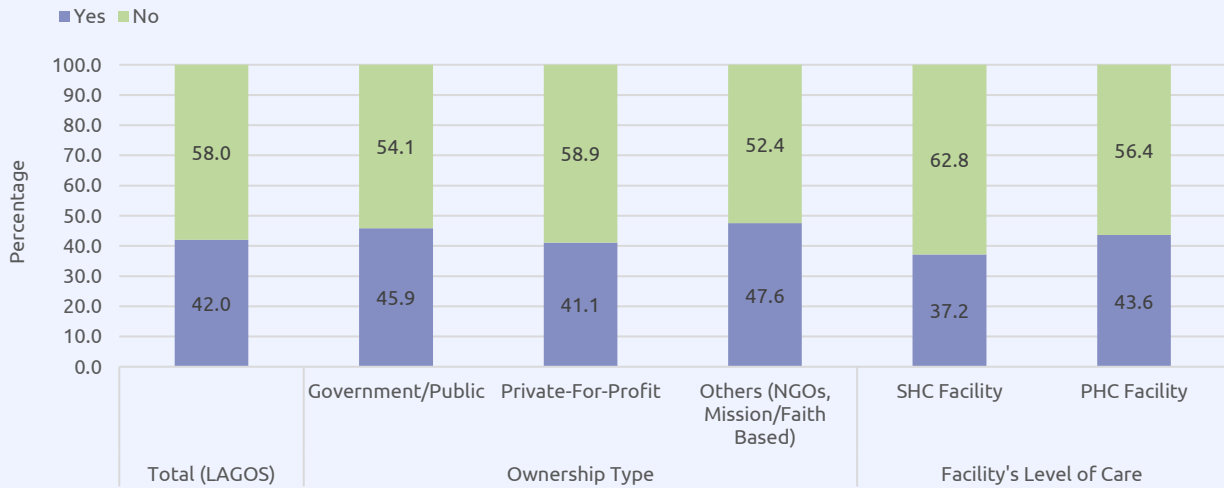


Figure 68: Availability of an Emergency Plan for COVID-19 Outbreaks

### Existence of Suspected Cases of COVID-19 in facilities (by LGAs)

Assessment of suspected cases of COVID-19 in facilities (by LGAs) revealed that Apapa LGA had 31.3%, the highest of COVID-19 suspected cases. In comparison, Lagos Mainland had 3.7%, the least of COVID-19 suspected cases (see Figure 70).

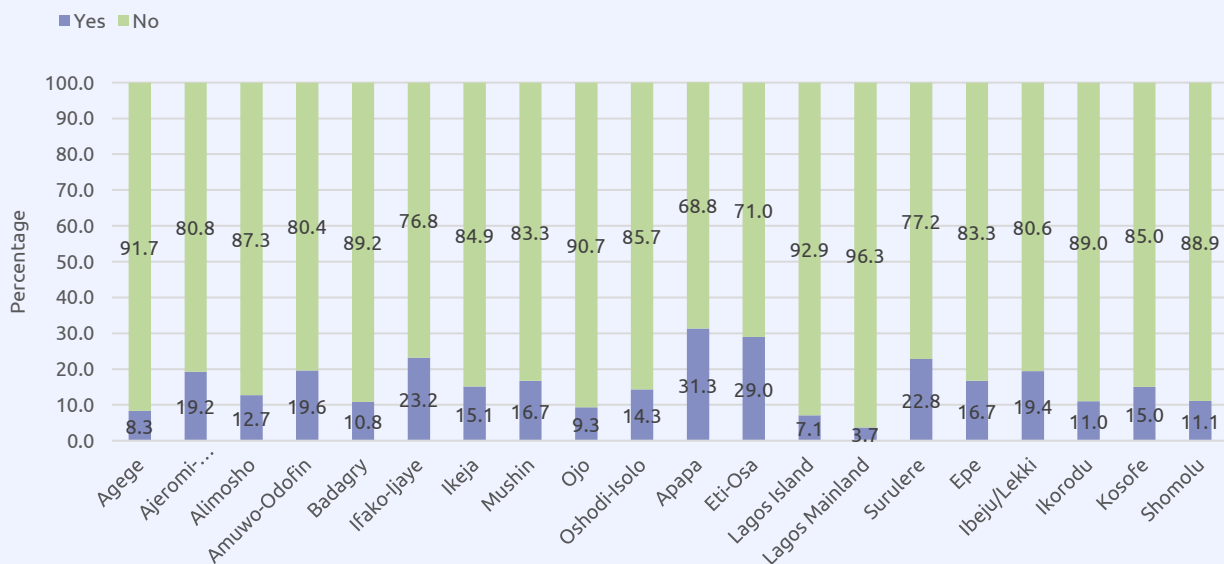


Figure 69: Existence of any Suspected COVID-19 Case in Facilities (by LGAs)

### Proportion of Facilities that Claimed that COVID-19 Significantly Affected their Facilities' Business Continuity

75.3% of facilities in Lagos State claimed that COVID-19 significantly affected their businesses, while 24.7% claimed not to be affected. Assessments based on ownership types revealed that 79% (the highest) of private-for-profit facilities were negatively affected by COVID-19, while public facilities were negatively affected by 56.2%, the least. Secondary health facilities had the highest level of care (80.9%), while primary health centres had the least (26.5%).

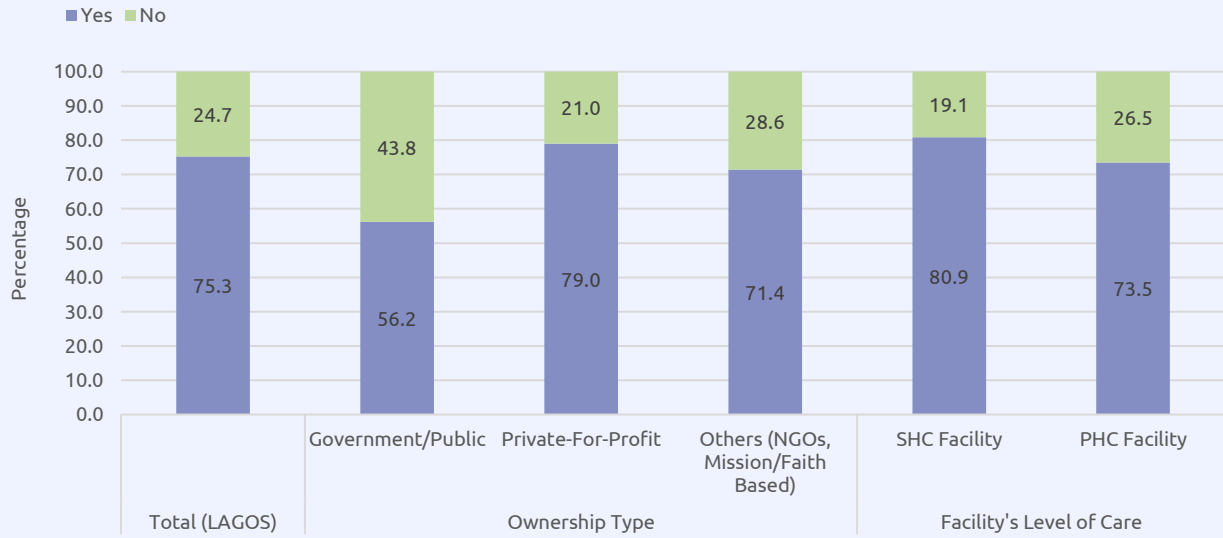


Figure 70: Proportion of Facilities that Claimed that COVID-19 Significantly Affected their Facilities' Business Continuity



## 5.0. DISCUSSIONS

### Human Resources

The health facilities' assessment reveal that a significant number of facilities have at least one nurse. Though, other health specialists, general medical doctors, specialist medical doctors, midwives, nursing assistants or technicians, etc., do not have over 70% presence in the facilities. Examining the percentage of health facilities with at least one specialist medical doctor, approximately 20% of health facilities have a gynecologist and a general surgeon. On average, health facilities have two generalist medical doctors working full time and one working part-time. A significant number of health facilities do not have adequate health workers, either full-time or part-time.

### Basic Infrastructure

#### Electricity

The primary source of electricity for health facilities is the central supply (the national grid), and most health facilities have a backup source of electricity. This ensures constant electricity if the national grid is out, when needed. However, a few health facilities do not have a primary or secondary power source.

#### Water Supply

Health facilities have water outlets from available sources within 500 metres. Although, a significant number of government and NGO-owned health facilities have challenges with water in their facilities. More toilets were set aside for general outpatient client use than for use in the emergency rooms, in-patient wards, and consulting rooms.

#### Waste Disposal System

Health facilities commonly use color-coded waste bins except for NGO /FBO-owned facilities, and a significant number of others which use other methods. 14.3% of NGO/FBO-owned facilities do not segregate wastes at the point of generation. Private waste management services are mainly used by private-for-profit and NGO/FBO- owned facilities.

#### Beds

Health facilities owned by private-for-profit organizations and NGOs/FBOs have a more significant number of overnight/in-patient and observation beds than government-owned facilities. The availability of emergency rooms is a challenge across ownership types of health facilities.

#### Communication

Access to mobile phones, functioning computers, and functioning e-mail are common among health facilities owned by private-for-profit organizations and NGOs/FBOs. Government-owned health facilities have the most undersized communication infrastructure. Only 13.4% of facilities owned by the government have access to available mobiles phones.

#### Referral Capacity

Transportation is essential in referral and emergency response capacities. 30% of health facilities have an emergency transportation service or ambulance for patient transportation to other facilities. Another finding is that about half of the health facilities have service level agreements with other health facilities to manage trauma or emergency cases beyond the scope of service rendered. These findings make health facilities' referral and emergency response capacities low in Lagos State.

### Basic Medical Equipment and Infection Prevention

The availability of diagnostic resources/equipment in HFs is an essential pointer to the service readiness of health facilities. Most health facilities have general-purpose equipment or items which are available and functional. The two general-purpose equipment that most health facilities do not have are ultrasound machines and Automated External Defibrillators (AEDs); only 36.1% and 21.3% of health facilities have this equipment respectively. Most basic surgical equipment or items are available and functional in health facilities. The equipment or items not available in most government-owned health facilities are retractors, nasogastric tubes, and ketamine. In general, 64.6% of health facilities have

available self-inflating bags and masks for resuscitation, and about half (54.8%) have micro-nebulizer/nebulizers. However, less than 50% of secondary health care facilities have respiratory system supplies, as government-owned health facilities. Generally, the availability of oxygen within health facilities is above 50%. Government-owned health facilities have a clear challenge of oxygen supply within them, while above 50% of secondary care health facilities do not have. However, 50% of health facilities have oxygen distribution systems and ventilators. The health facilities' assessment shows that health facilities have a process and a separate area for sterilization of medical equipment and documented procedures for sterilization.

## Health Services in Health Facilities

### Family Planning

Family planning and antenatal care services are offered more in government-owned health facilities than in private-for-profit and NGO/FBO-owned facilities. However, about 10% of health facilities offering antenatal services provide general counselling (in diet, nutrition, exercise). Obstetric and newborn care is provided by over 50% of private-for-profit, NGO/FBO-owned health facilities.

### Maternal, New born and Child Health (MNCH)

The percentage of government-owned facilities providing incubator care for new-borns is lower (5.1%) compared to that of private-for-profit owned (21.3%) and NGO/FBO- owned facilities (41.7%). Health facilities providing paediatric health services are 53.3% compared to facilities providing postnatal care (60%) and antenatal care services (63.3%). Not all health facilities providing postnatal and antenatal health services provide paediatric health services.

### Malaria Prevention and Treatment Services

About 78.1% of health facilities offer diagnosis or treatment of malaria services. Government/Public HFs offer more diagnosis or treatment of malaria services than private-for-profit HFs. The gap in the number of health facilities treating malaria can be attributed to the number of private-for-profit health facilities offering malaria services (74.4%) compared to government (96.4%) and NGOs/FBOs (90.5%). For malaria diagnosis methods, clinical symptoms are used in more health facilities than RDT and microscopy. The use of the clinical symptoms method points to the availability of equipment and human resources, and adherence to clinical procedures for malaria treatment.

### HIV/AIDS and Tuberculosis Services

Health facilities offering HIV/AIDS services (30%) were less than half of the health facilities surveyed. Private-for-profit health facilities account for a significant percentage of health facilities not offering HIV/AIDS services. Also, about 42.8% of health facilities offer tuberculosis services, with government and NGO/FBO-owned facilities accounting for the majority.

### Other Infectious and Non-Communicable Diseases

Altogether, 64.7% of health facilities offer other infectious and non-communicable diseases services. We have less than 80% of private-for-profit and NGO/FBO-owned facilities offering this service. The result of not having a large number of NGO-owned health facilities offering this service has created a shortage in the number of health facilities that should offer this health service.

### Surgical Services

This health facility assessment revealed that 48.9% of health facilities offer surgical services. The health facilities have a low human resource for specialist medical doctors. Likewise, health facilities offering dental and eye care services are not many at 12.4% and 28.5% respectively.

### Emergency Care

Health facilities across LGAs in Lagos State offer primary emergency care, with 64.0% of them offering this service. Findings from the facilities' assessment reveal that not less than 40% of health facilities in LGAs offer primary emergency services. How widely this service is offered across LGAs provides the opportunity for immediate emergencies to be quickly addressed. About half of health facilities offer diagnostics services, blood transfusion services, and service level agreements with HEFAMAA

accredited diagnostic centres. However, less than 30% of government facilities offer blood transfusion services or have an SLA with a HEFAMAA accredited diagnostic centres.

### Medical Supplies and Commodities

About 53.8% of HFs in the State stock medicines, vaccines, and contraceptive commodities. The pull and push distribution system are the two mechanisms used mainly by health facilities to determine re-supply quantities for the distribution of medical supplies and commodities. Government-owned health facilities use more of the push distribution system, while private-for-profit and NGO/FBO-owned health facilities adopt more of the pull distribution system. Health facilities resupply quantities are mainly determined using a pre-agreed formula. The State Central Medical Store is the leading direct supplier of common pharmaceutical commodities to government health facilities, while the health facilities mainly arrange for their delivery. Health facilities owned by private-for-profit organizations and NGOs/FBOs are directly supplied by nearby pharmacies or drug distributors. The supplier handles the logistics mainly (he delivers to the facility); the ordering and receiving of pharmaceutical commodities takes less than two weeks most times.

Results from the health facilities' assessment showed that most HFs in the state have essential medicines in their dispensary. These essential medicines include antibiotics, antimalarial, oral rehydration salts, emergency drugs and commodities, IV-fluids, epinephrine, hydrocortisone, oxytocin, anti-hypertensive, family planning commodities, and injectables. The supply of anti-retroviral was poor across HFs, as only 23.8% of them have anti-retroviral.

### Health Insurance Coverage

Health insurance is provided by 34.5% of health facilities in the state. The average number of patients covered by health insurance that visited the facilities a month before the survey is 113. This assessment reveals that the health insurance coverage in Lagos State is not up to 50% from both health facilities and clients.

### Financial Management System

The percentage of health facilities that have staff responsible for their financial accounting system is 60.2%, while 72.1% of health facilities have a dedicated bank account for their facilities' operation. The health facilities' assessment reveals that 70.4% of health facilities have a monthly financial report, though, only 34.3% of them have submitted a financial report for the quarter prior to the survey. Not all health facilities in Lagos State operate a standard financial management system. A Quality Improvement Plan (QIP) is available in 67.7% of health facilities, while 40.0% have no alignment between spending and the QIP. Approximately 37.4% of health facilities spend less than 30% of their allocation on QIP. At the same time, about 18.7% spend more than 30% of their budget on QIP. Most government-owned health facilities, and about half of other facilities do not have a business plan.

### Clinical Governance

The health facilities' assessment reveals that 33.0% of health facilities have a clinical governance committee, and 43.9% have a clinical governance framework guiding clinical services rendered by the facilities. About half of health facilities have a process or tool to capture relevant statistics of clinical outcomes. Also, HFs in the State have reports of statistics taken and shared with stakeholders within or outside them.

## 6.0. LIMITATIONS AND CHALLENGES

### Limitations

The assessment was done by telephone according to COVID-19 guidelines, and enumerators could not visualize any of the medical equipment being assessed.

Health facilities located in rural areas in Lagos State experienced poor network coverage, thereby distorting communication between enumerators and their respondents. The respondents' mobile numbers were switched off for days consecutively in some cases.

### Challenges

The survey tool was lengthy, as such, some of the respondents kept rescheduling their interview time; and when they finally had time, they could not respond to all questions on the survey tool.

Most of the respondents were always busy to respond to questions at the first attempt. These were majorly doctors, who were likely attending to patients when the enumerators called in. Some respondents had difficulty understanding the terminology used to describe some medical equipment.

### Lessons Learnt

Effectively securing stakeholders' buy-in facilitates a successful conduct of the assessment exercise.

Availability of an up-to-date database of facilities reduces delays in the conduct of exercises of this nature.

The use of on-the-field determined interventions help to mitigate the challenges of the facilities' assessment.

In epidemics, remote health facilities' assessment for an extensive database is achievable.

Mixed approach of remote and in-person methods, under strict infection prevention control measures would increase the output, by eliminating network coverage challenges in hard-to-reach areas and language barriers.

Initial zonal online sensitization of the validated facilities respondents would have helped to eliminate the problems of rescheduling calls, and initial refusal due to perceived sensitivity of the information.

A census of all facilities' target used in the exercise would help to develop a reliable facility directory for the state and help informed decisions by policy makers.

## 7.0. RECOMMENDATION

### Human Resources

1. To improve the availability of health specialists, general medical doctors, and specialist medical doctors, the state government should employ more specialists in government hospitals to make the health workforce adequate.
2. The employment strategy should involve private-for-profit and NGO/FBO-owned health facilities by regulating and encouraging them to employ specialist medical doctors. This approach shifts the focus of private-for-profit and NGO/FBO-owned health facilities to include more specialist services apart from services offered by gynecologists and general surgeons.
3. Health workers should be encouraged and regulated on having current BLS and ALS certifications.

### Basic Infrastructure

4. Lagos State still has health facilities without a national grid or alternative power supply. Most of these facilities are government-owned and fall in riverine LGAs (Badagry, Epe, Ibeju/Lekki), where having national grid electricity may be difficult. The state government should provide an alternative power supply, generators, and solar systems for such facilities.
5. In other to improve access to water supply and WASH (Water, Sanitation, and Hygiene) across health facilities in the state, a regulation should be in place for all health facilities to have available water sources within 500 metres..
6. The waste management system should be standardized across health facility ownership types to entrench best waste management practices across HFs in the state.
7. Lagos State Government should co-ordinate and make it easy for health facilities to have service level agreements across health facility ownership types. A standard means of transportation for referral should also be established.

### Basic Medical Equipment and Infection Prevention

8. The State Government should intensify more efforts to make all essential medical diagnostic equipment available in government-owned facilities. There are two general-purpose equipment that most health facilities do not have: An ultrasound machine, and an Automated External Defibrillator (AED).

### Health Services in Health Facilities

9. For the maternal, new born, and child health care services, government-owned health facilities require equipment to provide incubator care for new-borns.
10. The State Ministry of Health should encourage microscopy and rapid diagnostic testing for malaria treatment services among health facilities.
11. Private-for-profit health facilities should be encouraged to provide HIV/AIDS and tuberculosis services. They form part of the bulk of health facilities in the state.
12. The government should encourage private-for-profit and NGO/FBO-owned health facilities to offer more health care services for other infectious and non-communicable diseases, as they have the highest number of health care facilities in the state.

### Health Insurance Coverage

13. The State Government needs to promote health insurance in the states and encourage the residents to enrol. This will create a pool of funds for the government to manage the state health sector.

### Financial Management System

14. The financial management system across ownership types of health facilities is encouraging. However, the State Government needs to encourage a standardized structure of the financial system.

## Clinical Governance

15. The State Health Ministry should develop a legal framework for clinical governance for government, private-for-profit, and NGO/FBO-owned facilities. This ensures uniform service delivery and data at all levels of health facilities.

## 8.0 CONCLUSION

There are shortfalls of health specialists in the health workforce of Lagos State. These inadequacies in the number of health care workers cut across government, private-for-profit, and NGO/FBO-owned health facilities. There are more private-for-profit and NGO/FBO-owned health facilities in the state. However, despite this advantage, the state still lacks adequate human resources: General medical doctors, specialist medical doctors, midwives, nursing assistants, or technicians, especially in LGAs with more rural areas than urban areas (Epe, Ibeju/Lekki). Health care workers currently certified with BLS or ALS are less than 50% of the workforce interviewed. Most health facilities have the national grid as their primary source of power supply; however, there is still a challenge of electricity in some health facilities, especially in Badagry, Epe, and Ibeju/Lekki LGAs. The number of health facilities that use generators as a secondary power supply is relatively high. Health facilities (government, private-for-profit, and NGO/FBO-owned) do not have water outlets from available sources within 500 metres. Waste segregation at the point of generation is not practiced by all health facilities, and a significant percentage of NGO/FBO-owned facilities do not segregate their waste. Transportation is a challenge for referral services in over 60% of health facilities assessed. This is coupled with about half of health facilities not having a service level agreement with other health facilities to manage trauma or emergency cases beyond the scope of service rendered.

A significant percentage of health facilities have available and functional general-purpose equipment or items. There are two general-purpose equipment that most health facilities do not have: Ultrasound machines, and Automated External Defibrillators (AEDs). Most basic surgical equipment or items are available and functional in health facilities. The equipment or items not available in most government-owned health facilities are retractors, nasogastric tubes, and ketamine. The percentage of government-owned facilities providing incubator care for new-borns is low compared to private for-profit and NGO/FBO-owned facilities. Health facilities providing paediatric health services are less than those offering postnatal and antenatal care services. Microscopy and **rapid diagnostic testing for malaria are not majorly used. The use of the clinical symptoms method points to the availability of equipment and health specialists.** HIV/AIDS and tuberculosis, infectious and non-communicable diseases services are offered mainly by government and NGO/FBO-owned facilities. Health insurance coverage is not up to 50% of the states' population. The number of health facilities currently providing services to health insurance enrollees in the state is less than 40%. Not all health facilities have a clinical governance committee or a clinical governance framework guiding clinical services rendered. Furthermore, only about half of health facilities have a process or tool in place to capture relevant statistics of clinical outcomes.

## 9.0 REFERENCES

1. *Fact sheet: Quality health services*. Who.int. (2021). Retrieved 17 November 2021, from <https://www.who.int/news-room/fact-sheets/detail/quality-health-services>.
2. *Universal health coverage (UHC)*. Who.int. (2021). Retrieved 17 November 2021, from <https://www.who.int/news-room/fact-sheets/detail/universal-health-coverage-%28uhc%29>.
3. Tyebjee, T., & Lavrakas, P. (1988). Telephone Survey Methods: Sampling, Selection, and Supervision. *Journal Of Marketing Research*, 25(2), 217. <https://doi.org/10.2307/3172656>
4. J. Lavrakas, P. (2008). Telephone Surveys. In *Encyclopedia of Survey Research Methods*.
5. Block, E., & Erskine, L. (2012). Interviewing by Telephone: Specific Considerations, Opportunities, and Challenges. *International Journal of Qualitative Methods*, 11(4), 428-445. <https://doi.org/10.1177/160940691201100409>
6. Gignoux1, E. (2020). *A telephone-based assessment of the health situation in the far north region of Cameroon* [EBook]. Retrieved 17 November 2021, from <https://conflictandhealth.biomedcentral.com/track/pdf/10.1186/s13031-020-00327-4.pdf>.
7. *Assessment of diagnostic gaps and relevant digital health solutions in Nigeria*. (2020). [Ebook]. Retrieved 17 November 2021, from [https://www.finddx.org/wp-content/uploads/2020/11/NIGERIA\\_Executive-summary\\_20201109\\_v1.0.pdf](https://www.finddx.org/wp-content/uploads/2020/11/NIGERIA_Executive-summary_20201109_v1.0.pdf).