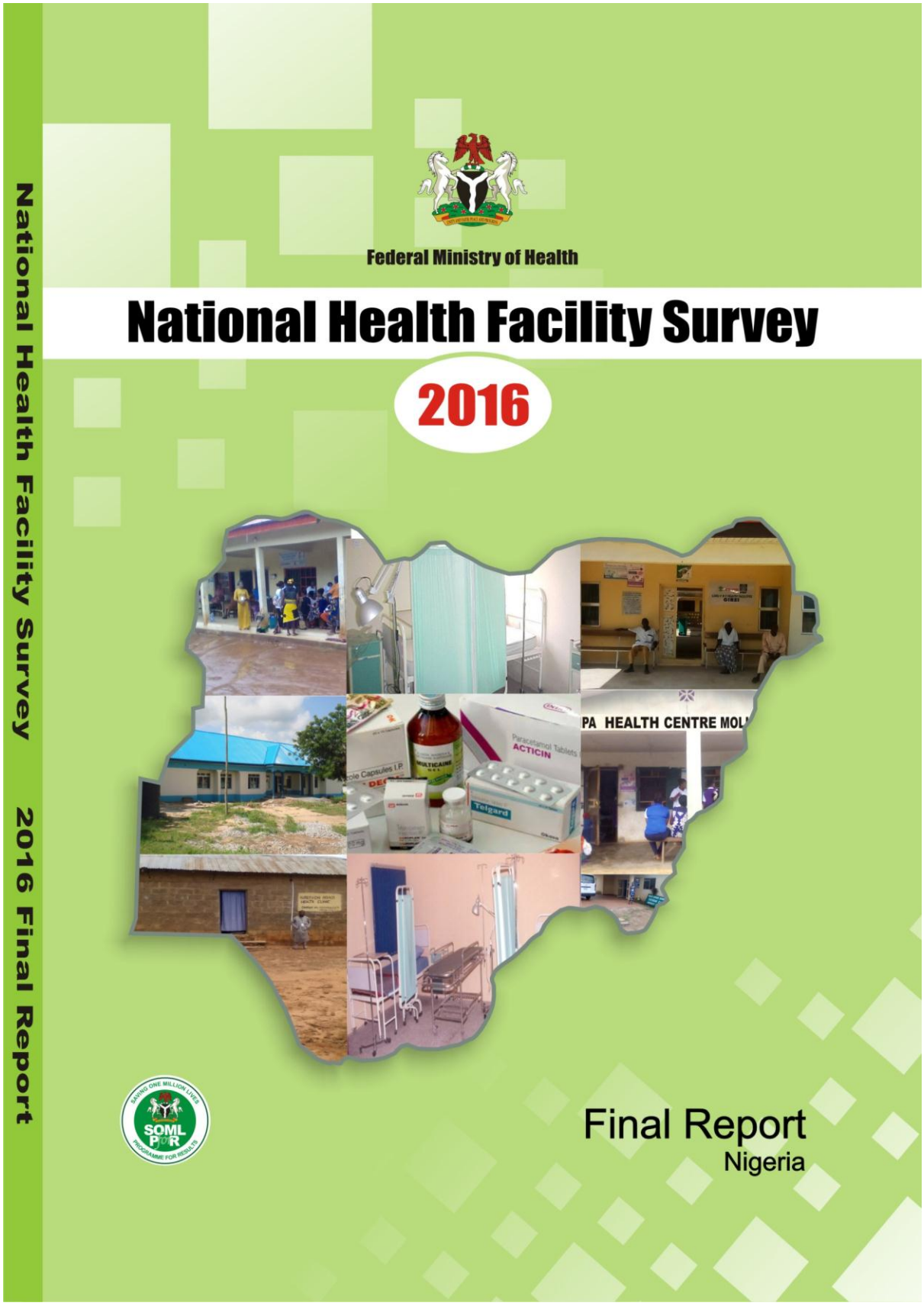

FOREWORD

The Federal Government of Nigeria (FGON) in line with its role of providing strategic direction for the Health Sector initiated the "Saving One Million Lives Programme for

Results" (SOML-PforR). This was conceived by the Federal Ministry of Health as a strategy to save the lives of mothers and children by increasing access and utilisation of evidence-based, cost-effective and high impact maternal, child and nutrition interventions in Nigeria.

The Programme is a results-focused partnership with the State Ministries of Health, and is financed by a US $500million International Development Association (IDA) credit to the Federal Republic of Nigeria over a period of four years. It is based on an approach of structuring the flow of resources to pay for results, rather than simply paying for processes or reimbursing activity costs.

The National Health Facility Survey (NHFS) 2016 is premised on the combination of Service Delivery Indicators (SDI) and Service Availability and Readiness Assessment (SARA) methodologies, with quality assurance support from the World Bank. The Report findings are disaggregated into geopolitical zones, States and Health Facility types.

This Report is the first nationally representative health facility survey designed to assess Primary, Secondary, and Private Health Care facilities. The survey provides information on: (i) clinical competence, (ii) availability of drugs and basic equipment, (iii) readiness to provide key SOML-PforR interventions, (iv) supervision and (v) financial management based on the Ward Minimum Health Care Package for quality services.

Availability of annual NHFS reports forms the basis for FGON to provide performance linked disbursement to States based on the quality of services provided at the Primary Health Care level. The dual benefit of improved quality of care and the accompanying financial incentive makes the annual NHFS a "win-win" to the FGON and the State government. The Programme for Result is a paradigm shift that rewards efficiency and quality of care.

In conclusion, I urge policy makers and programme managers to focus on the outcome of this report and ensure that their activities address all areas of concern in a concerted and coordinated manner. It is my hope that all stakeholders will play active roles in closing the gaps in the provision of high-quality health services to the Nigerian populace.

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Honourable Minister of Health,
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May 2017

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Finally, the input of the Survey supervisors, enumerators, health facility workers and patients, whose experiences, perspectives and voices helped to shape this document, is deeply appreciated.

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ABBREVIATIONS AND ACRONYMS

ANC	Antenatal Care
ART	Antiretroviral Therapy
ARP	Antiretroviral Prophylaxis
BCG	Bacillus Calmette-Guerin
BEmOC	Basic Emergency Obstetric Care
BP	Blood Pressure
CHC	Comprehensive Health Centre
CHEW	Community Health Extension Worker
CPT	Cotrimoxazole Preventive Treatment
CTX	Cotrimoxazole
DEP	Data Entry Programme
DFH	Department of Family Health
DHPRS	Department of Health Planning, Research and Statistics
DHS	Demographic Health Survey
DLI	Disbursement Linked Indicators
EID	Early Infant Diagnosis
EMTCT	Elimination of Mother-to-Child Transmission
EPI	Expanded Programme on Immunization
FCT	Federal Capital Territory
FMOH	Federal Ministry of Health
FMS	Facility Manager Survey
FP	Family Planning
GFATM	The Global Fund for AIDS, Tuberculosis and Malaria
GPRHCS	Global Programme to Enhance Reproductive Health Commodity Security
HC	Health Clinic/Centres
HF	Health Facility
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
HP	Health Post
HTS	HIV Testing Service
HW	Health Worker
ID	Identification
IDA	International Development Agency
IHFAN	International Health Facility Assessment Network
IMCI	Integrated Management of Childhood Illnesses
IPTp	Intermittent Preventive Treatment of Malaria in Pregnancy
IPTp3+	Intermittent Preventive Treatment of Malaria in Pregnancy 3+
ISS	Integrated Supportive Supervision
ITN	Insecticide Treated Bed Nets
IUCD	Intra-Uterine Contraceptive Device
IVA	Independent Verification Agent
LGA	Local Government Area

LLIN	Long-Lasting Insecticide Net
MBHSS	Monitoring the Building Blocks of Health Systems
MCH	Maternal and Child Health
MDG	Millennium Development Goal
MgSO4	Magnesium Sulphate
MMNC	Management of Maternal and Neonatal Complications
MNCH	Maternal, Neonatal and Child Health
MS	Microsoft
MSS	Midwives Service Scheme
NCD	Non-Communicable Diseases
NCZ	North Central Zone
NDHS	Nigeria Demographic and Health Survey
NEZ	North East Zone
NHAct	National Health Act
NHFS	National Health Facility Survey
NHIS	National Health Insurance Scheme
NHMIS	National Health Management Information System
NHMIS	National Health Management Information System
NHP	National Health Policy
NHREC	National Health Research Ethics Committee
NPHCDA	National Primary Health Care Development Agency
NSHDP	National Strategic Health Development Plan
NSHIP	Nigeria State Health Investment Project
NWZ	North West Zone
OIC	Officer –In – Charge
OPD	Outpatient Department
PAD	Project Appraisal Document
PBF	Performance-Based Financing
PETS	Public Expenditure Tracking Survey
PforR	Program for Results
PHC	Primary Health Care
PHF	Primary Health Facilities
PM	Project Manager
PMTCT	Prevention of Mother-to-Child Transmission
PMU	Programme Management Unit
QOC	Quality of Care
QSART	Quality of Service Assessment and Resource Tracking
RDT	Rapid Diagnostic Test
RHCS	Reproductive Health Commodity Security
SAM	Service Availability Mapping
SARA	Service Availability and Readiness
SBA	Skilled Birth Attendant
SDG	Sustainable Development Goal
SDI	Service Delivery Indicator

STI	Sexually transmitted Infection
SEZ	South East Zone
SHF	Secondary Health Facility
SIP	Survey Implementation Plan
SMART	Standardized Monitoring and Assessment of Relief and Transitions
SOML PforR	Saving One Million Lives Program for Results
SOML	Saving One Million Lives
SP	Sulfadoxine-Pyrimethamine
SPA	Service Provision Assessment
SPHCDA/B	State Primary Health Care Agencies or Boards
SSZ	South South Zone
STL	State Team Leader
SURE-P MCH	Subsidy Reinvestment and Empowerment Programme Maternal and Child Health
SURE-P	Subsidy Reinvestment and Empowerment Programme
SWZ	South West Zone
TB	Tuberculosis
TBA	Traditional Birth Attendant
TOR	Terms of Reference
U5MR	Under-5 Mortality Rate
UHC	Universal Health Coverage
UNFPA	UN Population Fund
USAID	United States Agency for International Development
VHW	Village Health Worker
WDC	Ward Development Committee
WHO	World Health Organization
WHS	Ward Health System
WMHCP	Ward Minimum Health Care Package

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DEFINITION OF TERMS

Accurate HMIS Summary Report Submission	Data from health facility registers (or source data) reconciles perfectly with the submitted or compiled monthly (summary) HMIS reports of the same health facility for the 3 months preceding the survey
Accurate Record of Expenditures	Assessed to determine if the available funds tallied with the records
Adherence to Guidelines	The un-weighted average of the share of the relevant history, physical examination, investigation and health education adhered to by a health worker in the management of a case.
Availability of Basic Delivery Equipment	Proportion of health facilities that had a full complement of the following in the delivery service area: cord clamp, episiotomy scissors, scissors or blade to cut umbilical cord and skin disinfectant.
Antenatal Care (ANC)	Antenatal care is the continuous clinical assessment of women during pregnancy, for the purpose of ensuring the best possible outcome for both mother and child
Availability of Basic Medical Equipment	The proportion of health facilities that had a full complement of the following: thermometer, any weighing scale (adult, child or infant), complete set of blood pressure apparatus, stethoscopes and examination light/flashlight
Clinical Condition	Five clinical cases made up of three common childhood cases namely; acute diarrhoea with severe dehydration, pneumonia and malaria with anaemia and two maternal and new born complications namely; Post-partum haemorrhage and neonatal asphyxia.
Diagnostic Accuracy	Average proportion of correct diagnoses provided in the five case studies by clinical staff (Acute diarrhea, Pneumonia, Malaria with Anemia, Post-Partum Hemorrhage and Neonatal Asphyxia)
Drug Availability	The proportion of essential drugs which at the time of the survey was available and unexpired at the health facilities
Early Infant Diagnosis (EID)	It is an antigenic test applied to an exposed newborn of HIV positive woman to assess HIV status within the first 72 hours of birth. Early infant diagnosis is the virological diagnosis of HIV infection in infants of HIV positive mothers usually within the first six week of life. It enables the early identification of HIV exposed infants who have HIV-infection, as a first step in securing their treatment and care.
Elimination of Maternal to	It is a program launched to prevent maternal to child

Child Transmission of HIV (EMTCT)	transmission of HIV globally. The program protocol provides the recommended standard of care for HIV positive pregnant woman-child pair.
Hand Washing Capacity	Availability of either soap and running water (tap water or water with pitcher) or alcohol-based hand sanitizer.
Health Management Information System	Single system of generating information for health that is meant to produce high quality data and to service a wide diversity of stakeholder data and reporting needs
Integrated management of Childhood Illness (IMCI)	It is an integrated, non-disease specific approach to management of major childhood illnesses where sick children are classified and assessed based on key danger signs, key/main symptoms with emphasis on preventive interventions like nutrition and immunization. It is used by lower cadres of health workers in PHFs to manage common childhood illnesses empirically.
Integrated Supportive Supervision (ISS)	A harmonized supervisory system which uses a common tool (checklist) to assess performance and promote effective coordination at all levels of health care delivery.
Knowledge of IMCI Danger Signs and Main Symptoms	The proportion of the danger signs and main symptoms mentioned by a respondent during the provider IMCI knowledge interview. The eight items considered were: four danger signs (inability to drink or breastfeed, convulsion, vomiting everything and loss of consciousness/lethargy) plus three symptoms (fever, cough/difficulty in breathing and diarrhoea) plus check of respiratory rate in child with cough/difficulty in breathing.
Long Lasting Insecticidal Net	Bed net that is designed as a physical barrier to mosquitoes and it has been treated with safe, residual insecticide for the purpose of killing and repelling mosquitoes.
MNCH Week	Maternal newborn and child health week is a week long, bi-annual implementation of health services for women and children in Nigeria. During this week, high impact, cost effective lifesaving interventions and services are delivered to pregnant women and under-5 children at primary health facilities during nationwide.
Other Health Workers	Health workers including Environmental Health Officers (EHOs), Pharmacists, Pharmacy Health Technicians and other cadre types apart from doctors, nurses and community health workers that were found in the health facility performing various functions especially in primary healthcare facilities
Protection of User Fee Generated Income	Health facilities that stored their income from user fees in a safe location until disbursed or moved out of the facility for

	saving (safe; locked drawer in solid furniture with limited access to key)
Primary Health Facilities	Provide essential health care that is based on scientifically sound and socially acceptable methods and technology which make universal health care accessible to all individuals and families in a community
User Fees	Fees or money paid by the clients visiting the health facilities for services they received in any of the designated service areas in the health facilities

EXECUTIVE SUMMARY

Background

The National Health Facility Survey (NHFS) 2016 builds on the service delivery indicator (SDI) surveys developed by the World Bank and on the Service Availability and Readiness (SARA[1]) developed by the World Health Organization (WHO). The World Bank, the Bill and Melinda Gates Foundation, and the Global Fund for AIDS, TB and Malaria (GFATM) financed this first NHFS in Nigeria while subsequent surveys shall be financed by government.

Objectives

The objectives of this year's NHFS and subsequent NHFS's are to: 1) provide insights for managers so they can take specific actions to strengthen the health care system; 2) provide robust, independent, objective, and frequent data by which to track progress in improving the quality of health care in Nigeria; 3) make available information by which to benchmark the performance of States; and 4) provide the quality of care scores needed under Disbursement Linked Indicator (DLI) 2 of the Saving One Million Lives (SOML) Program for Results (PforR) which rewards States for improving the quality of care and health services provided at primary health care level. The 2016 NHFS provides the baseline against which to measure progress on DLI 2 in subsequent years.

Methodology

A stratified sampling strategy was used in the survey to select a total of 90 health facilities from each of the 36 States and the FCT bringing the total sample size to 3,300. One announced visit was made to each facility by a team of 3 enumerators. Questionnaires were administered to officers-in-charge of health facilities and their responses recorded. The survey was carried out from August to December, 2016.

Quality Assurance

To ensure the quality of the data the following strategies were employed: 1) Electronic data capture: data collection was done with the use of android-based handheld devices on which the pre-tested questionnaire was scripted which minimized data entry errors and allowed the location of each team to be tracked, the length of the interviews measured, some of the interviews recorded, and problems identified early on; 2) Intensive training and competitive selection of field personnel: training which was conducted over a 2-week period for each cluster of States from two contiguous geopolitical zones of Nigeria with a combination of classroom teaching, role plays and questionnaire administration on the field to simulate real data collection. Successful field personnel were competitively selected at the end of training; 3) Supervision: the team leader in each State monitored the work of the teams under his/her supervision by accompanying a team daily to the assigned health facility and closely observing them to ensure strict adherence to survey protocols. The survey firm's core management team provided additional monitoring and oversight through spot checks on the teams and facilities visited. Independent monitoring and supervision was also carried out by

[1] http://www.who.int/healthinfo/systems/sara_introduction/en/

the World Bank team and the National SOML PforR Programme Management Unit (PMU) of the FMOH; and 4) Back checks were conducted on 10% of the sample size per State using an abridged version of the facility questionnaire to ensure consistency of data. Data collected met the Bank's acceptable thresholds for mismatch between the enumerators' data and the back checked data.

Sampling and Re-Sampling

A sample of 68 primary health centers (PHCs), 6 health posts, 6 secondary hospitals, and 10 private health facilities were selected from a list of facilities provided by UNFPA and validated by the States Ministries of Health. Overall, 669 sampled health facilities (20.2% of sample size) - had to be replaced with other facilities on the list. The reasons for replacement include: 1) wrongly categorized (31.7%); 2) facility no longer operational/functional (21.6%); 3) facility does not exist (19.4%); 4) communal crisis/security (9.8%); 5) lack of personnel (1.4%) and other reasons (15.9%).

Components of the Survey

The components of the overall NHFS survey questionnaire include; 1) general facility questionnaire; 2) observation of the treatment of a sick child; 3) clinical vignettes and provider questionnaire); 4) exit interview of the parents of a child brought to the clinic; and 5) records review.

Findings

Clinical Competence of Health Workers

Methodology: Health workers were provided with a series of 5 clinical situations (vignettes) where one of the enumerators acted like the patient or his/her mother. The vignettes comprised three common childhood illnesses namely diarrhea with dehydration, pneumonia, and malaria with anaemia as well as post-partum hemorrhage (PPH) and birth asphyxia. The health worker had to ask questions about the history of the illness, indicate what physical examination procedures they would carry out, and what laboratory examinations they would conduct. The enumerator would provide the information to the questions asked, findings on physical examination etc. Then the health worker would have to provide a diagnosis.

Diagnostic accuracy was calculated as the proportion of the 5 vignettes that the health worker correctly diagnosed. For example, if the health worker diagnosed 3 out of 5 vignettes correctly, she would have scored 60%. Overall, health workers on average, correctly diagnosed only 43.1% of the five cases. Doctors, nurses/midwives and CHEWs had diagnostic accuracy of 66.2%, 55.4%, and 38.7% respectively. It was found that only 12.5% of all the health workers were able to correctly diagnose malaria with anaemia while 44.3% diagnosed acute diarrhoea with dehydration and 46.2% diagnosed pneumonia. Post-partum haemorrhage (PPH) was diagnosed correctly by 65.0% and birth asphyxia by 44.6% of the health workers.

Adherence to guidelines for the management of common childhood diseases was measured as the un-weighted average of the share of relevant history questions, physical examination, and lab investigations (according to the IMCI guidelines) mentioned by the health worker. For example, if a health worker asked 5 out of the 6 relevant history questions for acute diarrhea with severe dehydration, carried out 2 out of 5 physical examinations, and asked for 1 out of 3 lab tests, that health worker would score 52.2% ((5/6 + 2/5 + 1/3)/3 = 52.2%). Overall, adherence to the guidelines averaged 38.6% among all health workers, including 53.9% for doctors, 41.4% for nurses/midwives, 36.5% for CHWs and 37.4% for other health workers.

Management of Maternal and Newborn Complications: When assessing the proportion of steps or actions correctly proposed for the management of maternal and newborn complications, health workers correctly proposed 17.9% of the steps or actions necessary for the management of PPH and birth asphyxia. Health workers' knowledge of the IMCI guidelines and providers' knowledge of the eMTCT clinical protocols were assessed by asking relevant open-ended questions. It was found that on the average, PHFs health workers knew 45.9% of all the key danger signs and main symptoms to be assessed in a sick child as stipulated by the IMCI guidelines.

Training: Survey findings reveal that generally, health workers who had received training on IMCI in the last 2 years knew only about 12 percent more of the danger signs and main symptoms than those who had not received training. Thus, the effect of training on provider knowledge was positive but marginal. In addition, only 24.5% of the PHF health workers that were interviewed had received prior training on IMCI.

Documentation of Care Process for ANC, Suspect Malaria in U-5 Children and eMTCT Services Records of patients were reviewed for documented evidence of certain important elements of the care process to determine the quality of care received by the patients. For example, 90.2% of all the ANC records reviewed had documentation for the woman's HIV test result, while 9.7% had the partners' test result and 9.2% had the woman's syphilis test result. The examination of ANC records also showed 65.5% documentation for blood pressure at the most recent visit and 35.4% documentation for anaemia assessed by laboratory test or physical examination. For the prevention of malaria in pregnancy, 17.3% had documentation of receiving three or more doses of IPTp while 39.6% had documentation of receiving three or more doses of IPTp and ITN/ITN.

Availability of Essential Drugs and Basic Equipment

Drug availability was defined as the proportion of the valid essential drugs available at a health facility. For example, if a PHC had 10 out of the 30 essential drugs, that facility would score 33%. Average drug availability in all health facilities was 34.6 % country-wide but varied between 29.9% in SWZ and 38.4% in NWZ. Only 32.9% of PHFs had all basic medical equipment (blood pressure cuff, stethoscope, weighing scale, thermometer and examination light (torch). Of all the PHFs surveyed, implants or IUCDs were available in only 12%, pills in 26%, injectables in 28.5% and male condoms in 33.1%.

Readiness of Health Facilities to deliver Key SOML Interventions

Survey determined that only 16% of PHFs offering eMTCT services reported that they had Early Infant Diagnosis (EID) capacity (either conducted EID in their facilities or took samples with blood spot paper and sent them to another facility from which they received the results back) while 11 % of those offering the service were able to conduct the test in their facilities. Nevirapine syrup, the prophylaxis for HIV exposed infants was available in 41.1% of these PHFs while maternal ARV prophylaxis was available in 55.2%. Availability of important items for delivery services in PHFs was assessed. Magnesium sulphate (MgSO4) injection was available in 8.8% of PHFs, oxytocin injection in 35.5% and functional basic delivery items to ensure clean delivery consisting of cord cutting and clamping instruments as well as disinfectants to clean the perineum were available in 22.1% of the PHFs. Functional bag and mask for infant resuscitation was available in 14.9% of PHFs. While only 15.9% of PHFs had IMCI guidelines/job aids and 46.3% had LLIN or LLIN vouchers for distribution, 71.8% had malaria test capacity (RDT or microscopy).

About 55.9% of PHFs surveyed reported to have participated in the most recent MNCH week within the previous 6 months preceding the survey while 20.7% reported that they distributed vitamin A during the MNCH week. Ante-Natal Care (ANC) services were provided in 84.6% of the surveyed PHFs. Of these, 60.1% offered HIV testing services while 25.1% provided ARV for HIV-positive women as part of routine ANC services. Sexually Transmitted Infections (STI) services were offered by 50.4% PHFs of which 9.5% had the national guidelines for treatment and diagnosis of STIs, 6.1% had syphilis test kits, 67.4% had metronidazole tablets, 34.4% had ciprofloxacin tablet and 24.4% had ceftriaxone injection. Tuberculosis services were available in 19.6% of PHFs and 75.8% of SHFs. Of the HFs that offered the service, 37.1% had the national diagnosis and treatment guidelines for adults while 23.5% have the guidelines for children. Microscopy availability was 55.7% while availability of laboratory staff trained in reading TB smear was 47.9%. First-line TB drug availability was 62.7% in the PHFs.

Infection control was assessed in terms of hospital waste management and hand hygiene with the result that 32.4% of HFs practiced safe disposal of their sharp wastes on-site while 19.6% safely disposed medical waste. For those facilities where wastes were removed off-site for final disposal, sharps wastes and medical wastes were not properly stored in 25.2% and 14.9% of HFs respectively before they were removed off-site. Also, 64.2% of HFs had hand

washing capacity (defined as availability of soap and either tap water/water with pitcher or hand sanitizer).

When the availability of vaccines and vaccine commodities was measured, each of BCG, polio, pentavalent and measles vaccines were available on the day of the survey in health facilities that stored vaccines (or during the last immunization day in those that did not store) in only about 35% of the HFs surveyed. While a high percentage of HFs had sharp containers (86.8%), disposable needle and syringes (86.4%), immunization registers (85.8%) and blank child immunization records (83.4%), only 32.4% had functional refrigerators with up-to-date temperature monitoring charts. When doctors and nurses/midwives were considered as delivery personnel, only 15.3% of HFs surveyed had skilled birth attendants. However, when CHEWs were included, the percentage increased four-folds to 62.9%.

Management

Financial management: Both revenue and expenditure records of health facilities were examined. Only 19.9% of PHFs had any financial records to examine and those were up-to-date (till the last expenditure made) in 14.7% of HFs. Cash-in-hand reconciled with the records in 8% of the HFs. Fees for services rendered were posted and easily visible to patients in 15.1% of HFs. The income from user fees were stored in a safe location until disbursed or moved out of the HF in 8.5% the HFs.

Health care financing: Only about one third of surveyed health facilities actually received any cash grants to meet their operational costs. They improvised by charging user fees with about 75% of PHCs charging such fees. The average fee charged for a child is ₦462 in PHCs and ₦1,090 in private facilities. This does not include transportation costs. This practise is inconsistent with governments' often touted policy of free healthcare at the primary level. The direct effect of this financial barrier to access could not be determined. However, the median national average number of patients seen per PHC in the 3 months preceding the survey is 46.7. Further, the average delay in payment of salaries to public sector health workers is 87 days i.e. 3 months delay. In order to improve access to health care at the primary level, government at the three levels has to do more to mobilize and devolve resources directly to PHFs.

Integrated Supportive Supervision (ISS): was conducted in 67.5% of PHFs in the three months preceding the survey. In 41.9% of the PHFs, a supervisory checklist was used by the supervisor during the most recent supervision visit. However, copies of the completed checklist or extensive written comments were left behind in only13.6% of the PHFs. The current approach to supervision where no checklist is left behind at the HF makes every supervisory visit like the first one with no opportunity to understand the trends in performance. Health Management Information System (HMIS) data accuracy was assessed by comparing the data on the monthly summary report form over the previous three months with the data from the respective register for consistency. The three indicators checked for accuracy were (i) number of first ANC visit; (ii) number of pregnant women tested for HIV;

and (iii) number of children receiving Penta 3 vaccine. The results showed that the reports and the registers were exactly consistent 47.7%, 58.0% and 43% of the time respectively.

Effect of Decentralizing Financing on Quality

Under the Nigeria State Health Investment Project (NSHIP), three states: Adamawa, Nasarawa and Ondo states implemented either Performance-Based Financing (PBF) or decentralized facility financing (DFF). Under these two approaches funds are transferred electronically to a bank account controlled by the officer-in-charge of the PHF and the chair of the Ward Development Committee (WDC). The facilities had substantial autonomy in how the funds were used. In order to assess the effectiveness of providing funds directly to health facilities, a series of outcome variables from the 3 project States were compared with those in control states. The control states were neighbouring states that received no additional support ("business as usual"). It is important to keep in mind the methodological limitations of this approach. It is possible that the NSHIP states were already performing better at baseline - an ongoing impact evaluation of NSHIP shall provide results in September, 2017. As can be appreciated from the table below the NSHIP states do considerably better on many indicators of quality of care.

Table ES1: Performance of NSHIP States Compared to Control States

Parameter	NSHIP States	Control States	Difference (percentage points)
Availability of Essential Drugs	47.7%	30.1%	17.6
Availability of Basic Medical Equipment	59.1%	32.9%	26.2
Availability of Equipment needed for Delivery Care	32.9%	18.6%	14.3
Supervisory Visit in the Last Quarter	79.7%	70.7%	9.0
Checklist used during Supervisory Visit	68.2%	38.1%	30.1
Supervision Documented & Comments Left in Facility	35.0%	7.0%	28.0
Diagnostic Accuracy (% of all vignettes)	45.7%	41.1%	4.6
Adherence to Clinical Guidelines	44.9%	33.6%	11.3
Management of Complications, Maternal & Child	22.1%	13.2%	8.9

SOML Quality of Care (QoC) Index Scores

In line with the SOML-PforR commitment to improving the quality of care at health facilities nationwide, the FMOH will provide performance disbursements to States (under DLI 2) based on the quality of services provided at primary health care level, as will be shown by the results of each year's NHFS. A quality of care (QoC) index has therefore been developed for objective calculation and scoring. Based on agreed project indicators and their measurements, clear examples of the calculation of scores using simple arithmetic and the weights attached to the scores in the final determination of the performance of each State are presented in detail in the report.

The QoC indicators, weighting and calculations as weighted averages of the different components are shown below:

Indicator	Weight	Calculation
Clinical competence	30%	$0.3 \times 59 = 17.7\%$
Availability of drugs and basic medical equipment	20%	$0.2 \times 67.5 = 13.5\%$
Readiness to provide key SOML services	15%	$0.15 \times 62.2 = 9.3\%$
Quality of supervision	20%	$0.2 \times 80 = 16\%$
Financial management and quality of HMIS data	15%	$0.15 \times 64.4 = 9.7\%$
Quality of care score	**100%**	**66.2**

Conclusions and Recommendations

This first NHFS obtained responses to over 4,000 variables and yielded a rich database of findings disaggregated to geopolitical zones, States and health facility types. The survey showed an overall poor performance in the clinical competence and knowledge of health care workers; poorly equipped health facilities unable to provide essential services; and health facilities that lacked good management practices. There are a few specific and actionable recommendations that arise from the results of the survey:

(i) **In-Service Training:** The limited knowledge of health care providers results in poor quality of health care. It indicates a pressing need to carry out more and better quality in-service training of health workers, particularly CHEWs and J-CHEWs.

(ii) **Decentralizing Funding to HFs:** Decentralizing funds to the health facilities appears to be a quick way of improving many aspects of health services. States could achieve this kind of decentralization quickly and it should be the approach used with federal government funds as well.

(iii) **Reduce User-Fees:** The widespread and relatively high level of user fees charged for child consultations, found through the exit interviews, suggests that free or reduced-cost care could be important in increasing access and utilization of public health services.

(iv) **Strengthening the Quality of Supervision:** The quality of supervision is weak and strengthening it could be done at little additional cost. Supervision is already being done reasonably frequently but there needs to be greater use of checklists and these need to be left in the HFs. In keeping with international best practice the checklists must be improved and should be quantitative (and objective), allow multiple visits to be shown on the same checklist, and allow details to be left with the health workers in the HF.

Further Analysis: The data coming from the survey has not been fully analysed and could provide important insights about the Nigerian health system. Of particular interest would be State-specific analyses to help state officials improve the public health care system.

1.0 INTRODUCTION

1.1 Background

The National Health Facility Survey (NHFS) 2016 is based on a standard health facility assessment methodology (Service Availability and Readiness - SARA[2]) promoted by the World Health Organization (WHO) to assist countries to monitor service availability and readiness to provide services at health facilities. The SARA questionnaire used for assessing quality of care draws on indicators and tools being developed by international health system stakeholders and technical experts under the leadership of the WHO. The quality of care tools have been adapted to meet the objectives for monitoring quality of care for the Federal Ministry of Health (FMOH) Saving One Million Lives Program-for-Results (SOML PforR) initiative, and to provide information needed to strengthen the health system as well as specific health services at State and national levels. It is expected that a subset of this survey will be conducted on an annual basis to provide information on changes in SOML PforR service availability and quality indicators.

The World Bank and the Global Fund for AIDS, TB and Malaria (GFATM) financed the first NHFS in Nigeria while subsequent surveys shall be financed by government. This work was carried out in close collaboration with the Department of Family Health (DFH) and Department of Health Planning, Research and Statistics (DHPRS) at the FMOH.

1.2 Country Context

Nigeria is an economic leader in Africa with an estimated 2015 Gross Domestic Product (GDP) at about USD 481.1 billion[3] and with an estimated population of 185 million presently[4]. Nigeria population is diverse with the existence of more than 300 ethnic groups and more than 500 languages/dialects spoken. With a birth rate that is significantly higher than the death rate, at 40 and 13 per 1,000 people respectively[4]; a population growth of 2.7% per annum[5] and a population density of 195 people per sq.km[6], it is increasingly challenging to meet the health demands of the populace and perhaps even more challenging to improve the quality of services.

Nigeria is a federal republic with the executive, legislative and judicial arms of government sharing power. Nigeria is divided into thirty-six States and the Federal Capital Territory

[2] http://www.who.int/healthinfo/systems/sara_introduction/en/
[3] http://www.worldbank.org/en/country/nigeria
[4] Projection from the National Population Census (2006)
[4] http://data.worldbank.org/indicator/SP.DYN.CBRT.IN?end=2014&start=1961
[5] http://data.worldbank.org/indicator/SP.POP.GROW?end=2014&start=1961
[6] http://data.worldbank.org/indicator/EN.POP.DNST?end=2014&start=1961

(FCT), which are further sub-divided into 774 Local Government Areas (LGAs). The LGAs are further divided into almost 10,000 wards. The States and the FCT are aggregated into six geopolitical zones: North West Zone (NWZ), North East Zone (NEZ), North Central Zone (NCZ), South East Zone (SEZ), South South Zone (SSZ), and South West Zone (SWZ).

1.3 Health Sectoral and Institutional Context

Health care provision in Nigeria is a concurrent responsibility of the three tiers of government i.e. Federal, State and Local Government. However, because Nigeria operates a mixed economy, private providers of health care play visible role in health care delivery especially in urban areas. The federal government's role is mostly limited to formulating policies, setting standards and regulating the system. In addition to these, it manages service delivery in the university teaching hospitals and federal medical centers (tertiary health institutions); while the State government manages services in the various general hospitals (secondary health care); and the local government focus on primary health centers (primary health care) which are regulated by the federal government through the National Primary Healthcare Development Agency (NPHCDA).

Most services provided by private and public providers are clinic-based, with minimal outreach, home and community-based services. The services are fragmented, with many vertical disease control programs. Referral systems are weak and even tertiary facilities are used for provision of primary care thus diminishing the continuum of care and making the system inefficient. Also, despite the private sector delivering 60% of health care in the country, private-public partnership is very weak. The NPHCDA has defined a Ward Health Care Minimum Package (WHCMP) for PHC, but implementation remains weak. There are limited or no standard operating procedures at higher levels, except for a few disease control programs/strategies, like Elimination-of-Mother-to-Child Transmission (EMTCT), Tuberculosis and Leprosy, Malaria, Family planning and Essential Obstetric care. These lead to provider-initiated rather than client-centered delivery of care.

Other confounding factors that further limit quality of care include dearth in the skills and, quantity of available human resources for health with poor attitude of health care providers. In addition, the country is confronted with lack of emergency preparedness to respond to epidemics[5]. Furthermore, the health outcomes measured through key health indicators such as life expectancy, mortality rates and prevalence of key disease conditions are poor and shall require significant investments in order for Nigeria to attain the Sustainable Development Goal (SDG) 3. There are also large income inequalities in both health outcomes and utilization of healthcare with the rich having greater access and better quality of services.

In order to improve the functionality, quality of care and utilization of services so as to positively impact the health status of the population, universal access to a package of cost-

[5] FMOH (2009): The National Strategic Health Development Plan Framework (2009-2015)

effective and evidence-based interventions is needed. This would of necessity require interventions that transform the way the health care system is resourced, organized, managed and services delivered. An important step towards attaining this is the establishment of baseline information as a diagnostic tool to design both short- and long-term solutions.

1.4 Objectives of Survey

The objectives of the NHFS are to: (a) provide information that can help managers at all levels of the health care system assess performance and identify weaknesses that need to be addressed in order to strengthen health service delivery; and (b) collect baseline health facility data against which progress in subsequent years can be measured as part of the SOML PforR. The NHFS will specifically: (i) collect robust evidence on basic health care availability and readiness to provide services at primary health care (PHC) facilities; (ii) examine care in a few general hospitals to better understand their ability to deliver PHC services; and (iii) strengthen the capacity of institutions in Nigeria to conduct health facility surveys and analyze the data generated.

Within the context of the SOML- PforR, the objectives of this consultancy are to: (i) collect facility based data on healthcare availability and readiness at selected primary health facilities and referral secondary level hospitals using agreed questionnaire and in compliance with agreed quality assurance provisions; (ii) deliver a completed health facility dataset with comprehensive documentation; and (iii) produce a country report.

1.5 Scope of Work

The consultant conducted facility surveys at primary health facilities and secondary referral hospitals using the methodology approved by the World Bank in selected sample facilities. The proposed scope of facilities to be covered during the survey was 3,330 facilities in total, with a minimum of 90 facilities in each of the 36 States and FCT. The NHFS involved the implementation of the following activities:

a) Review of relevant literature
b) Consensus building with World Bank and its partners on survey methodology, logistics & reporting
c) Sensitization of State, local government authorities as well as survey facilities
d) Sampling of health facilities
e) Piloting of questionnaire
f) Recruitment, training and selection of survey personnel
g) Collection of field data
h) Verification and analyses of data
i) Development of draft and final reports

The detailed tasks and deliverables of the Consultants are presented in the Terms of Reference (ToR) (**Annex 1)**.

2.0 LITERATURE REVIEW

2.1 Health Sector Strategies

In every country, the health sector is critical to social and economic development as there is ample evidence linking productivity to quality of health care.

2.1.1 Global Context

Health has always received global attention because of its relationship with social and economic development. Several efforts towards improving health have been made by governments of countries as well as global agencies like World Health Organisation (WHO), United Nations (UN), the World Bank and United Nations Children's Fund (UNICEF). These governments and agencies have established agenda, policies, strategies and interventions aimed at improving the health status of countries. The current major global agenda is discussed below.

Sustainable Development Goals (SDGs)

In September 2015, the United Nations General Assembly adopted the new development agenda; Transforming our World: the 2030 agenda for sustainable development, under which the Sustainable Development Goals (SDGs) have been laid out. The SDGs integrate all three dimensions of sustainable development: economic, social and environmental, and were designed based on the belief that eradicating poverty and inequality, creating inclusive economic growth and preserving the planet are intimately linked to each other and also to health.

There are 17 Goals, with 169 targets and 229 indicators. The health-specific SDG is Goal 3: Ensure healthy lives and promote well-being for all at all ages. There are other health-related targets under Goals 1, 2, 5, 6, 13, & 16. SDG 3 includes 13 targets covering all major health priorities including the unfinished and expanded Millennium Development Goals (MDG) agenda, Non-Communicable Diseases (NCD), mental health, injuries and environmental issues, and "means of-implementation" targets.

The target that focuses on Universal Health Coverage (UHC) is very important in achieving the other targets and building strong and resilient health systems. To this end a UHC coverage index of essential health services was proposed as SDG indicator for services. UHC

coverage index includes a set of tracer indicators grouped into four major categories with each category having four indicators. The four categories of tracer indicators for UHC service coverage are: (a) Reproductive, maternal, newborn and child health; (b) Infectious diseases; (c) Non-communicable diseases; and (d) Service capacity and access; and health security. In order to make progress towards the UHC target, countries need to strengthen their health systems. The health system also needs to be adapted to meet the shifting health priorities associated with demographic and epidemiological transitions, rapidly developing technologies and changing public expectations.

2.1.2 Nigerian Context

The provision of health care in Nigeria is the function of the three tiers of government: Federal, State and Local government. It has been reported that the health indicators, including maternal and child health indicators in Nigeria are below country targets and internationally-set benchmarks as a result of weaknesses in the country's health system. There are wide regional disparities in status, service delivery and resource availability in Nigeria's health sector. The pace of progress in the country's health sector has been slow despite the efforts that have been made towards improving the sector. In addition to implementation of MDGs and SDGs, several policies, strategies and interventions have been used by successive governments to improve the health sector in the country. Beginning with the National Health Act, some of these policies, strategies and interventions are discussed below.

The National Health Act (NHAct 2014)

Signed into law on the 31st of October, 2014, the NHAct provides the legal framework for the regulation, development and management of the National Health System and sets standards for rendering health services in the Federation. The NHAct covers the following areas: (a) Responsibility for health and eligibility for health services and establishment of National Health System; (b) Health establishments and technologies; (c) Rights and obligations of users and healthcare personnel; (d) National health research and information system; (e) Human resources for health; (f) Control of use of blood, blood products, tissue and gametes in man; and (g) Regulations and miscellaneous provisions.

The National Health Policy (NHP 2016)[6]

Following the enactment of the first NHAct 2014, the advent of the Sustainable Development Goals (SDGs) and the increased global support for the attainment of Universal Health Coverage (UHC), it became necessary to develop the 2016 National Health Policy. Reflecting these new realities and trends, the updated policy provides the direction necessary to support the achievement of significant progress in improving the performance of the Nigerian health

[6] *The NHP 2016 was adopted at the emergency NCH held in Abuja on September 8th, 2016 – (communiqué of the emergency NCH)*

system. It lays emphasis on strengthening primary health care as the bedrock of the national health system in addition to the provision of financial risk protection to all Nigerians, particularly the poorest and most vulnerable groups. In addition, it presents concise statements on the ancillary policies of other important health programmes.

The objective of the NHP is to strengthen Nigeria's health system, particularly the primary health care sub-system, to deliver effective, efficient, equitable, accessible, affordable, acceptable and comprehensive health care services to all Nigerians. The document represents the joint commitment of the Federal, State and Local Governments as well as the private health sector to intensify action to attain the goal of health for all citizens.

The ten policy thrusts of the NHA are: Governance; Health Service Delivery; Health Financing; Human Resources for Health; Medicines, Vaccines, Commodities and Health Technologies; Health Infrastructure; Health Information System; Health Research and Development; Community Ownership/ Participation; and Partnerships for Health.

Policy implementation, monitoring, evaluation as well as specific roles and responsibilities of key stakeholders were also included in the document.

National Strategic Health Development Plan (NSHDP)

The NSHDP (2010 – 2015) was developed to strengthen the country's weak and fragile health care delivery system and improve its performance when it became obvious that the country's progress towards achieving the health related MDGs was very slow. It served as the overarching framework for health development in Nigeria. It had eight strategic priority areas which include: (a) Leadership and Governance for Health; (b) Health Service Delivery; (c) Human Resources for Health; (d) Financing for Health; (e) National Health Management Information System; (f) Partnerships for Health; (g) Community Participation and Ownership; and (h) Research for Health.

The NSHDP II is currently being developed. The proposed NSHDP II will be anchored on the National Health Policy 2016 and shall further align with and seek to foster the attainment of the National Vision 20:2020 Development Agenda, and the 2030 agenda for sustainable development including the renewed Global Commitment for countries to progressively attain Universal Health Coverage.

National Health Insurance Scheme (NHIS)

NHIS is a body corporate established under Act 35 of 1999 by the Federal Government of Nigeria to ensure access to health care by all Nigerians at an affordable cost. The scheme became operational in 2005. The objectives of NHIS are to: (a) ensure that every Nigerian has access to good health care services; (b) protect families from the financial hardship of

huge medical bills; (c) limit the rise in the cost of health care services (d) ensure equitable distribution of health care costs among different income groups; (e) maintain high standards of health care delivery services within the Scheme; (f) ensure efficiency in health care services (g) improve and harness private sector participation in the provision of health care services; (h) ensure equitable distribution of health facilities within the Federation; (i) ensure appropriate patronage of all levels of health care; and (j) ensure the availability of funds to the health sector for improved services. However, in spite of the importance of NHIS, it has only achieved 4% coverage since inception.

Primary Health Care System in Nigeria

In tandem with the 3 tier system of Government operated by the Federal Republic of Nigeria, the Nigerian health system operates primary health care at the Local Government Level, secondary health care at State level and tertiary health care at Federal level.

Within the National Health Policy, PHC is identified as the 'main focus for delivering effective, efficient, quality, accessible and affordable health services to a wider proportion of the population'. The National Primary Health Care Development Agency (NPHCDA) is responsible for providing support for the implementation of the NHP 2016 in all matters relating to primary health care (PHC) in Nigeria. At the State level, there are State Primary Health Care Agencies or Boards (SPHCDA/B) meant to ensure that all PHC services are delivered under one authority and resource management body in line with the “PHC Under One Roof" concept championed in the NHAct 2014 and NHP 2016.

As part of efforts towards achieving the highest possible quality of care within the resources available and effectively managing health services, several attempts have been made to set standards for PHC in Nigeria from the Basic Health Service Scheme (BHSS) of 1975 – 1980 to the current Ward Health System.

The Ward Health System (WHS) and Ward Minimum Health Care Package (WMHCP)

The Ward Health System (WHS) represents the current national strategic thrust for the delivery of PHC services in Nigeria and utilizes the electoral ward as the basic operational unit for PHC service delivery.

The Ward Minimum Health Care Package (WMHCP) was developed to address the current Ward Health System strategy to deliver PHC services, and consists of a set of health interventions and services that address health and health related problems that would result in substantial health gains at low cost to government and its partners.

It includes the following interventions: (1) Control of Communicable Diseases (Malaria, STI/HIV/AIDS), (2) Child Survival, (3) Maternal and Newborn Care, (4) Nutrition, (5) Non-Communicable Diseases Prevention, (6) Health Education and Community Mobilization

Minimum Standards for PHC in Nigeria[7]

Following the development of the Ward Minimum Health Care Package in 2007, there was also the need to define and declare a set of Minimum Standards in the areas of health infrastructure, human and financial resources and provision of essential drugs and commodities for primary health institutions in Nigeria. This informed the development of the Minimum Standards for Primary Health Care in Nigeria document by the NPHCDA in collaboration with major stakeholders in health including the Federal Ministry of Health, agencies, academia and public health experts, as well as development partners.

The overall goal of the document is to uniformly define for the various levels of fixed health facilities in Nigeria, the minimum standards PHC systems, staffing, equipment and service delivery at LGA level in order to improve access to and quality of services. It is also intended as a vital tool to support effective supervision, monitoring and evaluation and to aid effective planning, development and delivery of PHC services.

Several other interventions have been implemented by government and development partners to improve health sector performance especially at PHC level in Nigeria. Most of these interventions are targeted at under-five children, women of childbearing age and health system issues. Many of these interventions focus on child health promotion, prevention of childhood diseases, maternal health promotion, prevention of obstetric complications and health system strengthening. Some of the recent interventions implemented by the Federal Government of Nigeria are as follows:

Subsidy Reinvestment and Empowerment Programme Maternal and Child Health (SURE-P MCH)

The SURE-P was a programme established to efficiently manage the savings from fuel subsidy removal in 2012. SURE-P MCH was the maternal and child health component of SURE-P. The aim of the programme was to reduce maternal and newborn mortality rates in order to put Nigeria on track towards achieving the defunct health-related MDGs. The project focused on rural areas and underserved communities across the country. It addressed both demand and supply constraints in health care delivery. The supply component of the project involves increasing infrastructure and human resources to improve delivery of health services while the demand component focused on stimulating demand for health services among women through the use of incentives like Conditional Cash Transfers (CCT)

[7] From the Ward Minimum Health Care Package 2007

Midwives Service Scheme (MSS)

The MSS was established by NPHCDA as a public sector initiative with collaboration of the Federal, State and Local government. The aim of the programme was to facilitate an increase in coverage of skilled birth attendance at delivery to reduce maternal, newborn and child mortality. The programme involved mobilization and recruitment of newly qualified, unemployed and retired midwives and deployment to selected Primary Health Care (PHC) facilities in rural communities. The design of MSS was such that four selected PHC facilities that have the capacity to deliver basic essential obstetric care were clustered around a general hospital that was capable of providing comprehensive emergency obstetric care. In order to improve access to skilled birth attendance at delivery and provision of 24 hours MCH services, a midwife was deployed to each of the selected PHCs. Another aim of the MSS was to strengthen PHC system by distributing basic equipment to 652 health facilities through the vaccine logistics system. The scheme also established new and reactivated dormant ward development committees at all selected PHCs to improve participation and ownership in the implementation.

2.2 Health Systems Measurement and Assessment

There is a dearth of health outcomes across a greater part of the developing world, laced with persistently widening global inequities in health status. At the heart of this human crisis is a failure of health systems which are the main obstacles to scaling-up interventions to make achievement of internationally agreed goals such as the MDGs a realistic prospect. The WHO defines a health system as a combination of all organizations, people and actions whose primary intent is to promote, restore or maintain health. This includes efforts to influence determinants of health as well as more direct health-improving activities. In the regional context, the weak health systems in Africa can be viewed as significant contributor to poverty and inequity.

Despite Nigeria's strategic position in Africa, the country is greatly underserved in the health care sphere. A report launched by the World Health Organization (WHO) and the World Bank Group in 2015 shows that, globally, 400 million people do not have access to essential health services and six percent of people in low- and middle-income countries are tipped into or pushed further into extreme poverty because of catastrophic health spending. According to the WHO, a well-functioning unified health system which ensures achievements of these health outcomes is premised on six pillars, otherwise known as "building blocks" consisting of: (i) Health service delivery (which includes a well-maintained infrastructure); (ii) Human resources for health (trained and motivated health workers); (iii) Health information systems (good accountability and reporting); (iv) Pharmaceutical management (a reliable supply of medicines and technologies); (v) Health financing (adequate funding); and (vi) Leadership and governance (strong health plans and evidence-based policies.

In Nigeria, a performance review conducted at the end of the MDGs in 2015 revealed slow and insignificant progress, particularly with respect to health-related goals of reducing maternal and child mortality and eliminating HIV/AIDS. With the advent of the Sustainable

Development Goals (SDGs), the functionality of the health systems was linked to achieving Universal Health Coverage (UHC). To this end, all United Nations (UN) Member States among other goals agreed to work towards ensuring all people have access to quality health services with minimal financial stress by the year 2030. This includes financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all.

Health indicators form the yardstick against which health outcomes are measured. In the past, most indicators of the status of a country's health system were stated in terms of resources per population (e.g. physicians per 1,000 population, etc.) or in terms of population-level outcome measures (e.g., mortality rates, etc). Although these population-level indicators are useful and necessary, they are not sufficient. Since health systems involve a network of health facilities, which are the formal service delivery points, it is important to focus on indicators that show how inputs to a health system are reflected in the type, quantity, and quality of services actually available to a population at individual facilities' level. These indicators also capture information essential for needs assessments and planning investments in a health system, as well as for assessing the impact of health services on health outcomes. Consequently, health professionals concerned with global health monitoring continually advocated for global norms and standards that could serve as the basis for standardized measures of health systems and health programs.

The UN with other development partners developed various tools and methods of measuring and tracking progress in the health systems over time, one of which includes health facility assessments. Data obtained from health facility assessments are useful and important as they play a vital role (when combined with population-level data) in explaining what actually happens at the level of service delivery (input, process, costs, output and quality). Such information is needed for monitoring (and improving) facility-level performance and service quality. These same performance and quality factors can affect health-seeking behaviour (e.g., utilization of services) and can also mediate the impact of service utilization on population-level outcome measures.

2.2.1 UNFPA Commodity Assessment for Reproductive Health Commodities and Services in Nigeria

The Global Programme to Enhance Reproductive Health Commodity Security (GPRHCS) is a leading UNFPA programme to help ensure access to a reliable supply of contraceptives, condoms, medicine and equipment for family planning, sexually transmitted infection/HIV prevention and maternal health services. The Reproductive Health Commodity Security (RHCS) survey is part of this global programme.

The RHCS is a health facility survey that aims to strengthen RHCS in Nigeria by providing data with which to track commodity security progress in the country. The survey has been

conducted annually in Nigeria since 2011. The survey aims to capture critical information associated with the availability of FP supplies and maternal/reproductive health life-saving drugs as well as information on how well the supply chain is functioning and the extent to which clients are served with quality products at all levels of the system.

The survey employed a cross-sectional design, and was carried out in 33 out of the 36 States. The survey questionnaire included both observations of physical inventory and interviews with service providers and clients at the surveyed facilities. The survey used a stratified sampling technique, with strata defined along the three tiers of health care provision – primary, secondary and tertiary health facilities. The minimal sample proportional to size for each category was used. A total of 1,021 health facilities were surveyed.

2.2.2 Service Availability Mapping (SAM)

Increasingly, donors are moving toward "performance based" funding, requiring countries to put into place systems that allow timely, cost-effective and complete reporting. This informed the creation of the Service Availability Mapping (SAM), a simple comprehensive tool made up of district and facility questionnaires and a geographical information system (GIS) software package commonly known as Health Mapper. This was considered a baseline assessment tool as well as tool for monitoring resource availability and highlighting the inequities between and within districts.

With a standard set of 100 indicators prioritized by the global community to provide concise information on the health situation and trends, including responses at national and global levels, the SAM tool was used from approximately 2004 to 2009, to collect and present information on availability of key health services, basic health infrastructure, and human resources availability. It was also used for regular and frequent monitoring of services, especially where things are progressing rapidly, such as prevention of mother-to-child transmission (PMTCT) of HIV, testing for and counselling of those with HIV, provision of antiretroviral therapy (ART), treatment of malaria and tuberculosis, and funding of the Expanded Programme on Immunization (EPI).

The aim was to use the results for operations and evidence-based strategic planning and management. This consisted of a survey of all district health management teams and health worker interviews. The outputs were maps and summary statistics of the situation in all districts in the country. The SAM exercise was implemented in four countries in Eastern and Southern Africa, namely Kenya, Rwanda, Uganda and Zambia. The SAM tool was replaced by the Service Availability and Readiness Assessment tool (SARA), which leveraged upon previous approaches designed to assess health facility service delivery including the SAM tool.

2.2.3 Service Availability and Readiness Assessment (SARA)

Despite heightened investments in health systems, few countries have up-to-date information on the availability of health systems that covers both the public and private sectors. Fewer still have accurate, up-to-date information required to assess and monitor the "readiness" of health facilities to provide quality services. Ensuring access to quality health services is one of the main functions of a health system. Service access includes different components: availability, which refers to the physical presence or reach of the facilities; affordability, which refers to the ability of the client to pay for the services; and acceptability, which refers to the sociocultural dimension. The quality of services is yet another dimension. A prerequisite to service quality is service readiness, i.e. the health facilities should have the capacity to deliver the services offered. This capacity includes the presence of trained staff, guidelines, infrastructure, equipment, medicines and diagnostic tests. Service availability and readiness are prerequisites to quality services, but do not guarantee the delivery of quality service. With the increased demand for accountability and the need to demonstrate results at country and global levels, information is needed to track how health systems respond to increased inputs and improved processes over time and the impact such inputs and processes have on improved health outcomes and better health status. Consequently, the Service Availability and Readiness Assessment (SARA) was designed as a systematic health facility assessment and survey tool. It is meant to generate a set of tracer indicators for the assessment and measurement of health systems progress, monitoring health sector interventions, and providing evidence to support the planning and managing of a health system.

The SARA methodology was developed through a joint World Health Organization (WHO) – United States Agency for International Development (USAID) collaboration to fill critical gaps in measuring and tracking progress towards health systems strengthening. It builds upon previous and current approaches designed to assess service delivery including the service availability mapping (SAM) tool developed by WHO, and the service provision assessment (SPA) tool developed by ICF International under the USAID-funded MEASURE DHS project among others. It draws on best practices and lessons learned from the many countries that have implemented health facility assessments, as well as guidelines and standards developed by WHO technical programmes and the work of the International Health Facility Assessment Network (IHFAN). Summary or composite indicators, also called indices, are used to summarize and communicate information about multiple indicators and domains of indicators. The 3 main focus areas of SARA include (i) Service Availability (ii) General Service Readiness; and (iii) Service Specific Readiness.

Service Availability refers to the physical presence of the delivery of services, encompassing health infrastructure, core health personnel, and service utilization and is described by an index using the three areas of tracer indicators. This is made possible by expressing the indicators as a percentage score compared with a target or benchmark, then taking the mean of the area scores. *General Service Readiness* refers to the overall capacity of health facilities to provide general health services i.e. the availability of components required to provide services such as basic amenities, basic equipment, standard precautions, laboratory tests, and

medicines and commodities. It is described by an index using the five general service readiness domains. A score is generated per domain based on the number of domain elements present, then an overall general readiness score is calculated based on the mean of the five domains. *Service Specific Readiness* refers to the ability of health facilities to offer a specific service and the capacity to provide that service measured through selected tracer items that include trained staff, guidelines, equipment, diagnostic capacity, and medicines and commodities. The SARA approach collects survey generated data that are comparable both across countries and within countries (i.e., across regions and/or districts). This was done using a standard core questionnaire developed and adopted by countries with certain country-specific elements. The SARA survey was conducted in Zambia, Tanzania and Uganda.

2.2.4 Service Delivery Indicators (SDIs)

According to the WHO Monitoring the Building Blocks of Health Systems (MBHSS), service provision or delivery is an immediate output of the inputs into the health system, such as the health workforce, procurement and supplies, and financing. This suggests that increased inputs should lead to better service delivery and improved access to services. The degree of functionality of health systems is largely dependent on the minimum quality standard. Service delivery together with other social determinants of health is fundamental to achieving better health systems outcomes. However, precision in organization and content of health services varies from one country to another. In 2008, the 11-year trend data from the World Bank Institute's Worldwide Governance Indicators showed that government effectiveness and service delivery had been poor in Nigeria, peaking at the 20th percentile rank in 2005 and never attaining a positive score on the -0.25 to +0.25 scale.

The review confirmed that though structures are in place, there are no clearly outlined mechanisms to hold service providers accountable for their performance. Moreover, overall there were no reliable mechanisms for measuring performance, conveying the views of service users to providers, or compelling providers to listen and respond to feedback. Many African countries increased spending on education and health which did not always translate into improved education or health outcomes. Against this back drop, the Service Delivery Indicators (SDI) program; an Africa-wide initiative was launched by the World Bank in partnership with the African Economic Research Consortium and the African Development Bank in 2013.

With limited evidence on the knowledge and skills of teachers and health workers, the SDIs provide a set of metrics for benchmarking service delivery performance in education and health in Africa with the overall objective of gauging the quality of service delivery in primary education (primary schools) and basic health services (frontline health facilities). This was done in fulfilment of the principles of the 2004 World Development Report (WDR) "Making Services Work for Poor People" so as to enable governments and service providers identify gaps and to track progress over time, while also repositioning the dialogue on human development in Africa within the context of effectiveness of public spending and accountability across countries. The SDI Initiative has 20 indicators – 10 each in health and

education. The indicators are broken down into three broad categories: (i) Provider competence and knowledge (ii) Proxies for effort (broadly defined); and (iii) Availability of key infrastructure and inputs.

Using standardized SDI methodology, the Quality of Service Assessment and Resource Tracking (QSART) were conducted in seven African countries with technical and financial support from the World Bank and the Bill & Melinda Gates foundation. The survey questionnaire was piloted in Tanzania and Senegal, while Kenya was the first SDI survey country in 2012, followed by Senegal, Nigeria, Togo and Uganda in 2013 and Tanzania and Mozambique in 2014. As of 2013, SDI targeted complete assessments for 10-15 countries by the end of 2015 with an overall target of 20-25 African countries. The two other components of the SDI initiative were to build the capacity of stakeholders to analyze this type of data themselves, and to use creative approaches to communicate and disseminate the data and findings. Results were broadly presented under (i) What providers know; (ii) What providers do; and (iii) What providers have to work with. Data from the surveys are expected to form the basis on which managers assess the quality of the performance of services in the field of education and health, in order to track progress over time and citizens to hold the authorities responsible for public expenditure committed. It is hoped that the data serves a basis for improvement by policy makers and other stakeholders.

SDI Nigeria

The Service Delivery Indicator surveys built on the Public Expenditure Tracking Surveys and the Quantitative Service Delivery Surveys and focused on the availability and content of services from the perspective of the user. The surveys covered the availability of basic inputs (infrastructure and equipment), provider effort, and provider knowledge for samples that were designed to provide information on the country and the following breakdowns: public/private, and rural/urban with a few exceptions documented in the detailed metadata. Between 2013 and 2014, the survey was conducted in 2 phases in twelve States: Anambra, Bauchi, Bayelsa, Cross River, Ekiti, Imo, Kaduna, Kebbi, Kogi, Niger, Osun, and Taraba. Findings were disseminated in all the SDI States as part of the survey activities. This formed the basis for the implementation of the first ever National Health Facility Survey in 2016, in all the 36 Nigerian States and the FCT.

2.3 Saving One Million Lives Program-for-Results Initiative (SOML PforR) and the National Health Facilities' Survey

Over the last decade the trend in Health, Nutrition, and Population (HNP) outcomes in Nigeria has been mixed. Data from the last three Nigeria Demographic and Health Surveys (NDHSs) showed a 36 % decline during this period in the under-5 mortality rate (U5MR) and a 31 % decline in the infant mortality rate, while at during the same time period there has been almost no progress on reducing maternal mortality (MDG5) and fertility rates remain stubbornly high. Childhood malnutrition has actually worsened by some measures (low weight for age has increased by 21 % and wasting has increased by 64%), although stunting

(low height for age) has improved -modestly by 12 % Nigeria contributes 14 % of all maternal deaths globally, second only to India at 17% and 13 % of all under-5 deaths globally, again second only to India at 21%.

Among various Nigerian health sector responses was the Saving One Million Lives Program for Results (SOML PforR). The SOML PforR is a Federal Government-led intervention supported by the World Bank to improve maternal and child health in Nigeria through a results-focused partnership with State Ministries of Health and the FCT's Health and Human Services Secretariat. It aims to restructure the flow of resources to pay for results rather than simply paying for processes or reimbursing activity costs.

The SOML PforR seeks to deliver high impact, evidence based, cost effective health interventions based on 6 "pillars": (1) maternal, new-born and child health; (2) childhood essential medicines and increasing treatment of important childhood diseases; (3) improving child nutrition; (4) immunization; (5) malaria control; and (6) the Elimination of Mother to Child Transmission (EMTCT) of HIV. States are the greatest beneficiaries of the program, receiving up to 82% of the total International Development Agency (IDA) credit sum of US$500million as grants and incentives for improved performance under the various disbursement linked indicators (DLIs).

States in each geopolitical zone are rewarded for improvements in performance from their own baseline, and also ranked according to their performance with the best performing State in a given zone (zonal champion) receiving an additional bonus. Similarly, the best performing State in the country (national champion) receives another additional performance bonus. This is aimed at fostering friendly rivalry among States to the benefit of their own target populations.

Performance assessment/calculation under the SOML PforR is based on objective indicators using data from household and health facility surveys as well as achievement of certain process indicators related to implementation of a performance management system; and consolidation of primary health care (PHC) management and resources under one authority.

The PforR will provide funds to the Federal and State Governments based on five DLIs:

i. DLI 1- Increasing Utilization of High Impact Reproductive and Child Health and Nutrition
ii. DLI 2- Increasing Quality of High Impact Reproductive and Child Health and Nutrition Interventions.
iii. DLI 3- Improving M&E Systems and Data Utilization
iv. DLI 4 - Increasing Utilization and Quality of Reproductive and Child Health and Nutrition Interventions through Private Sector Innovations
v. DLI 5 - Increasing Transparency in Management and Budgeting for PHC

Disbursements will only be made following evidence of improvements measured against the DLIs (scoring above the minimum threshold) and recommendations from the independent verification agent (IVA), the FMOH Programme Management Unit (PMU), the World Bank,

and the Federal Ministry of Finance. The PforR resources are expected to be ploughed back into the health sector to achieve better performance and improved outcomes, becoming a virtuous cycle. Failure to continue improving performance means that the State or the FCT will not receive any future funds.

Two methods of survey have been developed and adopted as part of the overall SOML PforR performance assessment mechanism: The annual National Population Health and Nutrition Survey using Standardized Monitoring and Assessment of Relief and Transitions (SMART) methodology which captures household based data on issues related to the six focus areas of the SOML PforR; and the annual National Health Facility Survey (NHFS) which measures readiness and ability to deliver quality health services. These two surveys are to be conducted independent of the health sector, but with technical support and quality assurance from various partners including the FMOH. The SARA methodology was adopted for the NHFS by the World Bank in close collaboration with the Global Fund for AIDS, TB and Malaria (GFATM), the Department of Health Planning, Research and Statistics, and Department of Family Health at the FMOH.

From the perspective of the SOML PforR, the objectives of the NHFS include collecting baseline health facility data against which progress in subsequent years can be measured. The results from the survey will be a contributory factor in determining the performance-based grants to be disbursed to each State and the FCT.

3.0 METHODOLOGY

Within the context of the NHFS data collection, the major tasks carried out were: (i) collection of robust evidence on basic health care availability and readiness to provide services at primary health care (PHC) facilities using the agreed survey questionnaire; (ii) examination of care in a few general hospitals to better understand their ability to deliver PHC services; and (iii) strengthening the capacity of institutions in Nigeria to conduct health facility surveys and analyze the data generated**.**

A total of 90 health facilities were drawn from all the 36 States and FCT from the list of health facilities obtained from the States with the assistance of key health officials. A total of 3,300 facilities were sampled. One announced visit was made to each health facility by a team of enumerators. On the average, the NHFS team in each State carried out the visits in a minimum of 15 facilities each week and concluded the survey within 11 weeks of data collection. The Medical Officers of Health and the Monitoring & Evaluation (M&E) Officers for each Local Government Area (LGA) were contacted and informed prior to the survey. More importantly, the Officer-In-Charge (OIC) of each HF surveyed was contacted by the appropriate survey supervisors before the visit. Data were captured using the finalized NHFS survey questionnaire which was field tested during the 3 clustered training for the 36 States and the FCT and adapted for use for this data collection.

3.1 Sampling Method

The survey used a stratified simple random sampling technique to select the health facilities. All health facilities were disaggregated first by facility ownership (public and private), while public facilities were further disaggregated by facility type (health posts, health centers and hospitals). There was no further disaggregation of private health facilities by type because their classification is not as standardized as public facilities. The random selection of Primary Health Facilities (PHFs) in each State, power calculations and facility replacement approach were finalized by the Bank's NHFS team. The sampling frame included all public PHFs and Secondary Health Facilities (SHFs) as well as private for profit and non-for-profit facilities in each State. The sampling design was such that six HP, 68 PHCs, 10 Private Health Facilities and six SHFs were randomly selected in each State adding up to 90 and bringing the total sample size to 3,300 for all 36 States and the FCT.

The survey design incorporated the finite population correction during sample size determination and data analysis. All point estimates presented in this report are weighted. Sampling weights were created at the state, regional and national level and used for data analysis at each level respectively.

3.2 Piloting of Questionnaires

The piloting of the NHFS questionnaires happened at two major levels; during the training of trainers and enumerators respectively.

3.2.1 Training of Trainers and Pre-Piloting

A five day training of trainers including one day field testing of the questionnaires was conducted in Abuja in July, 2016. Participants included the trainers, core management team of the survey firm, as well as representatives of the World Bank. The objectives of the training were to (i) generate a good and common understanding of the survey objectives; (ii) review the survey questionnaire; and (iii) agree on modalities for training which was designed to be in three phases given the large size of the survey. The phases were: NCZ & SWZ States (Cluster 1); SEZ & SSZ States (Cluster 2); and NEZ & NWZ States (Cluster 3).

A question-by-question review of the NHFS questionnaire was done, while in-depth explanations were provided for each of the questions with a view to deepening participants' understanding. Proposed changes and amendments on the survey questionnaire were harvested, debated upon and documented. These included: re-wording and re-ordering of questions, introduction of additional questions and correction of typographical errors. These changes were used to revise and script the questionnaire into electronic template on the android-based hand-held devices.

A one-day field-piloting of the questionnaires was conducted at Kuje Comprehensive Health Centre (CHC) and Kuyizhi Primary Health Centre (PHC) both rural health facilities of Kuje Area Council, Federal Capital Territory (FCT). Questionnaire administration and data collection were electronically done.

3.2.2 Training of Enumerators and Piloting of Questionnaires

During the training,atleast three days were dedicated to piloting the survey questionnaires. The objectives of the pilot were to:

- Administer survey questionnaire to respondents
- Determine the logic sequence of the questions in the questionnaire
- Test the functionality of the tablets
- Determine the time required to administer the survey questionnaire
- Determine respondents' understanding of questions and relevance
- Identify and document recommended changes to be made on survey questionnaire
- Watch for and record respondent's point of fatigue

The facilities visited during the piloting across the 3 Clusters are presented in **Annex 2.**

3.3 Finalization of Survey Questionnaire and Field Manual

Data collection was done electronically with the use of android-based handheld devices (tablets) for the survey. The draft field survey questionnaires were developed by the NHFS World Bank team and programmed on the tablet by the survey firm. Survey firm carried out in-house pre-test of the draft-programmed questionnaires and suggested improvements.

Field manual was developed by the NHFS World Bank team to guide interview procedures and processes during training and field activities. The manual describes each task of training and data collection exercise. The contents of the manual include but were not limited to field personnel roles and responsibilities as well as guidelines for the field personnel that were responsible for the data collection. Each field personnel went to the field with a customized manual as a first line reference material.

3.4 Personnel Recruitment and Selection

As a result of the large number of field personnel required for the implementation of the NHFS and to ensure consistency in quality of data, personnel involved in previous facility based surveys were recruited for the survey conducted by the survey firm and deployed to the States as either State Team Leaders (STLs) or enumerators.

A total of 37 STLs and 374 enumerators were recruited and trained in three clusters. Each State had an extra enumerator with the exception of Borno, Taraba, Yobe and Zamfara States which had two extra enumerators invited for training to address specific challenges. This was done as back-up plan in the event of unforeseen circumstances which may lead to the non-availability of field personnel. Each State had an adequate mix of participants with clinical background for easy and smooth administration of the ‘vignette’ and ‘observation’ sections of the survey questionnaires. At the end of the training, 37 STLs and 330 enumerators were competitively selected for the survey. Final selection of personnel was based on performance during pre-selection assessments, field practice and one-on-one interview with the training faculty. The final team selection for each State was made up of 9 enumerators and 1 STL.

3.5 Personnel Training

The objectives of the training were to (a) generate a good understanding of the questionnaires and accompanying field manual that will engender their effective administration on the field; (b) identify possible bottlenecks in the use and administration of the questionnaire and manual; and (c) to emphasize the need for team building and working synergistically to achieve results in the field.

The training was phased into 3 clusters of State from 2 geo-political zones each. This design of training was due to the large number of field personnel that were required for the implementation of the survey. The first cluster training was held in Ibadan, Oyo State and comprised of personnel from 13 States of the SWZ and NCZ while Cluster 2 was made up of personnel from 11 States of SEZ and SSZ zones and were trained in Enugu, Enugu State. Cluster 3 training was held in Kaduna, Kaduna State and had in attendance -participants from 13 States of NWZ and NEZ zones. The duration of the training in Clusters 1 and 2 was 13 days while training for Cluster 3 lasted for 12 days to enable enumerators participate in the Muslim *Eid-El-Kabir* celebrations. The objectives of the personnel training were to:

- Ensure participants understand the concept of the survey, the questionnaires, the field manual, and their application;
- Generate a good understanding of the questionnaires (module by module) to engender effective administration on the field;
- Identify possible bottlenecks in the use and administration of the questionnaires;
- Emphasize the need for team building and working harmoniously to achieve results on the field;
- Adapt and finalize the questionnaires and the complementary field manual; and
- Familiarize the STLs and enumerators with survey protocols and the handling of tablets

The technical sessions of the training were preceded by a pre-training test to determine participants' knowledge. The sessions were a mix of plenary, role plays and practical hands-on-session in which hypothetical exercises simulating real life situations were rehearsed as group team work to assess participants' understanding of each module. The details of the questionnaires reviewed during the technical sessions are presented in the **Table 1** below. Daily review meetings were held at the end of each day among the facilitators, core management team, and the Bank to assess: (a) the effectiveness of the training and performance of participants; (b) probable changes to be made to the questionnaire and field manual; (c) workshop logistics; and (d) plan for the subsequent day's activities. The training also served as a screening process towards identifying skilled enumerators and STLs. Final selection of personnel was merit driven and involved pre-and post-tests, pre-selection tests and one-on-one interaction with all invited personnel by the training faculty. The detailed training report is presented as **Annex 3.**

Table 1: Components of the National Health Facility Survey Questionnaires

S/No	Survey Component	Modules and Sections
1.	Facility Questionnaire	Mod 1: Facility linkages with community and Management, staff and Finance
		Mod 2: Facility Infrastructure and Maintenance
		Mod 3: Community and Outpatient services
		Mod 4: Delivery, postnatal care and reproductive, health surgical services
		Mod 5: Blood transfusion, diagnostics and pharmacy
		Mod 6: Health Management Information System
2.	Observation of Sick children	
3.	Vignette (provider questionnaire)	Acute diarrhoea with dehydration
		Pneumonia
		Diabetes Mellitus
		Pulmonary tuberculosis
		Malaria + Anaemia
		Post-Partum Haemorrhage
		Neonatal Asphyxia
		Care of Sick child based on IMCI & EMTCT standards
4	Exit Interview	Child
5	Record Review	Record Review ANC (women 32 wks+)
		Record review T.B (Patient on 1st line for 6mnths +)
		Record review ART (patient 5+ years on treatment for 6 months)
		Record review EMTCT (HIV positive women, 8 weeks post delivery of a live birth.
		Record review Suspect Malaria for under 5 children (under 5 with clinically or laboratory r diagnosed malaria or presently on anti-malaria therapy)

The NHFS questionnaires are contained in **Annex 4**.

3.6 Field Survey Implementation Plan

The field Survey Implementation Plan (SIP) was developed to guide the implementation of the survey**.** The main components of the SIP are:

a) objectives of survey
b) training of trainers
c) selection and training of personnel
d) finalization of survey questionnaire and evaluation of training
e) roles and responsibilities of survey team members
f) field data collection plan and timeline
g) communication channels
h) data management.

The SIP is presented in **Annex 5**.

3.6.1 Field Micro-Plan

The list of health facilities in each of the 36 States and FCT from which the sample of 90 facilities in each State was drawn was obtained and updated with the assistance of key health officials at the State level. The selected HFs were carefully divided between the enumerators over the period of the survey. The STL on a daily basis accompanied each team to a facility and supervised them. The updated list of facilities visited is presented as **Annex 6**.

3.7 Field Data Collection

Data Collection timelines across the 3 Clusters varied. The original design was for data collection to be completed between 6 – 7 weeks. However, data collection across the 3 Clusters lasted between 7 and 11 weeks due to late commencement of data collection and incomplete team composition in some States. Prior to field data collection, advocacy visits to the relevant authorities in the State were conducted for 2 days by the State teams. The objectives of the advocacy visits were to: (i) introduce the State team members; (ii) get the State's commitment as regards to the survey; (iii) confirm the functionality status of the sampled health facilities; and (iv) obtain the list of Officer's –In- Charge (OIC) of the sampled facilities. Each enumerator had a specific role to play in administering the questionnaire. Each team visited a facility per day. The data collection timeline is presented in **Table 2.**

Table 2: Data Collection Timeline

Cluster No	Geo-political one	Date	Duration	Remarks
1	SWZ & NCZ Nasarawa*	8th Aug – 23rd September, 2016	7 weeks	Each team visits a facility daily excluding weekends. An extra week was added to cover for the 2 days Muslim holiday and spill over that resulted from 2 teams visiting a secondary health facility. Adamawa spent 9 weeks Borno spent 13 weeks Yobe spent 9 weeks
2	SSZ & SEZ	29th Aug – 14th October, 2016	8 weeks	
3	NEZ & NWZ Adamawa**, Borno & Yobe	19th September – 4th November, 2016	13 weeks	

**Nasarawa State commenced data collection late due to the industrial strike action by health workers*
***Adamawa and Borno States spent beyond 8 weeks due to the incomplete team that worked in the States while Yobe State had a high number of replacement facilities and had to spend extra days to meet up the expected number of facilities*

The detailed implementation timeline is presented as **Annex 7.**

The distribution of personnel was such that each State team was comprised of 10 members namely; 1 STL and 9 enumerators (3 teams of 3 enumerators) except for Borno State that had 1 STL and 6 enumerators. There were 3 types of enumerators: Type 1, Type 2 and Type 3. The various roles of each enumerator type are presented as **Table 3.**

Table 3: Enumerator Types and Roles

S/N	Enumerator Type	Roles
1	Type 1	• Record Review • Module 6 – HMIS records • Exit Interview of observed child • Vignette administration – Act as an observer
2	Type 2	• Observation of sick child • Module 5 – Blood transfusion, Diagnosis and Pharmacy • Vignette administration – Act as a patient
3	Type 3	• Modules 1-4 • Staff roster

The survey was conducted at randomly selected facilities in 36 States and the FCT. Approximately, 3,325 facilities were surveyed in total; the shortfall from the 3,330 target of 5 health facilities was due to Jigawa and Yobe States where the expected number of 10 private hospitals per could not be achieved. This was as a result of non-operational or non-existence of the sampled private facilities. Field survey began with the HFs that were near to the NHFS survey team base so that lessons learnt could be applied to distant HFs in such a way to save time and resources. Each STL booked appointment with the OIC of the various health facilities ahead of the date of the visit by his/her team members. The aim of the appointment was to introduce the survey, confirm the type of services offered at the facility, inform them of the type of records that were required for review during the visit and confirmed the functionality of the different units. This also informed the size of team that was deployed to the facility especially for the SHCs. The summary of the health facilities coverage is presented in the **Table 4** below:

Table 4: Health Facility Coverage (Planned and Actual)

Cluster	No. of States	Total Facilities planned for Survey	Number and types of facilities actually surveyed				Total Facilities Actually Surveyed
			HP	Health Centers& Clinics	SHF	Private	
1	13	1,170	89	871	73	137	1,170
2	11	990	66	756	63	105	990
3	13	1,170	75	896	74	120	1,165
Total		**3,330**	**230**	**2,523**	**210**	**362**	**3,325**

3.7.1 Sampled Health Facilities Replacement

The total number of facilities surveyed across the 36 States and FCT is 3,325. A total number of 691 (20.8%) facilities were replaced for various reasons (**Table 5**).

Table 5: Sampled Health Facilities Replacement

Cluster	States	Total number of Facilities	Total number replaced	% Replaced
1	Ekiti	90	10	11.1
	Ogun	90	26	29
	Oyo	90	28	31.1
	Ondo	90	17	19
	Lagos	90	9	10
	Kogi	90	25	29
	Nasarawa	90	24	26.7
	Niger	90	18	20
	Plateau	90	20	22.2
	Benue	90	27	30
	Kwara	90	19	21.1
	FCT	90	12	13.3
	Osun	90	29	32.2
2	Abia	90	11	12.2
	Akwa-Ibom	90	8	9
	Anambra	90	18	20
	Bayelsa	90	18	20
	Cross-River	90	5	5.6
	Delta	90	16	18
	Ebonyi	90	12	13.3
	Edo	90	7	8
	Enugu	90	11	12.2
	Imo	90	13	14.4
	Rivers	90	24	27
3	Adamawa	90	41	45.6
	Bauchi	90	14	15.6
	Borno	90	48	53.3
	Gombe	89	10	11.1
	Jigawa	89	2	2.2
	Kaduna	90	12	13.3
	Kano	90	17	19
	Katsina	90	6	6.7
	Kebbi	90	18	20
	Taraba	90	38	42.2
	Sokoto	90	6	6.7
	Yobe	87	39	44.8
	Zamfara	90	11	12.2
Total		**3,325**	**669**	**20.2**

All such health facilities across the States were replaced following laid down procedures: such HF was reported to the PM, who in turn reported to the World Bank NHFS Field Coordinator, clearly stating the reason for replacement including all the other details as it appeared on the sampled HF list. The HFs replacement requests were then made available to

the PM, who subsequently passed them onto the relevant State team. The final status of the sampled health facilities list for each State was updated at the end of the survey with a column indicating whether a facility was, identified (=1) or replaced (=2), a successful first time replacement (=3), or a successful second attempt replacement (i.e. a replacement of a replacement = 4), or unsuccessful replacement (=5). The summary of replacement across the States is presented as **Annex 8.**

The percentage for each reason is presented in **Table 6**.

Table 6: Reasons for Facility Replacement across the 36 States and FCT

S/No	Reasons for Replacement	%
1	Wrongly categorized	31.7
2	Facility no longer operational/functional	21.6
3	Facility does not exist	19.4
4	Communal crisis/Security prone area	9.8
5	Facility Privately Owned	2.7
6	Lack of personnel	1.4
7	Facility appeared as duplicate	0.7
8	Institution owned	0.1
9	Others	12.4

The reasons lumped under 'others' varied across States and these include 'declined in participation', 'inaccessibility due to very bad terrain or flood', 'facility under construction' or 'facility not yet operational', etc.

3.7.2 Back Checks

Field data quality was assured through the conduct of back-checks. Back checks were conducted on approximately 10% of the sample size per State. An abridged version of the questionnaire was used for the back checks. The data collected was uploaded to the designated server and used to carry out consistency checks on the overall data collected. The results of the back checks conducted in the 3 Clusters of implementation were shared with the Bank NHFS field coordinator.

3.7.3 Field Supervision

The STL monitored the daily work of the teams under his/her supervision by accompanying a team daily to the health facility and closely observing them to ensure strict adherence to survey protocols. Also, the core management team provided additional monitoring and oversight through spot checks on the teams and facilities visited. Independent monitoring and supervision were also carried out by the Bank NHFS team. The detailed supervision plan is presented as **Annex 9.**

3.8 Data Management

The objective of data management in this survey was to provide the World Bank with clean, accurate data sets of the survey. The activities of the survey were organized to allow for progressive implementation. Data quality was enhanced by the automation of the flow of questions and data-entry process done electronically on a tablet device using the SurveyCTO platform. The two critical benefits of the electronic data collection are: (a) taking informed decisions in real-time; and (b) providing feedback and exchanging information between stakeholders in real-time. Daily supervision by the field coordinator contributed to improved quality during the implementation of this survey by ensuring that enumerators adhered to survey protocols and that only trained enumerators were on the field.

3.8.1 Data Storage and Manipulation within SurveyCTO Server

Data was uploaded to the cloud using a separate SurveyCTO server created for each cluster specifically for the NHFS project. Data captured into different survey questionnaire which were named according to the modules of the NHFS questionnaire. For each module, the electronic devices used in uploading the entered data have the unique Android device IDs in the dataset for identification purposes. Data synchronization was done on a periodic basis to minimize data loss. Once the data was uploaded, the datasets were subject to real time quality assurance before downloading and merged to form a dataset according the module. These were exported as flat tables in Stata for basic data quality checks before reshaping relevant sections. A cross section of the questionnaire in the SurveyCTO server and a cross section of the questionnaire with complete submission are illustrated in Figure 1 and Figure 2 respectively.

Figure 1: Cross Section of Questionnaire in SurveyCTO Server

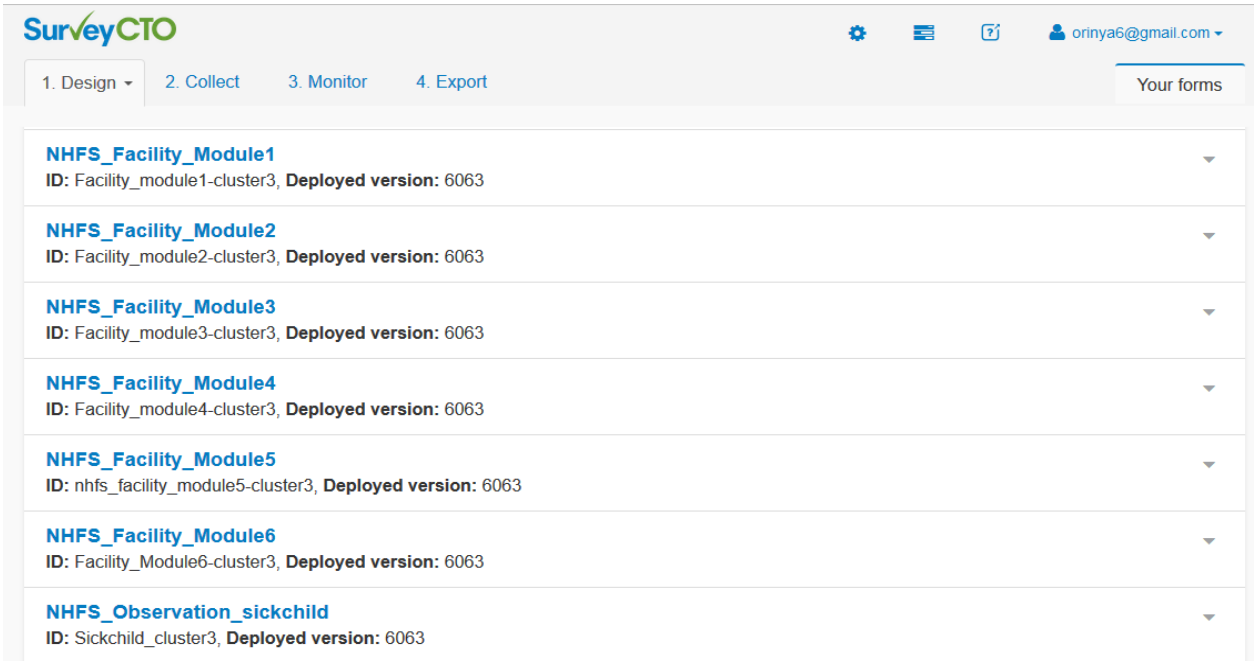
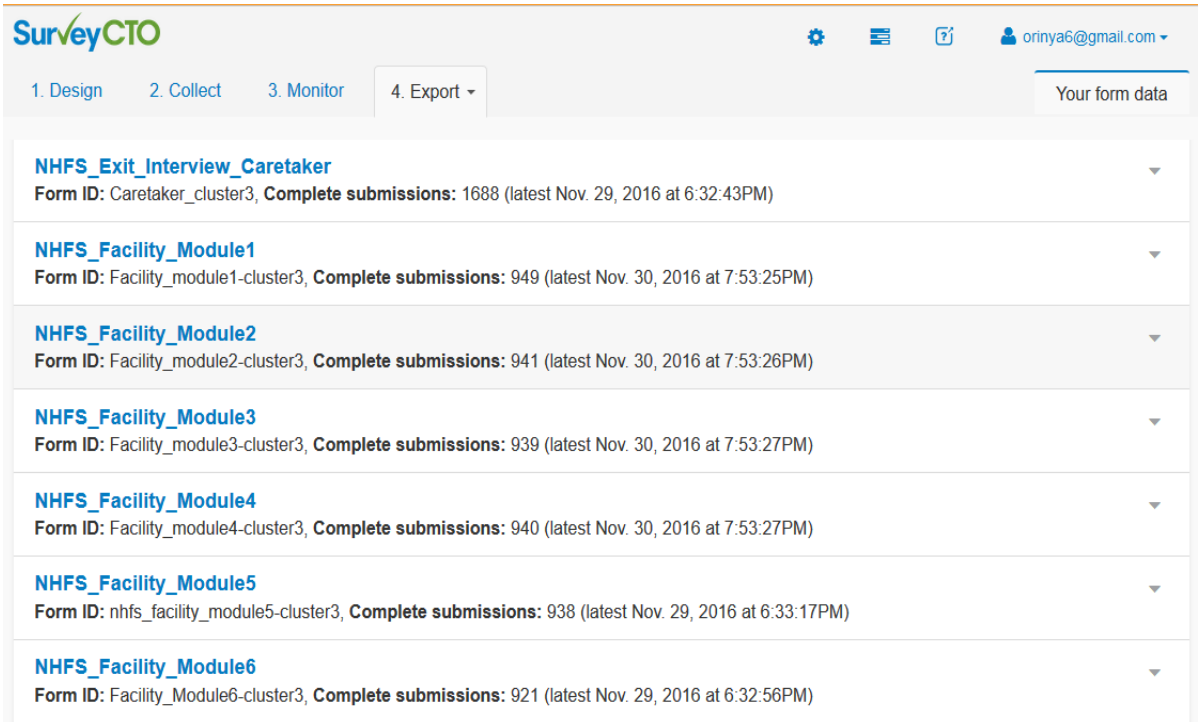


Figure 2: Cross Section of Questionnaire with Complete Submissions



3.8.2 Data Variables Codebook

A codebook was created to compile a documentation of all datasets, their variables, codes and labels. This includes missing codes for missing responses and unique values for valid responses. The codebook is sectionalized according to the modules of the survey. The codebook for the NHFS datasets is presented in **Annex 10**.

3.9 Quality Assurance

Quality assurance was built into every step of the survey process. From the process of selecting adequate number of competent and experienced personnel who reside in the States of survey to theoretical and practical training followed by a rigorous field testing of questionnaires and experience sharing, obtaining high quality and reliable data was a top priority. A larger number of enumerators than required were trained. This afforded the opportunity to identify and engage the best personnel. The resultant modified NHFS questionnaire following field testing was more fit-for-purpose than the initial one.

The STL accompanied a team daily to the facility and monitored them closely during the period of the survey. Spot checks and unannounced visits to the team by the STLs were done. The survey firm's supervisory team visited the States during the survey period to observe how interviews were been conducted and to ensure that State teams adhered to the protocol. Daily review meetings were held, chaired by the STL and attended by enumerators to review the day's implementation, identifying challenges and plan the next day's work. The survey management team assisted by the NHFS team technically supported, supervised and provided oversight to field data collection activities.

Electronic data collection ensured that GPS coordinates of visited health facilities were recorded for verification, start- and end-times of interviews were captured to assess adequacy of time given for the interview, enumerators' movements and patterns of movement were also documented. Other capabilities include photographic capture and actual recording of interviews.

4.0 MAIN FINDINGS

4.1 Clinical Competence of Health Workers

The knowledge of different cadres of health care providers who regularly performed out-patient consultations was assessed using medical vignettes (case simulations). A vignette is usually designed to measure knowledge about a specific diagnosis or clinical condition and also to elicit the skills in performing the tasks necessary to diagnose and manage a patient. Providers were presented with five clinical cases consisting of three common child health conditions namely; acute diarrhoea with severe dehydration, pneumonia and malaria with anaemia; along with management of maternal and newborn complications namely; post-partum haemorrhage and neonatal asphyxia. It was considered important that the conditions chosen were amenable to use with a simulation tool, i.e. the condition has a presentation of symptoms that makes it suitable to assess provider ability to reach correct diagnosis with the simulation tool.

According to the methodology, one of the enumerators acts as a case study patient and he/she presents to the clinician specific symptoms from a carefully constructed script while another acts as an observer. The clinician, who is informed of the case simulation, is asked to evaluate and make a diagnosis and propose a treatment regimen as if the enumerator were a real patient.

For each facility, the case simulations were presented to two randomly selected health workers who regularly conducted outpatients' consultation and a third health worker who provided ANC or EMTCT services regularly. However, all clinicians consulting in outpatient department were interviewed in facilities with consulting clinicians fewer than three. Also, the proportion of procedures in the guidelines which they followed when diagnosing these cases was assessed. The findings on these indicators are presented below.

4.1.1 Proportion of Clinical Conditions Diagnosed Accurately

Diagnostic accuracy was measured as the average of the proportions of correct diagnoses provided for the five common case studies. This was disaggregated by geopolitical zones, State, facility type and health workers cadre. Findings are presented in **Figure 3, Figure 4, Figure 5** and **Table 7** respectively. All other cadres of health workers apart from doctors, nurses, midwives and Community Health Extension Workers (CHEWS) are described in this report as "other health workers"

Figure 3: Percentage of Clinical Conditions Diagnosed Accurately by Geo-political Zone

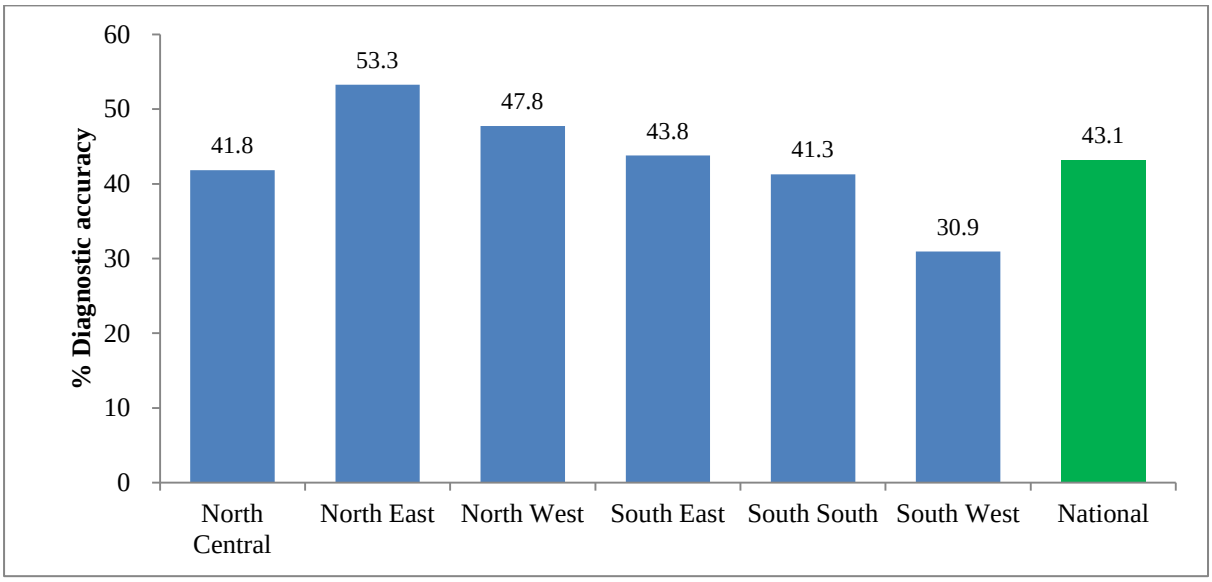
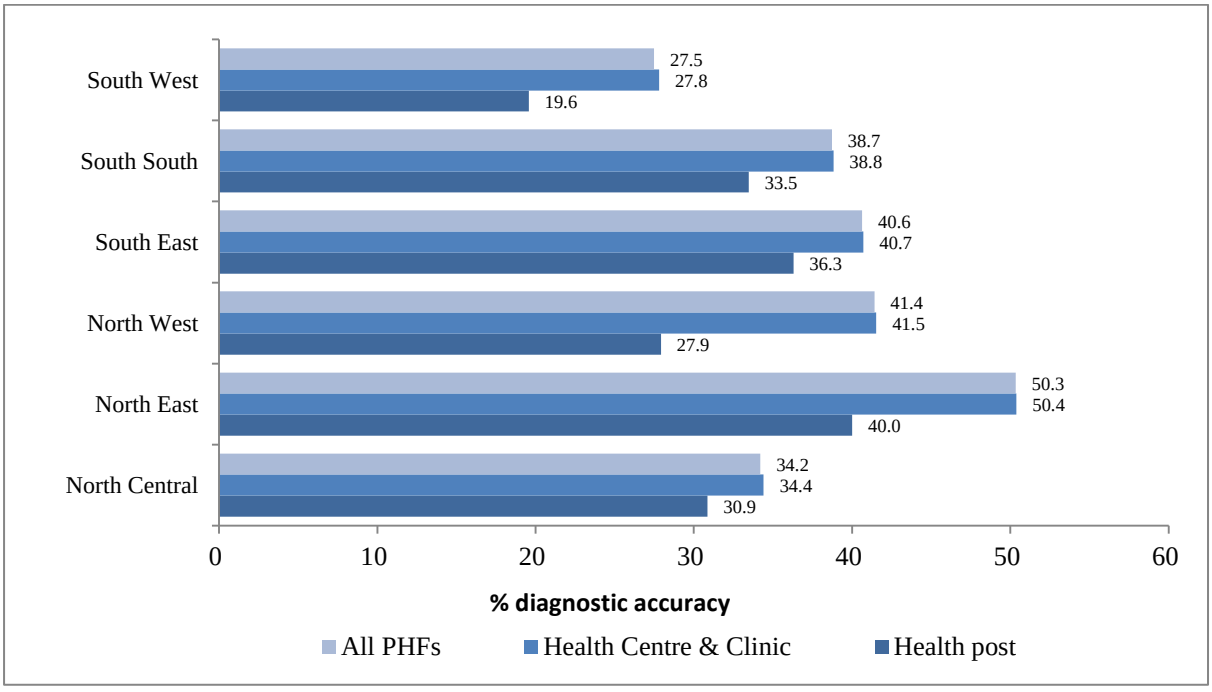


Figure 4: Percentage of Clinical Conditions Diagnosed Accurately in PHFs Across the Geopolitical Zones



Nationally, less than half of the five clinical conditions assessed (43.1%) were diagnosed accurately by the health workers interviewed. This poor performance cuts across all the geopolitical zones except NEZ that had 53.3% of the conditions diagnosed accurately. SWZ had the least diagnostic accuracy of 30.9% while other geopolitical zones ranged between 41.3% in SSZ to 47.8% in NWZ. Further breakdown of these figures based on the primary health facility type showed that health posts had the least proportion of conditions diagnosed accurately across all the geopolitical zones. The gaps between health posts and health clinics

& centres diagnostic accuracy were more marked in NEZ and NWZ despite their relatively high overall zonal averages.

Figure 5: Percentage of Health Workers who Diagnosed Clinical Conditions Accurately by Cadre

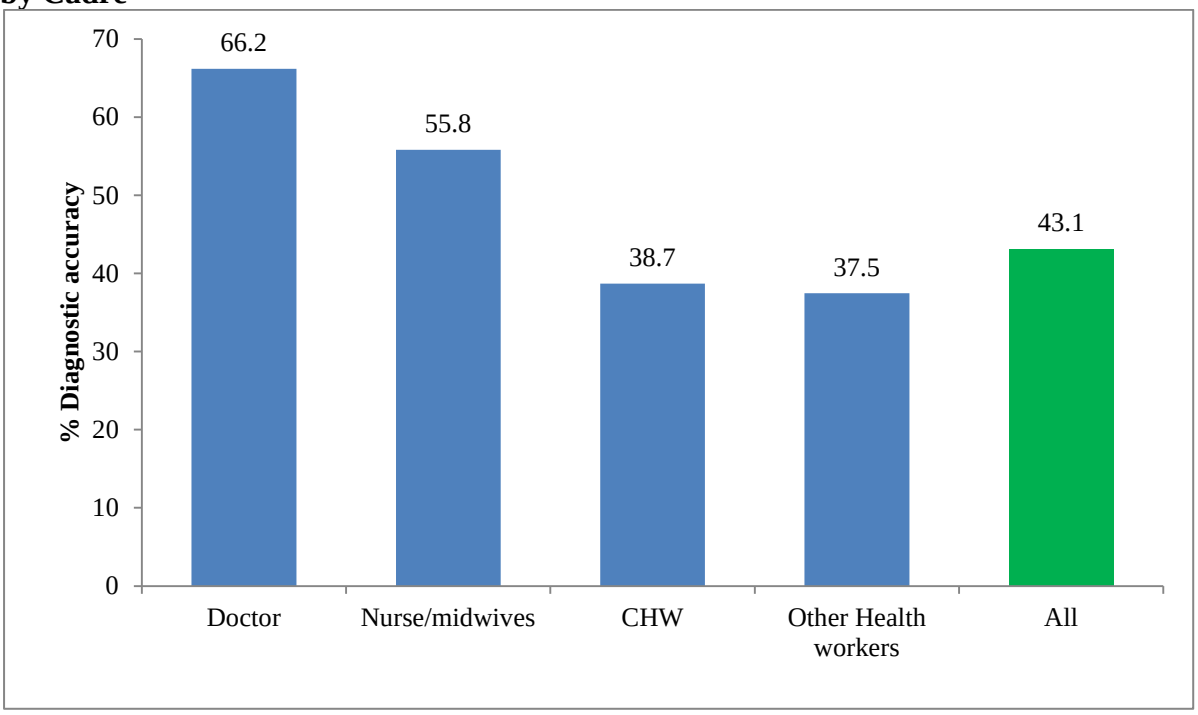


Table 7: Percentage of Health Workers who Diagnosed Clinical Conditions Accurately by Cadre (Disaggregated by the Disease Condition)

Tracer Dxs / Health workers cadre	Acute diarrhoea with dehydration	Pneumonia	Malaria with anaemia	PPH	Birth Asphyxia
Doctors	64.1	70.8	36.1	84.6	74.2
Nurses/ Midwives	47.1	56.5	16.5	83.4	71.3
CHEW	43.9	43.6	9.4	59.5	34.5
Other Health workers	37.3	37.6	10.7	57.8	39.9
All	44.3	46.2	12.5	65.0	44.6

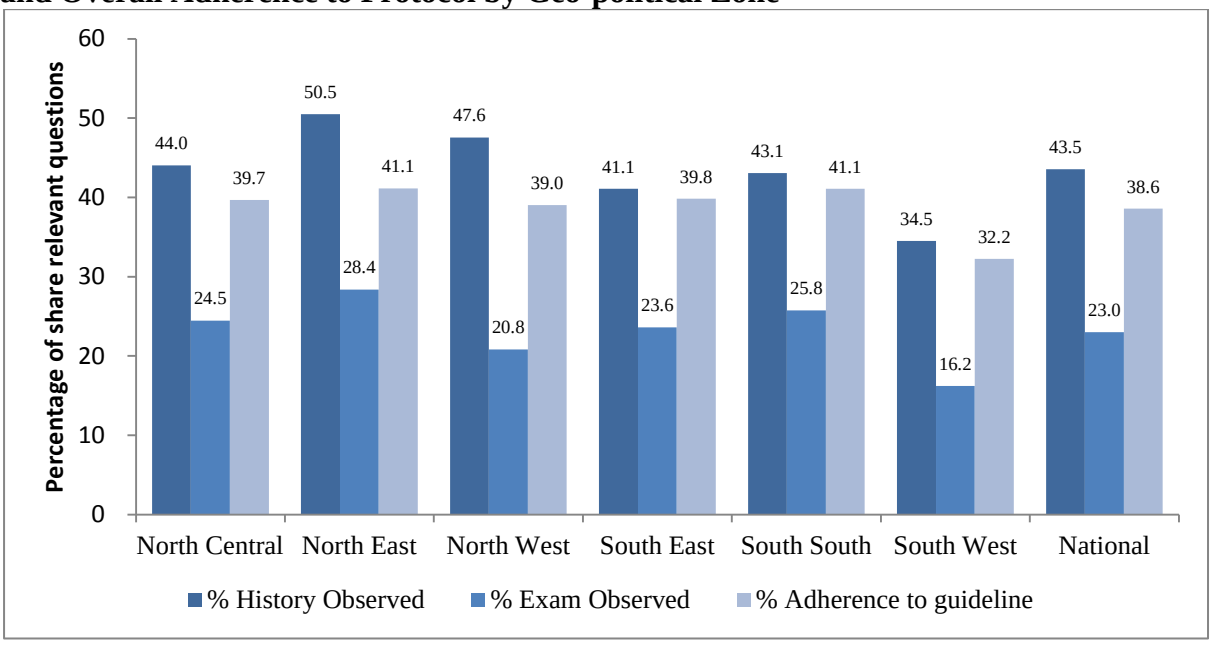
The proportion of clinical conditions diagnosed accurately was also analyzed by health workers' cadre across the geopolitical zones. Doctors were found to diagnose all conditions more accurately than all other cadres in general (66.2%), though the proportion of doctors' accuracy varied across the disease conditions. A high proportion of doctors diagnosed pneumonia (70.8%), post-partum haemorrhage (84.6%) and birth asphyxia (74.2%) accurately while only 64.1% and 36.1% were able to diagnose acute diarrhoea with dehydration and malaria with anaemia respectively. Also, a higher proportion of nurses and midwives accurately diagnosed PPH (83.4%) and birth asphyxia (71.3%). About 50% Community Health Extension Workers (CHEW) and other health workers were also able to diagnose PPH. Only 12.5% of all cadres interviewed diagnosed malaria with anaemia correctly (**Table 7**).

4.1.2 Adherence to Guidelines

Adherence to guidelines was another construct used to measure the competence of health workers in the survey. It was defined as the average of proportions of the relevant history, physical examination, investigation and health education adhered to in managing each of the three common childhood diseases namely; acute diarrhoea with dehydration, malaria with anaemia and pneumonia. Measurement was based on the national clinical guidelines and the

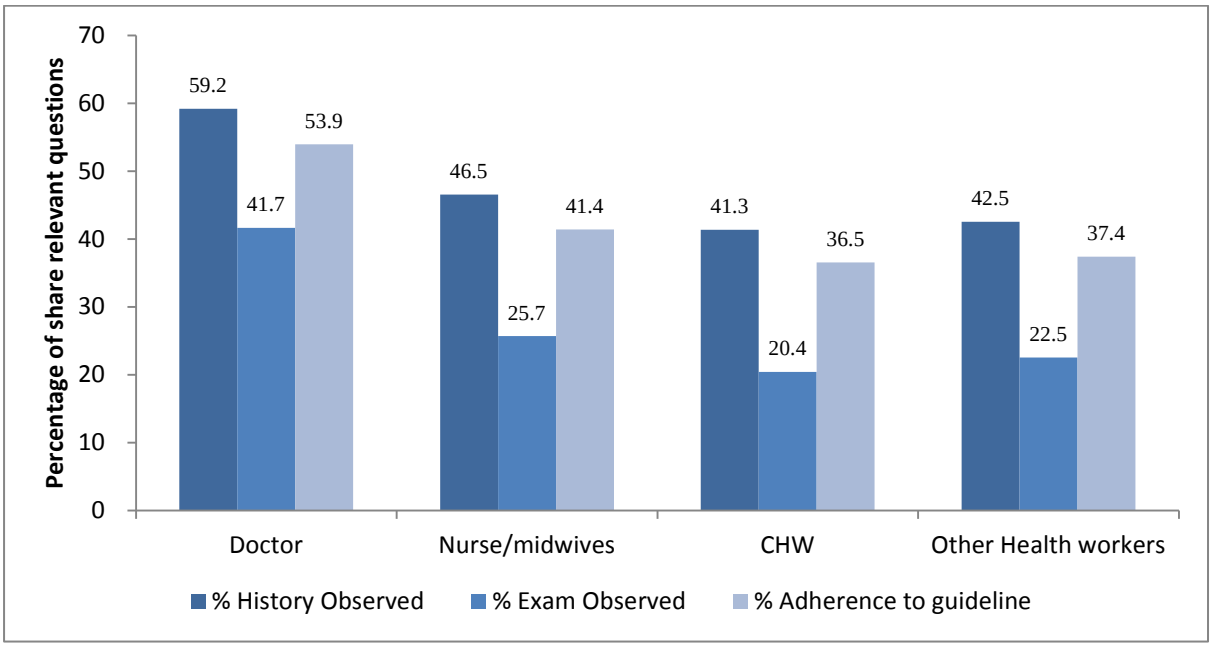
guidelines for Integrated Management of Childhood Illnesses (IMCI). The percentage of guideline items adhered to by health workers according to geopolitical zone and cadre are shown in **Figure 6** and **Figure 7** respectively.

Figure 6: Percentage of Relevant History Questions, Physical Examination Adhered to and Overall Adherence to Protocol by Geo-political Zone



Nationally, an average of 38.6% (approximately 4 out of every 10 items) of the guideline items were adhered to by all health workers interviewed. The performance was found to vary only slightly across the geopolitical zones; highest in SSZ and NEZ (41.1%), followed by SEZ (39.8%), NCZ (39.7%) and NWZ (39.0%), while SWZ had the least adherence (32.2%). A breakdown of the construct into the various components shows that greater proportions of history questions were observed when compared to the examination across all the geopolitical zones.

Figure 7: Percentage of Guideline Items Adhered to by Health Workers According to Cadres



Disaggregation by cadre showed that doctors adhered most to guidelines than all other cadres on the whole (53.9%), though the proportion of doctors' adherence varied across the construct components. More than 50% of expected relevant history questions were asked while a lower percentage (41.7%) of relevant physical examinations was observed by the doctors. Doctors were closely followed by nurses (41.4%) while CHEW and other health workers adhered to only 36.5% and 37.4% of the guideline items respectively

Table 8 shows further breakdown of adherence to guidelines into the proportion of history questions and physical examination done during consultation for each of the three common childhood diseases.

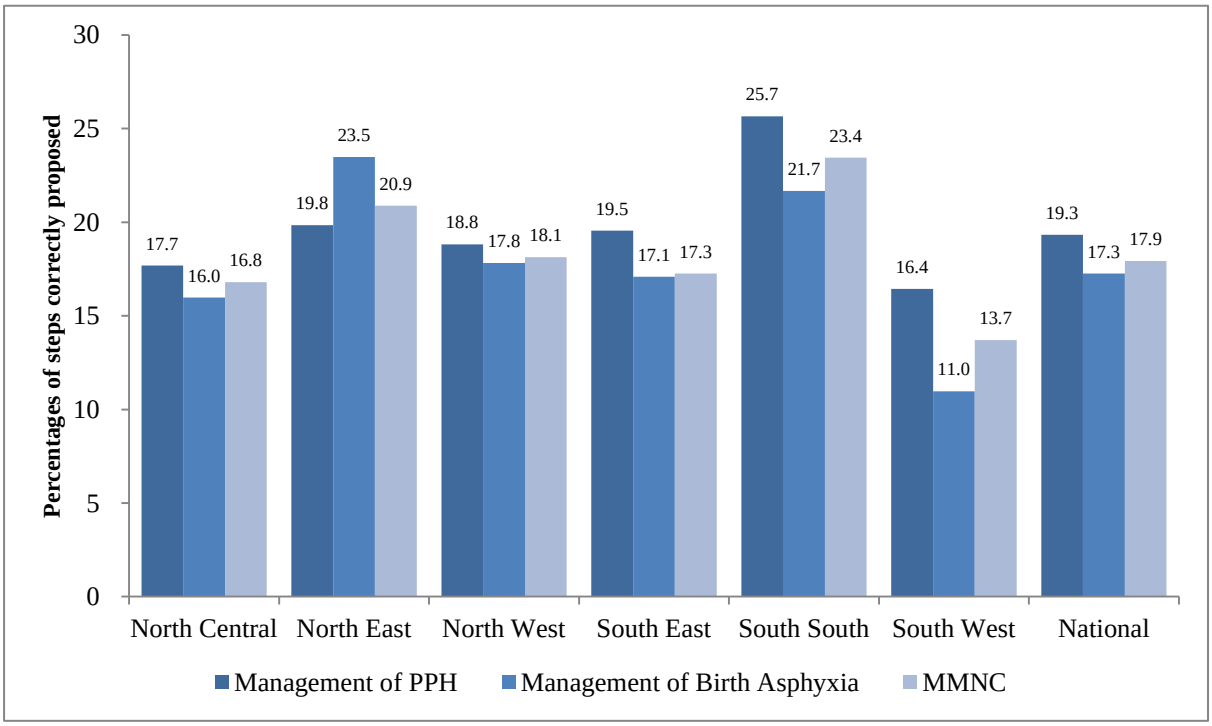
Table 8: Percentage of Relevant History Questions and Examination Adhered to in Diagnosing Diarrhoea, Pneumonia &Malaria during Consultation by Geopolitical Zones

Geo-Political zone	Diarrhoea		Pneumonia		Malaria	
	% Hx taking	%Physical Exam	% Hx taking	%Physical Exam	% Hx taking	%Physical Exam
North Central	46.8	24.0	38.8	22.5	46.3	26.6
North East	48.4	30.0	46.3	25.5	54.5	24.4
North West	45.8	23.7	42.5	18.2	53.6	19.2
South East	43.1	20.7	41.4	19.7	38.6	27.3
South South	44.0	25.8	41.6	19.4	43.5	31.9
South West	36.9	15.5	32.3	13.1	34.3	20.1
National	43.2	22.2	39.7	18.5	44.0	23.6

Less than half of all the relevant history questions and less than one-third of relevant physical examinations needed for diagnosing diarrhoea, pneumonia and malaria were observed across all the geopolitical zones except NEZ and NWZ where 54.5% and 53.6% of relevant history questions for malaria were asked respectively**.**

Figure 8 shows the proportion of maternal and child health complications' management actions or steps correctly proposed by health workers managed according to Geopolitical Zones.

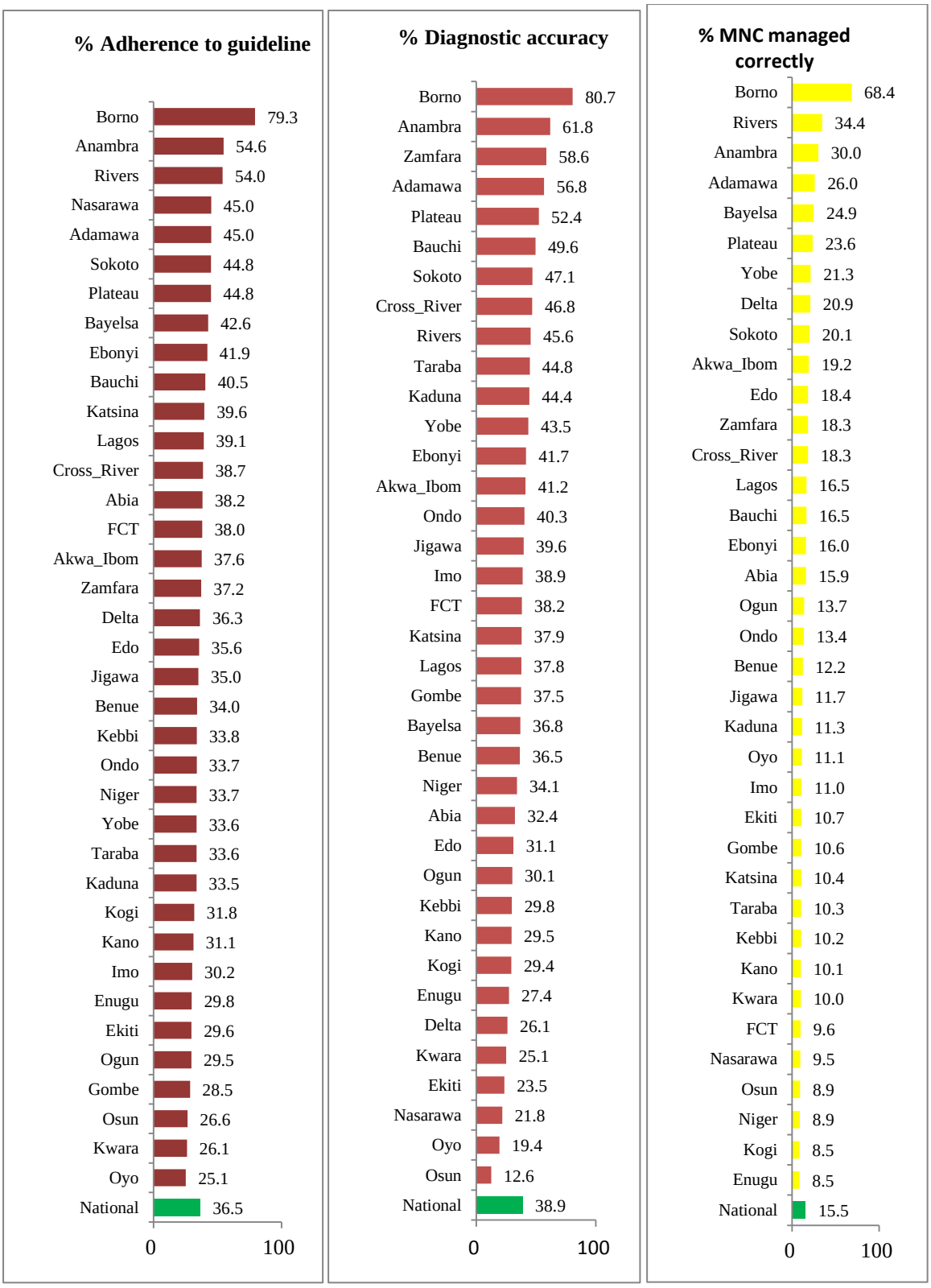
Figure 8: Percentage of Maternal and Child Health Complications' Management Actions/Steps Correctly Proposed by Health Workers According to Geopolitical Zone



The indices of management of maternal and neonatal complications (MMNC) - postpartum haemorrhage and birth asphyxia- were not different. Nationally, an average of 17.9% (2 out of every 10 items) of the management guidelines were observed by the health workers interviewed. SSZ took the lead with zonal average of 23.4% while SWZ had the least zonal average of 13.7%**.**

Figure 9 presents the States results of health worker competence for all five cases presented in the survey vis-à-vis their diagnostic accuracy, adherence to guidelines and management of maternal and neonatal complications.

Figure 9: Percentage of Guidelines Adhered to, Clinical Conditions Diagnosed Accurately and Maternal, Neonatal Complications (MNC) Managed Correctly in PHFs by State



The PHFs estimates were compared across States since they are the target facility type for SOML interventions. Borno State maintained the lead in the three indicators with guideline

adherence score of 79.3%, diagnostic accuracy score of 80.7% and a score of 68.4% in management of maternal and neonatal complications. Anambra, Adamawa, and Rivers were also found among the first five States in the three indices assessed. Some other States that fared relatively well in one or two of the indices measured include Sokoto and Nasarawa States in percent adherence to guidelines, Zamfara and Bauchi in diagnostic accuracy, Plateau in both diagnostic accuracy and MMNC, and Bayelsa in MMNC. Excluding Borno state, all other states had below 50% in MMNC.

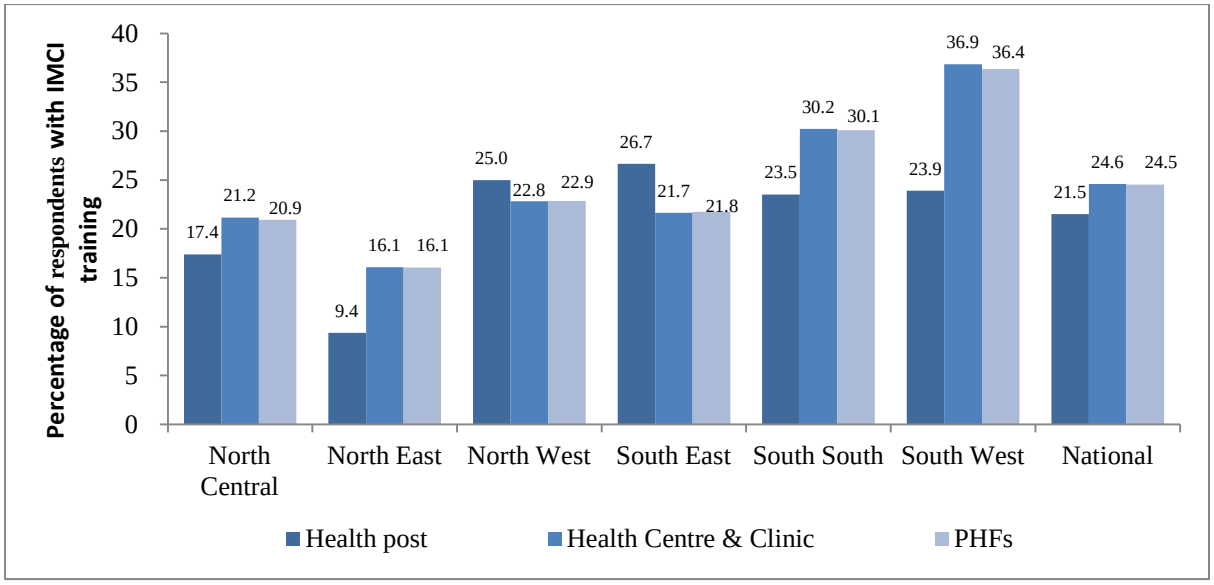
On the contrary, Osun, Oyo, Enugu and Gombe performed poorly in two or more of the indices. Of note was the direct relationship between adherence to guidelines and diagnostic accuracy in most of the States except Nasarawa State that had very low diagnostic accuracy despite relatively high percentage adherence to guidelines.

4.2 Provider Knowledge of the IMCI Protocol for Diagnosis and Treatment of the Sick Child

Integrated Management of Childhood Illness (IMCI) is an integrated, non-disease specific approach to management of major childhood illnesses where sick children are classified and assessed based on danger signs and main symptoms with emphasis on preventive interventions like nutrition and immunization. It is essentially a primary health care intervention that aids the health worker in the prompt triage of sick children based on the severity of their illnesses to determine those that can be managed at the PHF versus those that need urgent referral to the next level of care. Therefore, the provider's knowledge questionnaire in this survey was designed to measure the knowledge of the IMCI protocol among different cadres of health care providers who regularly perform children out- patient consultations in all the PHFs irrespective of prior training in IMCI.

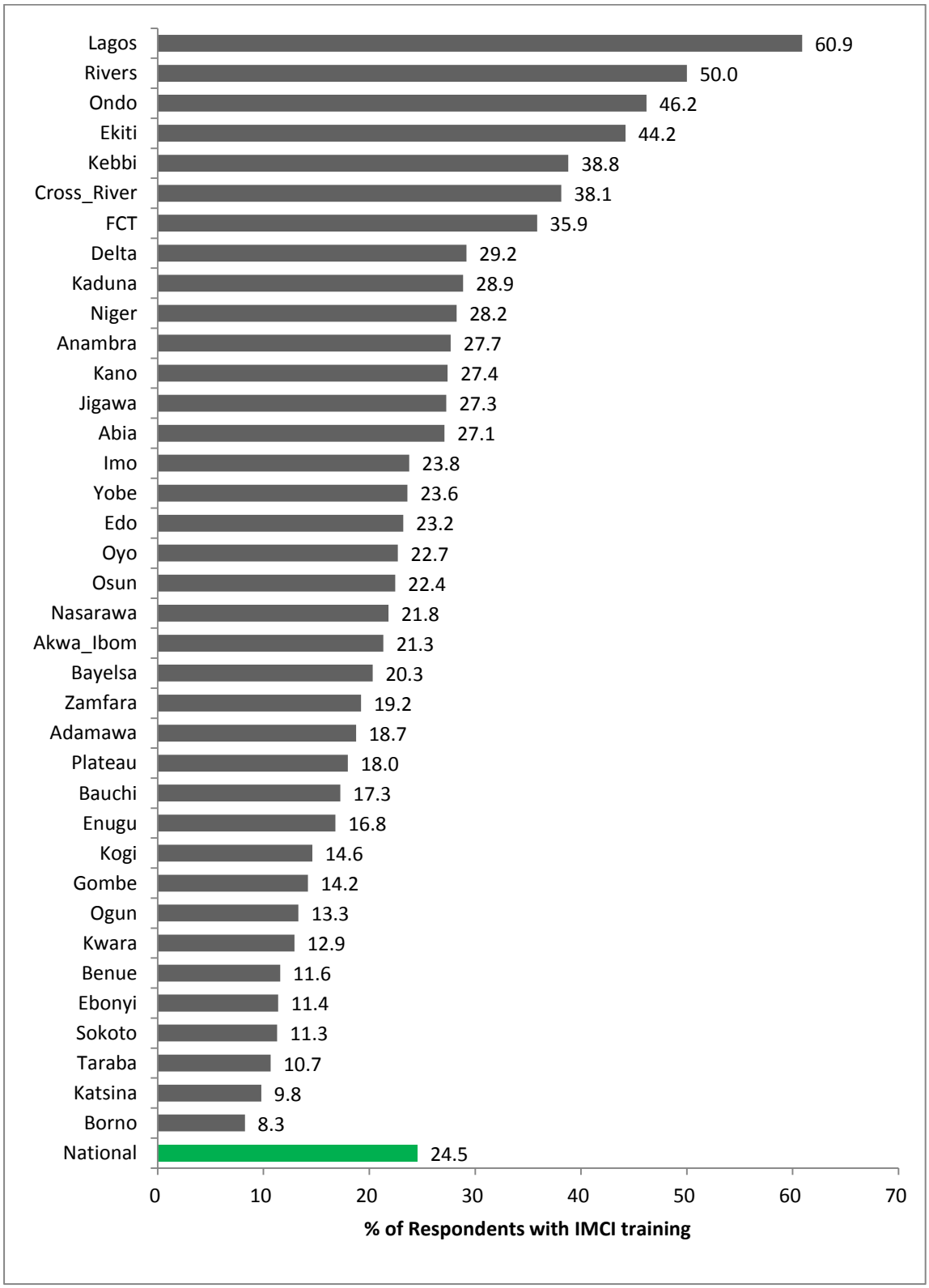
Respondents were asked to mention the IMCI danger signs and main symptoms that should be checked for in a sick child. During the data analysis their knowledge of this was computed as the proportion of the danger signs (inability to drink or breastfeed, convulsion, vomiting everything and loss of consciousness/lethargy) and main symptoms (fever, cough/difficulty in breathing and diarrhoea) they were able to mention. An additional item on checking respiratory rate in those with cough or difficulty in breathing was also included in the computation of this indicator. **Figure 10** and **Figure 11** show the proportion of the PHF health workers interviewed that had prior training in IMCI by geopolitical zone and state respectively while **Figure 12** and **Figure 13** show the PHF health workers' knowledge of IMCI danger signs and main symptoms according to PHF type by geopolitical zone and state respectively. Furthermore, **Figure 14** and **Figure 15** compared the knowledge of IMCI danger signs and main symptoms based on IMCI training status of the health worker by geopolitical zone and state respectively.

Figure 10: Proportion of PHF Health Workers Interviewed Who Had Received Prior Training in IMCI according to PHF Type by Geopolitical Zone



About a quarter of the health workers who were interviewed at the PHFs said they had received prior training in IMCI. The figure ranged from 16.1% in the NEZ to 36.4% in the SWZ. Disagregated by type of PHFs, 21.5% and 24.6% of the health workers interviewed in the health posts and health centres/clinics respectively had received prior training. The proportion for the health posts varied between 9.4% in the NEZ to 26.7% in the SEZ.

Figure 11: Proportion of PHF Health Workers Interviewed Who Had Received Prior Training in IMCI by State



About 60% of the health workers interviewed in Lagos State and 50% in Rivers State said they had prior training in IMCI. Less than 50% of those in every other states said they had prior training with the lowest being Borno (8.3%).

Figure 12: Health Workers' Knowledge of IMCI Danger Signs and Main Symptoms according to PHF Type by Geopolitical Zone

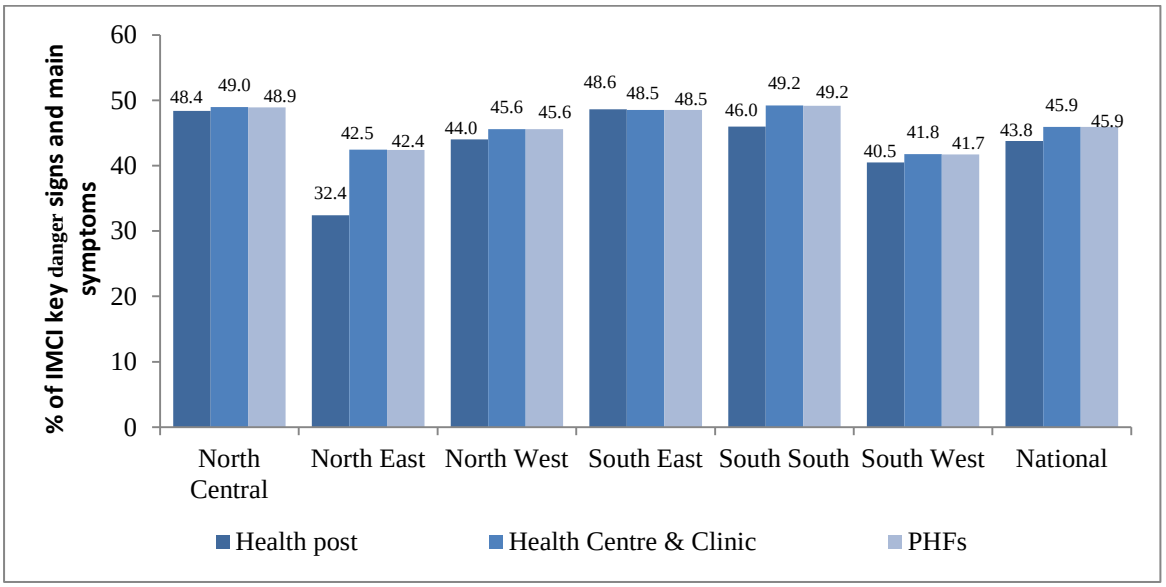
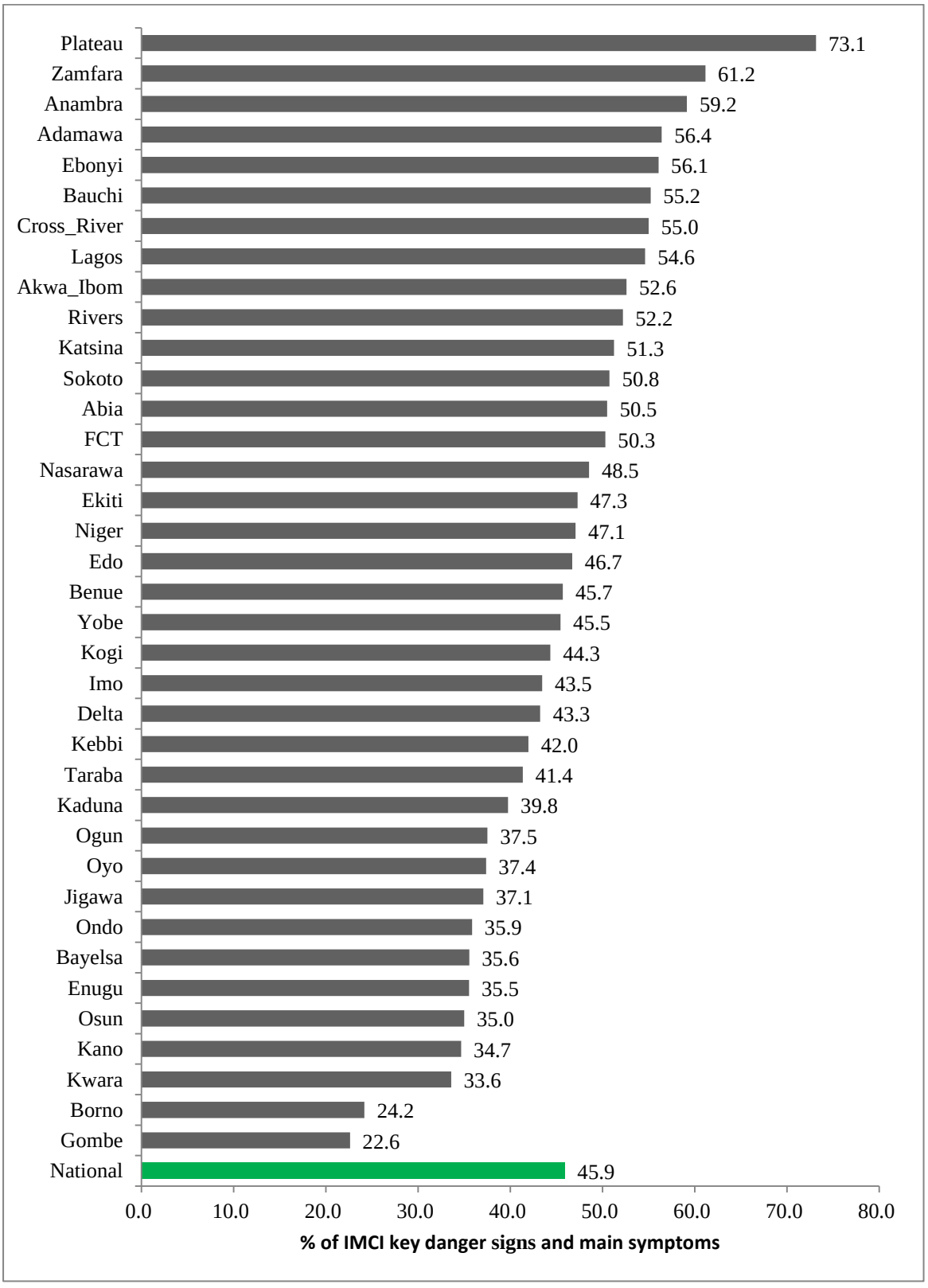


Figure 13: PHF Health Workers' Knowledge of IMCI Key Danger Signs and Main Symptoms by States



On the average, the primary health facility health workers (irrespective of prior IMCI training) knew approximately half (45.9%) of the key danger signs and main symptoms that should be checked for in a sick child. Similar knowledge scores were also observed in the

health centres/clinics and health posts across the geopolitical zones except in NEZ where an average health worker knew 32.4% of the signs and symptoms. Across the states, the knowledge ranged from 22.6% in Gombe State to 73.1% in Plateau State. In fourteen states it was above 50% and below 25% in two states.

Figure 14: PHF Health Workers' Knowledge of IMCI Danger Signs and Main Symptoms according to IMCI Training Status by Geopolitical Zone

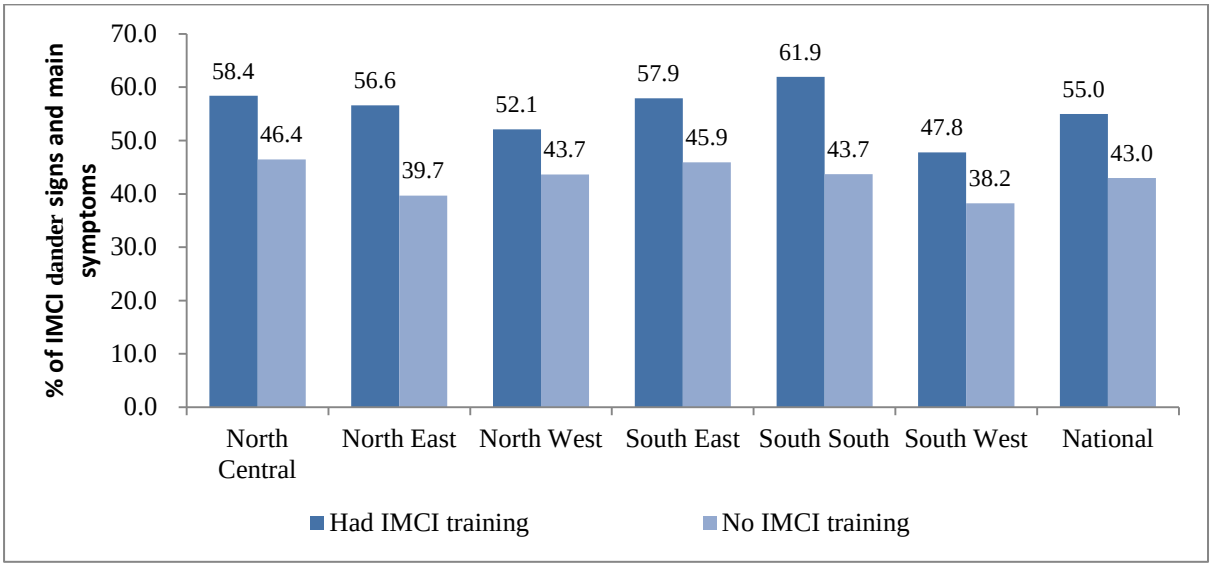
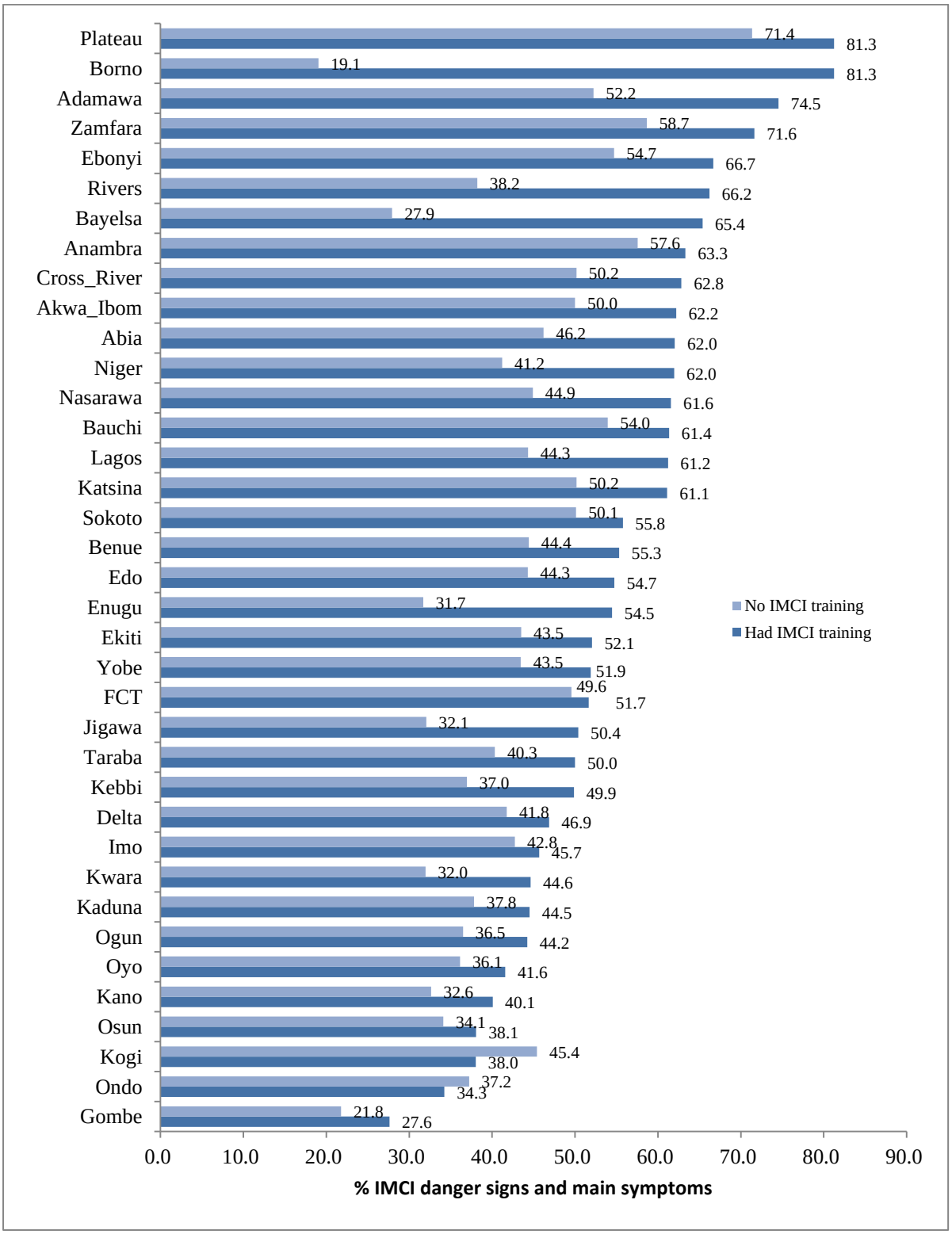


Figure 15: Knowledge of IMCI Danger Signs and Symptoms according to IMCI Training Status by State



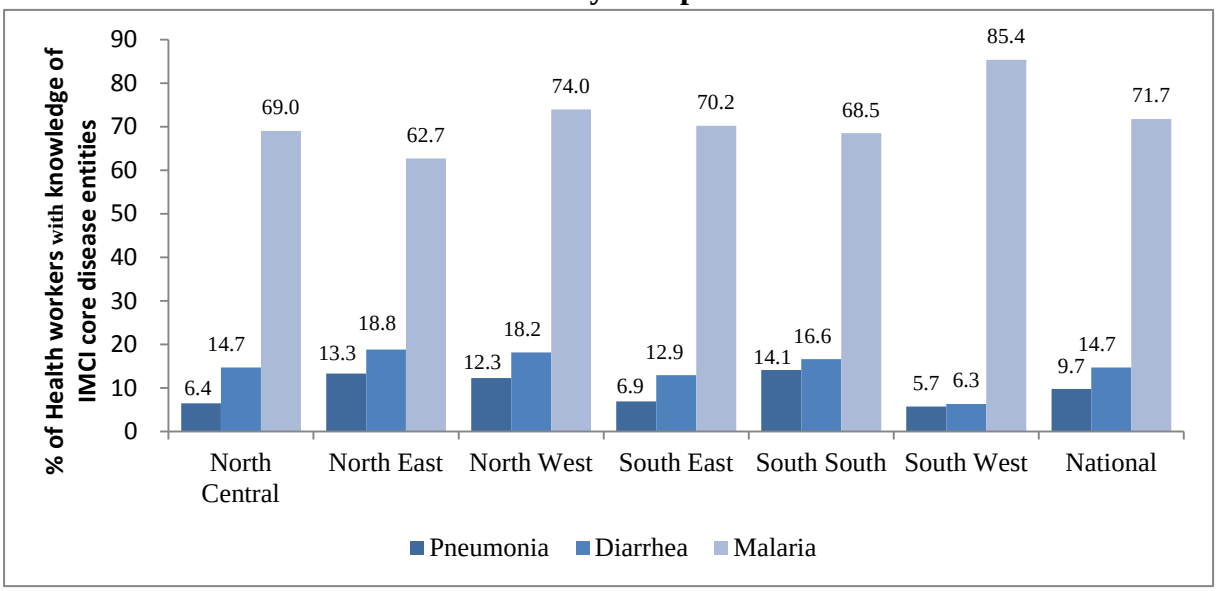
Expectedly, health workers who said they had prior training in IMCI performed better than those without prior training as they knew 55.0% and 43.0% of the danger signs and symptoms respectively. This was also observed across the geopolitical zones and the states

except in Kogi State and Ondo State where health workers without prior training had better performance than those with prior training.

4.2.1 Knowledge of Assessment and Treatment of IMCI Core Disease Entities

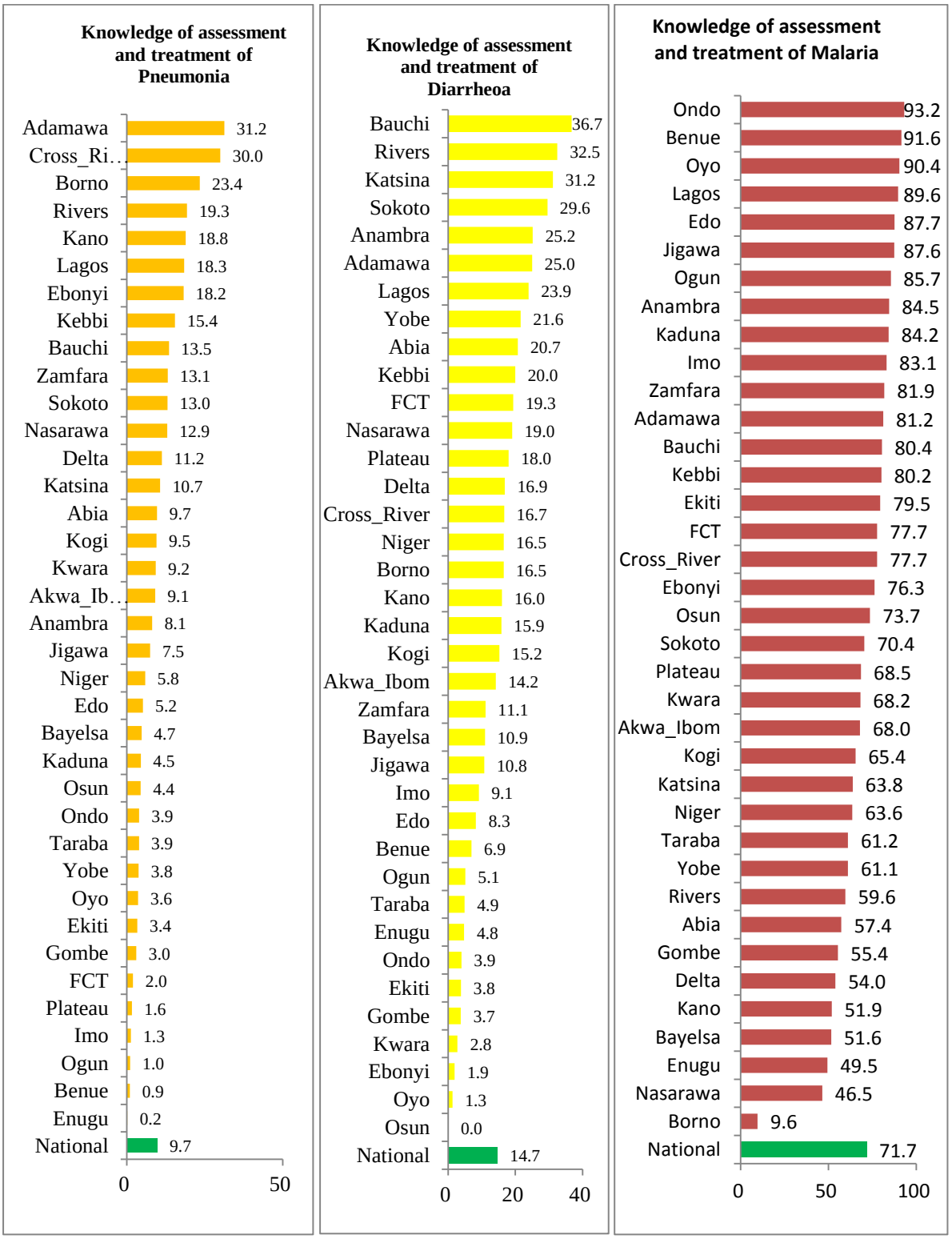
Analysis was done to further assess the depth of knowledge of the clinicians in assessment and treatment of core IMCI disease entities namely; malaria, pneumonia and diarrhoea. This assessment was based on the initial main symptom mentioned by the clinicians and the IMCI process in classifying and managing the disease entity. The un-weighted average of the share of relevant classification, physical examination and treatment for each of the disease entity was computed and disaggregated by geopolitical zone and State. The proportion of PHF health workers with knowledge of assessment and treatment of core IMCI disease entities by Geopolitical Zone and State are shown in **Figure 16** and **Figure 17** respectively.

Figure 16: Percentage of Health Workers in PHFs with Knowledge of Assessment and Treatment of IMCI Core Disease Entities by Geo-political Zone



Analysis reveals that majority of the health workers interviewed were knowledgeable in assessment, classification and treatment of malaria. This cuts across all the geopolitical zones with 85.4% of health workers in SWZ, 74% in NWZ, 70.2% in SEZ, 69% in NCZ, 68.5% in SSZ, and 62.7% in NEZ. However, knowledge of IMCI protocol management of pneumonia and diarrhoea was unimpressive across the geopolitical zones.

Figure 17: Percentage of Health Workers in PHFs with Knowledge of Assessment and Treatment of IMCI Core Disease Entities by State



Note: No health worker in Osun State mentioned all the three component items used to compute the indicator on knowledge and assessment of diarrhoea

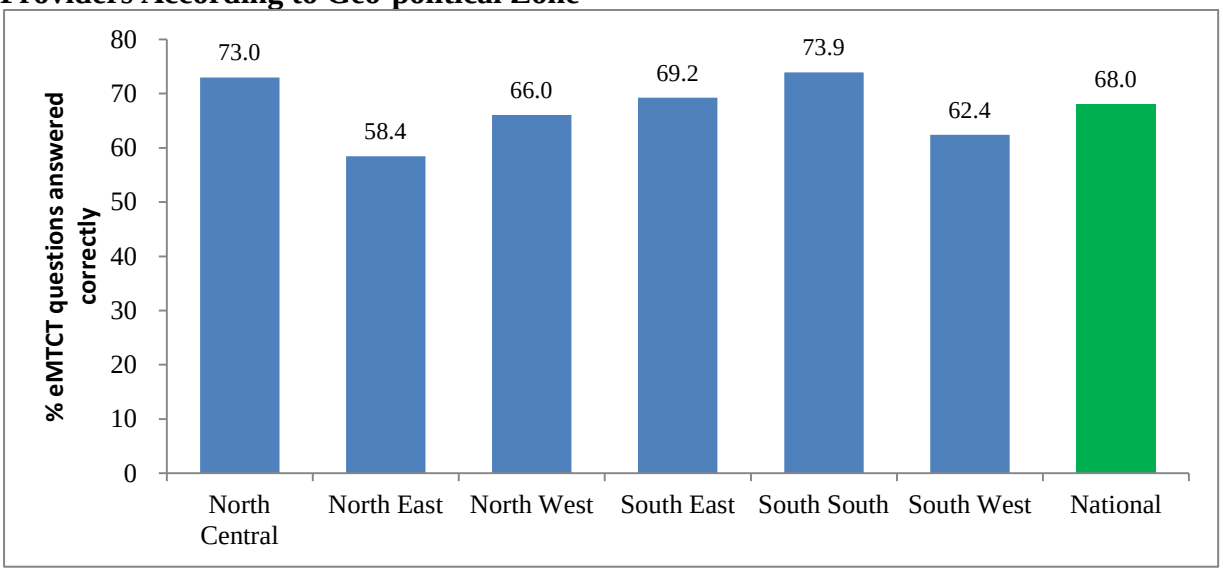
More than 50% of the health workers that were interviewed in all the States (except Nasarawa, Enugu and Borno States) had adequate knowledge in management of malaria according to IMCI standard in contrast to pneumonia and diarrhoea where less than 40% of

health workers showed adequate knowledge in all the States. In Osun State, none of the interviewed health workers showed adequate knowledge of the management of diarrhoea.

4.3 Provider Knowledge of Protocol for eMTCT during ANC

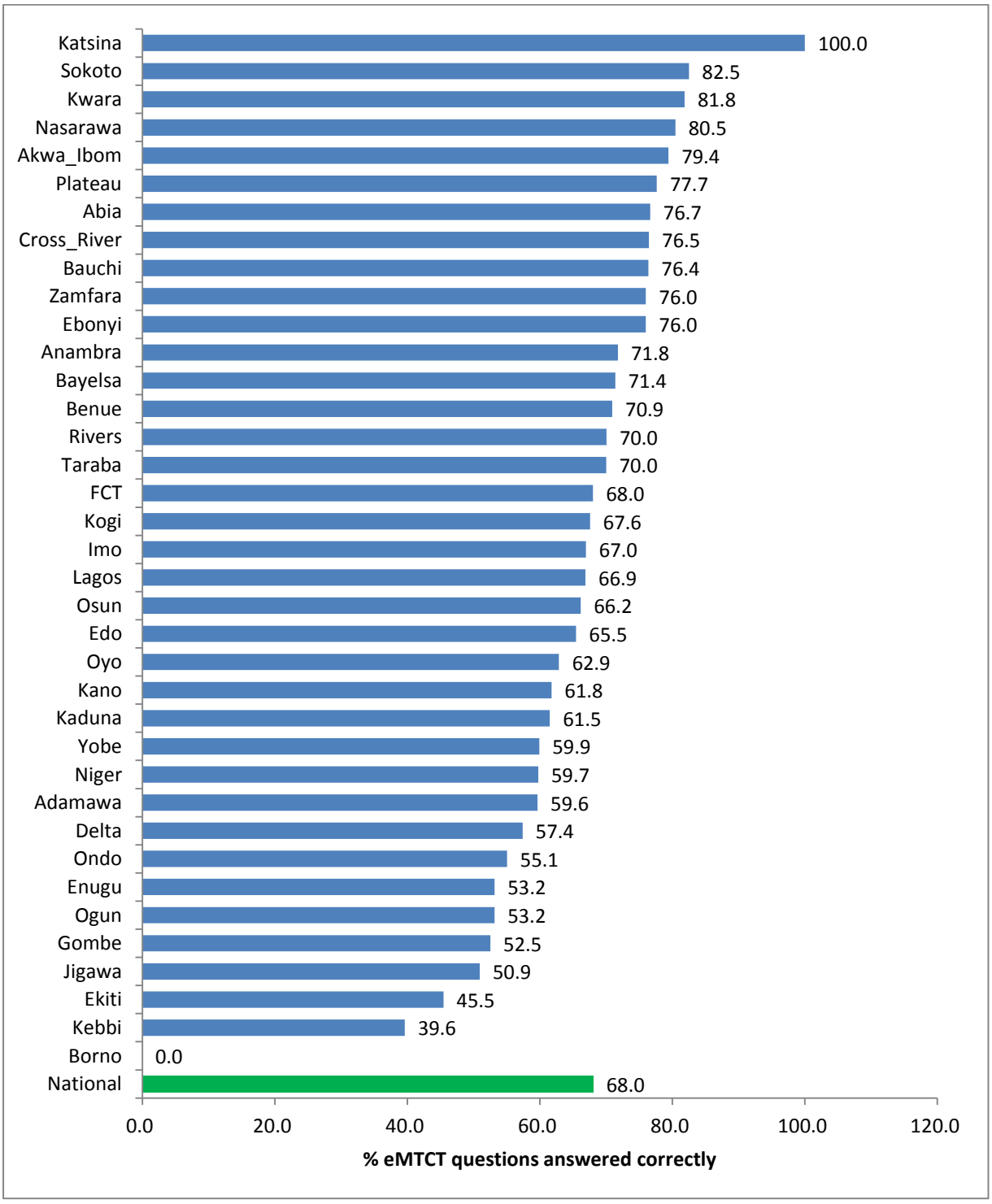
eMTCT protocol is a document that provides the recommended standard of care for HIV positive pregnant woman-child pair in order to prevent vertical transmission of HIV from mother to child. The protocol provides information on the key interventions, targets and activities for the programme. The survey assessed the knowledge of the eMTCT providers on the key recommendations on testing, treatment and counselling of clients that are enrolled under the programme. Eleven relevant questions, selected from the protocol, were used to assess the knowledge of the providers on eMTCT programme. A special sampling technique was employed for the eMTCT assessment as only primary health facilities with eMTCT providers were recruited, giving varied sample sizes across the zones and States. Borno State was left out of the assessment because there was no eMTCT service provider in any of the surveyed primary health facilities. The percentage of the questions answered correctly was calculated for each respondent. The national, geopolitical zones and State averages were computed and presented in **Figure 18** and **Figure 19** respectively.

Figure 18: Percentage of eMTCT Questions Answered Correctly by eMTCT Service Providers According to Geo-political Zone



Analysis shows that the knowledge base of eMTCT providers on the programme was above 50% in the entire geopolitical zones. Nationally, 68% (approximately 7 out 10) of the requested questions were answered correctly. SSZ (73.9%) had the highest proportion of questions answered correctly while NEZ (58.4%) had the lowest.

Figure 19: Percentage of eMTCT Questions Answered Correctly Across the 36 States and FCT Primary Health Facilities



Note: None of the surveyed PHFs in Borno State offered eMTCT services while the respondent in the only PHF in Katsina offering the service answered all questions correctly

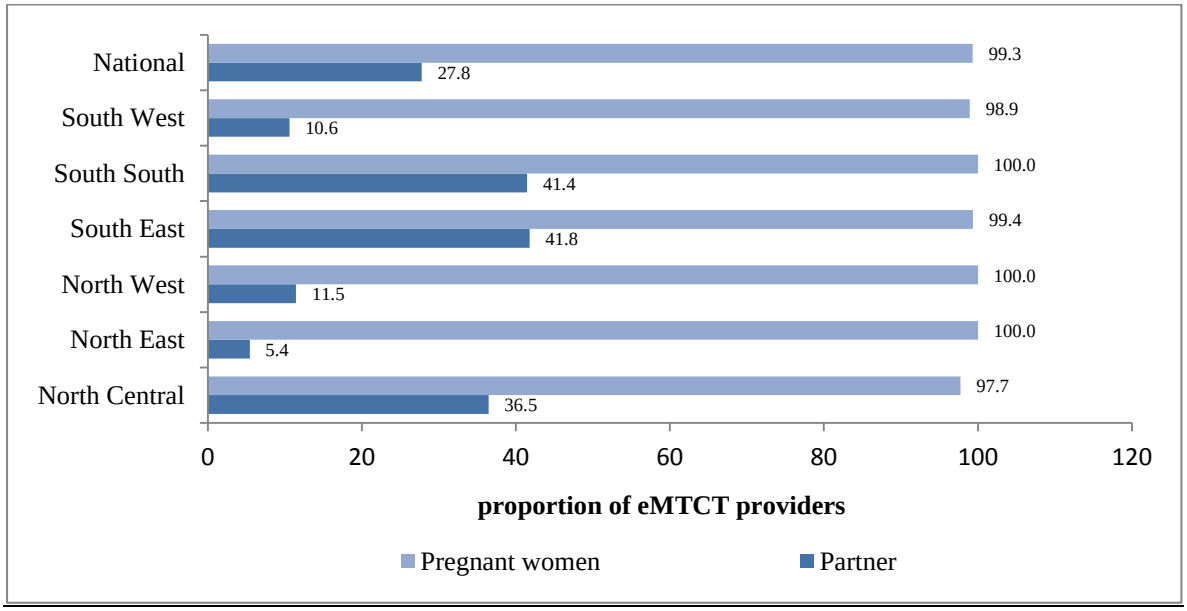
Findings show that majority of the eMTCT providers in the PHFs across all the surveyed States except Kebbi and Ekiti States, were able to answer at least half of the protocol questions correctly.Sokoto respondents were able to answer 82.5% of the questions correctly. This was followed by Kwara (81.8%) and Nasarawa (80.5%). Borno State was excluded

because none of the selected PHFs in the State had eMTCT service provider while Katsina had only one PHF offering PMTCT in the data and the respondent in this PHF had perfect knowledge of eMTCT, hence the 100% score.

4.3.1 Breakdown of Provider's Knowledge of eMTCT into its Components

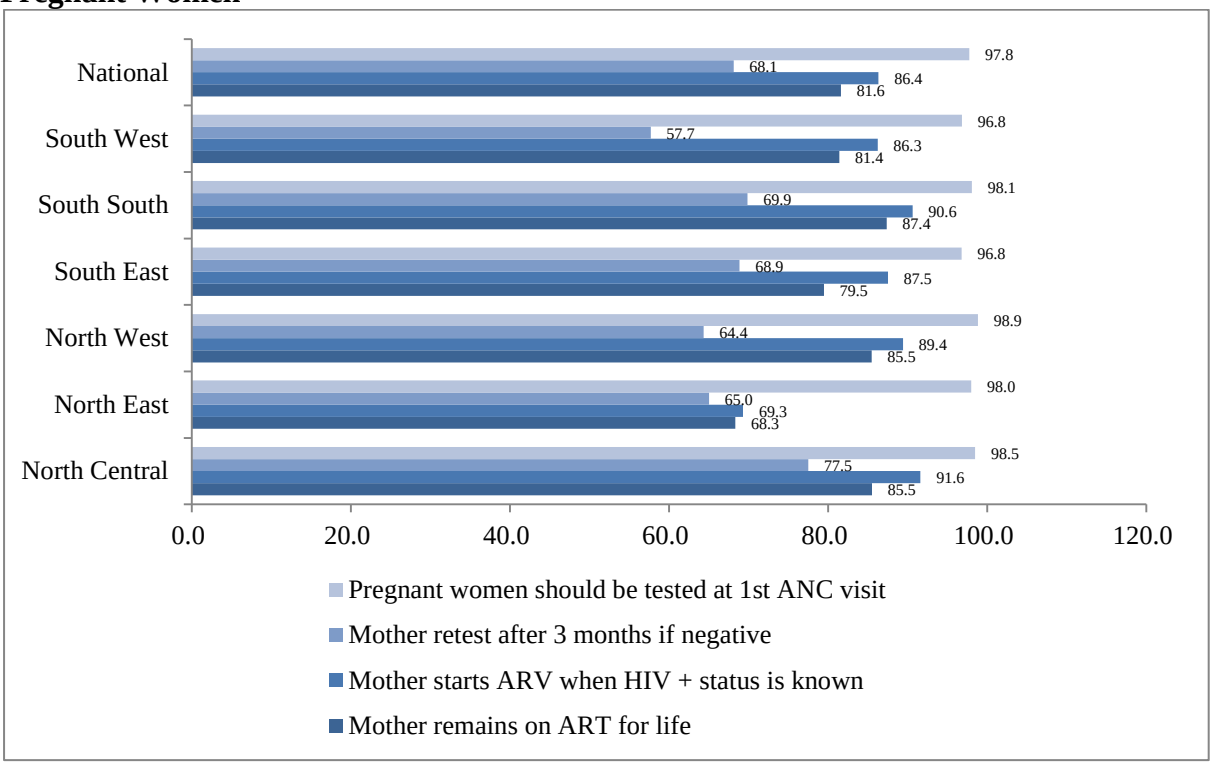
The providers' knowledge of eMTCT was grouped into three categories namely: knowledge about who should be tested, knowledge about the care of HIV-positive pregnant women and knowledge about the care of HIV-exposed newborns. The proportions of eMTCT providers who answered each question correctly were computed and presented as **Figure 20**, **Figure 21** and **Figure 22** respectively.

Figure 20: Knowledge of Interviewed eMTCT Service Providers on Who Should be Tested



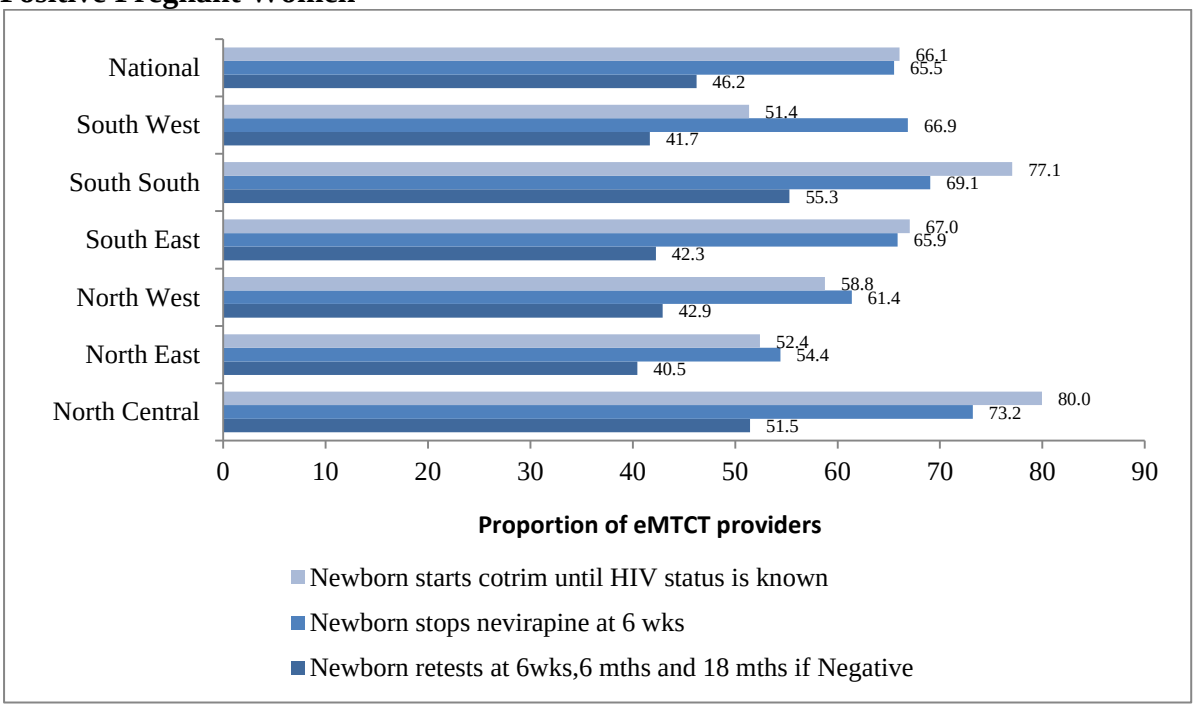
Nationally, almost all the providers interviewed said that pregnant women should be tested for HIV (99.3%), while only few mentioned that their partners should also be tested (27.8%). More providers agreed that partners of the pregnant women should be tested in SSZ (41.4%) and SEZ (41.8%) compared to other zones.

Figure 21: Responses of Interviewed EMTCT Providers on Care of HIV Positive Pregnant Women



Nationally, a high proportion of providers mentioned that pregnant women should be tested at 1st ANC visit (97.8%), should start ARV immediately they tested positive (86.4%) and should be on ART for life (81.6); however, a lower percentage (68.1%) mentioned that they should have a retest 3 months if the initial test was negative. This trend was also seen across all the geopolitical zones, fewer respondents mentioned a retest at 3 months if negative when compared to the other three questions.

Figure 22: Knowledge of Interviewed eMTCT Providers on Care of Newborns of HIV Positive Pregnant Women



When compared to the questions on the care of mother with HIV, fewer eMTCT service providers answered questions on care of newborns of mother with positive HIV status correctly. Nationally, the estimates were 66.1% and 65.5% on questions on use of prophylactic cotrim and use of nevirapine in the first 6 weeks of life respectively while less than half (46.2%) mentioned the need for retest at 6 weeks, 6 months and 18 months if the first HIV test was negative. Providers from NCZ showed more knowledge in care of newborns of mothers with positive HIV status than other zones.

4.4 Documentation of Care Process for ANC, Suspect Malaria in Under-5 Children and eMTCT Services

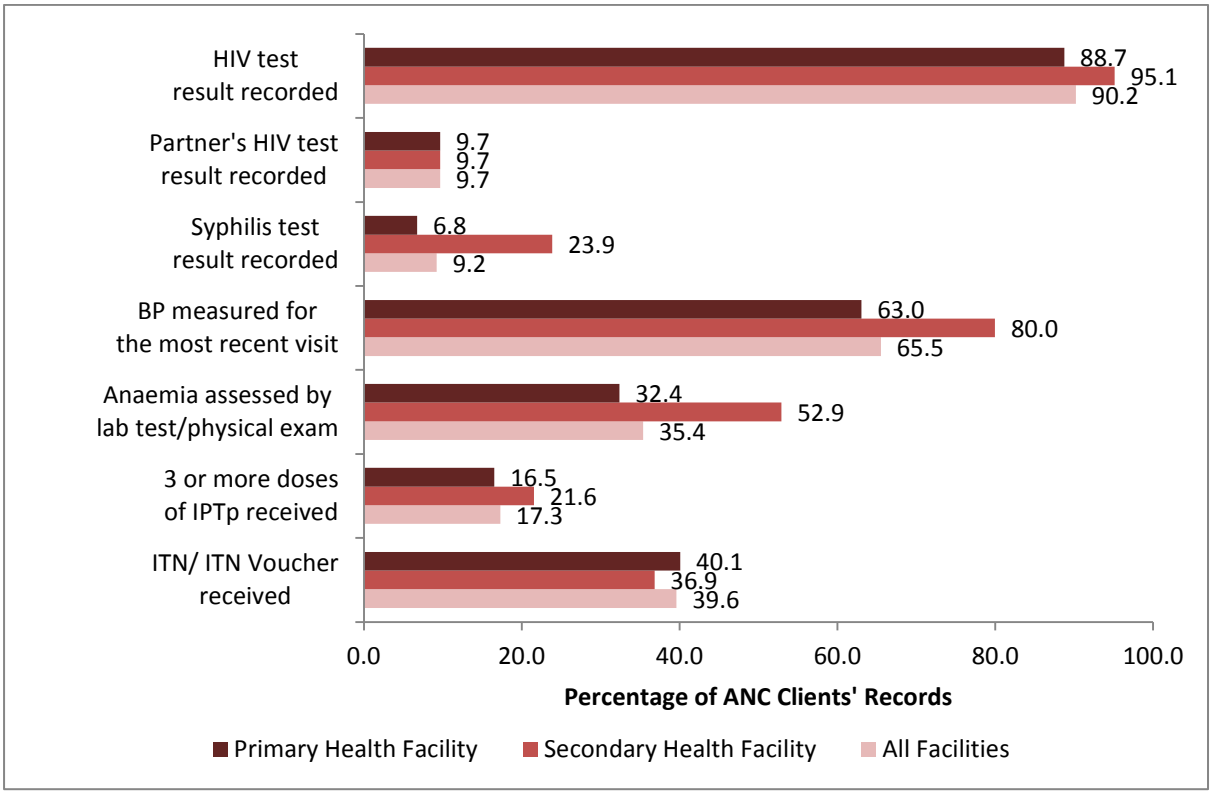
Documentation is critical to the provision of quality health care as it validates the care that has been provided and ensures that data is shared with subsequent caregivers thereby safeguarding the health of the patient.

In this survey, well trained enumerators randomly selected appropriate number of clients from a sampling frame of eligible clients derived from the relevant register(s). The record of each selected client was reviewed using the appropriate record review pro forma. Information for individual patients was extracted from various sources such as individual cards, laboratory records, pharmacy records and relevant registers. The indicators in this section were derived by calculating the proportions of the clients in a health facility whose records showed an evidence of documentation for a defined item (symptom, physical examination, laboratory test, treatment etc.).

4.4.1 Documentation of Antenatal Care (ANC)

The eligibility criterion for this record review was a pregnant woman whose pregnancy was at least 32 weeks during her most recent ANC visit. This is the gestational age at which a client is expected to have received all the relevant interventions included in the pro forma. **Figure 23** shows the percentages of health facilities that have clients' ANC records with documentation for key items disaggregated by facility type.

Figure 23: Percentages of Clients' ANC Records with Documentation for Key Items



Documentation of Screening for STI /HIV/AIDS during ANC

Results show that in all, clients' HIV test results were documented in about 90% of all the ANC cases reviewed. This high proportion was also observed when disaggregated by geopolitical zone and State except in Gombe State (61%) and Jigawa State (59%) (**Annex 11**). In contrast however, there was low documentation of partners' HIV test results (10%) and syphilis test results (9%) overall.

Documentation of Screening for Pre-eclampsia/Eclampsia/Anaemia in Pregnancy

Overall, blood pressure (BP) was recorded for 66% of the women (**Figure 23**), ranging from 50% (NEZ) to 80% (SSZ) while documentation of anaemia assessment either by Hb/PCV estimation or by physical examination (checking for mucosal pallor) was seen in only 35% of the records of their most recent ANC visits, ranging from 25% in the SWZ to 47% in the SEZ (**Annex 12**).

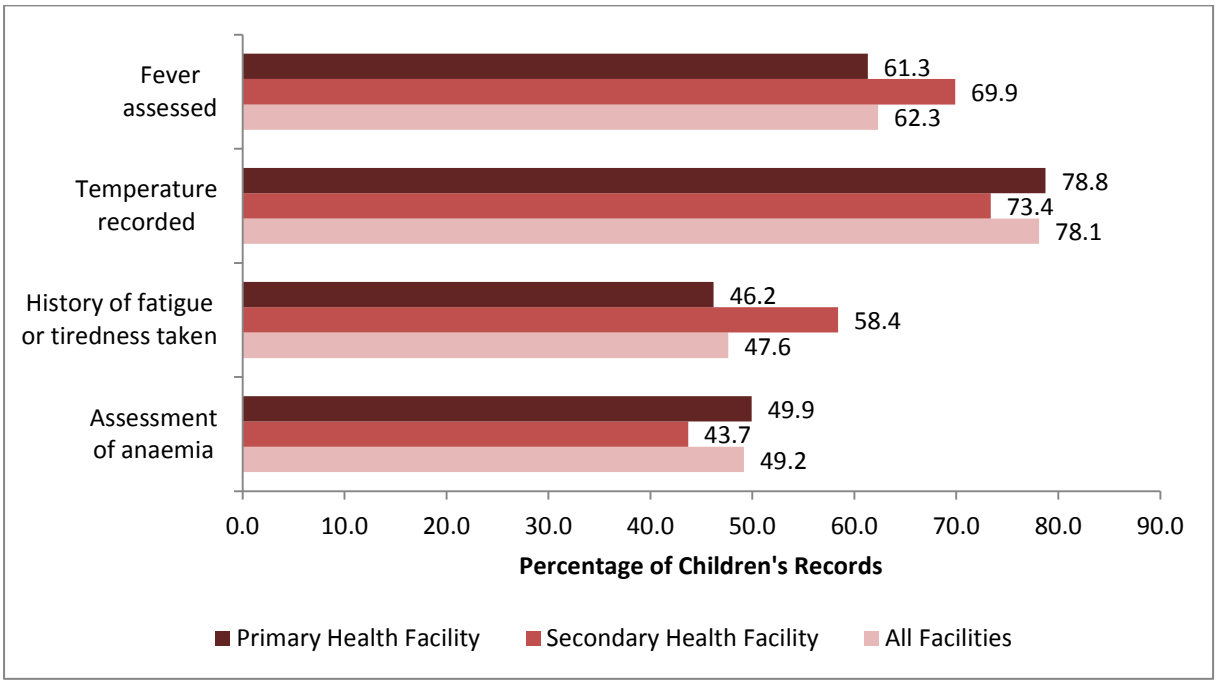
Documentation of Interventions for the Prevention of Malaria in Pregnancy

Key interventions during ANC to prevent malaria in pregnancy include the use of Sulfadoxine-Pyrimethamine (SP) called intermittent preventive treatment of malaria in pregnancy (IPTp) and the use of insecticide treated bed nets (ITN). Overall, only 17% of the records had evidence that the women received three or more doses of SP (IPTp3+) while 40% had evidence that ITN or a voucher for receiving ITN was given (**Figure 23**). Across the geopolitical zones, documentation for ITN/ITN voucher ranged from 21% in the NEZ to 57% in the SWZ while IPTp3+ documentation ranged from 12% in the SWZ to 28% in the NWZ (**Annex 13**).

4.4.2 Documentation of Care Process for Under-5 Children with Suspected Malaria

Records of children less than 5 years old who had been suspected of having malaria were reviewed by enumerators. To identify eligible cases, the Daily Outpatient Department (OPD) register was used to search for cases that presented with symptom(s) of malaria (fever, vomiting etc.) or had a malaria test or with diagnosis of malaria or given a prescription of anti-malaria drug. In health facilities where individual cards were not kept, the records of opportunistic samples of children with suspect malaria presenting on the day of the survey were used for the review. The result of this review is presented in **Figure 24**.

Figure 24: Percentages of Children's Records with Documentation for Selected Items in the Care Process for U-5 with Suspected Malaria



Overall, 62% of the records of children who were suspected to have malaria had documented evidence that history of fever was taken while slightly more than three-quarter had documentation of temperature reading (**Figure 24**). When disaggregated into geopolitical zones, the percentage ranged from 32% in the SWZ to 86% in the SSZ for the documentation

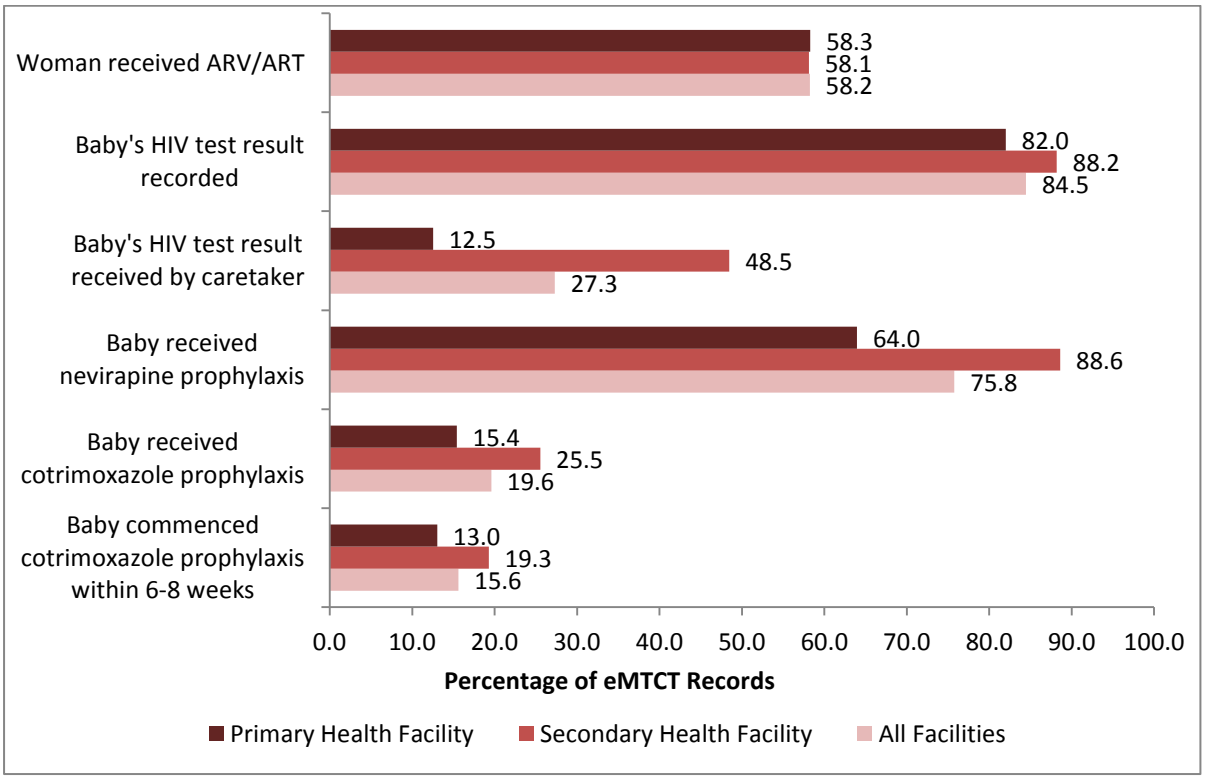
of the history of fever and 43% in the NWZ to 88% in the SWZ for documentation of the temperature reading (**Annex 14**). Documentation for the history of fever was lowest in Oyo State (13%) and highest in Borno State (93%) (**Annex 15**). Also, all the children records reviewed in Borno State had documentation for temperature reading while none had such documentation in Yobe State (**Annex 16**).

Lethargy (tiredness/fatigue) and anaemia are among the common features of malaria that clinicians must look for when assessing a child with suspected malaria because they help in determining the severity of the illness and subsequent treatment options. Overall only about half of the children whose records were reviewed had documentation for the assessment of each of these (**Figure 24**). Cases of severe malaria are expected to be promptly diagnosed at the PHFs and referred to the SHFs for proper management after a pre-referral treatment has been given. The findings show that at the PHFs, history of lethargy and assessment of anaemia were documented in only 46% and 50% of the individual records respectively (**Annex 17**). SEZ had the least proportion of documentation for both lethargy (14%) and anaemia (8%) while SWZ had the most proportion of documentation for these, 78% for lethargy and 87% for anaemia (**Annex 17**). All the States in the SEZ and SSZ performed poorly in both indicators with as low as 6% for lethargy documentation in Anambra State and 7% for anaemia documentation in Ebonyi State **(Annex 17)**.

4.4.3 Documentation of EMTCT Services for HIV-Positive Mother-Infant Pair

In order to allow for the assessment of the uptake of ART/ARV prophylaxis by the mother and child as well as newborn testing and follow up, records of HIV-positive women who attended ANC and delivered live babies who were at least 8 weeks old on the day of the survey were used for the EMTCT review. Results of the EMTCT review disaggregated by facility type are presented in **Figure 25**.

Figure 25: Proportion of Patient Records with Documentation for Selected Items in eMTCT by Facility Type



Maternal ARV Prophylaxis/ART during ANC

Overall, evidence that the HIV-positive mother received either ARV prophylaxis or long term ART during ANC was seen in 58% of the eMTCT records that were reviewed (**Figure 25**). This ranged from 75% in the NEZ to 44% in the SEZ (**Annex 18**).

HIV Testing Service for HIV-Exposed Infants

Eighty five percent of infants of HIV positive women had their HIV results documented while only 27% had documented evidence that the result was received by their caretakers (**Figure 25**). The NEZ and NWZ had high percentage of records for both indicators while the SSZ had low percentages for both indicators. Although NCZ and SWZ had more than 90% for the documentation of infant's HIV test results, only about10% of these were documented to have been received by the caretaker (**Annex 19**).

ARV (Nevirapine) Prophylaxis and Cotrimoxazole Preventive Treatment (CPT) for HIV-Exposed Infants

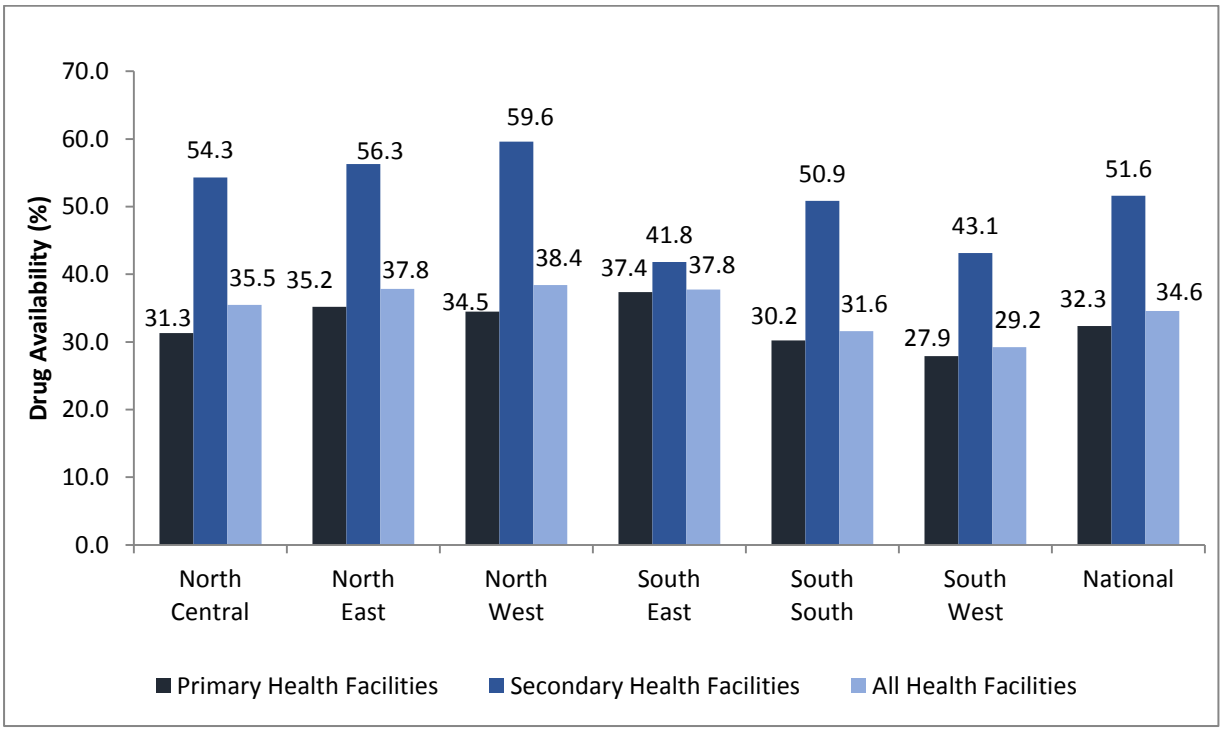
Figure 25 shows that there was evidence that 76% of the infants received nevirapine prophylaxis while 20% received cotrimoxazole prophylaxis. The cotrimoxazole was given at the recommended age (within 6-8 weeks) in only 16% of all the infants whose records were reviewed.

4.5 Availability of Drugs and Equipment

4.5.1 Availability of Essential Drugs

Drug availability is the proportion of essential drugs complement which at the time of the survey was available at the health facilities. Enumerators observed each drug and ensured that it was unexpired. The 'Minimum Standards for Primary Health Care in Nigeria' specifies the types of drugs expected to be available in each type of primary health facility. These essential drug lists were used to compute the drug availability for the corresponding type of primary health facilities (**Annex 20**). Drugs on the lists, but for which the survey did not collect data and anti-TB drugs were excluded from the computation. Also, the essential drug list for the highest level of primary health facility (primary health centre) was applied in the computation of drug availability for the secondary health facilities because there is no national standard for this level of care. The average proportions of essential drugs available in health facilities according to geopolitical zones were computed and presented in **Figure 26.**

Figure 26: Average Proportion of Essential Drugs Available in Health Facilities by Geopolitical Zone

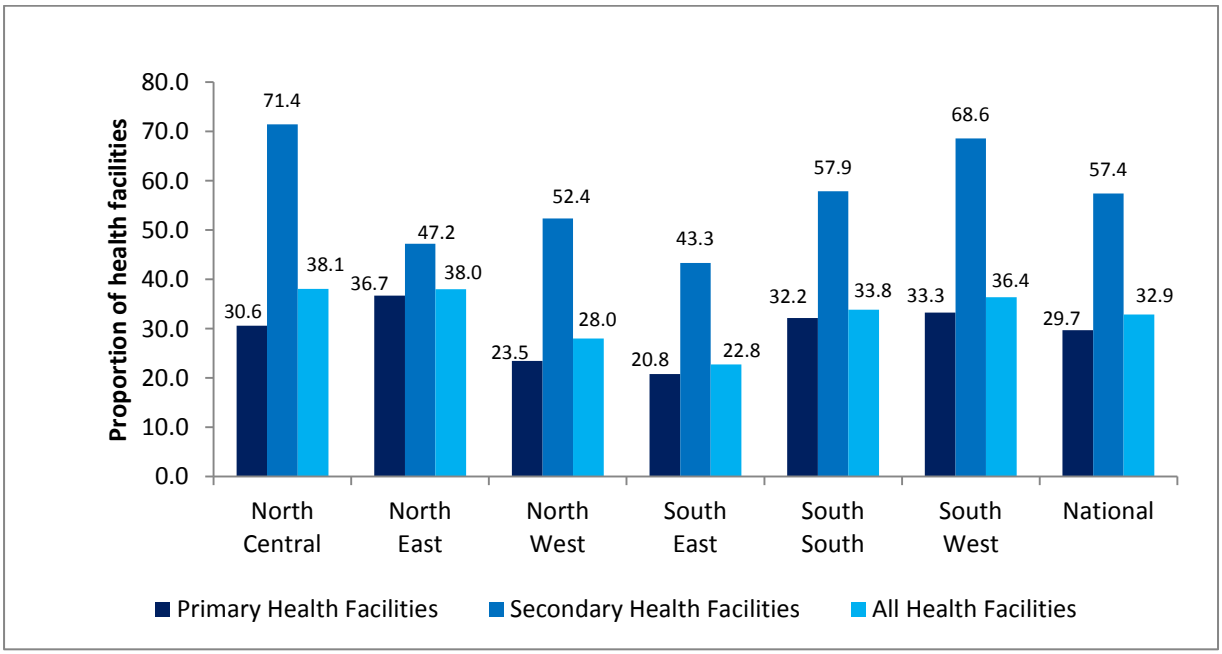


Drug availability was less than 40% nationwide as well as across all the geopolitical zones. Among the States, it ranged from 9% in Osun to 51% in Adamawa **(Annex 21)**. Comparing HF types, drug availability was found to be lower in the PHFs (32%) than the SHFs (52%). This pattern was also noticed in all the geopolitical zones and almost all the States except in Anambra State where it was 48% in PHFs and 45% in SHFs and Osun State where it was 9% in PHFs and 5.9% in SHFs. For disaggregation of drug availability by geopolitical zone and State, see **Annex 21** and for the availability of albedazole/mebendazole which is an essential anti-helminthic drug, see **Annex 22**.

4.5.2 Availability of Basic Medical Equipment

Availability of basic medical equipment was measured as the proportion of facilities that had a full complement of the following: thermometer, any weighing scale (adult or child or infant), complete set of blood pressure apparatus, stethoscopes and examination light/flashlight. Each piece of equipment was observed and confirmed to be functional by the enumerator. Pieces of equipment available, but personally owned by health workers as well as makeshift equipment were excluded from the count. The proportions of health facilities with basic medical equipment according to Geopolitical Zones were computed and presented in **Figure 27.**

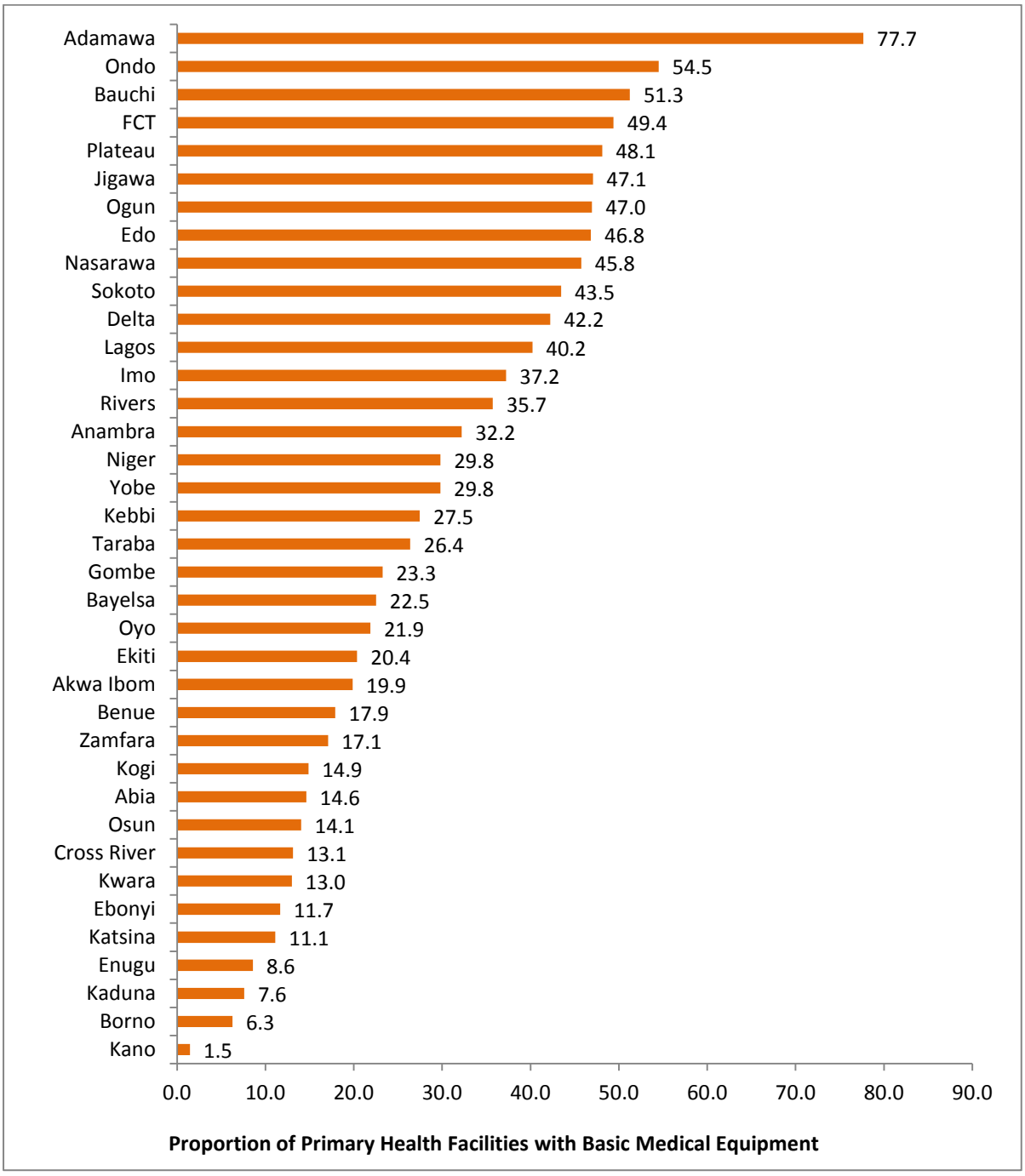
Figure 27: Proportion of Health Facilities with Basic Medical Equipment by Geopolitical Zone



Analysis of results shows that the availability of basic medical equipment was generally low in the PHFs as less than a third of them had functional basic medical equipment. A similar situation was observed across all the geopolitical zones. As expected, a significantly higher proportion of SHFs had basic medical equipment compared to the PHFs as 57% of the SHFs surveyed had the basic equipment ranging from 43% in the SEZ to 71% in the NCZ.

As shown in **Figure 28** below, there was a wide variation in the availability of basic medical equipment in the PHFs across the States as it ranges from 1.5% of PHFs in Kano to 78% in Adamawa. All the SHFs surveyed in five States (FCT, Katsina, Ogun, Plateau and Rivers) had basic medical equipment available while none of the SHFs in two States (Kano and Taraba) had basic medical equipment (**Annex 23**).

Figure 28: Proportion of Primary Health Facilities with Basic Medical Equipment by State



4.6 Readiness of Health Facilities to Deliver Key Saving One Million Lives Interventions, Sexually Transmitted Infections and Tuberculosis Services

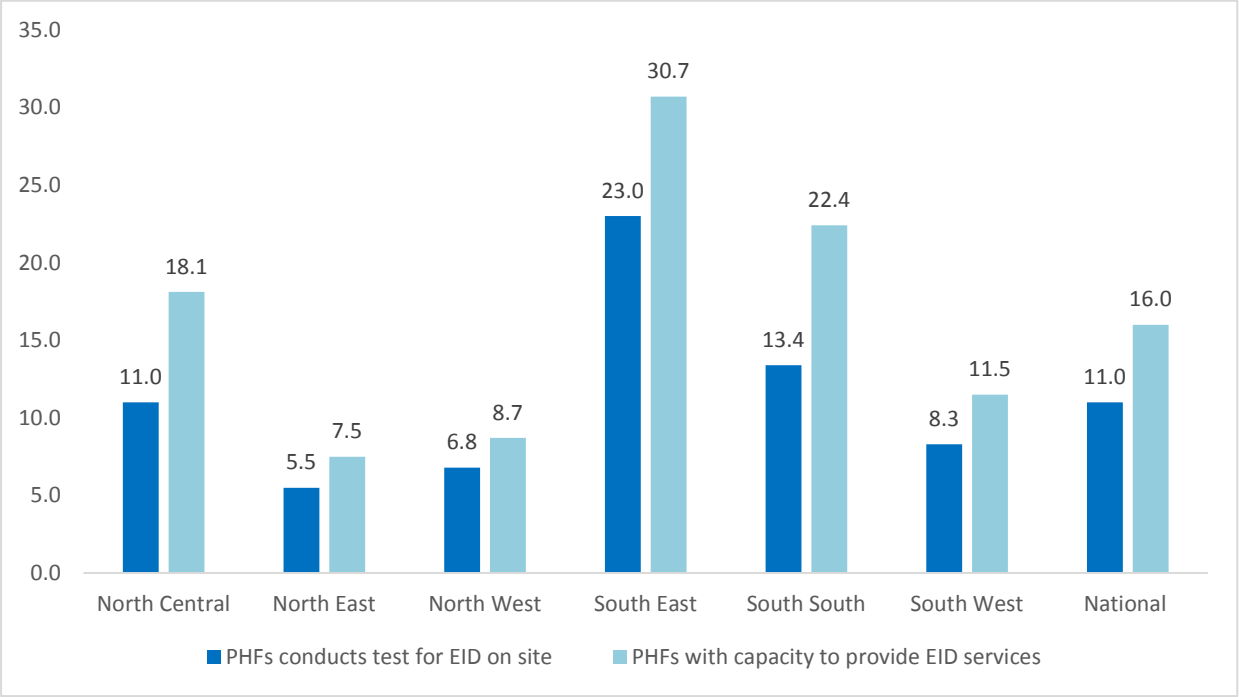
4.6.1 eMTCT Services

The aim of eMTCT services is to ensure that HIV transmission does not occur from HIV positive mothers to their children. Assessment of eMTCT services was only conducted in sampled health facilities that reported such services were offered. Enumerators asked to be shown the eMTCT service site in the HF and interviewed the most knowledgeable person about the service in the health facility.

Early infant diagnosis (EID) is strategic to eMTCT interventions and it entails the assessment of the virological status of infants of HIV positive mothers usually between six to eight weeks of life. It enables the early identification of HIV exposed infants who have HIV infection, as a first step in securing their treatment and care. Enumerators asked if the facility provides EID services for all HIV exposed infants. Also, in facilities that offer eMTCT services, the availability of nevirapine syrup and maternal ARV prophylaxis with valid expiry dates were assessed.

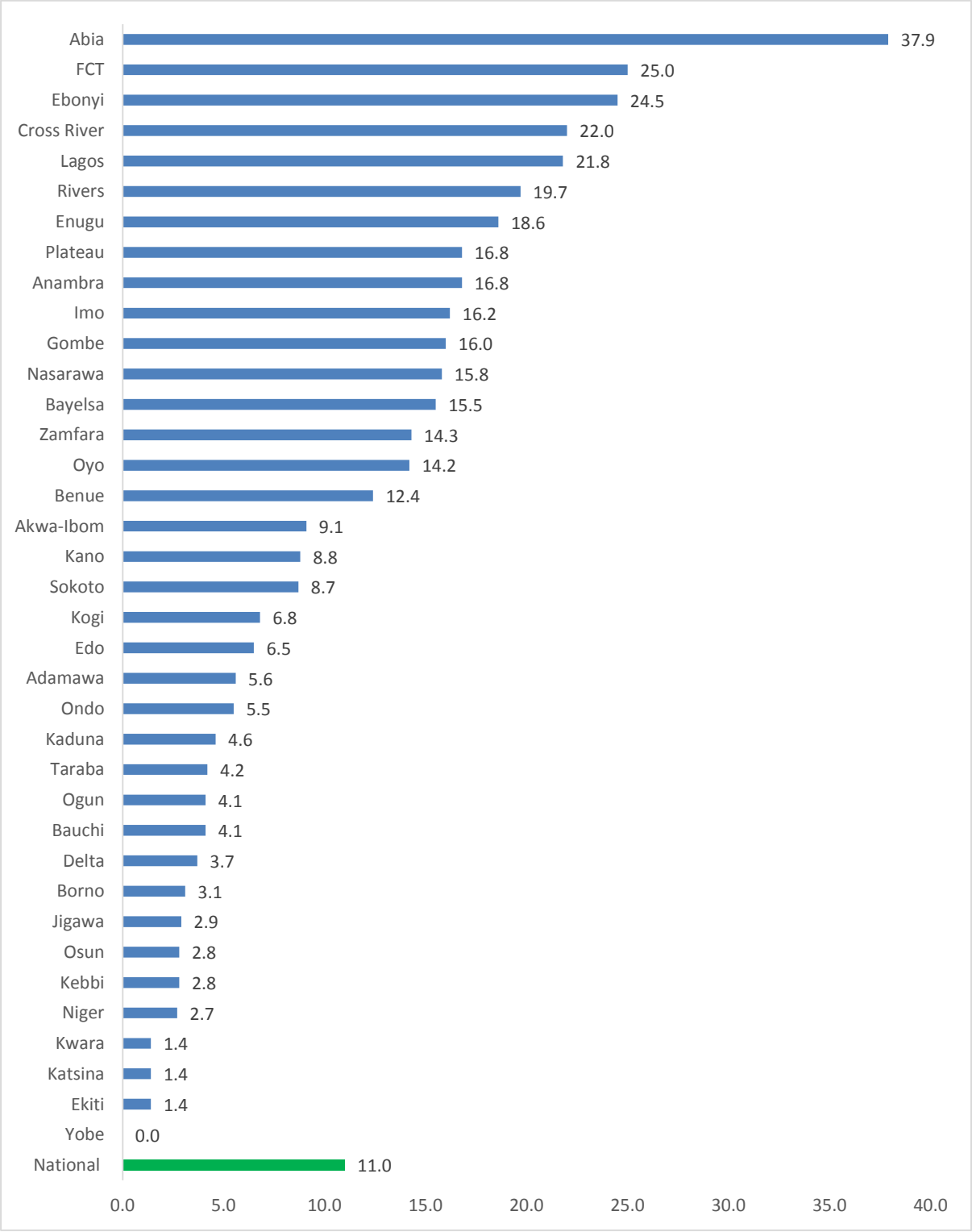
In this survey, a facility was adjudged to have the capacity to provide EID services if tests for HIV exposed infants were conducted in the facility or there was a system in place to collect blood samples; send them outside for testing with results returned to the facility and blood spot papers were observed to be available. The proportion of PHFs that conduct test for EID on-site and those that have capacity to provide EID services for HIV exposed infants by geopolitical zones was computed and presented in **Figure 29**.

Figure 29: Percentage of PHFs that Conduct Test for EID On-site and those that Have Capacity to Provide EID Services for HIV Exposed Infants by Geopolitical Zones



Generally, only 11% of PHFs nationwide conducted tests for EID in their facilities ranging from 5.5% in the NEZ to 23% in the SEZ. However, the proportion of PHFs that had the capacity to provide EID services for HIV-exposed infants in the country was 16%. This ranged from 7.5% in both NEZ and NWZ, to 30.7% in the SEZ. The proportion of PHFs that conduct on-site EID test for HIV exposed infants across the States and the FCT is presented in **Figure 30**

Figure 30: Percentage of Primary Health Facilities that Conduct On-site EID Test for HIV-exposed Infants across the States and the FCT



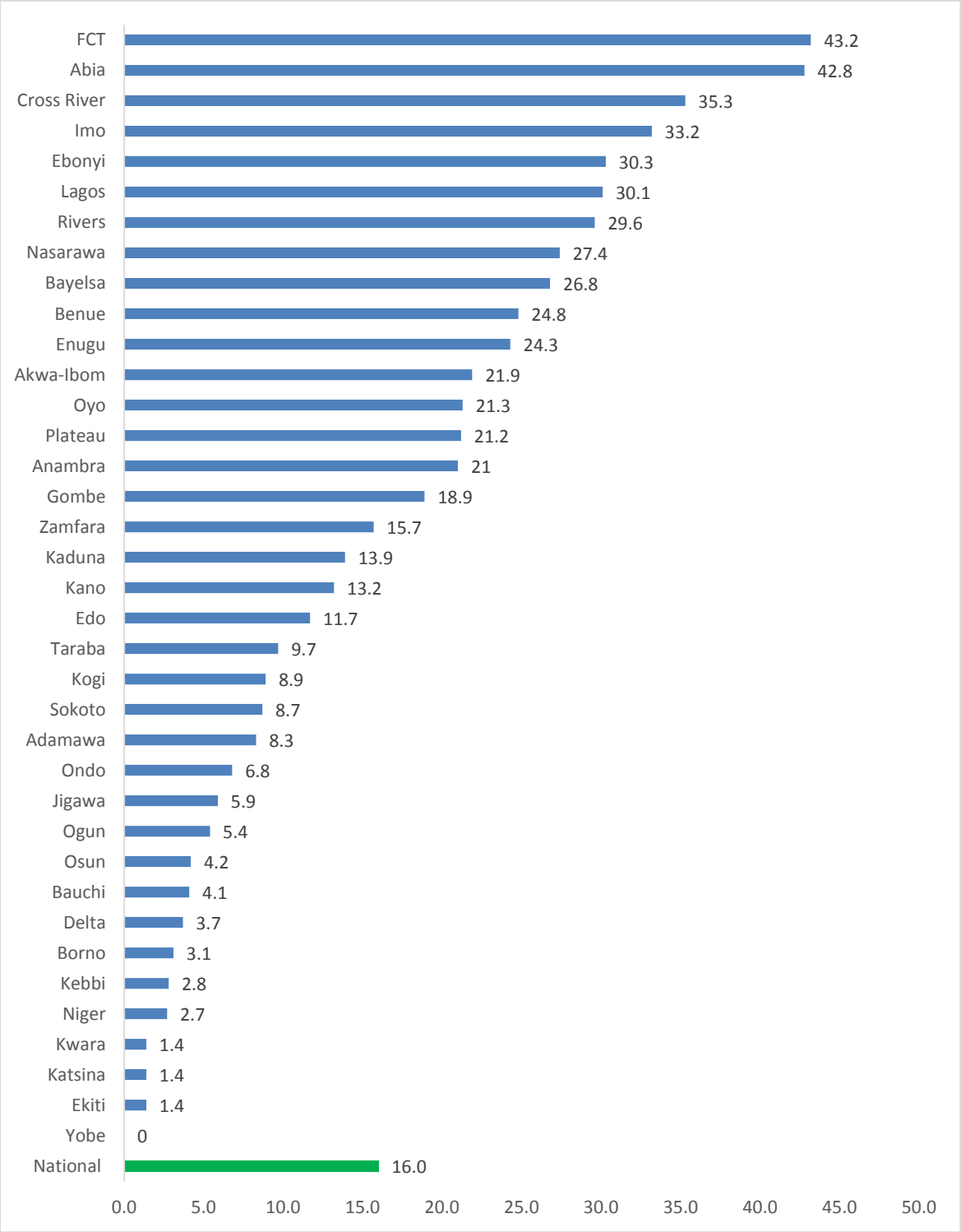
Note: *Only 3 health facilities in Yobe state reported conducting on-site EID test and they are all secondary HFs*

The proportion of PHFs in the States that conduct EID test on site for HIV exposed infants varied from 0.0% in Yobe State to 37.9% in Abia State. In 31 States and the FCT, EID test was conducted

on site for HIV exposed infants in less than 20% of all PHFs. Detailed findings showing disaggregation by type of health facility across the States and geopolitical zones are in **Annex 24**.

The proportions of primary health facilities with HIV testing capacity to provide EID services across the States and the FCT are presented in **Figure 31.**

Figure 31: Percentage of Primary Health Facilities with Capacity to Provide EID Services Across the States and the FCT



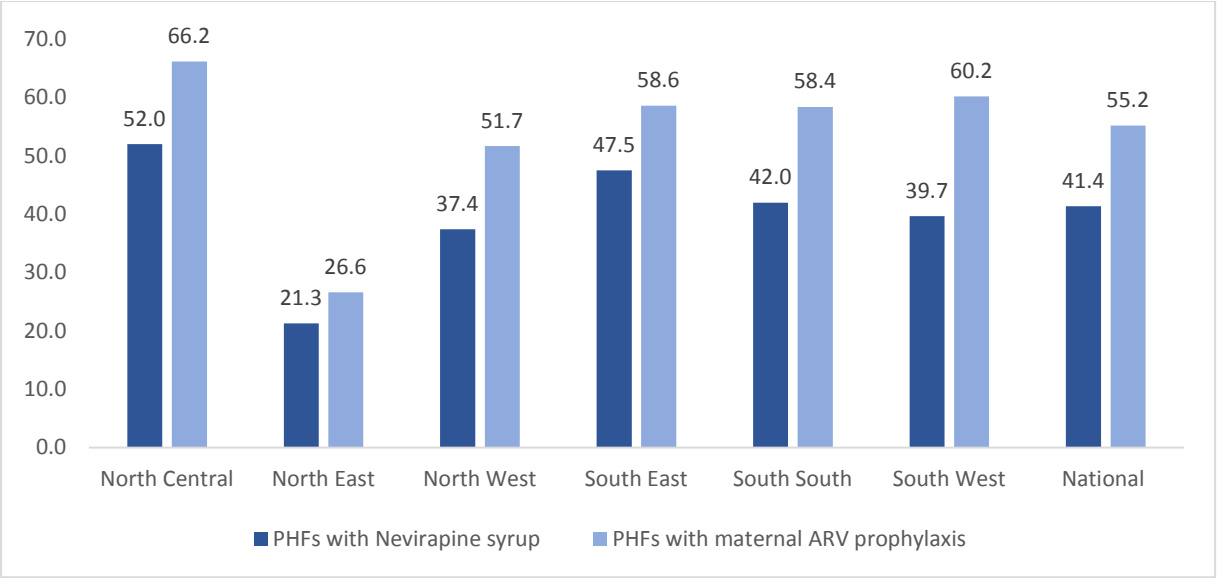
Note: *Only 3 health facilities in Yobe state reported capacity to provide EID service and they are all SHFs*

This was an assessment of the capacity of the PHFs to provide early infant diagnosis (EID) for HIV exposed infants. Generally, the availability of EID services was low across all PHFs in the country with an average of 16% at the national level. The availability of EID services in PHFs across the States ranged from none (0%) in Yobe State to 43.2% in FCT. Detailed

findings showing disaggregation by type of health facility across the States and geopolitical zones are in **Annex 25.**

The proportion of PHFs offering eMTCT services that had nevirapine syrup and maternal ARV prophylaxis by geopolitical zones is presented in **Figure 32**

Figure 32: Percentage of PHFs offering eMTCT that had Nevirapine and Maternal ARV Prophylaxis by Geopolitical Zones



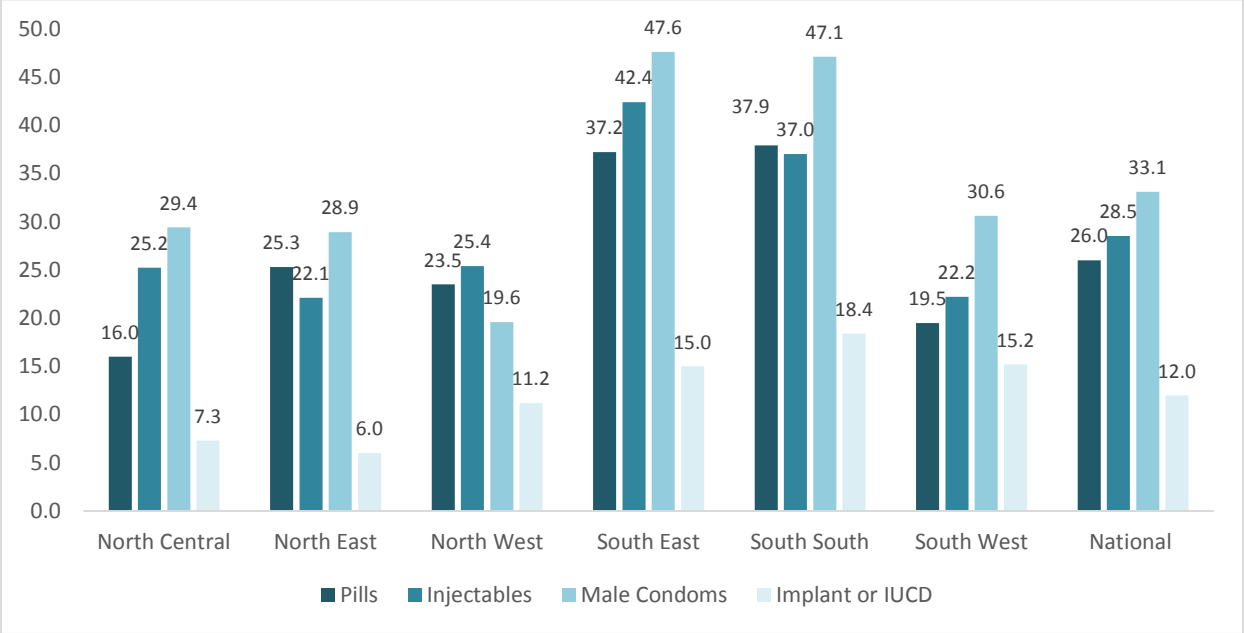
About 4 out of 10 PHFs that offer eMTCT services (41.4%) had nevirapine syrup with valid expiry dates. This varied from 21.3% in the NEZ to 52% in the NCZ and from 0% in 7 States (Bauchi, Delta, Katsina, Kebbi, Kwara, Osun and Yobe States) to 74.9% in Kaduna State. See **Annex 25** for details of availability of nevirapine by health facility types in the States and geopolitical Zones.

Slightly more than half of PHFs (55.2%) that offer eMTCT services had maternal ARV prophylaxis (any of the ARV combinations recommended in the 2014 Integrated National Guidelines for HIV Prevention, Treatment & Care) with valid expiry dates on the day of the survey. In the geopolitical zones and States, this varied from 26.6% in the NEZ to 66.2% in the NCZ and from 0% in 5 States (Bauchi, Delta, Katsina, Kebbi and Kwara States) to 89% in Nasarawa State. Details of availability of maternal ARV prophylaxis by HF types in the States and geopolitical zones are in **Annex 26**.

4.6.2 Family Planning Services

All surveyed health facilities were assessed for the availability of selected family planning commodities at the time of the survey. Enumerators observed each family planning commodity in the facilities and ensured that it was not expired. The assessed commodities were oral pills (progestin only and combined estrogen-progesterone pills), injectables (progestin only and combined estrogen-progesterone injectable contraceptive), male condoms and implants or intra-uterine contraceptive device (IUCD). The availability of family planning commodities in PHFs across all geopolitical zones is presented in **Figure 33**.

Figure 33: Percentage of Primary Health Facilities with Pills, Injectables, Male Condoms and Implants or IUCD Across Geopolitical Zones



Nationally, the availability of family planning commodities in the PHFs was generally low. Male condoms were available in 33.1% of PHFs while implants or IUCD were least available with only 12% of PHFs having the commodity. Family planning commodities were generally more available in PHFs in the SEZ and SSZ compared to other zones. Oral pills were available in 37.9% and 37.2% of PHFs in SSZ and SEZ respectively while only 16% of PHFs in the NCZ had oral pills. Injectables were available in 22.1% of facilities in the PHFs in the NEZ while 42.4% of PHFs in the SEZ had injectables. About forty seven percent of facilities in both SEZ and SSZs had male condoms while only 19% of PHFs in the NWZ had male condoms. The availability of Implants or IUCDs was generally low ranging from 6% in the NEZ to 18.4% in the SSZ. The availability of family planning commodities in Primary Health Facilities across all the States was computed and presented as **Table 9**.

Table 9: Percentage of Primary Health Facilities Across all States and FCT with Oral Contraceptive Pills, Injectables, Male Condoms and Implants or Intra Uterine Contraceptive Device

States	Pills	Injectables	Male condoms	Implants or IUCD
Abia	39.1	47.6	51.4	8.6
Adamawa	19.4	15.3	30.5	6.9
Akwa-Ibom	50.0	52.8	48.6	13.4
Anambra	45.0	59.0	49.0	18.2
Bauchi	26.4	25.0	23.7	5.5
Bayelsa	12.7	12.7	23.9	2.8
Benue	11.0	25.4	25.4	8.3
Borno	28.0	28.0	24.4	9.8
Cross River	42.6	35.3	55.7	26.3
Delta	54.5	50.8	71.7	32.3
Ebonyi	56.2	55.0	76.5	18.6
Edo	49.3	51.9	63.6	18.2
Ekiti	8.4	9.7	13.9	7.0
Enugu	28.9	23.2	40.3	10.0
FCT	18.6	38.5	36.1	11.9
Gombe	32.2	37.8	45.3	10.2
Imo	15.4	26.1	17.6	18.4
Jigawa	10.3	14.7	5.9	1.5
Kaduna	39.3	52.4	41.7	27.9
Kano	32.3	27.9	33.7	19.1
Katsina	7.0	2.8	2.8	0.0
Kebbi	23.4	24.7	19.2	4.1
Kogi	3.2	3.2	10.6	2.1
Kwara	7.2	13.3	14.4	0.0
Lagos	12.0	13.4	14.8	10.7
Nasarawa	17.0	25.5	30.3	17.0
Niger	25.7	28.3	31.1	1.4
Ogun	50.5	58.7	58.1	27.1
Ondo	17.8	16.4	37.7	15.1
Osun	7.8	13.4	26.0	10.6
Oyo	19.0	19.6	32.4	19.6
Plateau	22.0	35.4	46.4	6.6
Rivers	19.2	19.2	20.4	15.5
Sokoto	26.1	30.4	21.8	14.5
Taraba	8.3	1.4	15.3	2.8
Yobe	38.3	27.0	34.2	1.4
Zamfara	28.5	28.5	25.7	25.7

As shown in **Table 9**, the availability of oral pills in PHFs ranged from 3.2% in Kogi State to 56.2% in Ebonyi State. Only four States had oral pills in at least half of their PHFs. The availability of injectable contraceptives in PHFs varied across the States, ranging from 1.4%

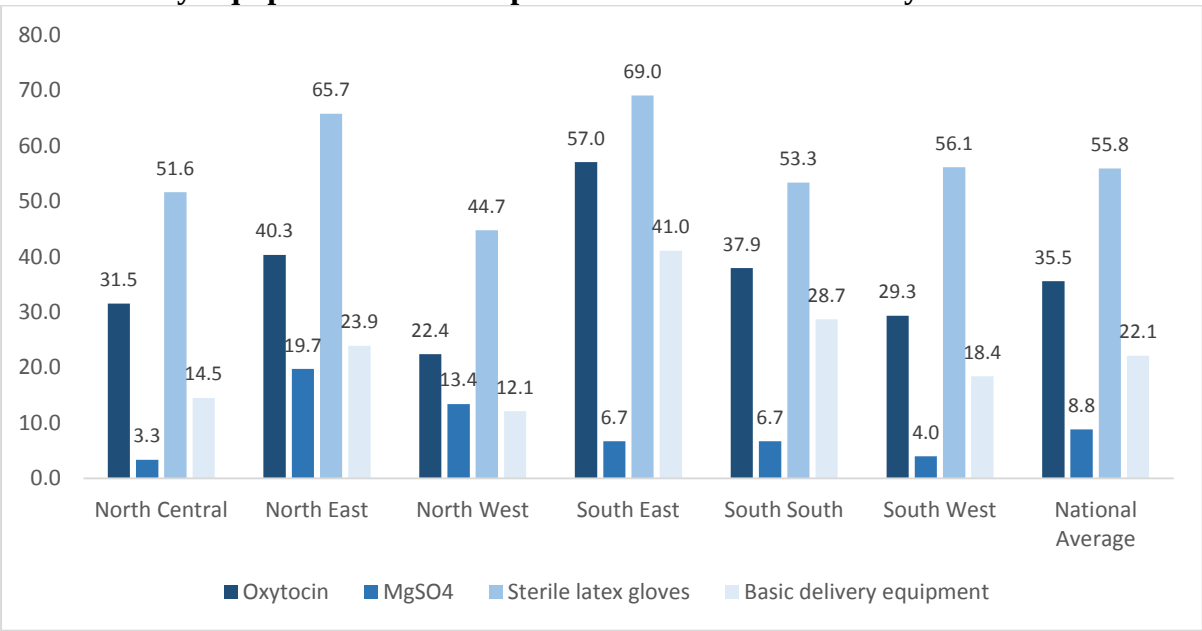
in Taraba State to 58.7% in Ogun State. There was a wide variation in the availability of male condoms in PHFs across the States ranging from 2.8% in Katsina State to 76.5% in Ebonyi State.

It was observed that the availability of implants or IUCDs in PHFs across the States was generally low, ranging from none in Kwara and Katsina States to 32.3% in Delta State. The details of the availability of family planning commodities by category of health facilities are described in **Annex 27**.

4.6.3 Delivery Services

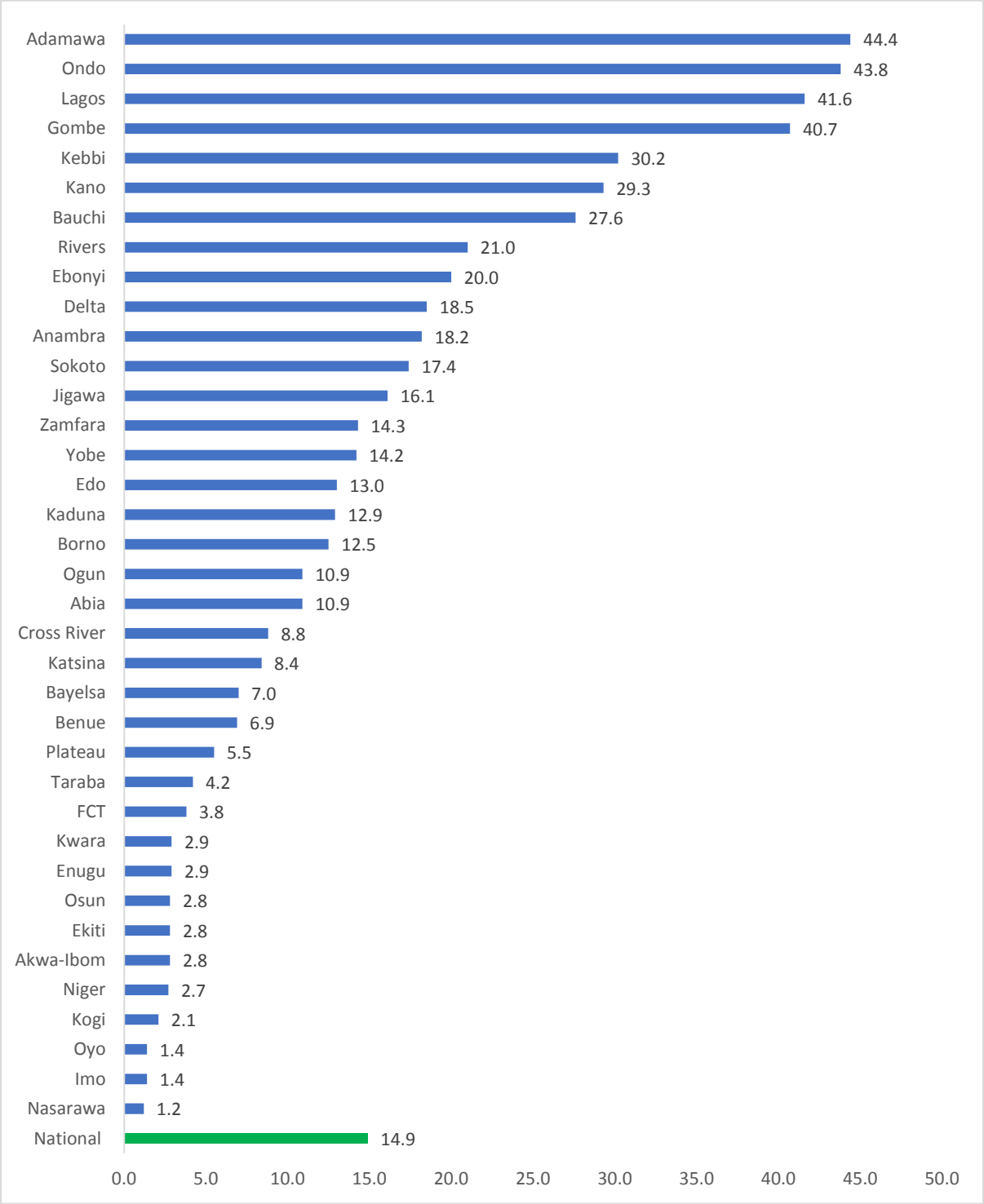
The readiness of surveyed health facilities to provide delivery services was assessed within the delivery service area. Enumerators were directed to the delivery service areas and they asked if the facility stocked any drugs for obstetric care and delivery services within the service site. For facilities that stocked drugs in the service area, oxytocin and magnesium sulphate (MgSO4) were assessed for availability and valid expiry dates. The availability of basic delivery equipment (cord clamp, episiotomy scissors, scissors or blade to cord and skin disinfectant) as well as disposable sterile latex gloves was equally assessed. The availability of bag; mask for infant resuscitation and its functionality in the past 3 months were also assessed in all health facilities. **Figure 34** shows the percentage of primary health facilities that had oxytocin and MgSO4 with valid dates of expiration in the different geopolitical zones of the country alongside the national average.

Figure 34: Percentage of Primary Health Facilities that had Oxytocin, MgSO4 and Basic Delivery Equipment across Geopolitical Zones of the Country



Oxytocin was available in 35.5% of all surveyed PHFs in the country. The availability of oxytocin was below the national average in the NWZ (22.4%) SWZ (28.5%) and NCZ (31.5%) The availability of magnesium sulfate (MgSO4) was low with a national average of only 8.8%. MgSO4 was only available in 3.3% and 4.0% of surveyed primary health facilities in the NCZ and SWZ respectively. Sterile latex gloves were available in 55.8% of all PHFs nationwide. The availability of sterile latex gloves in the delivery service area ranged from 44.7% in the NWZ to 69% in the SEZ. Basic delivery equipment was available in only 22.1% of all PHFs that were surveyed nationwide. The availability of basic delivery equipment in PHFs ranged from 12.1% in the NWZ to 41% in the SEZ. The proportions of PHFs with bag and mask for infant resuscitation which were functional in the past 3 months across States and FCT are shown in **Figure 35**. See **Annex 28 for** details of availability of oxytocin and MgSO4 and **Annex 29** for details of availability of basic delivery equipment as well as cord clamp, episiotomy scissors and scissors for cutting cord.

Figure 35: Percentage of Primary Health Facilities Functional with Bag and Mask for Infant Resuscitation in the Past 3 Months Across States and FCT



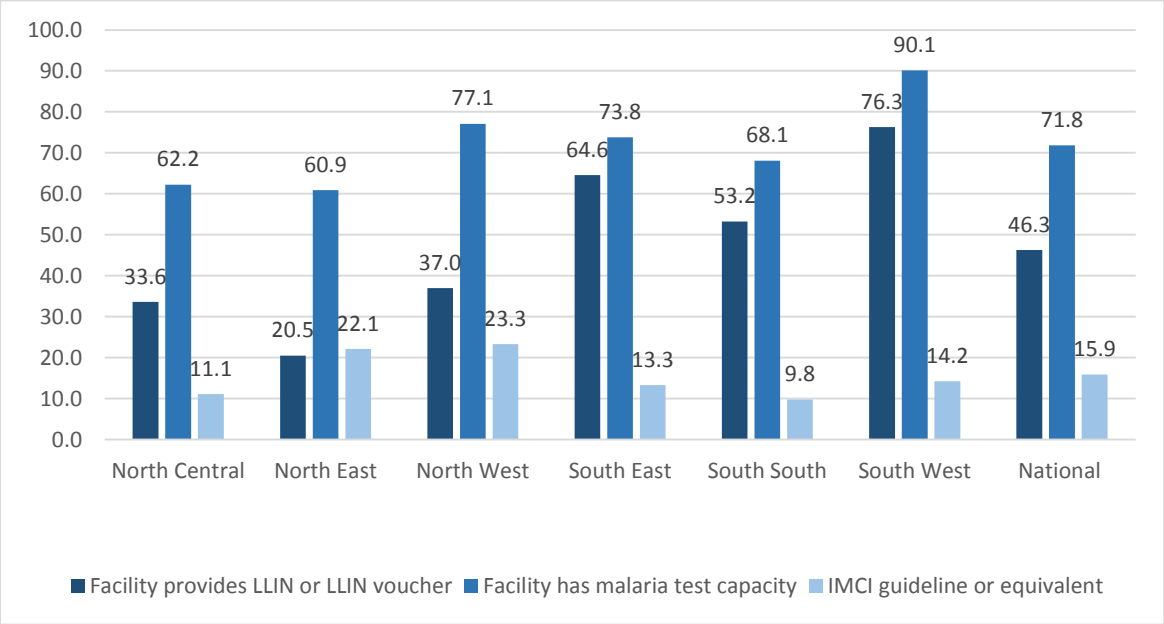
The availability of functional bag and mask for infant resuscitation in the three months prior to the survey was low (14.9%) in PHFs nationwide. This varied between 1.2% in Nasarawa, State and 43.2% in Ondo State.

Annex 30 contains details of availability of blank partograph for monitoring labour and foetal stethoscope as well as availability of bag and mask by HF type in each state and geopolitical zone.

4.6.4 Sick Child /Malaria Services

The availability of specific services for children less than 5 years of age in the health facility was assessed. Enumerators visited the section in the facility where child preventive and curative care services were offered and asked the most knowledgeable person about services such as provision of LLIN or voucher for LLIN and availability of guidelines or job aids for IMCI. The malaria test capacity of the health facility was also assessed. A PHF is said to have malaria test capacity if rapid diagnostic testing of malaria or microscopy could done in the facility. The Proportion of PHFs that had LLIN or LLIN Voucher for distribution, had malaria test capacity and IMCI guideline/job aids in all geopolitical zones were computed and presented in **Figure 36**.

Figure 36: Percentage of PHFs with LLIN or LLIN Voucher for Distribution, Malaria Test Capacity and IMCI Guideline or Job Aids by Geopolitical Zones



Results show that only 46.3% of PHFs in Nigeria provide LLIN or voucher for LLIN. The proportion of health facilities across the geopolitical zones that provide LLIN or voucher for LLIN ranged from 20.5% in NEZ to 76.3% in SWZ.

Malaria test capacity was available in about 7 out of every 10 PHFs in Nigeria. The capacity to conduct malaria test in PHFs in the geopolitical zones varied from 60.9% in NEZ to 90.1% in the SWZ. The availability of IMCI guidelines or job aids was quite low with national estimates at 15.9%. The availability of IMCI guidelines in the PHFs in the geopolitical zones varied from 9.8% in the SSZ to 23.3% in the NWZ. The percentage of facilities that provide LLIN or voucher for LLIN, have malaria test capacity and have IMCI guideline or equivalent by States is presented as **Table 10**.

Table 10: Percentage of Facilities with LLIN or Voucher for LLIN, Malaria Test Capacity and IMCI Guideline or Job Aids by State

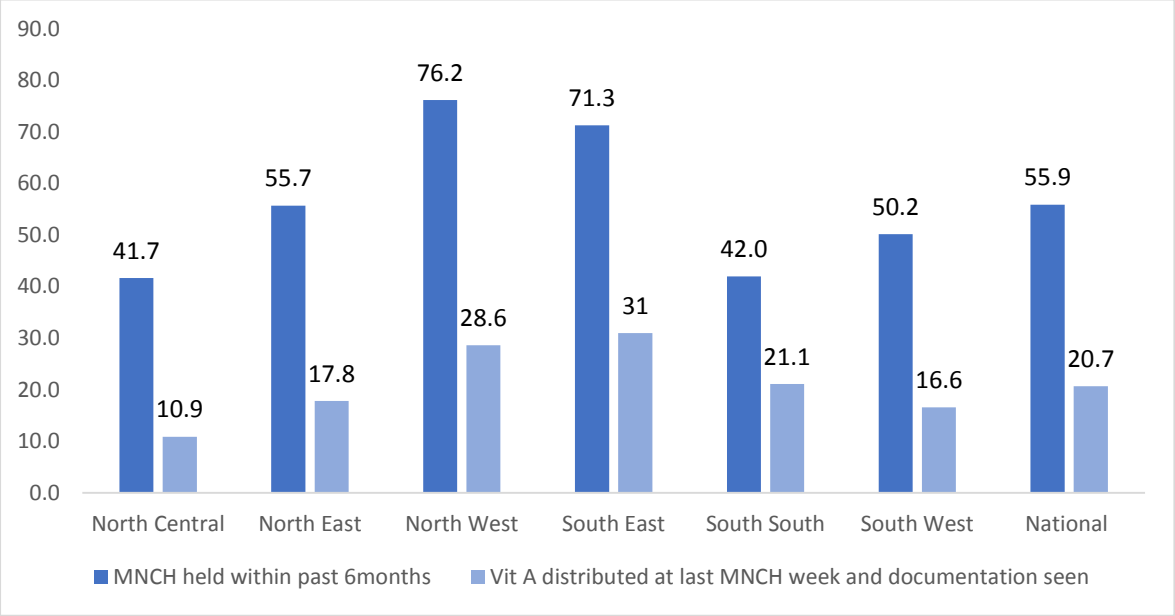
States	Facility provides LLIN	Facility has malaria test capacity	Facility has IMCI guideline or equivalent
Abia	32.8	56.1	10.9
Adamawa	33.3	87.5	72.2
Akwa-Ibom	91.5	81.6	6.3
Anambra	83.1	91.3	18.4
Bauchi	42.8	93.0	18.0
Bayelsa	5.6	56.3	8.5
Benue	75.2	83.5	2.8
Borno	6.7	30.4	12.5
Cross River	82.4	77.9	16.2
Delta	37.1	48.1	8.7
Ebonyi	79.3	79.8	10.0
Edo	63.0	73.4	5.2
Ekiti	78.3	85.3	13.4
Enugu	49.2	56.3	8.6
FCT	1.4	47.6	8.1
Gombe	10.2	52.5	7.3
Imo	80.2	85.8	19.0
Jigawa	36.6	85.2	58.7
Kaduna	22.2	47.6	3.0
Kano	25.0	92.6	27.9
Katsina	9.7	57.7	12.5
Kebbi	51.6	85.5	21.4
Kogi	36.5	66.7	1.1
Kwara	47.6	52.6	1.4
Lagos	81.5	93.5	24.5
Nasarawa	24.3	89.1	20.6
Niger	21.7	48.7	17.7
Ogun	82.9	90.5	12.2
Ondo	84.2	98.6	28.7
Osun	73.2	80.3	4.2
Oyo	56.5	92.3	1.4
Plateau	13.5	58.0	18.7
Rivers	37.6	65.3	11.1
Sokoto	42.0	81.2	18.9
Taraba	1.4	37.5	5.6
Yobe	25.7	59.7	14.3
Zamfara	59.9	84.2	17.2

The proportion of PHFs that provided LLIN or voucher for LLIN, in the States, ranged from 1.4% in Taraba State and the FCT to 91.5% in Akwa Ibom State. The malaria test capacity of PHFs was relatively high in many States and it ranged from 30.4% in Borno State to 98.6% in Ondo State. The availability of IMCI guidelines or job aids was generally poor in PHFs in the States ranging from 1.1% in Kogi State to 72.2% in Adamawa State.

4.6.5 Maternal Neonatal and Child Health Week and Vitamin A Distribution

Maternal Neonatal and Child Health (MNCH) week was assessed as part of community services offered by the surveyed health facilities. Enumerators visited the outpatient area and interviewed the most knowledgeable person about community linkages and services of the facility. Questions were asked about the most recent MNCH week that the facility participated in. Information was also obtained about Vitamin A distribution to children during the most recent MNCH week and records were observed as evidence of services rendered. The percentage of PHFs that participated in the most recent MNCH week in the past 6 months and distributed Vitamin A at the last MNCH week across geopolitical zones was computed and presented in **Figure 37**.

Figure 37: Percentage of PHFs that Participated in the Most Recent MNCH Week in the past 6 Months and Distributed Vitamin A at the last MNCH Week Across Geopolitical Zones



Results show that slightly more than half (55.9%) of PHFs in Nigeria participated in the most recent MNCH week in the past 6 months before the survey. This ranged from 41.7% in NCZ to 76.2% in NWZ.

The proportion of surveyed PHFs in the country that distributed Vitamin A at the last MNCH week (with observed documentation) was low at 20.7%. The percentage of PHFs in the geopolitical zones that had Vitamin A distributed at last MNCH week and its documentation was observed ranged from 10.9% in NCZ to 31% in SEZ. The proportions of PHFs that participated in the most recent MNCH week in the past 6 months and the proportions of PHFs that distributed Vitamin A at the last MNCH week across States were computed and presented in **Figure 38** and **Figure 39** respectively.

Figure 38: Percentage of PHFs that Participated in the Most Recent MNCH Week in the Past 6 Months by State

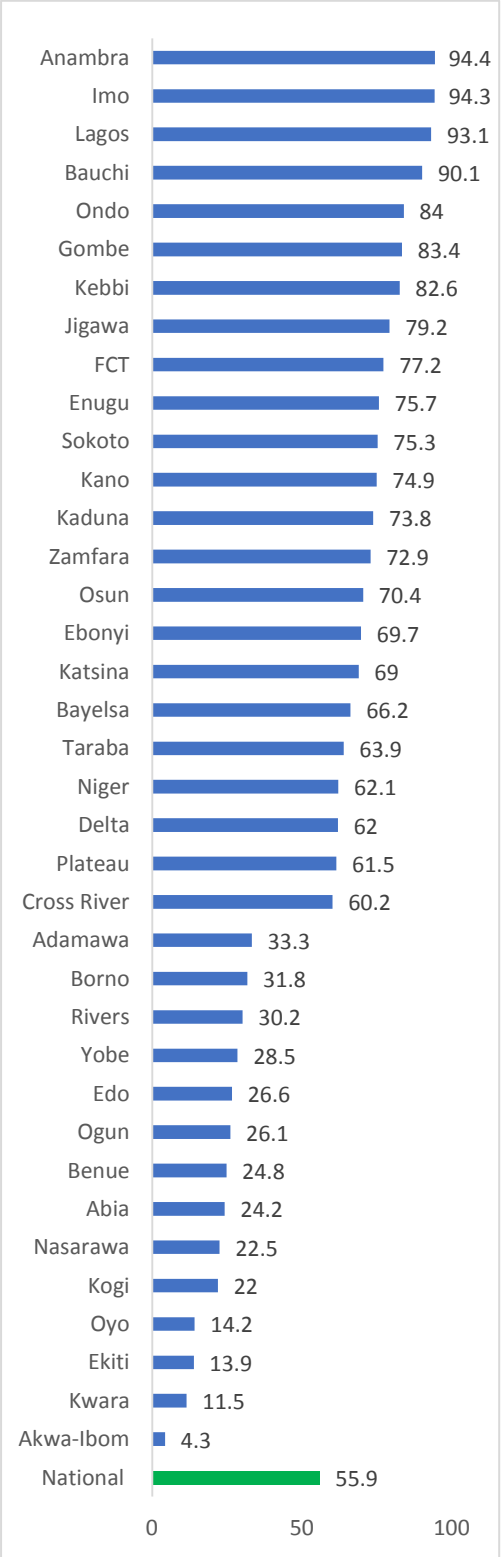
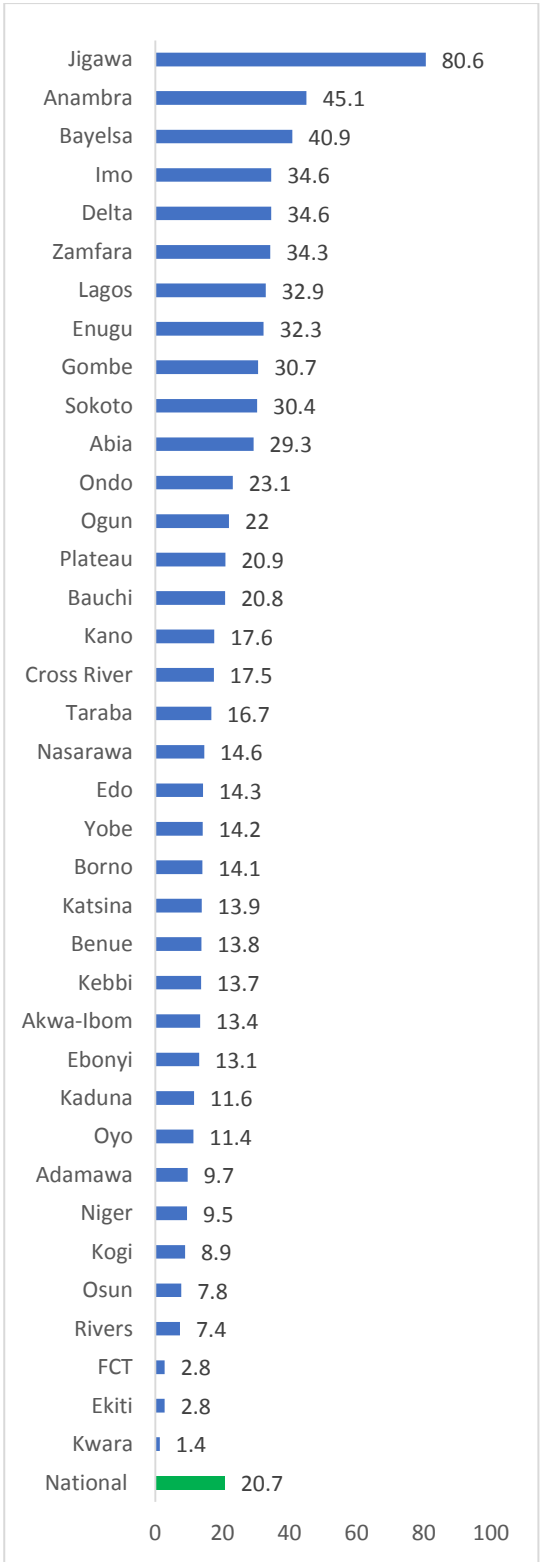


Figure 39: Percentage of PHFs with Confirmed Distribution of Vitamin A at the Last MNCH Week by State



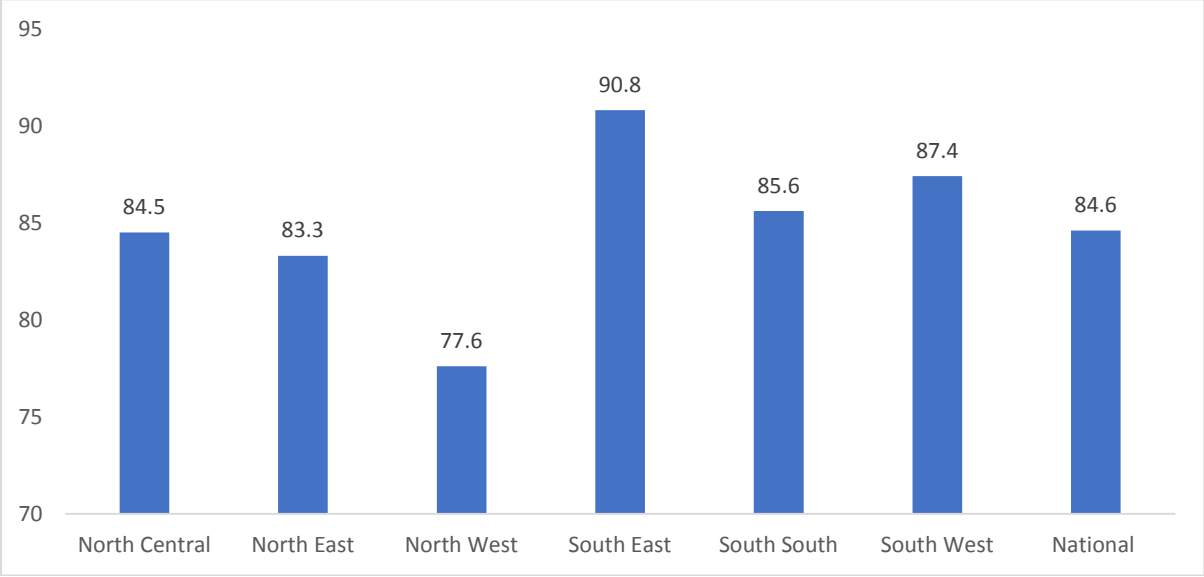
The percentage of PHFs that participated in the most recent MNCH week in the previous 6 months before the survey ranged from 4.3% in Akwa Ibom State to 94.4% in Anambra State. Less than half of PHFs in 14 States participated in the most recent MNCH week in the previous 6 months before the survey.

Similarly, the proportion of PHFs that were confirmed to have distributed Vitamin A at the last MNCH week before the survey was low ranging from 1.4% in Kwara State to 80.6% in Jigawa State. Less than half of PHFs in all the States (except Jigawa State) distributed Vitamin A at last MNCH week with documentation observed.

4.6.6 Ante-Natal Care Services

Antenatal Natal Care (ANC) services were assessed in all the surveyed health facilities that offered ANC services. Enumerators asked if ANC services were offered in the facility and where services were provided, they were then shown the ANC service area. The most knowledgeable person about ANC services was then asked about the types of services that were offered to pregnant women as part of routine ANC services. Such services included availability of HIV testing, provision of ARVs for HIV positive ANC clients, iron and folic acid supplementation, IPTp, Tetanus toxoid immunization, monitoring for hypertensive disorders of pregnancy, corticosteroid use for clients at risk of preterm delivery, counselling about family planning, diagnosis and treatment of STIs. The proportions of PHFs that provide ANC services in the geopolitical zones are presented in **Figure 40**.

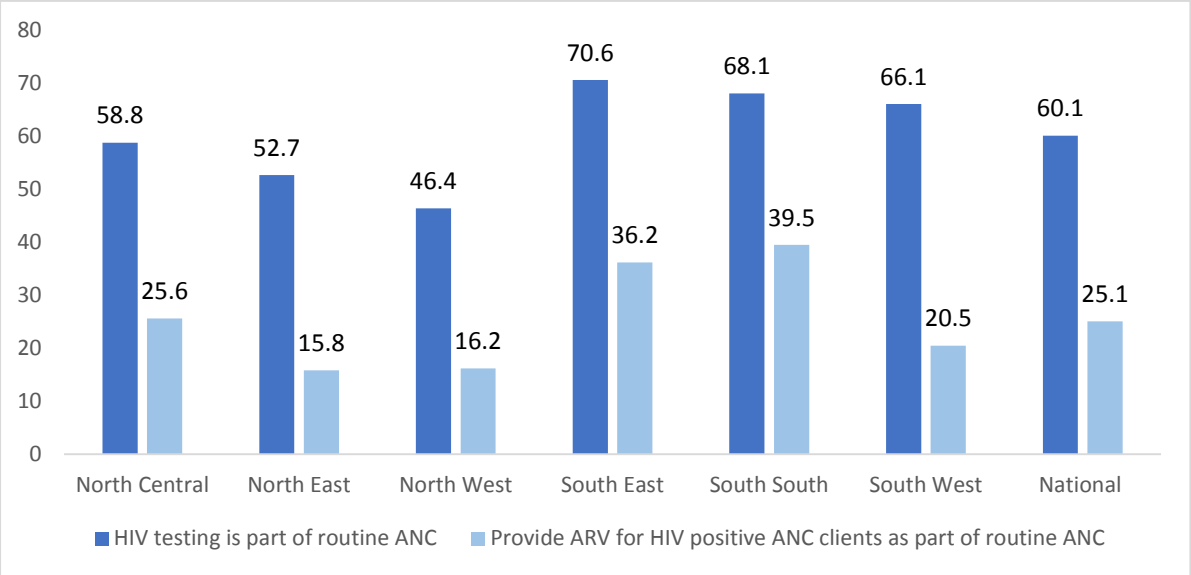
Figure 40: Percentage of PHFs that Provide ANC Services by Geopolitical Zone



Most (84.6%) of the surveyed PHFs nationwide reported that they provide ANC services. The proportion of health facilities that provided ANC services in the different geopolitical zones ranged from 77.6% in the NWZ to 90.8% in the SEZ. HIV testing and provision of ARVs for HIV positive ANC clients are presented in **Figure 41** while the details of other

services rendered as part of routine ANC and availability of blank individual ANC cards are presented in **Annex 31**.

Figure 41: Percentage of PHFs that Provide HIV Testing and ARV for HIV Positive Clients as Part of Routine ANC by Geopolitical Zones



HIV testing was part of routine ANC services in 60.1% of PHFs all over the country. The proportion of health facilities in the geopolitical zones that provided HIV testing as part of routine ANC services ranged from 46.4% in NWZ to 70.6% in SEZ.

Only 25.1% of all PHFs in Nigeria provided ARVs for HIV positive ANC clients as part of routine ANC services. The proportion of facilities in the geopolitical zones that offered ARVs for HIV positive ANC clients as part of routine ANC services ranged from 15.8% in NEZ to 39.5% in SSZ.

The proportions of PHFs that offer HIV testing and PHFs that offered ARV for HIV positive client as part of routine ANC services by State are presented in **Figure 42** and **Figure 43** respectively.

Figure 42: Percentage of PHFs that Offer HIV Testing as Part of Routine ANC Services by State

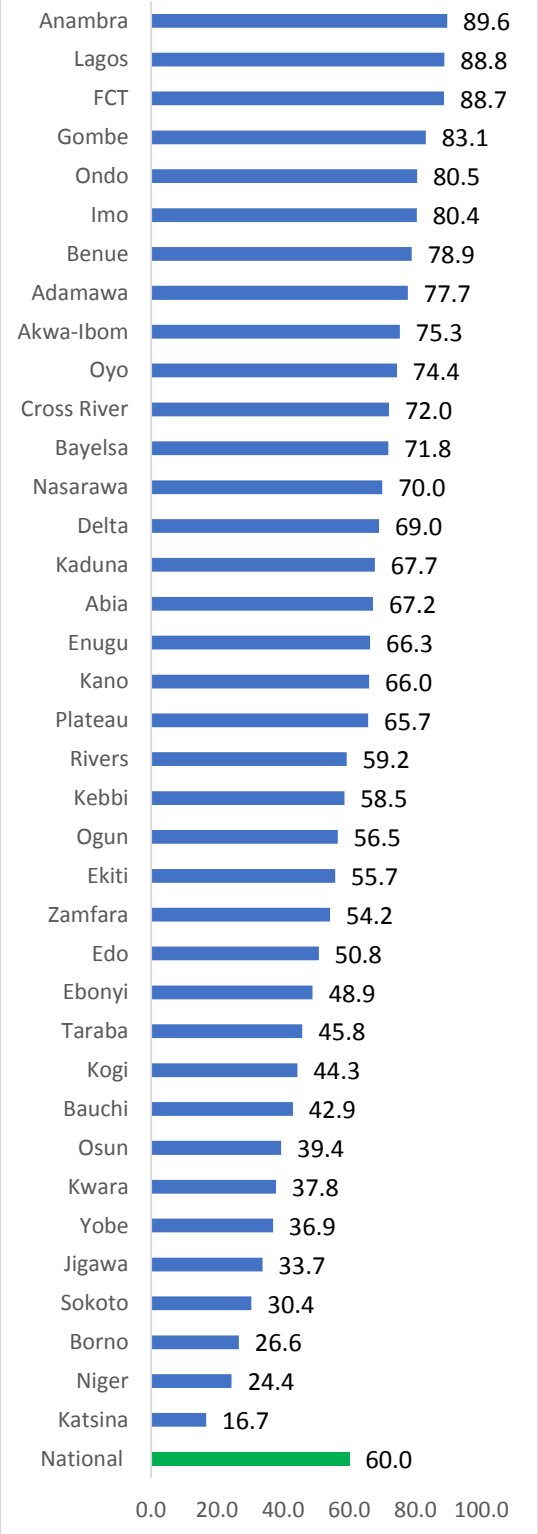
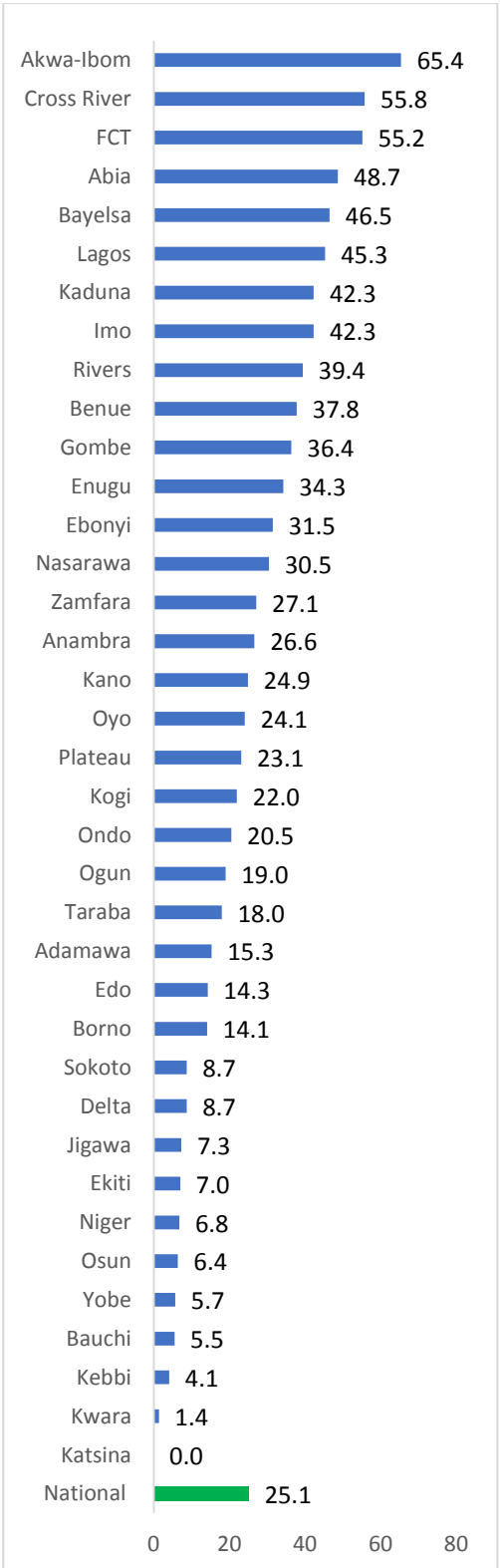


Figure 43: Percentage of PHFs that Offer ARV for HIV Positive Clients as Part of Routine ANC Services by State



The percentage of PHFs that offered HIV testing as part of routine ANC services in States ranged from 16.7% in Katsina State to 89.6% in Anambra State. Although, most States had

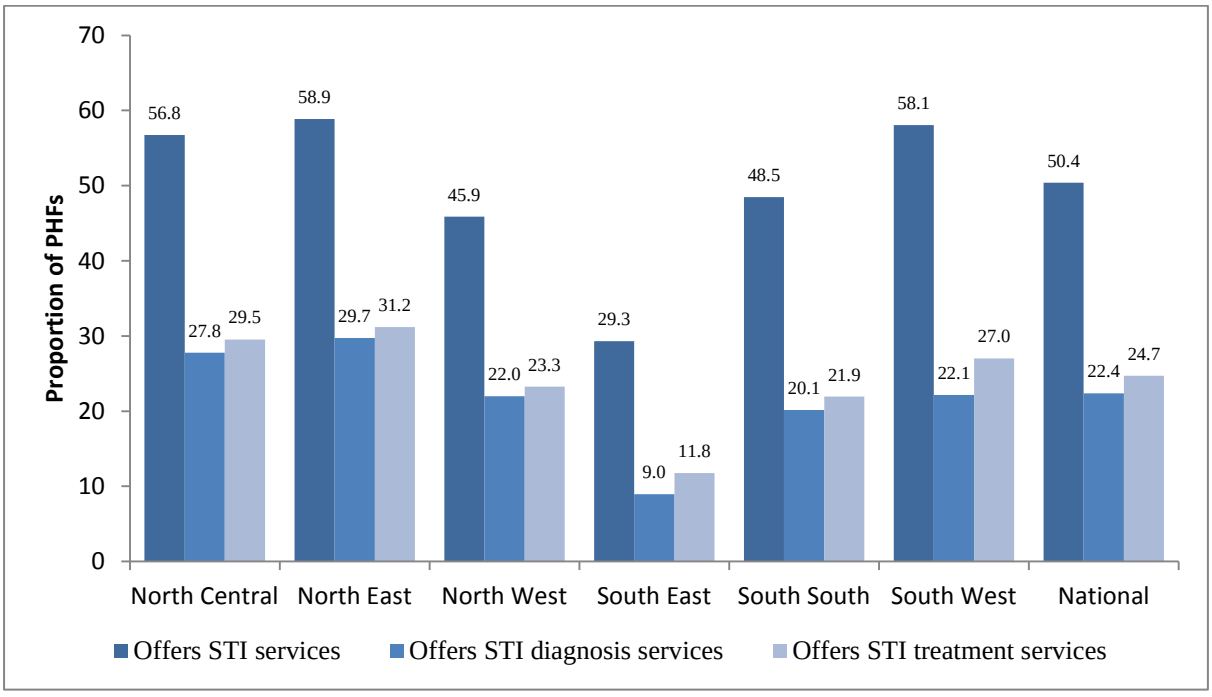
HIV testing as part of routine ANC services in more than half of their facilities, three States (Borno, Niger and Sokoto States) had HIV testing as part of routine ANC services in less than 30% of their PHFs. The proportion of PHFs that offered ARV for HIV positive clients as part of routine ANC services varied from none in Katsina State to 65.4% in Akwa Ibom State. Only three States (Akwa Ibom, Cross-River, and the FCT) offered ARV for HIV positive clients as part of routine ANC services in more than half of their facilities.

4.6.7 Sexually Transmitted Infections (STIs) Service Availability and Readiness Assessment

STI Service Availability

In each HFs surveyed, enumerators sought to know if STI services were being offered. In health facilities where the service where being offered, further questions were asked to know if providers in the HF make STI diagnosis and if they prescribe treatment for STIs. The results of these for PHFs across geopolitical zones are presented in **Figure 44** while **Annex 32** gives detailed results by HF types across the States and geopolitical zones

Figure 44: Percentages of PHFs Offering STI Services, STI Diagnosis and STI Treatment Services across the Geopolitical Zones



Nationally, about half of all the PHFs surveyed reported availability of STI services. Breakdown into geopolitical zones revealed similar experience to what obtained at the national level. Except SEZ that reported STI service provision in only 29.3% (approximately 3 out of every 10) of its PHFs, all other zones had STI service provision in about 50% of the PHFs in their zones.

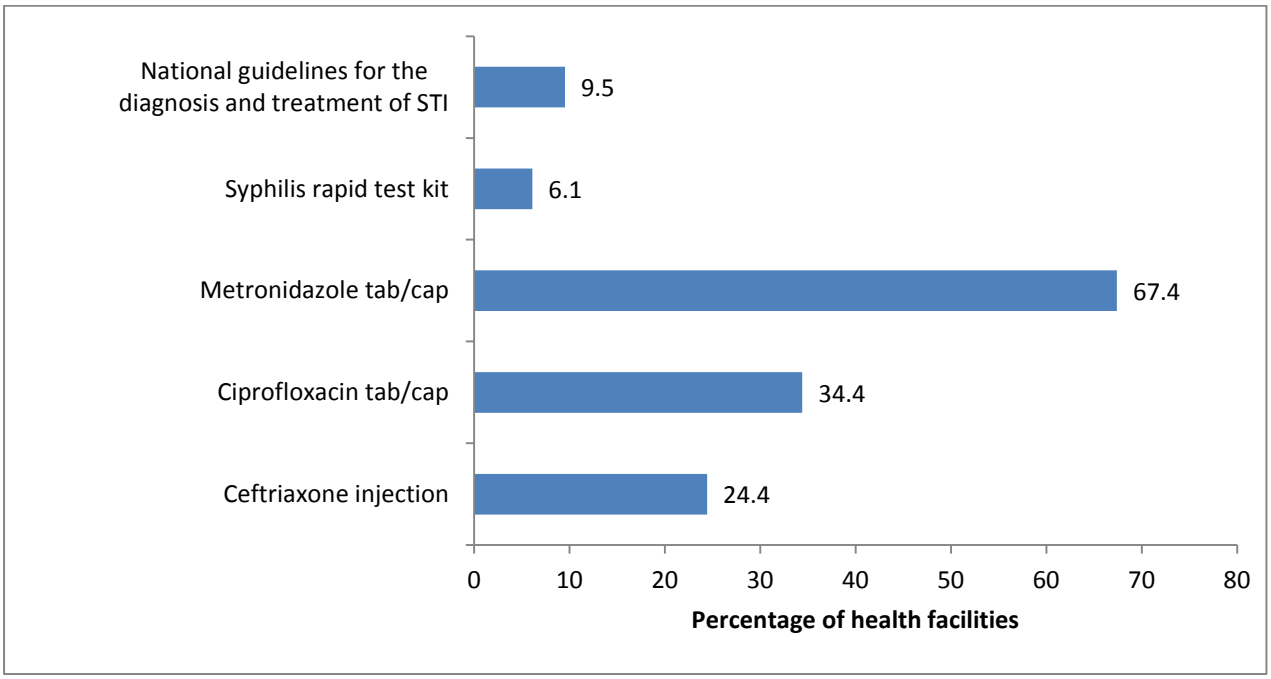
The services were rendered more in SHFs across all the zones with above 90% of SHFs surveyed reporting STI service availability in NCZ, NEZ, NWZ and SWZ. SEZ had the least reportage with STI service provision in only 76.7% of its SHFs **(Annex 32).** In addition, less than 50% of PHFs were rendering diagnostic and treatment services across all the geopolitical zones. The figure varied from 9.0% in SEZ to 29.7% in NEZ for STI diagnosis services and 11.8% in SEZ to 31.2% in NEZ for STI treatment services (**Figure 44**). These wide gaps between STI service provision and provision of STI diagnosis/treatment services were less observed in SHFs (**Annex 32).**

STI services were also reported to be available in 50% of the PHFs in two-third of the States. Adamawa State had the highest proportion of PHFs with STI services (81.9%). This was followed by Kano (73.5%), Lagos (72.6%), Plateau (72.6%) and Yobe (71.2%). Diagnosis and treatment services were found to be more available in SHFs than PHFs in most States except a few States like Anambra. Imo, Katsina, Kwara, Osun and Taraba, that recorded poor indices across all the facility types **(Annex 32).**

STI Service Readiness

Analysis of the survey data from HFs that reported that they offer STI services was done for the availability of tracer items which include **(i)** guidelines for the diagnosis and treatment of STIs **(ii)** syphilis rapid test kits with valid expiry dates and **(iii)** drugs (metronidazole tab/cap, ciprofloxacin tab/cap and ceftriaxone injections) with valid expiry dates. **Figure 45** shows the proportion of PHFs offering STI services with the tracer items available on the day of the survey while **Annex 33** gives details of the tracer items disaggregated by HF types across the States and geopolitical zones.

Figure 45: Availability of Tracer Items on the Day of the Survey in HFs offering STI Services



National Guidelines for the Diagnosis and Treatment of STIs

Only 9.5% of PHFs offering STI services had the national guideline for the diagnosis and treatment of STIs (**Figure 45**). This was generally low across the geopolitical zones as only the NEZ (12.6%) performed slightly above the national average and the SEZ (4.1%) being the least performed zone. Six states (Akwa Ibom, Bayelsa, Ebonyi, Edo, Kwara and Yobe States) had no guidelines in any of their PHFs while Jigawa State had the guideline in 28.6% of their PHFs (**Annex 33**).

Rapid Test Kits for Syphilis

Rapid test kits for syphilis were observed in very few (6.1%) of PHF offering STI services (**Figure 45**). Across the geopolitical zones, only the SWZ (14.6%) and NCZ (14.2%) had rapid test kits for syphilis in any of their PHFs offering STI services. Also, across the States, only 12 States had the test kits in their PHFs with availability in these 12 States varying between 49.1% in Lagos State and 2.3% in Ekiti State (**Annex 33**).

Tracer Drugs for STIs

Of the three tracer drugs, only metronidazole tablet was observed in a fairly high proportion (67.4%) of PHFs offering STI services (**Figure 45**). This ranged from 56.2% in the SWZ to 91.3% in the SEZ and 11.6% in Ekiti State to 97.5% in Anambra State. While ciprofloxacin tablet and ceftriaxone injection were available in less than half of PHFs offering STI services across the country, Anambra, Kano and Bauchi States had each of the drugs in more than

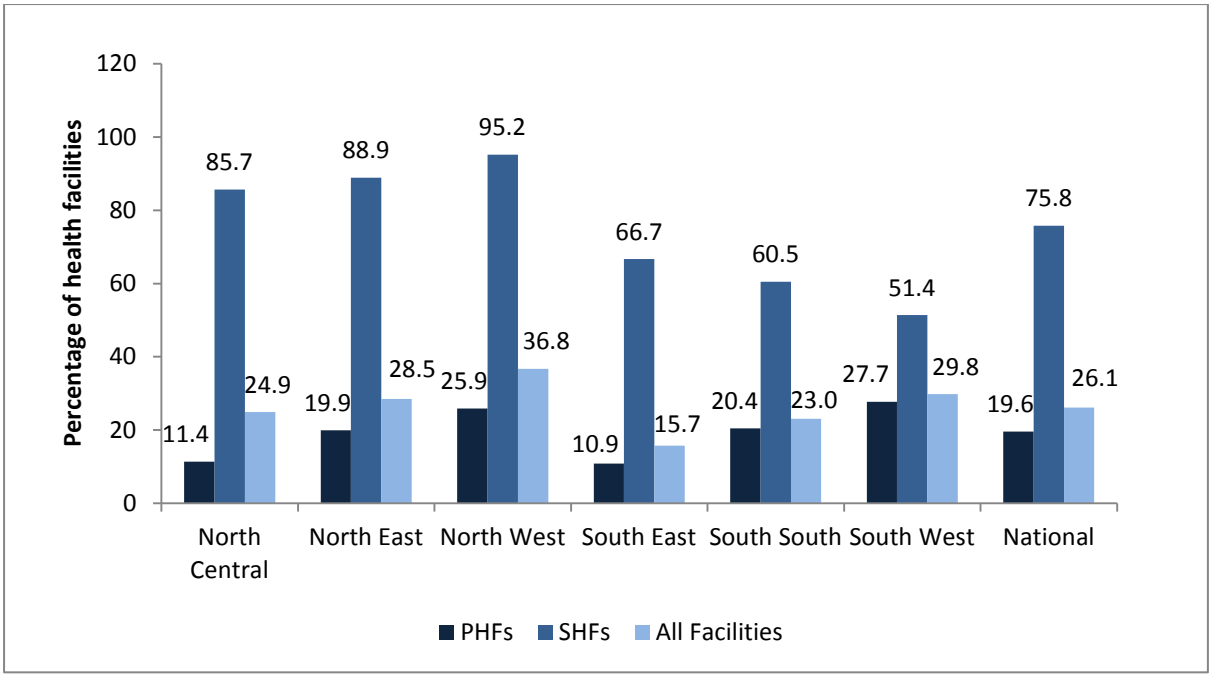
50% of such PHFs. Osun State on the other hand did not have either ciprofloxacin tablet or ceftriaxone injection them in any of its HFs offering the service (**Annex 33**).

4.6.8 Tuberculosis (TB) Service Availability and Readiness Assessment

TB Service Availability

Data collectors asked if each of the surveyed HFs were offering TB diagnosis, treatment prescription and treatment follow-up. **Figure 46** shows the proportion of HFs where TB services were available.

Figure 46: Percentage of Health Facilities Offering TB Diagnosis and Management by Geopolitical Zones



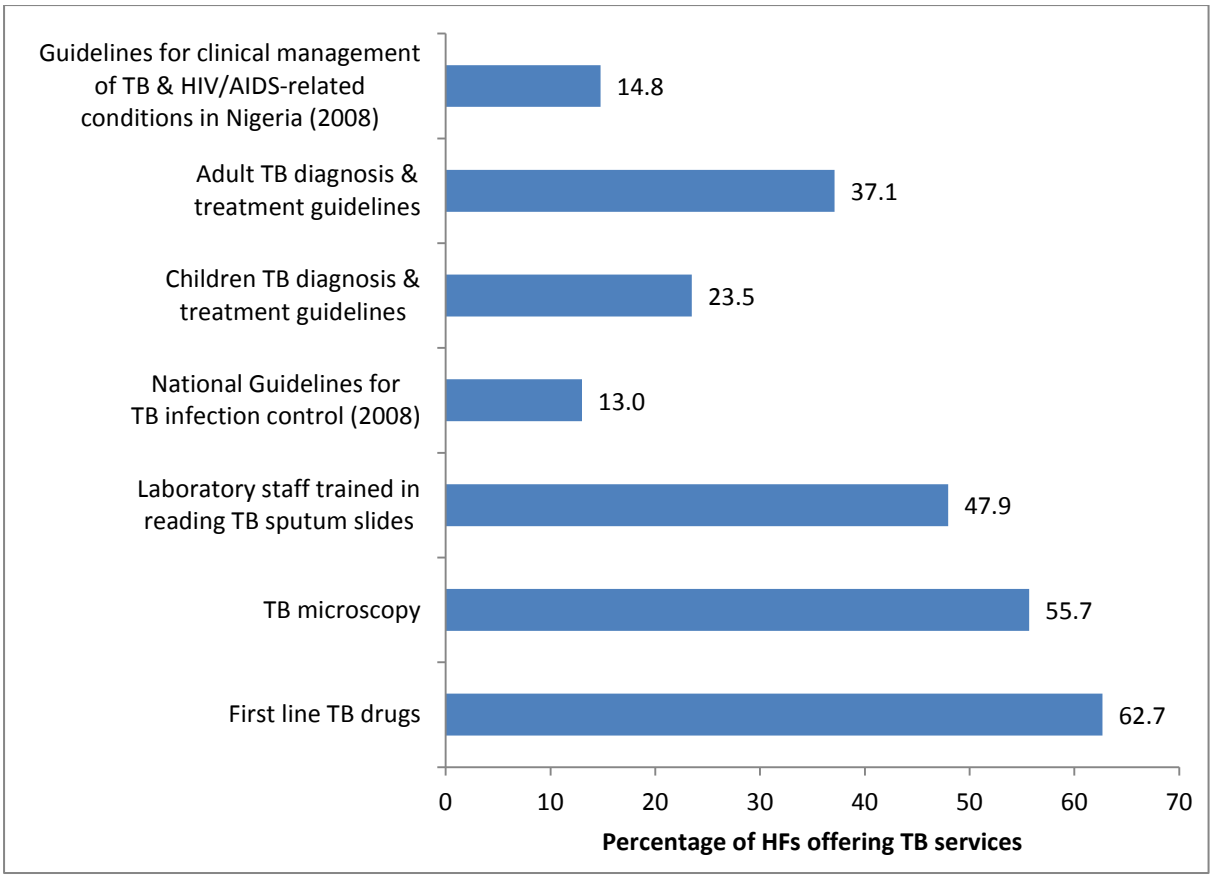
At the PHF level, 19.6% of HFs offer TB diagnosis and management compared with 75.8% at the SHF level. The highest TB service availability at the PHFs was reported in the SWZ where a little above a quarter of the PHFs offered TB diagnosis and management. However, service availability at the SHFs in the SWZ was also the least of all the zones as only about half of them offered the service. Across the states, TB service availability ranged from 63.2% of HFs in Lagos State to 10.5% of HFs in Anambra State. Details of TB service availability by HF types across the States and geopolitical zones can be found in **Annex 34.**

TB Service Readiness

TB service readiness at the HFs offering TB services was assessed with the availability of tracer items which includes **(i)** the guidelines for clinical management of TB and HIV/AIDS-related conditions in Nigeria **(ii)** the national guidelines for diagnosis and treatment of TB for adults **(iii)** the national guidelines for diagnosis and treatment of TB for children **(iv)** the

national guidelines for TB infection control **(v)** laboratory staff trained in reading Tb sputum slides **(vi)** TB microscopy and **(vii)** Full complement of first-line TB drugs as single drugs or fixed dose combination packs with valid expiry dates. The analysis of these tracer items was only based on HFs where TB services were available. **Figure 47** shows the percentage of HFs offering TB services that have each of the tracer items. See **Annex 35** for more details on each of the tracer items by facility types in each State and geopolitical zone.

Figure 47: Availability of TB Service Tracer Items in Health Facilities that Offer TB Services



TB Diagnosis, Treatment Guidelines and Infection Control Guidelines

About 15% of all the HFs offering Tb services had the national guidelines for clinical management of TB/AIDS-related conditions in Nigeria. A little less than these had the national guidelines on TB infection control (13%). More HFs had the diagnosis and treatment guidelines for TB in adults (37.1%) than for TB in children (23.5%). Across the geopolitical zones, the NWZ had more proportions of HFs with each of the guidelines than other zones, ranging from 27.9% for the guidelines on clinical management of TB and HIV/AIDS-related conditions to 50.4% for the guidelines on the diagnosis and treatment of TB in adult. Similarly, among the States, Jigawa State had more proportions of HFs with each of the guidelines than other States except Nasarawa State which had slightly more proportions of HFs (77.3%) with the guidelines on the diagnosis and treatment for adults than Jigawa State (73%). **See Annex 35**.

Laboratory Staff Trained in Reading TB Sputum Slides

Overall, 47.9% of HFs where TB services were available had at least a laboratory staff trained in reading TB sputum smear slides. This ranged from 35.9% in the SWZ to 59.2% in the NCZ and from 6.6% in Enugu State to 100% in Ekiti State (**Annex 35**).

Availability of TB Microscopy

This was determined as the ability of a HF offering TB services to conduct TB microscopy in the facility as evidenced by a functional microscope (light or fluorescent), appropriate stains (ZN stain or auramine-rhodamine stain) and glass slides OR ability to conduct the test off-site (in another facility). TB microscopy was available in 55.7% of HFs offering TB services. Variations existed across the zones from 45.1% in the SWZ to 62.4% in the NEZ and across the States from 17.9% in Delta State to 100% in Ekiti State (**Annex 35**).

Availability of First-line TB Drugs

About 63% of all the surveyed HFs offering TB services had a full complement of the first-line TB drugs (rifampicin, isoniazid, pyremethamine and ethambutol). This varied from 55.5% in SSZ to 70.4% in SWZ and from 30.4% in Akwa Ibom State to 94% in the Federal Capital Territory (**Annex 35**).

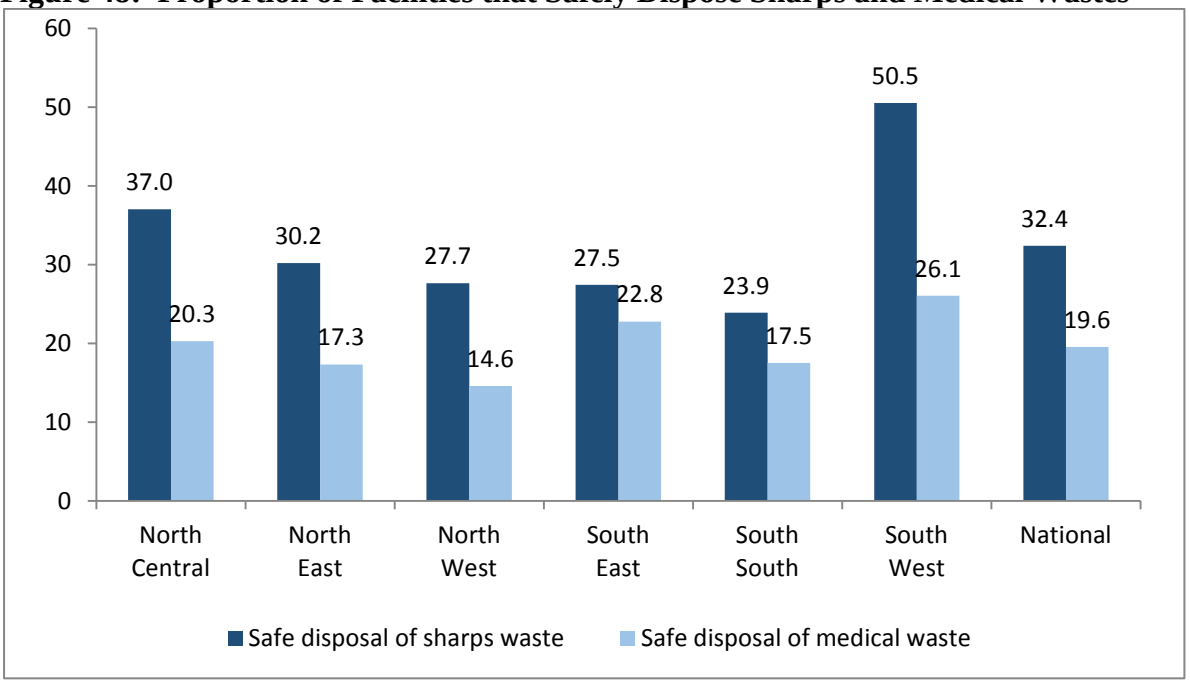
4.6.9 Infection Control

Infection control is an important aspect of health care provision. Improper disposal of hazardous health-care wastes such as sharps and medical wastes pose a threat to the wellbeing of health workers, patients and the community through the continuous spread of infectious micro-organisms right in the facility environment.

Safe Disposal of Sharps and Medical Wastes

Data was collected on how facilities safely disposed sharps and medical waste on-site, or how they safely stored such wastes until they were removed offsite for final disposal. Safe disposal of health-care wastes with the use of incinerators and burning in protected pits were considered safe. The proportions of facilities that safely disposed sharps and medical wastes using any of the methods mentioned on-site by geopolitical zone are presented in **Figure 48**.

Figure 48: Proportion of Facilities that Safely Dispose Sharps and Medical Wastes

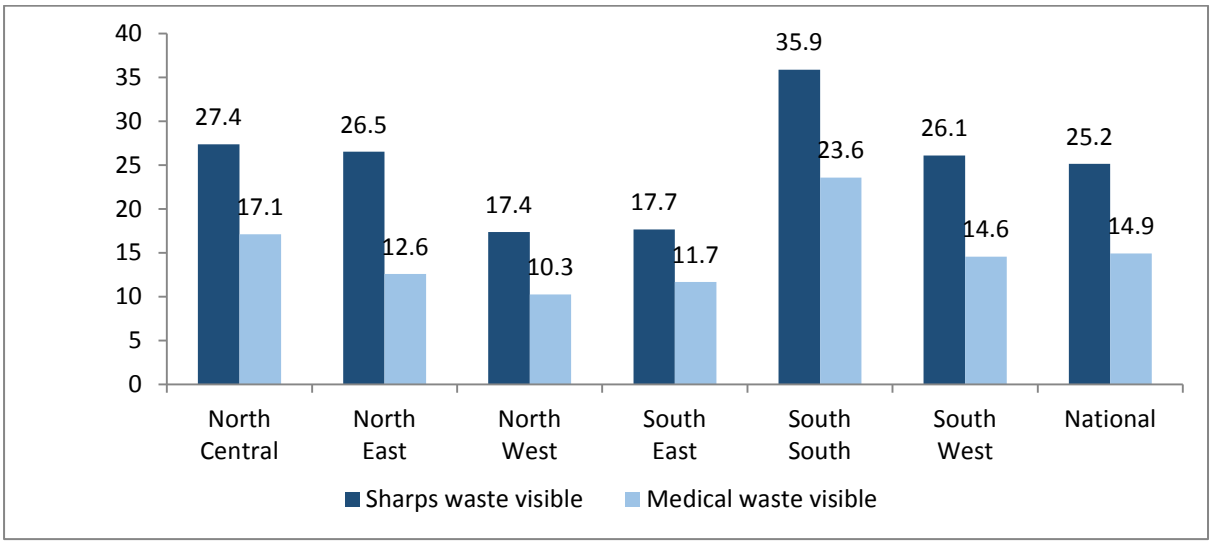


Ability to safely dispose sharps wastes was higher than medical wastes across the zones and nationally. About one-third of all facilities in the country were able to safely dispose sharps wastes while fewer facilities could safely dispose medical wastes. Safe disposal of sharps wastes ranged from half of facilities in SWZ to 24% in SSZ, while safe disposal of medical wastes was highest in SWZ (26%). Disposal of sharps wastes was better managed than that of medical wastes across the States. Result on the safe disposal of sharps wastes in PHFs across the States range from 7% of facilities in Katsina State to about 68% in Lagos State. Medical wastes were appropriately disposed in only 2% of PHFs in Kano and 60% in Lagos State (**see Annex 36** for details on safe disposal of sharps and medical wastes by facility type and State).

Storage of Sharps and Medical Wastes prior to Final Disposal

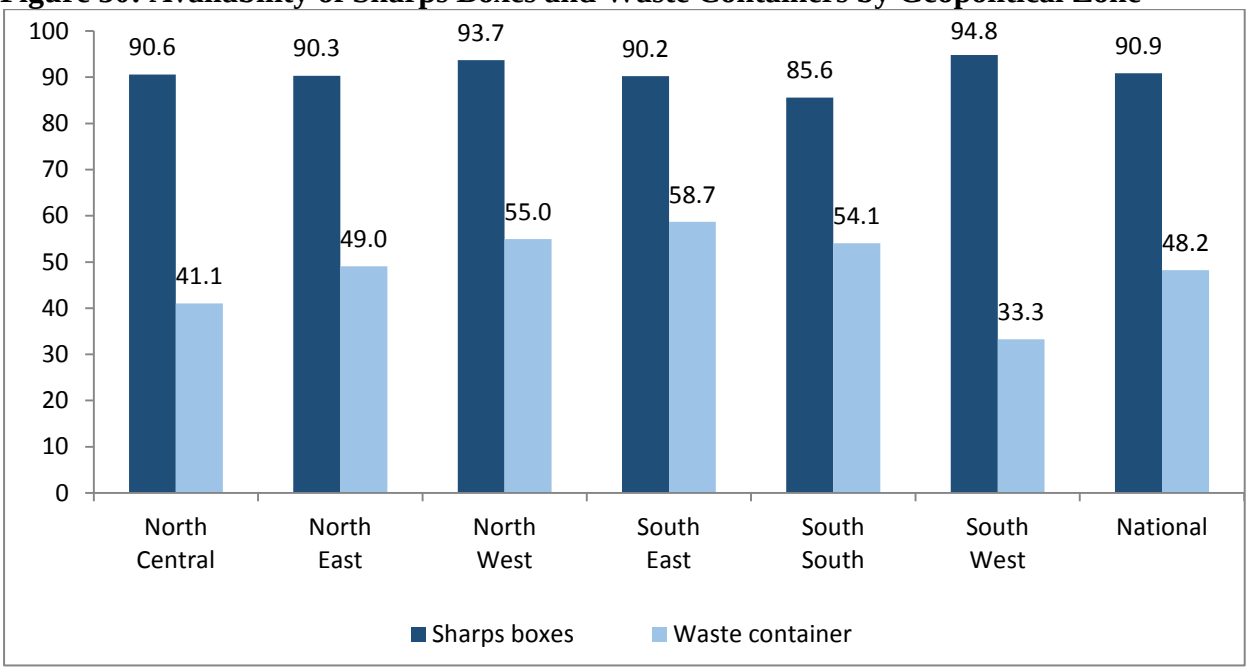
Facilities without the capacity to safely dispose wastes are expected to store the wastes and remove them offsite to a central place where facilities for proper wastes disposal exist. Oftentimes, the practice in Nigeria is that such facilities send the wastes to the LGA headquarters for final disposal. It is important that facilities are able to safely keep such wastes prior to disposal or removal to the offsite place. Areas where sharps and medical wastes were stored prior to removal offsite were assessed to see if such wastes were visible or if they were kept properly. The proportion of facilities with visible sharps and medical wastes in service areas prior to removal offsite is presented as **Figure 49**.

Figure 49: Proportion of Facilities with Visible Sharps and Medical Wastes in Service Areas Prior to Removal Offsite



Although availability of safety box for sharps wastes was high across the country, visible sharps wastes were observed more than medical wastes (25% against 15% national) in all the facilities visited. **Figure 50** shows the availability of sharp boxes and wastes containers (with cover and plastic liner) in the health facilities across the geopolitical zones.

Figure 50: Availability of Sharps Boxes and Waste Containers by Geopolitical Zone

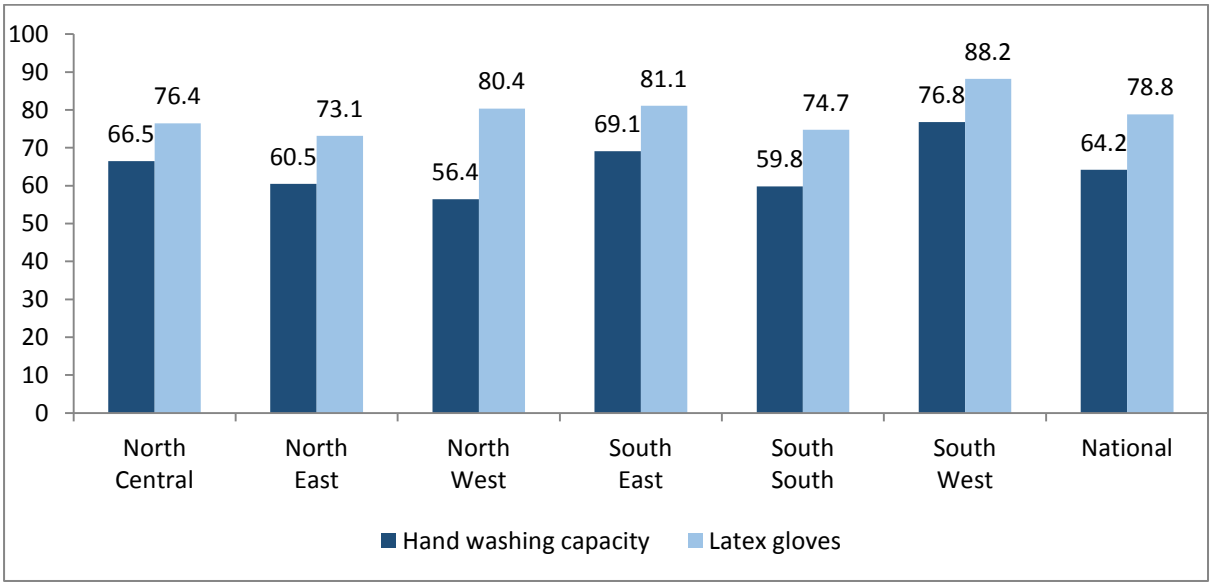


Sharps boxes were available in at least three-quarters of primary health facilities, while availability of wastes containers in primary health facilities ranged from 15% in Oyo State and Kogi State to 90% in Anambra State. See **Annex 37** for details on availability of sharps boxes and waste containers by facility type and State.

Hand Hygiene

Hand hygiene is a simple yet proven and effective way of infection control. It helps to reduce the spread of potentially deadly germs to patients, and also reduce the risk of provider's infection caused by germs acquired from patients. Hand hygiene can be practiced by washing the hands with soap and water or through the use of alcohol based hand sanitizers, and the use of gloves. **Figure 51** shows the proportion of facilities with hand washing capacity (soap and water or alcohol based sanitizers) and availability of latex gloves by geopolitical zone.

Figure 51: Proportion of Facilities with Hand Washing Capacity and Latex Gloves by Geopolitical Zone

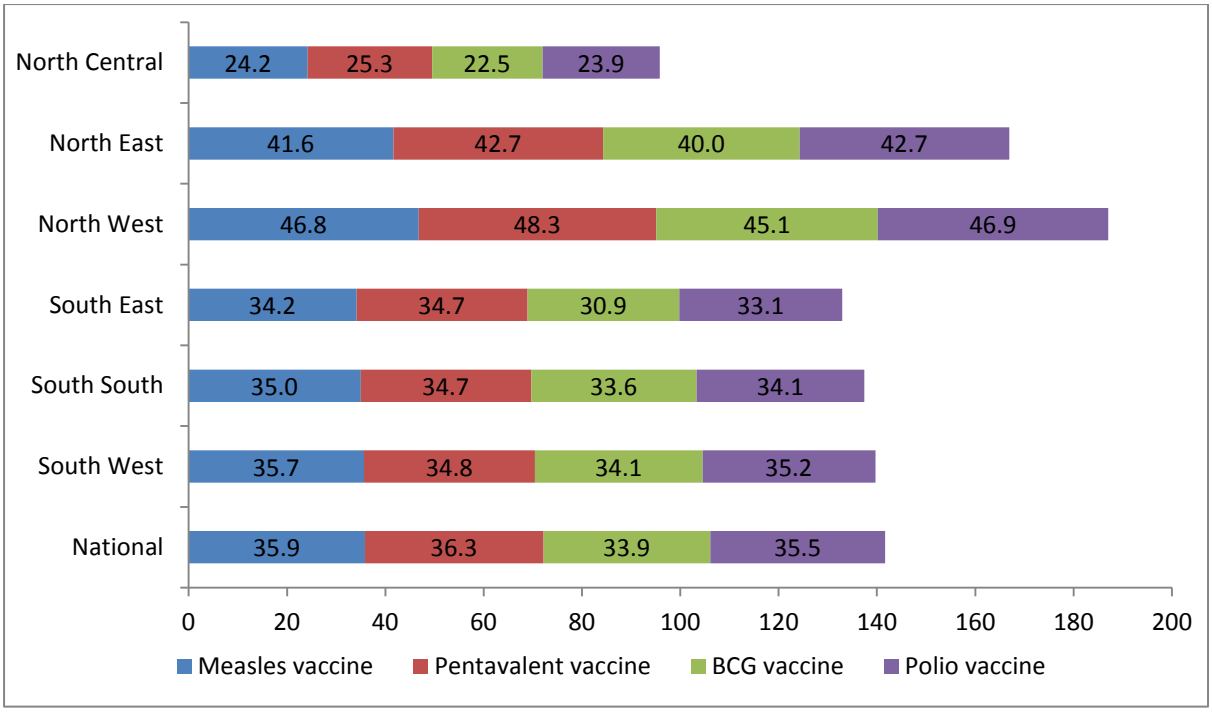


Nationally and across the geopolitical zones, availability of latex gloves is more common than hand washing capacity. Only 64% of health facilities nationwide had appropriate hand washing capacity, while almost 80% had latex gloves for use in the facility. Results across the zones show that hand washing capacity ranged from 56% in the NWZ to 77% in the SWZ. Hand washing capacity at PHFs varied from 22% in Kaduna State to 94% in Anambra State. All SHFs in 17 States had appropriate hand washing capacity. Availability of latex gloves ranged from 73% in NEZ to 88% in the SWZ, and was recorded in at least 80% of PHFs in 22 States and all SHFs in 17 States. See **Annex 38** for details on availability of latex gloves by facility type and State.

4.6.10 Provision of Immunization Services

Availability of BCG, polio (OPV or IPV), pentavalent, and measles vaccines at health facilities was assessed during the survey. Facilities that had the capacity to store vaccines were asked if they had any of the vaccines mentioned. These were observed for validity, and where facilities did not have storage capacity, they were asked if any of the vaccines was available on the last immunization day. **Figure 52** shows the availability of different vaccines in the health facilities by geopolitical zone.

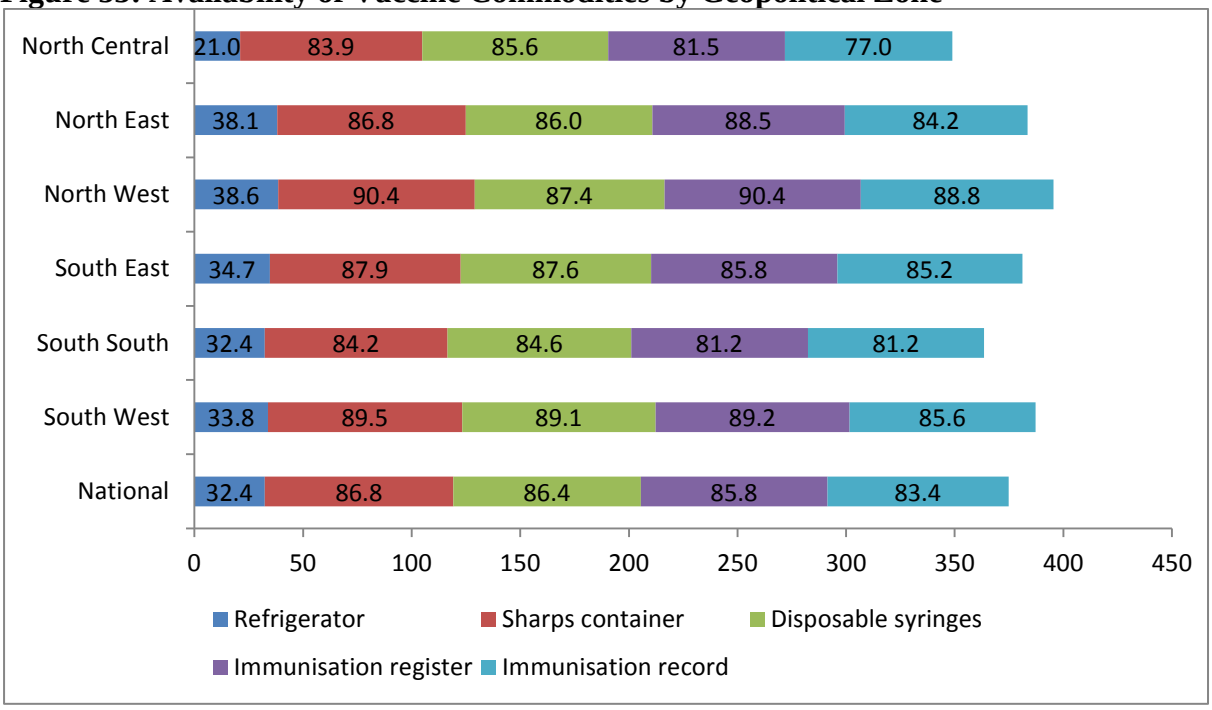
Figure 52: Availability of Vaccines by Geopolitical Zone



Results show that each of the vaccines was available in about one-third of all facilities nationwide. The vaccine availability was lower at PHFs across the country. Availability of all vaccines was lowest in the NCZ (25% or below) and highest in the NWZ, followed by the NEZ. Availability of vaccines at PHFs varied widely across the States as availability of BCG ranged from 11% in Taraba PHFs to 71% in Lagos PHFs while availability of pentavalent vaccine ranged from 12% in Niger PHFs to 76% in Kano PHFs. PHFs in Lagos and Kano States also had the highest availability for polio vaccine (75%) and measles vaccine (76%) respectively while PHFs in Cross Rivers State had the lowest availability for both polio vaccine (10%) and measles vaccine (12%).

Provision of immunization services requires that some equipment or materials such as refrigerators, sharps containers and single use disposable syringes are available for use at facilities. Registers for recording and monitoring immunization coverage as well as individual child immunization records are also important. Proportions of health facilities that had the vaccine commodities were computed across geopolitical zones and presented in **Figure 53**.

Figure 53: Availability of Vaccine Commodities by Geopolitical Zone



Availability of sharps container for used needles, disposable syringes, immunization register and individual child record was observed in more than 80% of all facilities across the country. However, the availability of functional refrigerators with up-to-date temperature monitoring charts was very low compared to the availability of other items, ranging from 38.6% in NWZ to 21% in the NCZ. Details on availability of vaccines and vaccine commodities by facility type and State are contained in **Annex 39**.

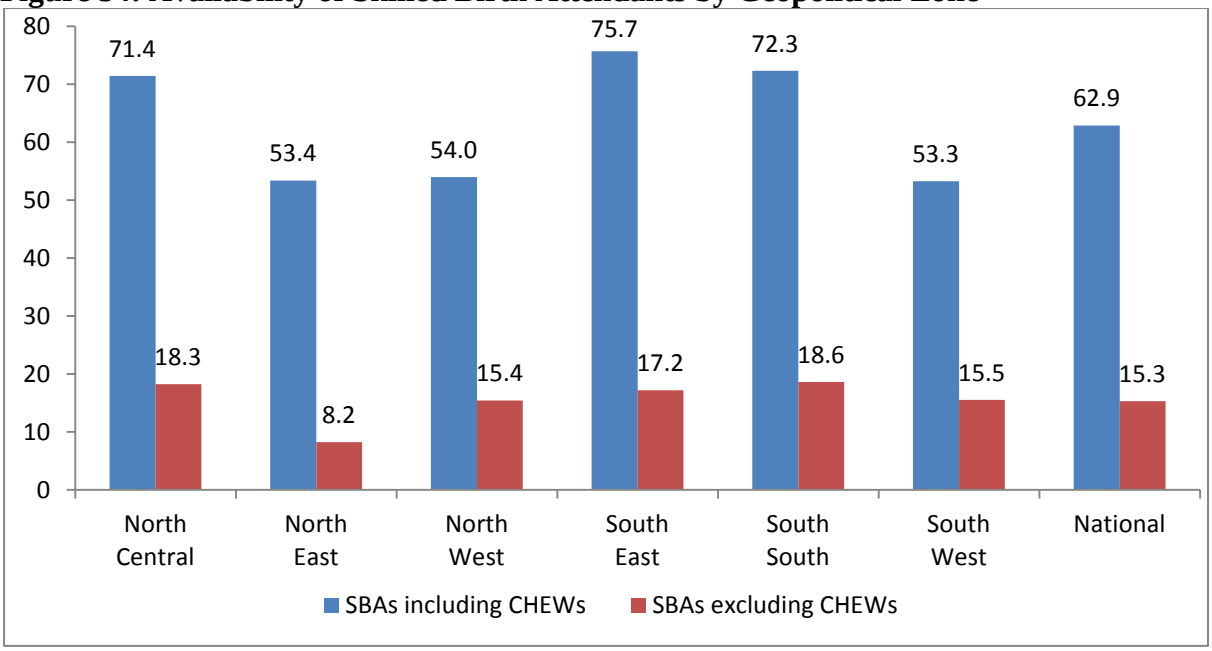
4.6.11 Availability of Skilled Birth Attendants

The World Health Organization defined a Skilled Birth Attendant (SBA) as "an accredited health professional – such as a midwife, doctor or nurse – who has been educated and trained to proficiency in the skills needed to manage normal (uncomplicated) pregnancies, childbirth and the immediate postnatal period, and in the identification, management and referral of complications in women and newborns" Essentially, WHO only recognizes doctors, nurses and midwives as SBA. The presence of a skilled birth attendant during delivery is key to improving maternal and newborn health.

However, in Nigeria, due to the shortage of health workers and in order to meet the demand for health services, Community Health Extension Workers (CHEWs) were introduced and form a larger part of human resources for health at the primary health care level. Although CHEWs are not included in the WHO's definition of a SBA. This is because they are given limited amount of training, supplies and support to provide essential primary health care services in their communities. The reality is they are found to conduct consultations and deliveries at primary health care level in Nigeria. Therefore, two variants of the analyses on

availability of SBA in health facilities were done. The first was the analysis when CHEWs are considered as SBA, while the second was done excluding CHEWs in the definition of SBAs. The availability of the two variants of SBAs across Geopolitical Zones is presented in **Figure 54**.

Figure 54: Availability of Skilled Birth Attendants by Geopolitical Zone



The inclusion of CHEWs increased the availability of SBAs by four times nationally. A similar picture is seen across all the zones as well.

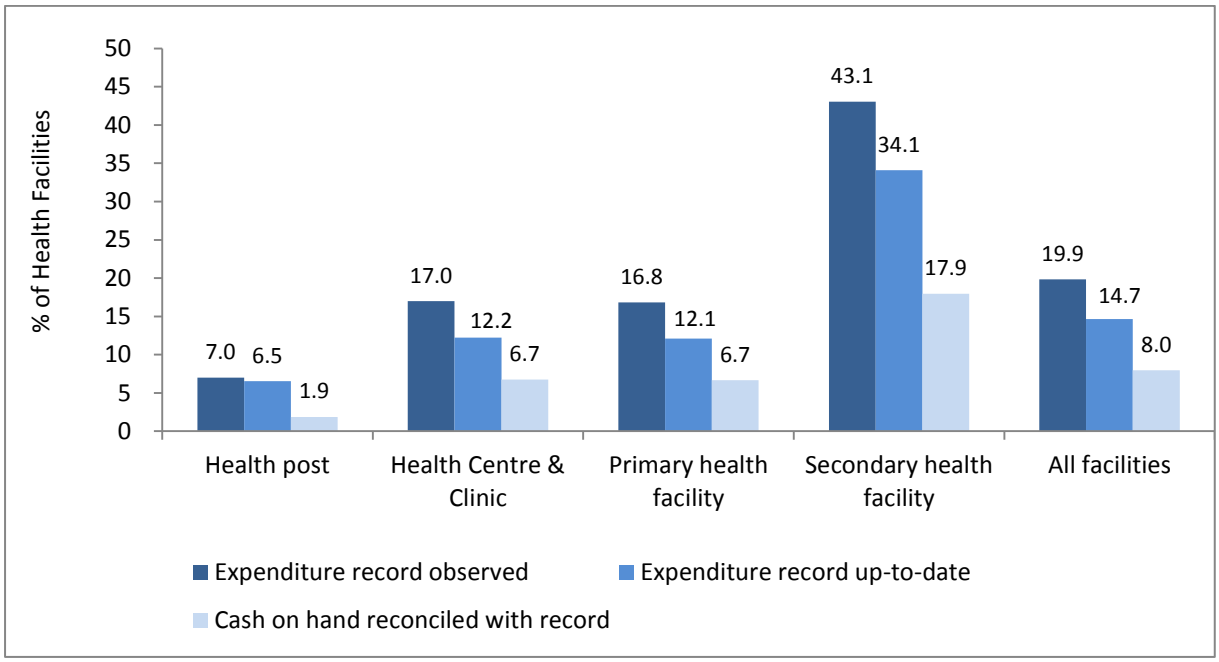
4.7 Management

4.7.1 Financial Management

Financial management in this context refers to the collection, supervision and expenditure of income from all sources in order to achieve the targets of the health institution. It is a contributing factor in determining availability and affordability of health services, and this is especially relevant at the primary healthcare level, where financial management has typically been sub-optimal.

Each health facility was asked to show their records or registers of expenditure (made either by cash or through a bank account). Enumerators confirmed if they were up-to-date by asking the respondent for the most recent expenditure made and checking if there was an entry for that expenditure. Also, the records were scrutinised to see if important information needed to audit for accountability in the use of funds (date, reason for expenditure, amount disbursed and balance on hand) were entered for the last five entries of funds expended). The proportions of health facilities where expenditure record were observed, found to be up-to-date and reconciled with cash on hand are presented in **Figure 55**

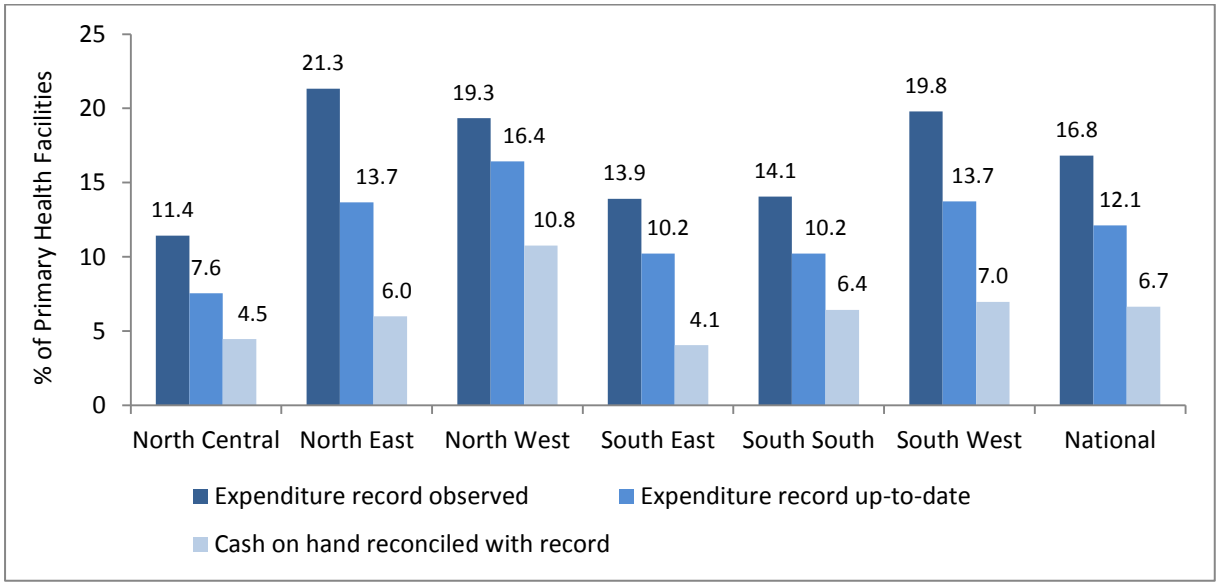
Figure 55: Percentage of Health Facilities by Types where Expenditure Record were Observed, Expenditure Record was Up-to-date and Cash on Hand Reconciled with Record.



Only 19.9% of all health facilities were able to physically produce a register/record of funds disbursed/expended, and only 14.7% of all health facilities had records that were seen to be up-to-date. When further assessed to determine if the available funds in the facility tallied with the records, only 8% of all facilities had records that reconciled.

Availability of expenditure records among the primary tier health facilities was considerably lower (16.8%) compared to secondary facilities (43.1%). This disparity was also observed for up-to-date records as 12.1% of PHFs had up-to-date records compared to 34.1% of SHFs. Neither primary nor secondary facilities fared well on the reconciliation of their available funds with their expenditure records. Only 6.7% of PHFs and 17.9% of SHFs had records that matched. Health posts also had a lower percentage of observed expenditure records (7.0%) compared to the health centres/clinics (17%). Availability of records that reconciled with available funds (cash on hand) was marginally higher for health centres/clinics (6.7%) than health posts (1.9%). The proportion of primary health facilities where expenditure records were observed, found to be up-to-date and reconciled with cash on hand by geopolitical zone is presented in **Figure 56**.

Figure 56: Percentage of PHFs where Expenditure Record were Observed, Expenditure Record was Up-to-date and Cash on Hand Reconciled with Record by Geopolitical Zone

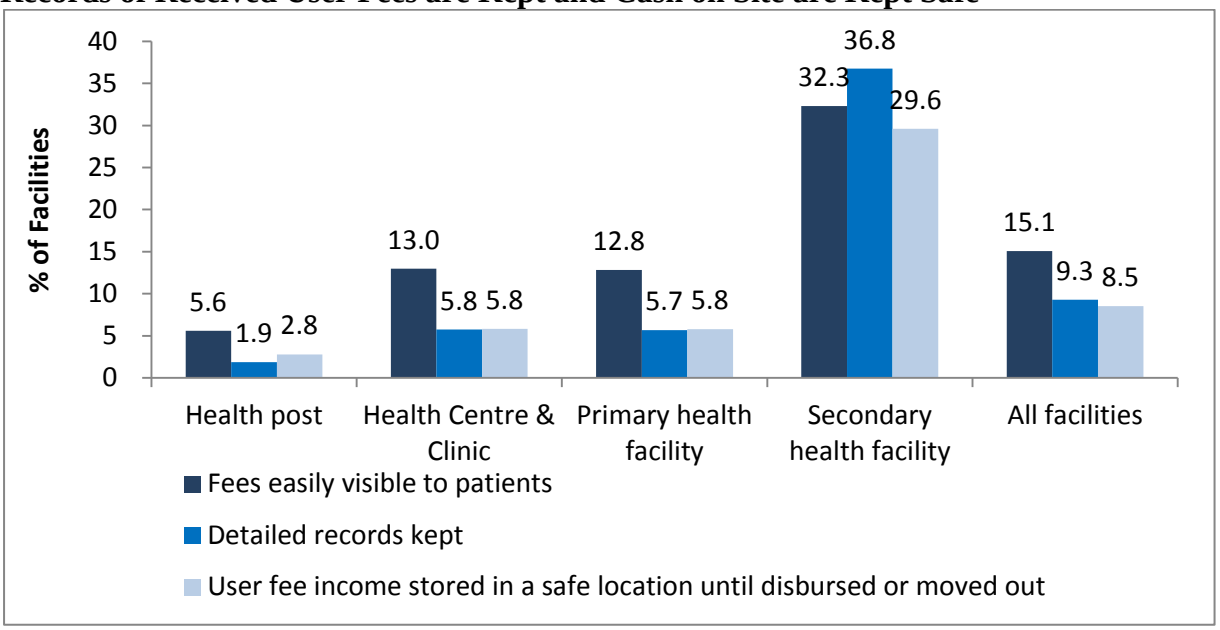


Significant differences were observed between the geopolitical zones regarding the proportion of PHFs (combining health posts, health clinics and health centres) that maintained a record of expenditures, with the NEZ (21.3%), NWZ (19.3%), and SWZ (19.8%) having higher proportions than the national average (16.8%), and the NCZ (11.4%) recording the lowest proportion. Nationally, 12.1% of PHFs had expenditure records that were up-to-date. When further assessed to determine if the available funds tallied with the records, nationally only 6.7% of all PHFs had records that reconciled, with the highest proportion in the NWZ (10.8%) and the lowest in the SEZ (4.1%).

Additional details on expenditure record keeping including the proportion of facilities that recorded date of expenditure, reason for expenditure, amount expended and balance on hand and showed evidence that the most recent expenditure was validated (by receipt/signature) are presented in **Annex 40** and dis-aggregated by health facility types in each geopolitical zone in **Annex 41**.

User fees are paid by individuals in order to enable them access products or services at a health facility. Due to varying policies of individual States and the FCT, not all facilities charged user fees. Of those that do, it is expected that they will take steps to facilitate ease of understanding of these fees by the clients/patients, eliminate any ambiguity and promote transparency. At each facility, enumerators were asked to observe if fees schedules were posted where patients could readily see them. The percentages of health facilities with accurate records and protection of user fee generated income by facility type are presented as **Figure 57**.

Figure 57: Percentage of HFs Where Service Fees are Easily Visible to Clients, Detailed Records of Received User Fees are Kept and Cash on Site are Kept Safe



Only 15.1% of all facilities that charged user fees posted the service fees schedules where patients could readily see them, with a significant variation between SHFs (32.3%) and PHFs (12.8%).

A lower proportion of all facilities (9.3%) were found to maintain detailed registers/records for user fees received showing the date, name, service/service area where fees were collected, and amounts received. The proportion was lower among PHFs (5.7%).

The proportion of health facilities that stored their income from user fees in a safe location until disbursed or moved out of the facility for saving (safe; locked drawer in solid furniture with limited access to key) was remarkably similar to the proportion that kept detailed user fee records, with the exception of SHFs, among which a higher proportion kept detailed records (36.8%) than safely stored their income from user fees (29.6%), and health posts, among which a lower proportion kept detailed records (1.9%) than safely stored their income from user fees (2.8%).

4.7.2 Health Care Financing

Overall, most PHCs received their resources in-kind only (**Figure 58**). In particular, the majority of PHCs received no cash funding from government sources whether from federal, state, or local governments. In exit interviews, 74% of parents report paying a user fee. A lot more PHCs report receiving in-kind support – especially vaccines, drugs, and registers and reporting forms (**Figure 59**). In-kind support is provided predominantly by local government and international donors, and, to a lesser degree state government.

Figure 58: Proportion of PHCs Receiving Funds across Regions: In Cash vs In Kind

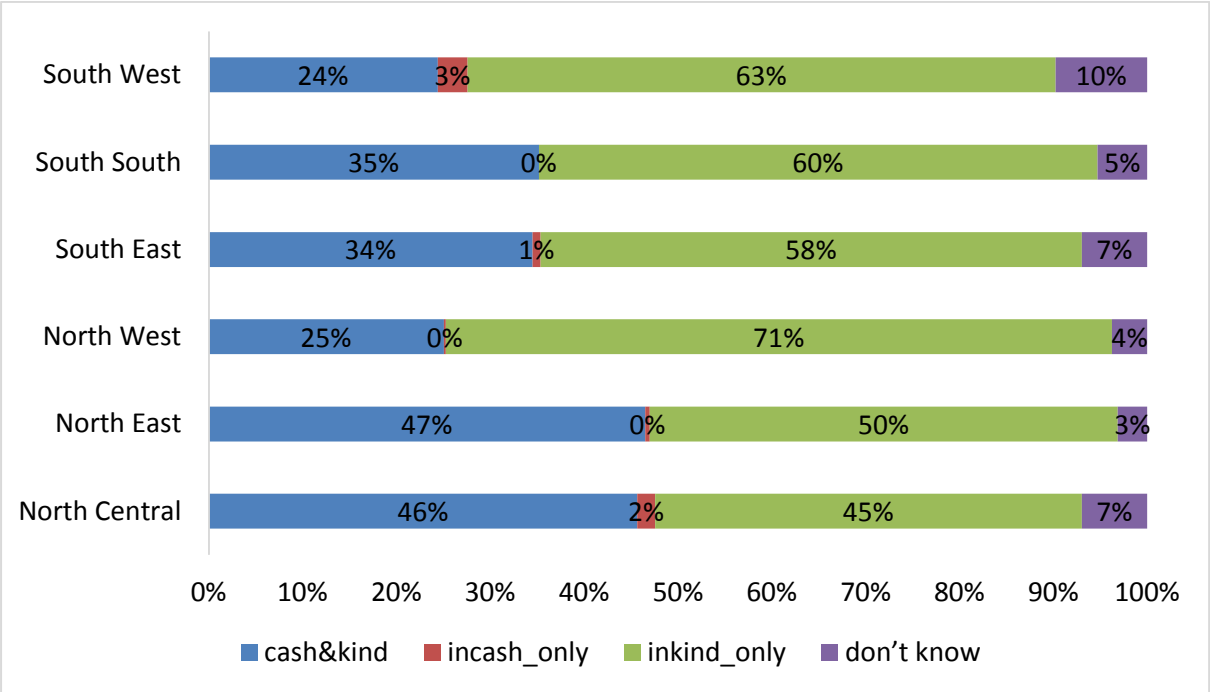
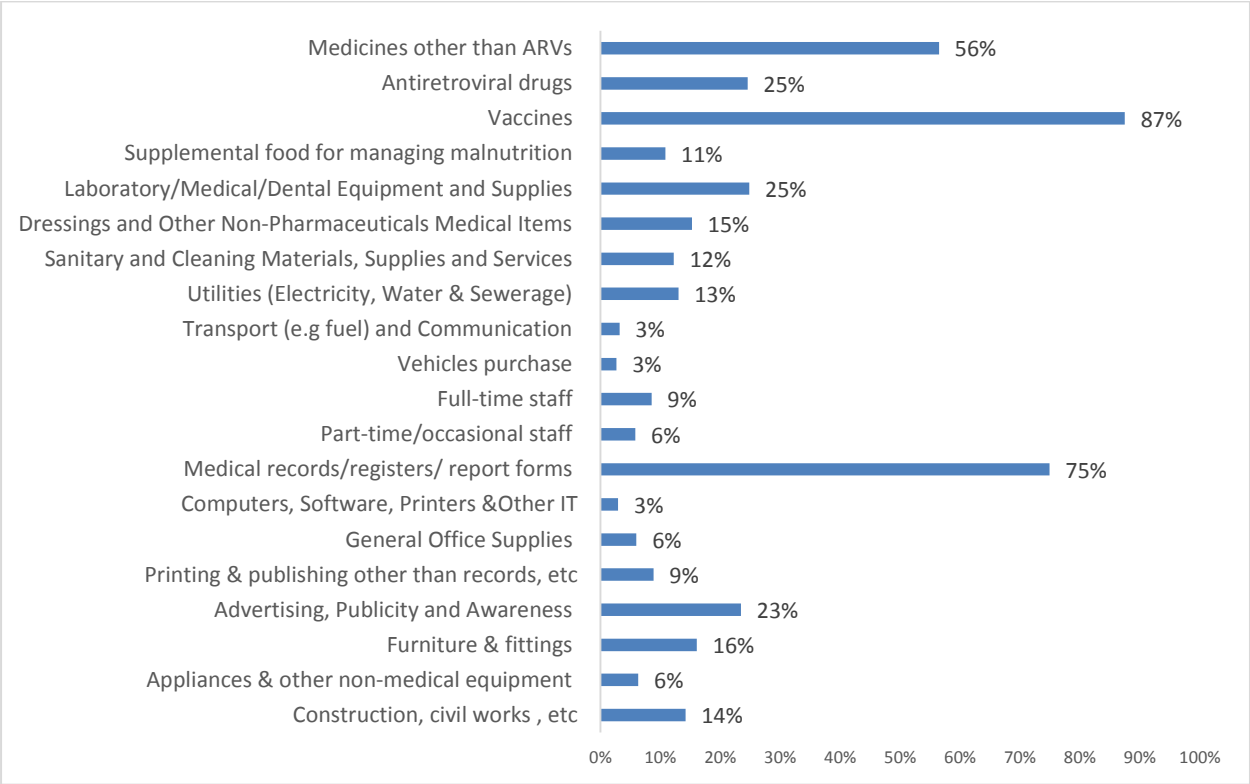
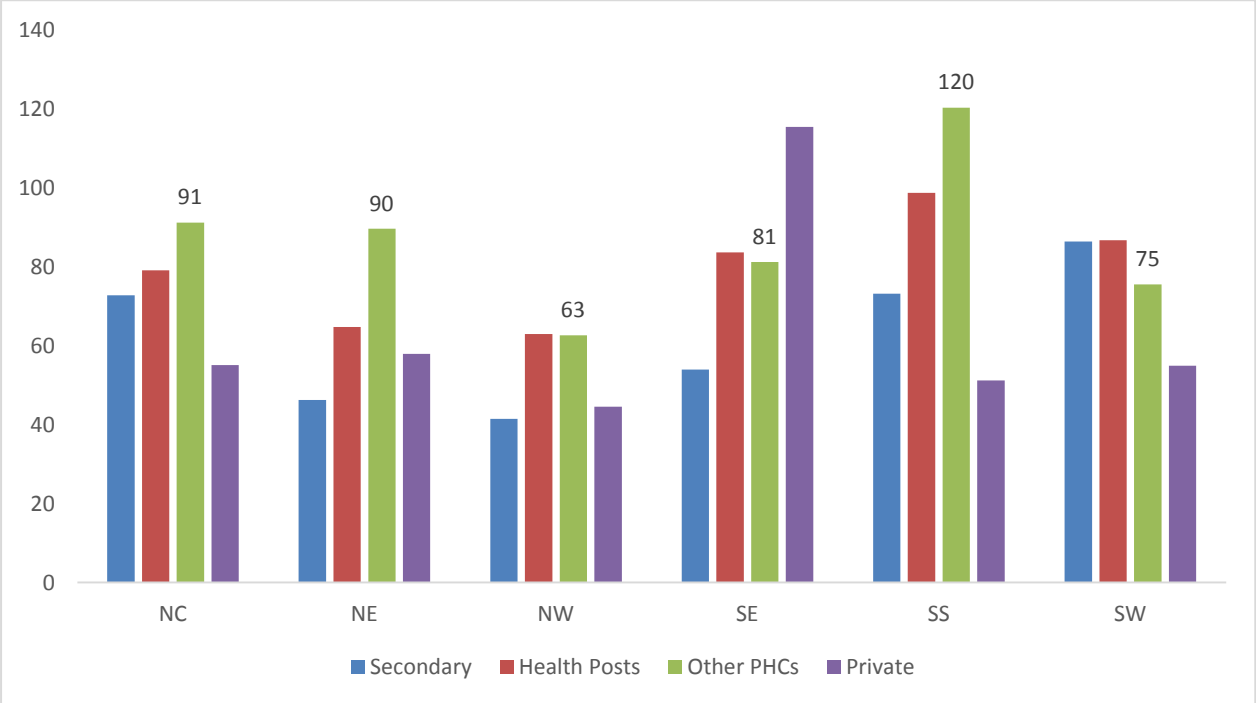


Figure 59: Proportion of PHCs Receiving In-kind Funding by Item Type



Facilities also report an average 2-3 months' salary delay although there is wide variation across regions (**Figure 60**).

Figure 60: Average Salary Delays across Regions (in Days)



The majority (77%) of facilities report charging user fees, especially at private and secondary facilities. User fees are predominantly collected for drugs or other commodities, delivery services and antenatal care in PHCs and health posts. The average total visit charge is N462 at PHCs compared with N1,839 at private facilities. Average drug charges per visit – the largest component of user fees – are N432 in PHCs and N1,090 in private facilities.

Table 11: Percent of Facilities Charging User Fees by Region

Facility Type	NC	NE	NW	SE	SS	SW	Total
Secondary	100%	89%	86%	100%	84%	83%	90%
Health Posts	83%	38%	45%	93%	64%	42%	60%
Other PHCs	88%	67%	64%	97%	79%	53%	74%
Private	100%	96%	95%	98%	100%	100%	98%
Total	***90%***	***69%***	***67%***	***97%***	***81%***	***60%***	***77%***

Table 12: Proportion of Facilities with User Fees, by Facility and Service Type

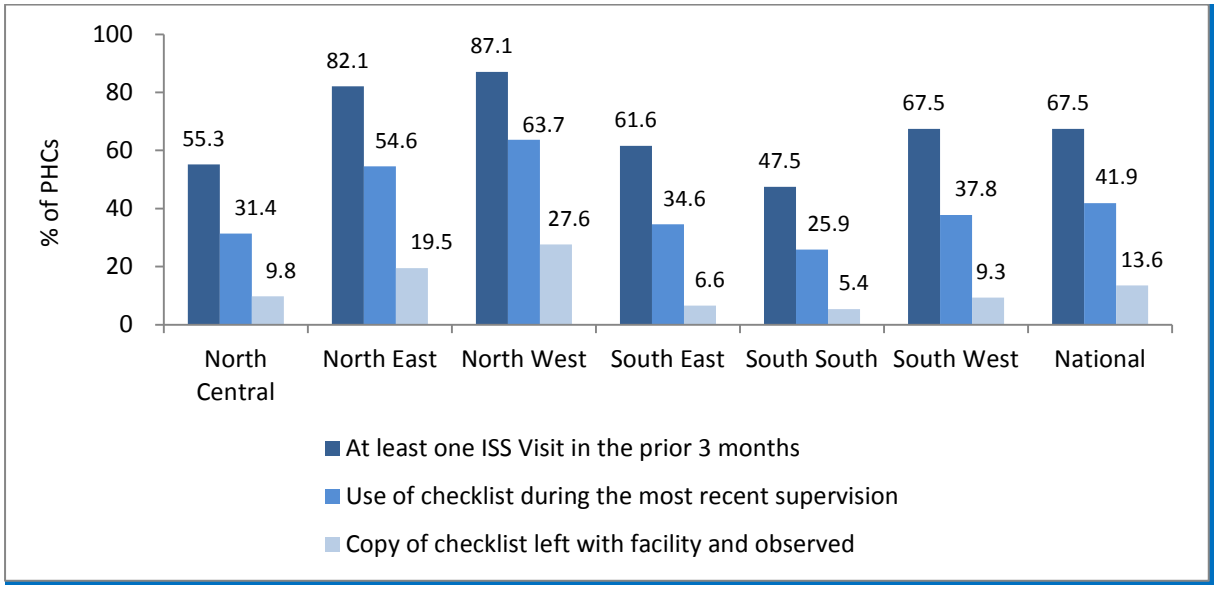
User Fees_Type	Secondary	Health Posts	Primary Health Facility	Private	Total
Child Immunization Services	3%	3%	4%	17%	5%
Delivery Services	47%	25%	40%	85%	44%
Drugs or other Commodities	84%	53%	65%	92%	68%
Laboratory Tests	83%	14%	27%	81%	35%
Family Planning Service	11%	7%	9%	59%	14%
Antenatal Care Service	36%	24%	35%	75%	39%
Outpatient Consultation	32%	23%	27%	70%	32%

4.7.3 Integrated Supportive Supervision

Integrated Supportive Supervision (ISS) is a harmonized supervisory system which uses a common tool (checklist) to assess performance and promote effective coordination at all levels of health care delivery. It is meant to improve quality of health services and provide the evidence base for effective planning. ISS visits are expected to hold quarterly. It is recommended/expected that a standardized ISS tool be used during each quarterly supervision visit to each health facility. It is also expected that a copy of the ISS tool used during the supervision visit be left with the facility to serve as evidence of the visit, for reference by the facility and to enable the administration of the health facility and any other evaluator to track changes in performance over time. Enumerators were asked to identify which health facilities hosted an ISS visit from the LGA-PHC in the last 3 months prior to the survey. Facilities who reported hosting an ISS visit were further examined to determine if a checklist was used during such visits and if a copy of the checklist or written feedback was

left behind after the visit. **Figure 61** shows the percentages of health facilities who hosted ISS visits from the LGA-PHC in the last 3 months arranged nationally and by geopolitical zone.

Figure 61: Percentage of Primary Health Facilities who Hosted an ISS Visit in the 3 Preceding Months by Geopolitical Zone



Nationally, 67.5% of PHFs hosted supervisory visits, with variations across the zones ranging from 87.1% in the NWZ to 47.5% in the SSZ. Use of checklists during the visits was significantly lower nationally (41.9%), and ranged from 63.7% in the NWZ to 25.9% in the SSZ. Very few facilities had copies of the checklist left with facilities that the enumerators were able to observe physically, from 27.6% in the NWZ, to 5.4% in the SSZ. The percentages of health facilities who hosted ISS visits from the LGA-PHC in the last 3 months prior to the survey, percentage that reported the use of checklist during the visit and percentage with observed copy of the checklist with the facility across States are presented in **Figure 62**, **Figure 63** and **Figure 64** respectively.

Figure 62: Percentage of PHFs that Reported at least one ISS Visit in the 3 Preceding Months by State

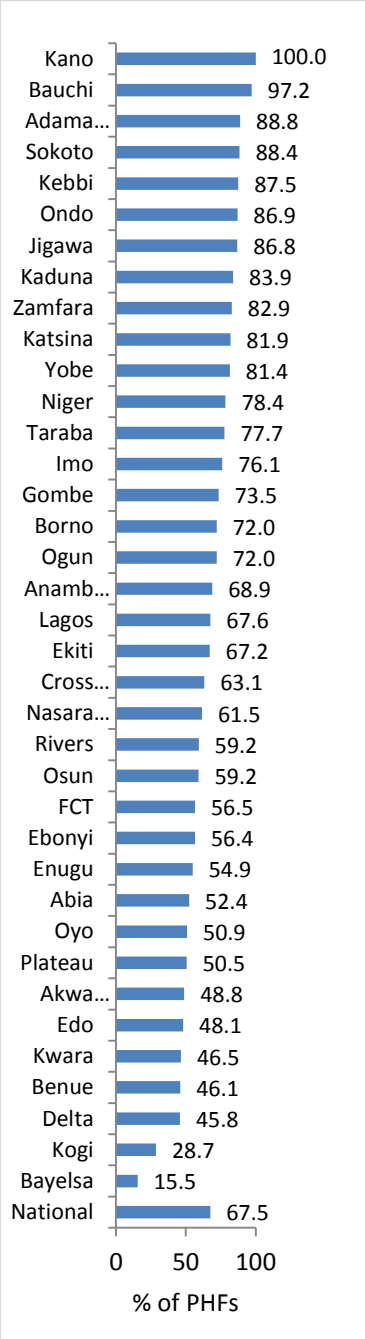


Figure 63: Percentage of PHFs that Reported Use of Checklist during the most recent ISS Visit by State

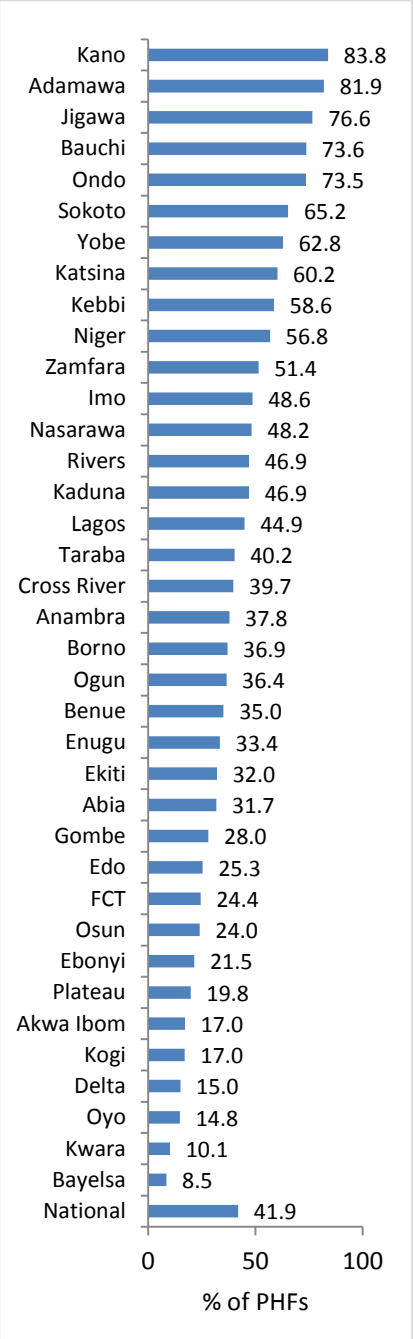


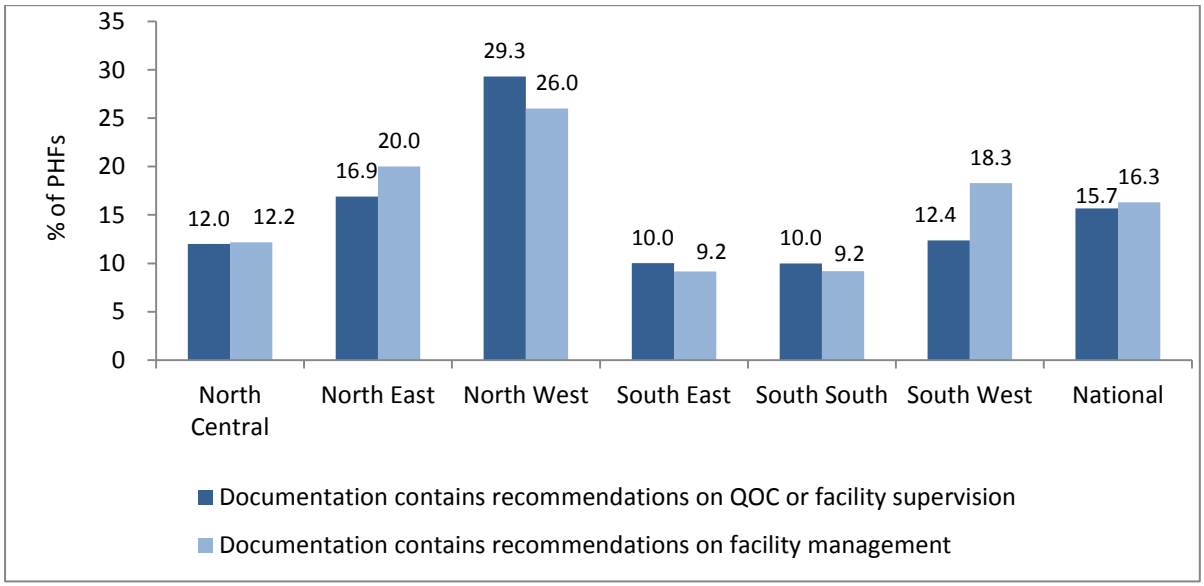
Figure 64: Percentage of PHFs with Observed Copy of ISS Checklist left with the Facility by State

There was significant variation among the States from 100% in Kano State to 15.5% in Bayelsa State. Instances of wide variation within individual States comparing ISS visits to health posts and visits to health clinics/centers were also observed (**Annex 42**). Examples include Taraba and Plateau States, which recorded ISS visits to 77.8% and 65.7% respectively of their health clinics/centers but paid no such visits to any of their surveyed health posts. In contrast, Kano State recorded visitations to all their health posts and health clinics/centers. Additional details are presented in **Annex 42** with findings dis-aggregated by State and by primary health facility type.

There was significant variation in percentage of health facilities that reported the use of checklist during the most recent ISS visit among the States from 83.8% in Kano State to 8.5% in Bayelsa State. There was also significant variation in percentage of health facilities that were able to produce a copy of the checklist used to during the most recent ISS visit among the States from 53% in Kano State to 1.2% in Rivers State.

For those facilities able to produce a copy of the checklist used during the most recent ISS visit, the ISS documentation was reviewed to give further insight as to the quality of the supervision, and to determine if the supervision attempted to address important issues that may have arisen or may have been discovered during the exercise. The result of this review is presented by Geopolitical zone in **Figure 65**.

Figure 65: Percentage of PHFs who Hosted an ISS Visit with Detailed Documentation in the 3 Preceding Months by Geopolitical Zone



Nationally, 15.7% of PHFs had ISS documentation that contained specific recommendations for how to resolve/improve an identified weakness for quality of care (QOC) or facility supervision, with variations across the zones ranging from 29.3% in the NWZ to 10% in the SEZ and SSZ. Documentation showing specific recommendations for how to resolve/improve an identified weakness related to facility management such as staffing, finances, general resources, HMIS data reports and records was a little higher nationally at 16.3%, and ranged from 26% in the NWZ to 9.2% in the SSE and SSZ. Additional findings on quality of ISS disaggregated by zones, States and facility types are presented in **Annex 43**.

Figure 66 shows percentage of facilities by State showing documentation that contained specific recommendations for how to resolve/improve an identified weakness for QOC or facility supervision. Also, **Figure 67** shows percentage of facilities by State showing

documentation that contained specific recommendations for how to resolve/improve an identified weakness related to facility management such as staffing, finances, general resources, HMIS data reports and records.

Figure 66: Percentage of PHFs whose ISS Documentation Contains Recommendations on QOC or Facility Supervision by State

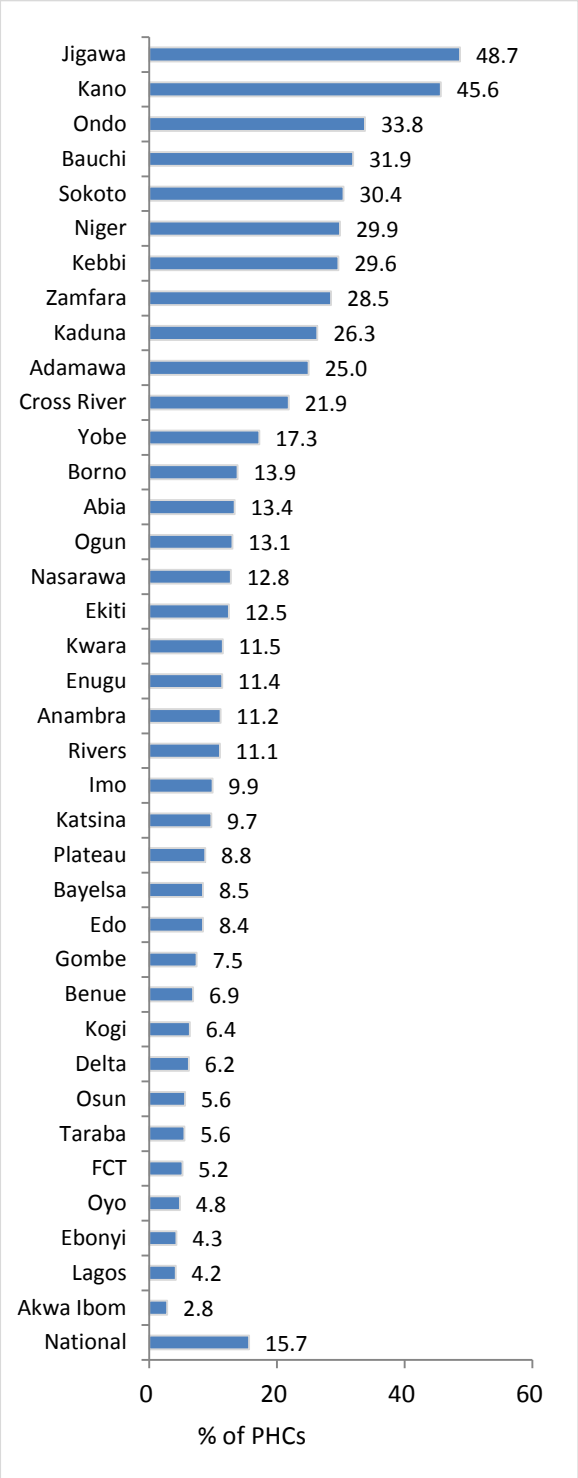
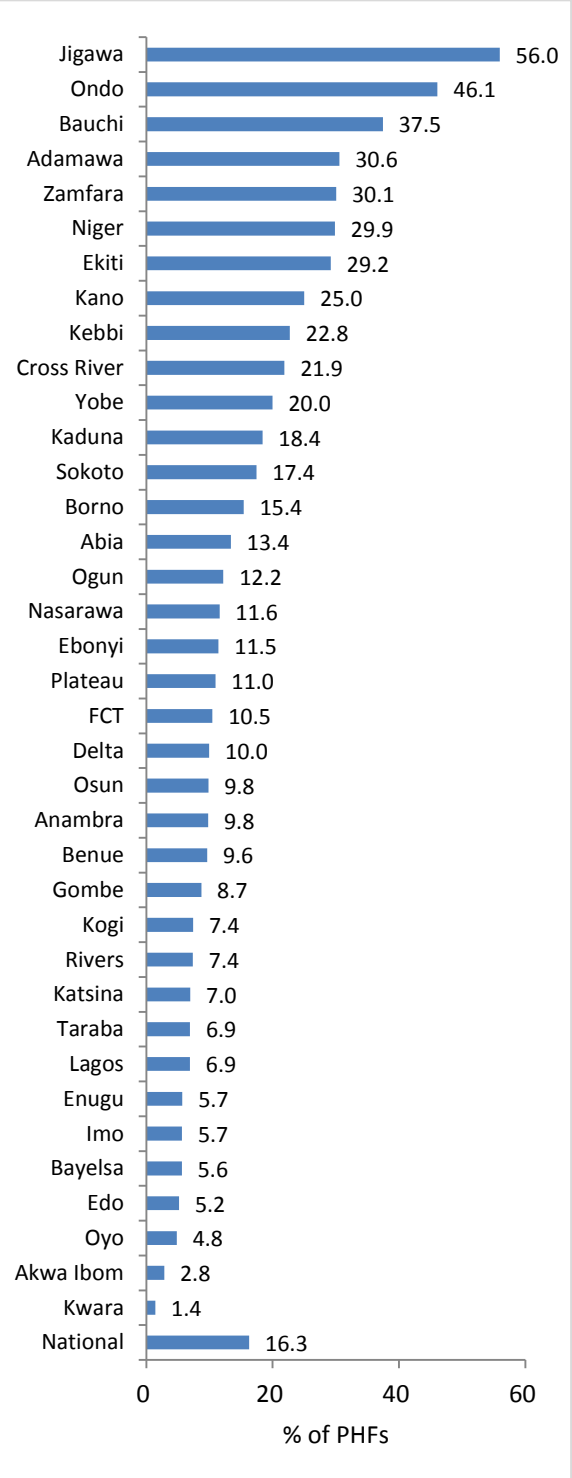


Figure 67: Percentage of PHFs whose ISS Documentation Contains Recommendations on Facility Management by State



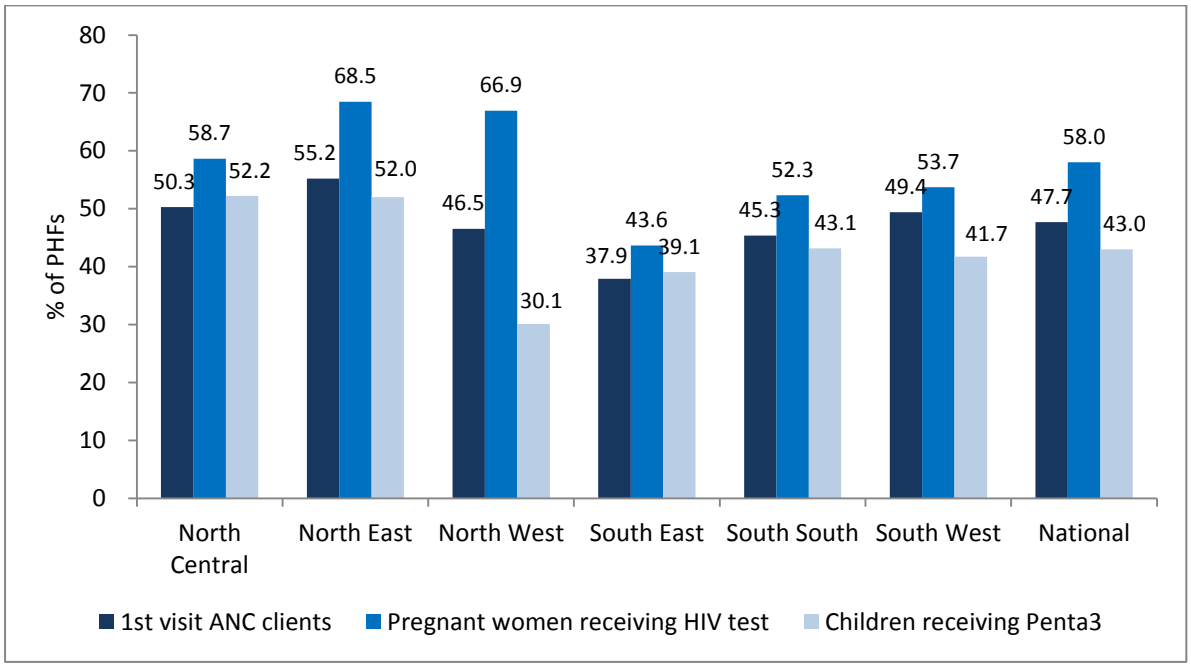
The results range from 48.7% in Jigawa State to 2.8% in Akwa Ibom State for **Figure 66** and from 56% in Jigawa State to 1.4% in Kwara State for **Figure 67**. This shows significant variations in quality of ISS across the States.

4.7.4 Health Management Information System

The National Health Management Information System (NHMIS) is meant to contribute towards achieving a unified, single system of information for health, capable of producing high quality data and serving a wide diversity of stakeholder data and reporting needs to support programmatic and policy decision making at the local, national and even global levels.

Enumerators compared source data (from registers) against compiled monthly (summary) reports for 3 months preceding the survey, and recorded for each month where source data and summary reports reconciled. **Figure 68** shows the zonal proportions of primary health facilities whose source data reconciled with their summary report submissions for the last quarter for three reporting categories: (1) first visit ANC clients; (2) pregnant women receiving HIV test; (3) children receiving Penta3.

Figure 68: Percentage of Primary Health Facilities Submitting Accurate HMIS Information (source data reconciled with summary reports for 3 months preceding the survey) by Geopolitical Zone



Nationally, the proportions of primary health facilities contributing relatively accurate summary reports to the NHMIS for each of the three reporting categories under review were 47.7% for first visit ANC clients; 58% for pregnant women receiving HIV tests; and 43% for Children receiving Penta3. The best performing zone for any category was the North East with 68.5% for pregnant women receiving HIV tests, while the least for any category was the NWZ with 30.1% for children receiving Penta3.

Figure 69, Figure 70 and Figure 71 show the proportions of PHFs whose source data reconciled with their summary report submissions for the last 3 months preceding the survey

under three reporting categories respectively: (1) first visit ANC clients; (2) pregnant women receiving HIV test; and (3) children receiving Penta3 respectively.

Figure 69: Percentage of PHFs submitting Accurate HMIS Information on 1st Visit ANC Clients by State

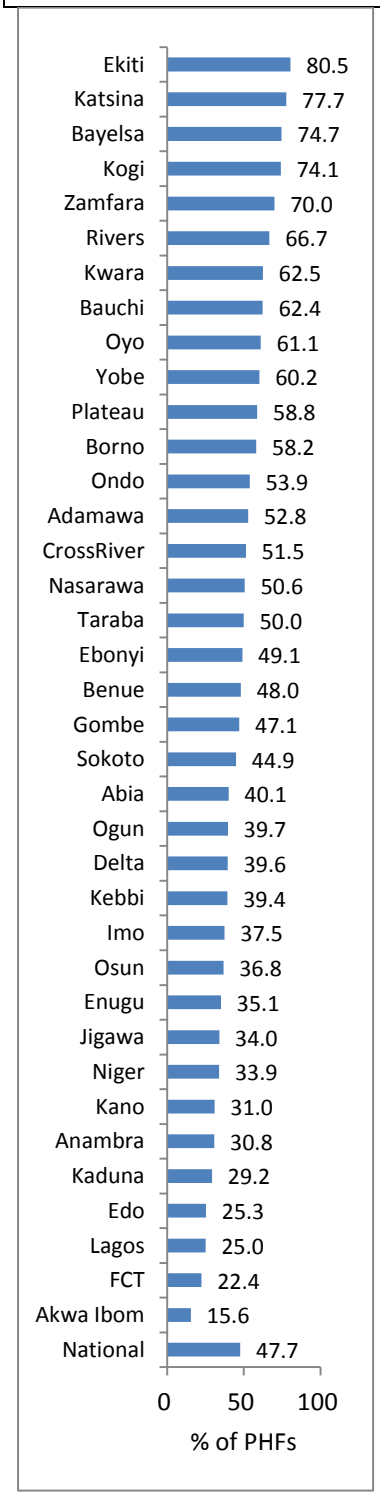


Figure 70: Percentage of PHFs submitting Accurate HMIS Information on Pregnant Women Receiving HIV test by State

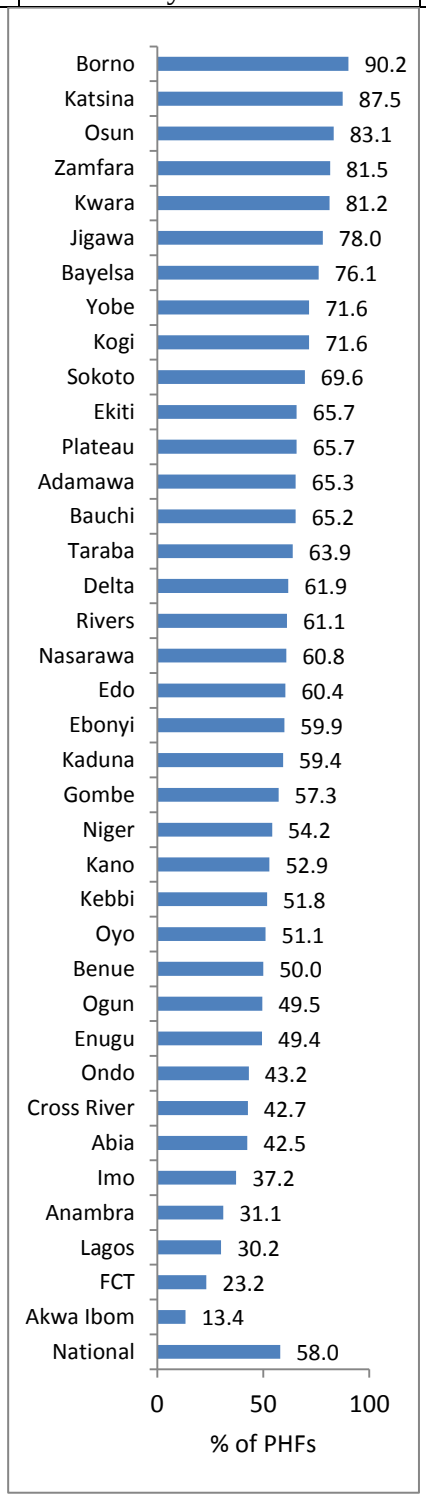
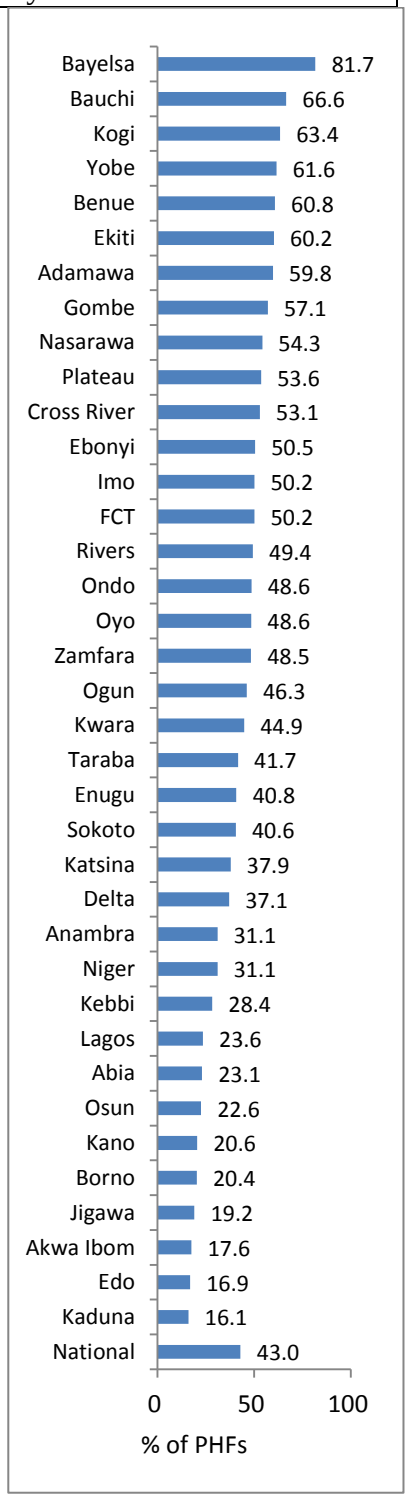


Figure 71: Percentage of PHFs submitting Accurate HMIS Information on Children Receiving Penta3 by State



Results show significant variation among the States, ranging from 80.5% in Ekiti State to 15.6% in Akwa Ibom State under category 1; from 90.2% in Borno State to 13.4% in Akwa Ibom State under category 2, and from 81.7% in Bayelsa State to 16.1% in Kaduna State category 3. Akwa Ibom State had the lowest percentage in each category, while more than half of the States of the Federation including the FCT had less than 60% of their primary health facilities reporting accurately under the three reporting categories. Additional findings are shown in **Annex 44**.

5.0 COMPARISON OF SELECTED INDICATORS BETWEEN PERFORMANCE-BASED FINANCING (PBF) AND CONTROL STATES

The Nigeria State Health Investment Project (NSHIP) is one of the health system reforms embarked upon by the Government of Nigeria. The project uses a Performance-Based Financing (PBF) approach in which individual health facilities, and the staff that work there, are rewarded on the basis of the quantity and quality of the services they provide. The funds earned by the facility are transferred electronically to a bank account controlled by the officer-in-charge and the chair of the ward development committee. The facility has substantial autonomy in how the funds are used. They can use up to half the funds earned as bonuses to the staff and can buy drugs and equipment, make repairs, conduct outreach, etc. with the rest. Supervision is carried out by LGA level staff who use a quantitative supervisory checklist to assess the quality of care.

Under NSHIP, the Performance-Based Financing (PBF) approach has been tested in 3 States: Adamawa, Nasarawa and Ondo. LGAs in the 3 project States were randomly assigned to (i) standard PBF – where payments are made directly to individual health facilities based on the quantity and quality of a set of services provided by each facility; or to (ii) Decentralized Facility Financing (DFF), in which a slightly smaller amount of financing, not linked to the quantity or quality of services provided, was also transferred to the bank account of the health facility.

In order to assess whether providing funds directly to health facilities (using the PBF or DFF approaches) is effective, a series of outcome variables from the 3 project States were compared with those in control States. The control states were neighbouring States that receive no additional support ("business as usual"). The three NSHIP states and their corresponding control states are:

Ondo - Ogun,
Nasarawa - Benue
Adamawa – Taraba

It is important to keep in mind the methodological limitations of this approach. It is possible that the NSHIP states were performing better at baseline and so the observed differences reflect existing differences in the states rather than the effect of decentralized financing. A formal impact evaluation of NSHIP is ongoing and results will be available in September, 2017.

5.1 Availability of Drugs, Basic Medical and Delivery Equipment

Three key SOML indicators are considered in this comparison. These are availability of drugs and basic medical equipment, quality of supervision, and clinical competence of providers. Availability of drugs is about 18% higher in the PBF states compared to the control states. Half of essential drugs were available in primary health centres in Adamawa compared to

25% in Taraba. In Ondo and Ogun States the proportions of essential drugs available were 43% and 36% respectively, while Nasarawa and Benue have 50% and 34%.

Basic medical equipment is mostly available in PBF states. Three quarters of health facilities in Adamawa compared with 23% in Taraba, 56% in Ondo compared with 50% in Ogun and 46% in Nasarawa compared with 32 % in Benue have basic medical equipment. The same pattern is observed for availability of basic delivery equipment.

Figure 72: Comparing Drug and Equipment Availability in Individual PBF and Control States using NHFS Data

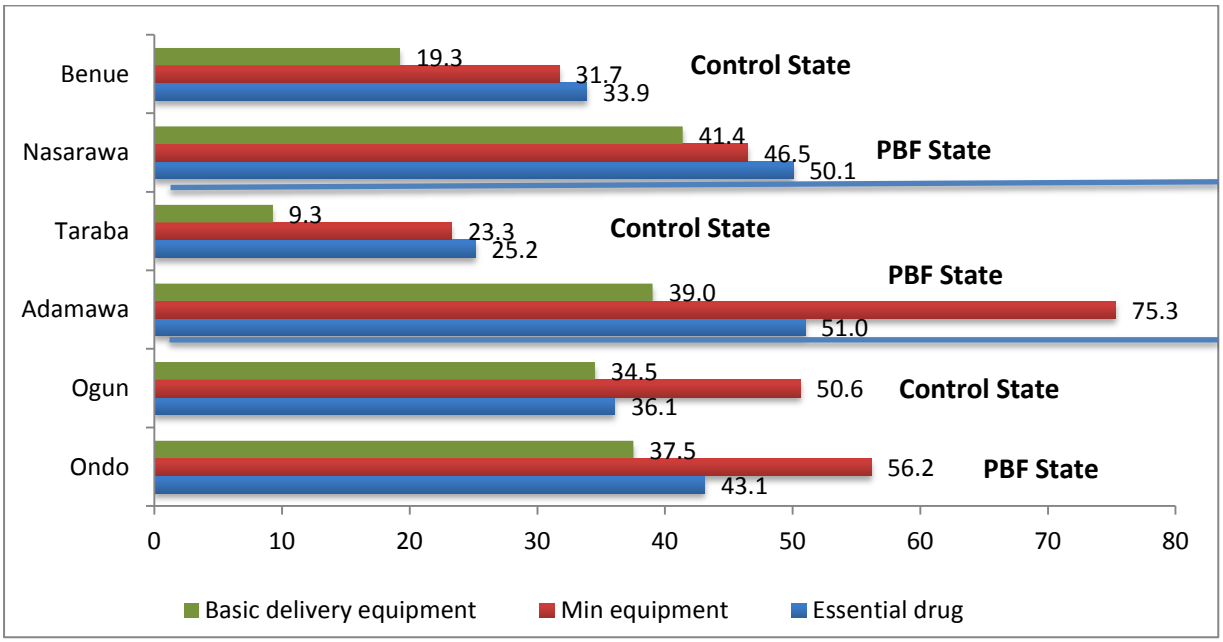
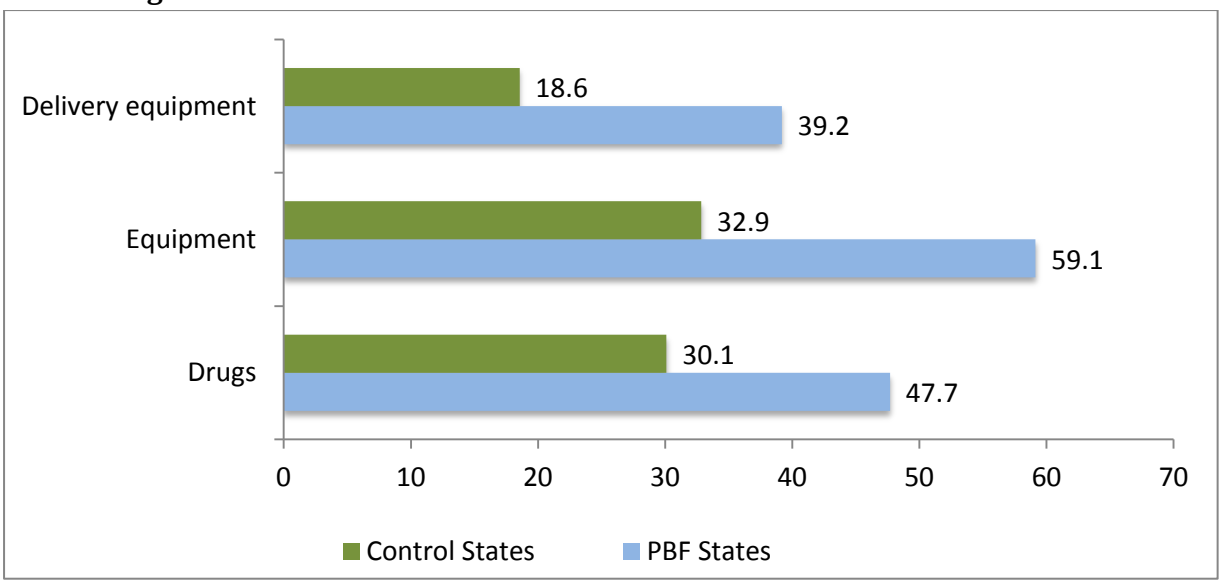


Figure 73: Comparing Drug and Equipment Availability in Combined PBF and Control States using NHFS Data



5.2 Quality of Supervision

The quality of supervision is central to improving the quality of health care. Integrated supportive supervision is expected to be carried out at least once in a quarter using a standard checklist. It is also expected that a written feedback should be given to the facility to facilitate implementation of recommendations made by the supervisor. Performance of PBF states in all the 3 indicators considered is better than the control states. Twenty eight percent of supervisory visits were documented in Ondo compared to only 9% in Ogun. The gap is even wider between Adamawa and Taraba, on one hand and Nasarawa and Benue on the other.

Figure 74: Comparing Quality of Supervision in Individual PBF and Control States using NHFS Data

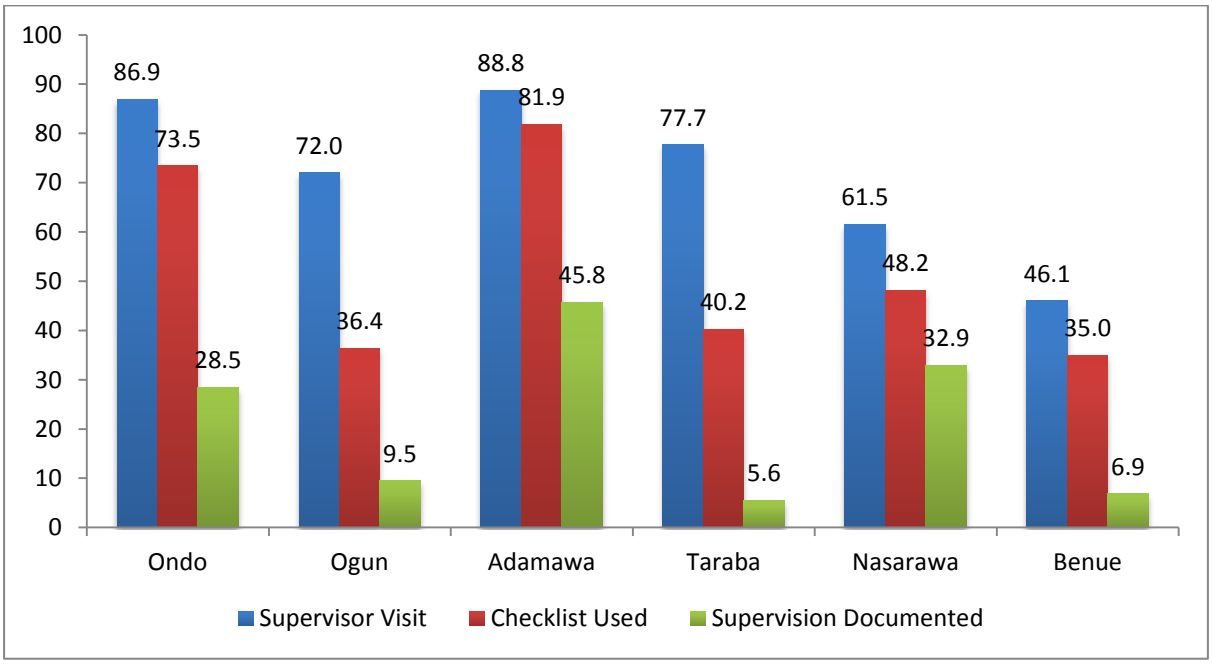
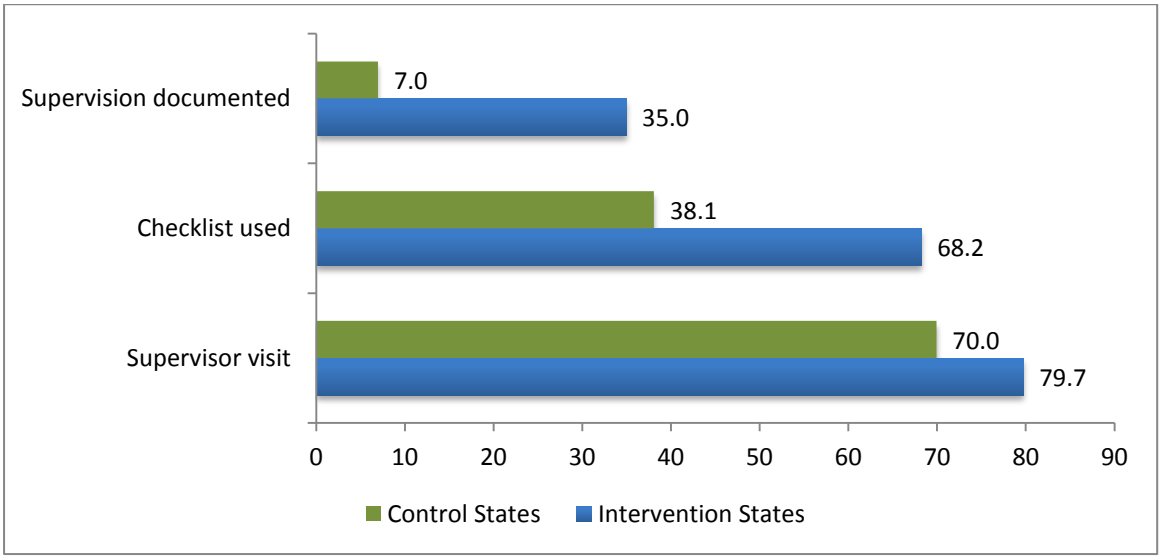


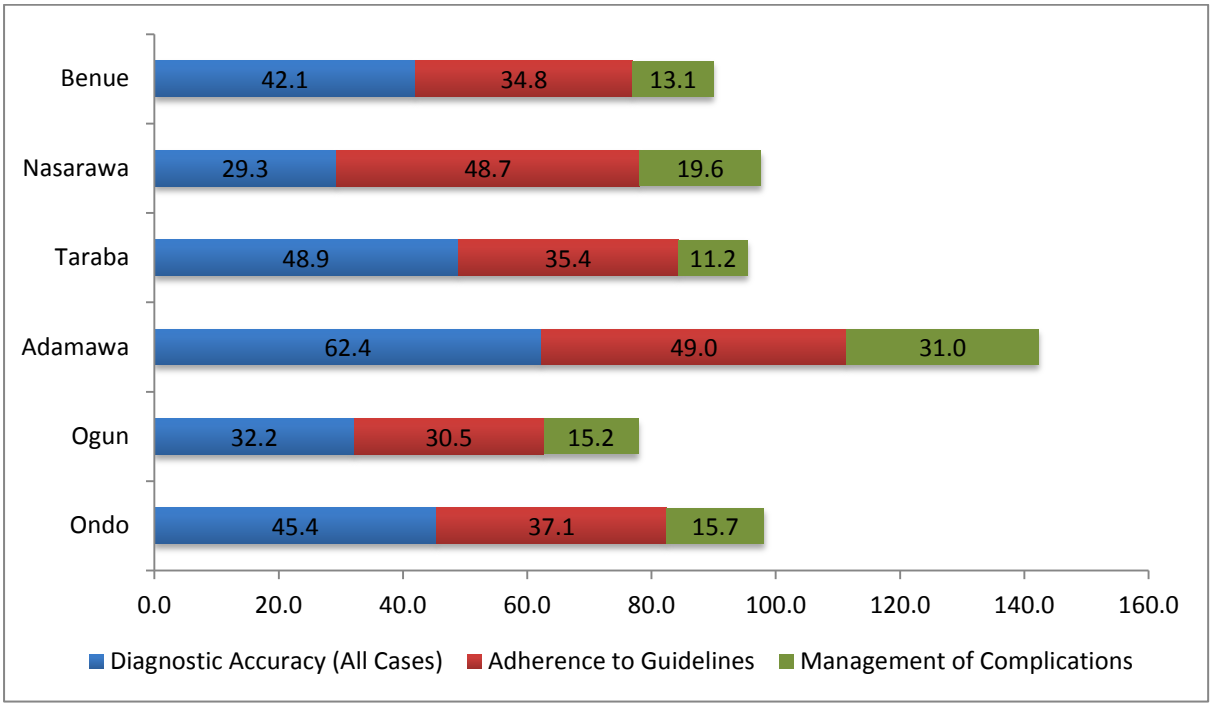
Figure 75: Comparing Quality of Supervision in Combined PBF and Control States using NHFS Data



5.3 Clinical Competence of Health Care Providers

Clinical competence was measured using 3 indicators namely diagnostic accuracy, adherence to guidelines and management of maternal and newborn complications. Diagnostic accuracy is significantly higher among health care providers in PBF states, except in Nasarawa state. Adherence to guidelines and management of maternal and newborn complications was better in in PBF states.

Figure 76: Comparing Clinical Competence in Individual PBF and Control States using NHFS Data



6.0 CHALLENGES OF THE SURVEY, MITIGATION AND LESSONS LEARNT

6.1 Challenges of Survey Implementation and Mitigation

The challenges encountered during data collection include harsh terrain and hard to reach areas; delays in completing some of the interviews especially at SHCs due to busy nature of the facilities; weather (spontaneous rainfall and high river tides) in States like Cross River, Bayelsa and Niger States all affected smooth movement of enumerators. Some States in the South South and Northern zones had large geographical areas with the attendant logistics challenges. The survey team improvised to overcome these challenges. For example, groups of enumerators were formed and accommodation provided at bases within geographically large States so enumerators could operate closer to the target health facilities. The challenges specific to this survey are enumerated as follows:

i. Administering case simulations (module 3) on doctors was sometimes tedious as they were too busy attending to clients being the only health personnel cadre carrying out outpatient consultation in secondary facilities.
ii. Challenges administering and/or completing the exit interviews at most of the facilities visited because: (a) some of the facilities were more of an outreach sites because of the remote location and are being used once-a-week for immunization purposes alone; (b) patient load was so low that no patient came to some of the facilities during the visit; and (c) some facilities referred their under-5 children to facilities that offered free health services within their locality.
iii. The sampling frame used for the selection of health facilities was not up to date. This led to high number of facilities replacement in various States
iv. Security challenges: (a) insurgency in the NEZ; (b) Fulani herdsmen attack of field personnel in Adamawa State; and (c) communal clashes in survey communities in Bayelsa and Rivers States.

Three key challenges were encountered during data management:

a. Lack of uniformity in the questionnaire coding. During the survey implementation, it was realized that the actual codes for special responses (e.g. don't know, other specify, not applicable) were not uniform across the survey questionnaire. It was also discovered that it would have been better if the record review section was embedded as one electronic form instead of having it presented as separate modules.
b. Facility ID and Facility Name at some point was a challenge because there was no uniformity with the way the type 1,type 2 and type 3 enumerators inputted the facility id and facility name during data collection. This made it difficult to merge facility data across the questionnaire when the datasets came in cumulatively. In order to overcome this challenge a filtering by State across each module was done and an 8-digit facility id (e.g. 01020301) was arrived at to differentiate the four categories of facilities surveyed in the datasets.

c. One other challenge of concern was the need for software upgrade on SurveyCTO application on the electronic devises. The continuous improvement of the questionnaire during the preparatory and early survey implementation phases led to the release of a newer version of the questionnaire on the server. Some enumerators failed to upgrade their devices during a certain required period and the datasets from such devices were navigated into a different server having the old definition of the questionnaire. This was done to prevent misaligned data during data extraction from the Server to Stata, which was the data management and analytical software used. Such datasets were filtered and fixed during preliminary data analysis

6.2 Lessons Learnt

Some of the lessons learnt from similar surveys were brought to bear during the implementation of the NHFS in the States. The lessons learnt from similar survey and the ones learnt specifically during NHFS are highlighted below:

6.2.1 Early Sensitization and Communication with Stakeholders

The SMOH, SPHCDA, HMB, MOLG and the other relevant stakeholders were informed about the objectives, methodology and time of implementation well ahead of survey implementation. This was done to get their buy-in and serve as early sensitization to avoid delay in implementation. Gatekeepers of communities where the sampled health facilities were located were similarly informed. Hanovia core team worked with World Bank team to achieve this.

6.2.2 Early Feedback on Data Quality

Feedback to field personnel on data quality after analyses contributed to overall quality of data from previous similar surveys. This led to revisits and call backs where results were not satisfactory. This also contributed to identification of sound enumerators and supervisors as well as weak ones.

6.2.3 Selection and Training of Personnel

Competent, well-trained enumerators and field supervisors constitute perhaps the most important factor for the success of the survey implementation. Hence, field workers were competitively selected; they are knowledgeable, experienced and mostly resides in the survey States. This was to ensure familiarity with the norms, language and culture of the respondents in the facility communities.

Training of personnel was rigorous and competitive. Comprehensive general training was given to supervisors and interviewers. It served as a screening process for skilled interviewers therefore; extra personnel were recruited for training to facilitate the selection of the best candidates. This also provided a cushion in the case of personnel withdrawal, misconduct or weak performance. During training, candidates were assessed through pre-and post-tests,

daily tests, observation by facilitators during role plays and questionnaire piloting. The best candidates that demonstrated personal integrity and other leadership skills were selected as field supervisors.

6.2.4 Continuous Modification of both the Manual & Electronic Version of the Questionnaires

The continuous modification of the questionnaire affected the dataset to an extent. Subsequently, we advise that a complete & final version of the questionnaire should be made available after the final pilot exercise. The inclusion of new questions necessitated the need for software upgrade on SurveyCTO server. While these was on-going, some field personnel who were working in far to reach areas failed to upgrade to the latest version of the questionnaire.

6.2.5 Uniformity in the Questionnaire Coding

During the survey we realized that the codes for these responses (e.g. don't know, other specify, not applicable) were not uniform across the questionnaire. Early arrival of the questionnaire could have resolved these issues.

6.2.6 Late Availability of the Survey Questionnaire

An early look at the questionnaire will help the survey firm suggest to the client the best possible way electronic questionnaires can also be developed with a better flow for enumerators to understand e.g. it was discovered that the records to be reviewed e.g. ANC, ART, TB, Suspect Malaria & PMTCT records came in as a different questionnaire of its own. During the questionnaire pilot, we discovered that some enumerators were not accounting for the services not offered in the facility. This was later discussed by the survey management team it was agreed to embed the five different questionnaires into one electronic form

6.2.7 Case Management with the Use of a Unique Identifier i.e. Facility ID and Facility Name

This became a major challenge considering the multi-layer's level of the questionnaire. During data management & cleaning, it became close to impossible linking a facility to another across the questionnaire.

7.0 DISCUSSION

7.1 Clinical Competence of Health Workers

7.1.1 Diagnostic Accuracy

Less than 50% (half) of all the health workers interviewed diagnosed all the clinical conditions assessed correctly. The worst proportion was observed for diagnosis of malaria with anaemia where only 12.5% (1 out every 10) health workers could boast of diagnosing malaria with anaemia correctly. Also of note was that the process indicators in malaria diagnosis, i.e. % history questions asked and examination observed, could not explain this finding when correlated. Malaria had the highest proportion of history questions asked and examinations elicited across all the health workers cadre, state and geopolitical zone. Also analysis of IMCI knowledge of assessment and diagnosis of malaria showed that larger percentage of health workers across the States and geopolitical zones surveyed had adequate knowledge in diagnosing malaria compared to other disease entities with higher diagnostic accuracies.

7.1.2 Adherence to Guidelines

Adherence to guidelines was generally poor among health workers. It was below 50% among nurses/midwives and CHEWs which not only form the frontline health workers but also constitute the vast majority of those who consult at the PHFs. Doctors, who are meant to be well above average, being the highest trained health workers, could only manage adherence to guidelines of a little over 50%. It could be argued that the poor history taking and physical examination ability (components of adherence to guideline) of health workers observed in this survey is responsible for their poor performance in the diagnosis of the three common childhood diseases observed.

7.2 Provider Knowledge of Protocol for Diagnosis and Treatment of the Sick Child

7.2.1 Management of Childhood Illnesses

Identification of danger signs and key symptoms is crucial for rapid appraisal of all children for prompt treatment and referral in PHFs. Findings showed that less than half on the IMCI danger signs and main symptoms were mentioned by health workers that see patients at the PHFs irrespective of whether they were trained in IMCI or not. However, the contrasting knowledge of these items between those with and without prior training in IMCI and the low proportion of health workers with such training showed that lack of training could be responsible for such a sub-optimal performance. The lack of adequate knowledge of IMCI danger signs and main symptoms poses threat to the health of children that are being managed in the PHFs as this could either lead to a delay in giving prompt treatment and referral or engagement of PHFs health workers in the management of illnesses that are beyond their level of care. Also, the knowledge of IMCI protocol management of Pneumonia

and Diarrhoea was unimpressive compared to malaria. This might be due to the training support received for the management of malaria in PHFs from vertical programmes like Roll Back Malaria unlike pneumonia and diarrhoea that had no similar programme support.

7.3 Provider knowledge of Protocol for eMTCT during ANC

7.3.1 Elimination of Maternal to Child transmission of HIV (eMTCT)

Analysis of data shows that the knowledge base of eMTCT providers on the programme was above average across the entire geopolitical zones. Nationally, 68% (approximately 7 out 10) of the requested questions were answered correctly. Further, findings show that majority of the eMTCT providers across all the surveyed States except Kebbi State were able to answer at least half of the protocol questions correctly. Borno State was not included in the assessment because it had no PHF with eMTCT provider. Katsina State ha d the highest proportion of eMTCT questions answered correctly while Jigawa State had the lowest. It should be noted that Katsina State had only one eMTCT provider in one of the selected facilities who was able to answer all the protocol questions correctly; thereby, giving the State the highest proportion of protocol questions answered correctly.

Nationally, almost all the providers interviewed felt that pregnant women should be tested for HIV while only about 1 out of 4 felt that their partner should also be tested. Also, more than 8 out of 10 providers mentioned that pregnant women should be tested at 1st ANC visit, start ARV immediately they tested positive and be on ART for life. However, only about 7 out of 10 providers mentioned that they should have a retest 3 months if the initial test was negative. It was also observed that fewer eMTCT providers were able to answer questions on care of newborns of mothers with HIV positive status.

7.4 Documentation of Care Process for ANC, Suspected Malaria in Under-5 Children and eMTCT Services

During service provision, it is important that the process leading to diagnosis and the treatment curative or preventive) offered to the client are well documented by the provider. Failure to do so may be interpreted that the service component was not delivered when quality of service is being audited.

7.4.1 Documentation of Antenatal Care (ANC)

Generally, the documentation process for key ANC service interventions was poor and this has implications for the quality of ANC services provided by health workers. The specific key ANC service components assessed for the quality of documentation are discussed below.

7.4.2 Documentation of Screening for STI /HIV/AIDS during ANC

The poor documentation of partners' HIV test results compared to the documentation of ANC clients' results is an indication that partners are not being offered HTS or there is low uptake when offered. Even though a woman is negative when tested, there is still the possibility of being infected during pregnancy if her partner's positive status remains unknown.

Also poor documentation of syphilis test results indicates that syphilis is being missed in women during pregnancy with an undesirable possibility of vertical transmission and its attendant congenital complications.

7.4.3 Documentation of Screening for Pre-eclampsia/Eclampsia/Anaemia in Pregnancy

As simple and basic as BP measurement and anaemia screening are, only 66% and 35% of the records had documentation for these respectively. This is unacceptably low if conditions that could lead to poor maternal outcomes are to be diagnosed and managed/referred early.

7.4.4 Documentation of Interventions for the Prevention of Malaria in Pregnancy

The recommendation for IPTp has only been recently reviewed from two doses of SP to three or more doses. However, the pre-printed ANC cards and registers presently in use at the HFs have no columns for recording more than two doses of SP. This is probably a contributing factor to the low documentation of IPTp3+ observed in this survey.

7.4.5 Documentation of Care Process for Under-5 Children with Suspected Malaria

Taking the history of main symptoms and checking for key danger signs are important steps in the assessment of a sick child including those suspected to have malaria. The overall poor performance and observed States and geographical zones differences in the documentation of the history of fever and lethargy, temperature reading and assessment for anaemia are not encouraging. The poor performance in the documentation for anaemia assessment correlates well with the poor diagnostic ability of malaria with anaemia by health workers that was also observed in this survey (Vignette).

7.4.6 Documentation of eMTCT Services for HIV-Positive Mother-Infant Pair

The monitoring and evaluation of the progress towards the achievement of the elimination of MTCT is hinged on the appropriate documentation of the care process of the service at the health facility.

7.4.7 Maternal ARV Prophylaxis/Long Term ART during ANC

HIV-positive mothers are to be placed on ARV prophylaxis or long term ART once diagnosed during ANC in order to reduce the risk of HIV transmission to their babies. If they were previously known HIV patients on ART before the pregnancy, they should continue with their drugs. The results of this survey showing the huge gap existing between those enrolled in eMTCT and those with documented evidence of receiving prophylactic ARV/long

term-ART during ANC and is capable of hindering the achievement of the objective of eliminating MTCT.

7.4.8 HIV Testing Service for HIV-Exposed Infants

Even though a high percentage of the infants of HIV-positive women whose records were reviewed had their HIV results documented, only a few of these results were documented to have been received by their caretaker.

7.4.9 ARV Prophylaxis (Nevirapine) and Cotrimoxazole Preventive Treatment (CPT) Service for HIV-Exposed Infants.

Only a few of the infants had documented evidence of receiving CTX at all or that if received, it was received at the ideal age.

7.5 Availability of Drugs and Equipment

7.5.1 Availability of Essential Drugs

Despite the fact that drugs represent an important link in the building blocks of the health system and are also central to patients' perception of quality service, essential drugs were unavailable in the about half of the SHFs and about 7 out of every 10 PHFs. These are the drugs needed to treat majority of the health problems which patients present with. The same trend was observed across the geopolitical zones.

7.5.2 Availability of Basic Medical Equipment

Due to lack of a published minimum package for the SHFs unlike PHFs, the same set of equipment was considered basic for both levels of HFs in this survey. Though the assessed medical equipment complement is too basic to be absent in PHFs let alone SHFs, which are supposed to be referral centres, they were available only in about 3 out of every 10 of PHFs and almost 6 out of every 10 SHFs. The only exception to this are SHFs in FCT, Katsina, Ogun, Plateau and Rivers States in which all the basic medical equipment complement were available.

7.6 Readiness of Health Facilities to deliver key Saving One Million Lives Interventions, STIs and TB Services

7.6.1 eMTCT services

Early Infant Diagnosis (EID) services is strategic to eMTCT interventions and it is useful in determining the virological status of infants of HIV positive mothers usually within six to eight weeks of life. Nationwide, about one out of 10 PHFs and about 5 out of 10 SHFs offered EID on-site. There was a variation in proportion of PHFs that conducted test for EID on-site across States. This ranged from none in Yobe State to four out of ten PHFs in Abia

State and FCT respectively. The poor availability of EID services across health facilities deserves attention. Sustained availability of maternal ARVs and Nevirapine syrup are essential for ensuring that the programmatic target of zero MTCT is achieved. Lack of these drugs in about half of HFs offering the service in this survey reveals a weakness in the implementation of the eMTCT programme and calls for urgent measures to correct this anomaly.

7.6.2 Family Planning Services

Family planning is a key component of primary health care. Availability of a wide range of family planning commodities in the PHFs offers clients the flexibility of choice after counselling and also ensures continuity of use by client of a preferred method. Therefore, the observed unavailability of a wide range of family planning commodities at the PHFs in this survey may have a negative impact on client satisfaction with family planning service at that level.

7.6.3 Delivery Services

The readiness of a HF to prevent or manage maternal and newborn complications depends greatly on the constant availability of life-saving drugs and supplies, basic delivery equipment and functional newborn resuscitation equipment. These should be available in all the HFs providing any delivery service as they are essential for basic emergency obstetric care (BEmOC). However, nationally as well as across the geopolitical zones, only the availability of sterile latex gloves was above 50%. As important as MgSO4 and oxytocin are in the prevention of maternal deaths, they were unavailable in the vast majority of PHFs surveyed.

7.6.4 Sick Child /Malaria Services

Malaria is endemic in Nigeria and is responsible for a high percentage of death of children under-5. The national malaria policy recommends that malaria should be confirmed with a test before the use of antimalarial drugs. Therefore it is pertinent that all HFs have the capacity to test for malaria either with the use of RDT or microscopy. Inability of HFs to conduct malaria test is inimical to the implementation of the policy. A few States still have low capacity for malaria test in their HFs.

7.6.5 Ante-natal Care Services

ANC services focus on care of women in pregnancy with the aim of ensuring positive health outcomes for mothers and newborns. Although 8 out of 10 PHFs in the country offer ANC services, this is below expectation as all PHFs are expected to provide ANC services. Enhancing the capacity of all health facilities to provide ANC services will improve access to maternal health services with the attendant positive effect on the nation’s maternal health indices.

7.6.6 Sexually Transmitted Infection (STI) Service Availability and Readiness

Treatment of STI is considered as one of the essential services that should be provided as primary care in primary health facilities in Nigeria in order to bring health to doorsteps of the citizenry; however findings from this survey showed that only about half of the primary health facilities rendered STI services. This was found to be lower in some states of the country. Also very few PHFs rendering this service could boast of diagnostic facilities, as indicated by only 6% with rapid test kits for syphilis, and prescription treatment, as indicated by paucity of tracer drugs, for the appropriate management of the disease. The findings also revealed that STI diagnosis and treatment services were mostly found in SHFs which are sparse across the country and are expected to be referral sites for complicated cases. In addition, the wide differences between the proportion of facilities providing STI treatment services with minimal or without diagnosis services in some states like Kano,Ogun and Bauchi states, also infer high use of empirical or syndromic management of sexually transmitted infections in PHFs in those states. These findings pose risk of high transmission of the STI in the population by increasing the number of ambulating untreated or poorly treated STI cases in the country.

7.6.7 Tuberculosis Service Availability and Readiness

Community partnership and ownership are identified as a key component of stop TB initiative in combating TB. Efforts are being geared towards community linkages with TB diagnosis and treatment centres and this could only be achieved if the PHFs that are closed to the door step of the citizenry are equipped and made ready to link up with community in providing TB services. However, as only a small proportion of HFs at the primary health care level in the country (19.6%) and across the zones and states were found to be offering TB services, many case of the disease may continue to evade detection. Essential ingredients needed to offer quality TB services include specific guidelines, diagnostic capacity and quality assured drugs among others. Availability of these in the HFs providing the service was generally poor as guidelines were available in less than half of HFs while TB microscopy and trained microscopist were available in about half of the HFs. Also, the survey findings showed that only 6 out of every 10 PHFs surveyed in the country could boast of availability of first line TB drugs. The figures were worse in Plateau, Akwa Ibom, Niger and Kwara, where less than 3 out of every 10 facilities reported availability of first line drugs. The drugs were found to be more readily available in SHFs compared to PHFs in most of the states.

7.6.8 Infection Control

Waste management practices were found to be generally poor despite a high proportion of health facilities with sharp boxes and waste bins. Though disposal of sharps was relatively better managed than that of medical waste, having less than a third of health facilities being able to properly dispose their sharps and less than a quarter with sharps visible in the storage location prior to final disposal means that health workers in these health facilities are exposed to the hazard of sharp injury and associated risk of transmission of diseases such as HIV/AIDS, hepatitis B and viral haemorrhagic fevers. Lack of basic hand washing capacity

observed in about a third of health facilities in this survey signifies a high risk of nosocomial infections in those settings.

7.6.9 Provision of Immunization Services

One of the key objectives of the primary health care plan at inception was to implement the Expanded Program on Immunization (EPI). About half of Nigerians live in rural areas where health indices are generally poor. Primary health facilities are the closest to the people and have greater reach especially among rural population. The NHFS data show that availability of vaccines and storage capacity at PHFs were very poor. Only 3 States had average supplies of 70% for each type of vaccine. This has implications for achieving the desired goal of reducing infant and child mortality, as many children still die from vaccine preventable diseases.

7.6.10 Availability of Skilled Birth Attendants

Although the results of this survey showed that skilled birth attendance increased greatly when CHEWs were included as SBAs during analysis, it should be noted that majority of the CHEWs might not have been trained to proficiency levels to be considered SBAs. Therefore, the finding illustrates the gap between SBAs and potential SBAs that could be filled if the Task-Shifting and Task-Sharing Policy for maternal and child health in Nigeria is properly implemented. However, the argument remains whether we want CHEWs to be given the minimal training required for them to be included among SBAs or not.

7.7 Management

7.7.1 Financial Management

Most health facilities did not keep records of income and expenditure. Even in instances where expenditure records were kept, there were major gaps in accuracy. These findings are symptomatic of why it is difficult to track financial resources from government to health facilities and expenditure.

7.7.2 Health Care Financing

Only a few PHFs (about one third) received any cash grants to meet their operational costs. Though government at the three levels (federal, state and LGA) insist that care at the primary level is free for all citizens, personnel at the primary level improvised by charging user fees with about 75% of PHCs charging such fees. The average fee charged for a child is ₦462 in PHCs and ₦1,090 in private facilities. This does not include transportation costs. These amounts may seem small but when the average income, weak economic situation and opportunity cost of the time taken to seek healthcare are considered, it is not surprising that access is constrained such that the median national average number of patients seen per PHC

in the 3 months preceding the survey is 46.7. This translates to less than 1 patient per PHC per day.

7.7.3 Integrated Supportive Supervision

Though majority of PHFs received ISS visits during the period under review, a standard tool or checklist was used only in less than half of the visits. Hard copies of the checklist were left with the facilities for future reference and to track changes over time in even less instances. Furthermore, health posts were deliberately overlooked in some States, suggesting a limited understanding of the major objectives of ISS by those health officials. If the objectives of ISS are to be met, it requires the full inclusion of health facilities at all levels.

7.7.4 HMIS

The maintenance of data accuracy from the service delivery point throughout the HMIS has great implication for the quality of decisions that are taken based on the data. The high level of disparity between the data sources and the monthly summary reports found in a substantial proportion of health facilities in this survey is a pointer to a weak HMIS which in turn reduces the confidence reposed in it by programme managers and policy makers.

8.0 SOML QUALITY OF CARE (QoC) INDEX

In line with the SOML-PforR commitment to improving the quality of care at health facilities nationwide, the FMOH will provide performance disbursements to States (under DLI 2) based on the quality of services provided at primary health care level. This will be determined by the results of each year's NHFS. A quality of care (QoC) index has therefore been developed for objective scoring and calculation of rewards.

8.1 Indicators and their Measurements

The agreed quality of care indicators in the SOML Project Appraisal Document (PAD) were followed. Five key indicators were included in computing the index. These are i) clinical competence, ii) availability of drugs and basic equipment, iii) readiness to provide key SOML interventions, iv) supervision, and v) financial management. Described below is how scores were calculated.

8.1.1 Clinical Competence

Clinical vignettes were used to assess the competence of health care providers in the NHFS. The vignettes were designed to measure knowledge about specific clinical conditions or to assess providers' skills in performing the necessary tasks needed to diagnose and care for a patient. One of the enumerators acted as a "patient" (or parent of a patient) and presents the provider with specific symptoms for each of the five cases simulated. For example, the surveyor would say:

"Good morning (afternoon) doctor. I am the mother of a 13-month-old boy. His name is Noel. My son has diarrhoea."

"Please manage the patients like you would, your usual patients, i.e. ask history questions, tell us what systems you would examine, what tests you would request, make preliminary diagnosis, prescribe treatment and provide the patient any health information as necessary. You should not ask for any test that you cannot do or prescribe any medicines that you do not think the patient can get locally. Everything should be just as you would attend to your usual patient during a regular consultation."

The health worker would then ask questions and the enumerator would provide the information requested. For example, if the health worker asked, *"has there been any blood in Noel's stool?"* the enumerator would say *"yes there has been some blood."* Similarly, the surveyor would provide information related to physical examination or laboratory tests.

The health worker's competence was measured from responses to the vignettes using 3 indicators: diagnostic accuracy, adherence to guidelines and ability to manage maternal and newborn complications.

Diagnostic accuracy: This is calculated as the average proportion of correct diagnoses provided in the five case studies by clinical staff. To obtain the diagnostic accuracy for each clinician, the total number of correct diagnoses by a clinician is simply divided by 5 and

multiplied by 100. For example, if a clinician correctly diagnoses 3 cases out of 5, his diagnostic accuracy is calculated as

$$\text{Diagnostic accuracy} = \frac{3}{5} \times 100 = 60\% \quad (1)$$

Diagnostic accuracy is calculated for each clinician interviewed. The average of correctly diagnosed cases for all clinicians is then derived for each health facility. To calculate the state average, we divide the sum of diagnostic accuracy for each facility by the total number of facilities surveyed in the state.

Adherence to guidelines: measures the extent to which providers follow protocol during history taking and physical examination, and in recommending laboratory tests. It was measured as the unweighted average of the share of relevant history taking questions, physical examinations and laboratory tests adhered to by a health worker in the management of a case. The proportion of **history taking questions** is computed as the average number of relevant clinical questions asked for each of the 5 cases. The relevant history taking questions for each case were identified using protocols for management of such cases.

Example:
There are 6 relevant history questions for acute diarrhea with severe dehydration. These are:

i. Duration of diarrhea
ii. Frequency of diarrhea
iii. Whether or not there is blood in the stool
iv. Whether or not the child is vomiting
v. Whether or not the child is breastfeeding well
vi. Whether or not the child has abdominal discomforts/cramps

If a provider asks 5 out of the 6 relevant history questions for acute diarrhea with severe dehydration, the score will be calculated as

$$\text{History questions} = \frac{5}{6} \times 100 = 83.3\% \quad (2)$$

The proportion of physical examinations carried out and laboratory tests are also calculated in a similar way. Using acute diarrhea with severe dehydration as example, if a clinician performs 2 out of 5 recommended examinations and requests for 1 out of 3 laboratory investigations, then

$$\text{Examination score} = \frac{2}{5} = 40\% \quad (3)$$

$$\text{Lab test} = \frac{1}{3} \times 100 = 33.3\% \quad (4)$$

Adherence to guideline is then calculated as the average of history score, examination score and laboratory test score.

$$\text{Adherence to guidelines} = \frac{History + Examination Score + Lab Test}{3} \quad (5)$$

$$\text{Adherence to guidelines} = \frac{83.3\% + 40\% + 33.3\%}{3} = 52.2\% \quad (6)$$

Management of maternal and newborn complications: this is the unweighted average of competence in the management of maternal and neo-natal complications namely post-partum hemorrhage and birth asphyxia. It relates to the share of relevant history taking, physical examination and treatment actions taken. These were calculated in the same way as the adherence to protocols.

Example:
If a health worker asks 9/13 important history questions for post-partum hemorrhage, carried out 4/7 of the relevant physical examinations and takes 2/4 of necessary treatment action, management of PPH complications is calculated as

Management of PPH = (9/13 + 4/7 +2/4)/3 = 58.8 (7)

If the same health worker was able to carry out 3/4 required physical examination, asks 5/7 history equations and takes 2/3 treatment actions, management of birth asphyxia is calculated as:

Management of birth asphyxia = (3/4 + 5/7 +2/3)/3 = 71% (8)

The health worker's ability to manage maternal and newborn complications is therefore the average scores for both PPH and birth asphyxia (65%).

The provider's clinical competence is the average of his/her scores for diagnostic accuracy, adherence to guidelines and management of complications.

Clinical competence = (52.2% + 60% + 65%)/3 = 59% (9)

8.1.2 Availability of Drugs and Basic Equipment

Availability of drugs was measured as the proportion of priority drugs for women and children, which were available and unexpired at the facility on the day of the survey. The list of priority drugs was based on NPHCDA's list of essential drugs contained in the minimum standards for primary health care in Nigeria. This list takes into account the facility type to accommodate the fact that drug availability varies by facility type. The officers-in-charge of

the pharmacy at health facilities were asked if drugs on the list were available. If the drugs were reported available, enumerators asked for samples of the drugs to be seen. They will then confirm whether or not the drug has expired on the day of the survey.

Example:
If the officer-in-charge of a health center reported that 24 out of the 30 listed drugs were available, and the enumerator observed that only 18 of these are unexpired, drug availability for that facility is calculated as

$$Drugs = \frac{18}{30} \times 100 = 60\% \quad (10)$$

This means that only 60% of essential drugs are available at the facility. Drug availability for each State is calculated as the average of drug availability for all facilities surveyed in the State.

Table 13: List of Essential Drugs Used in the Computation of Drug Availability

	Health Post	**Health Clinics/Health Center/Secondary Health Facilities**
1	Aspirin or paracetamol tab (Adult)	Aspirin or paracetamol tab (Adult)
2	Folic Acid or combined ferrous and folic acid	Folic Acid or combined ferrous and folic acid
3	Ferrous or combined ferrous and folic acid	Ferrous or combined ferrous and folic acid
4	Paracetamol syrup/suspension (Children)	Paracetamol syrup/suspension (Children)
5	SP/Fansidar	SP/Fansidar
6	Artemether+lumefantrine (AL 1-4) OR Artesunate+Amodiaquine (AA 1-3)	Artemether+lumefantrine (AL 1-4) OR Artesunate+Amodiaquine (AA 1-3)
7	Albendazole/Mebendazole	Albendazole/Mebendazole
8		Diazepam injection
9		Phenobarbital tablet
10		Atropine injection
11		Amoxicillin tablet/capsule/dispersible tablet (250 mg/500mg)/125mg)
12		Benzathine Penicillin injection
13		Benzylpenicillin injection
14		Co-trimoxazole tablet syrup
15		Erythromycin tablet
16		Gentamycin
17		Streptomycin injection
18		Metronidazole tab
19		Rectal artesunate or Artesunate injection or Quinine injection
20		Magnesium sulphate injection
21		Misoprostol tablet
22		Oral Rehydration Salts(or Oral Rehydration Salts with zinc)
23		Zinc (or Oral Rehydration Salts with zinc)
24		Oxytocin injection
25		Chlorpromazine injection
26		Beclomethasone inhaler
27		Salbutamol inhaler
28		Calcium gluconate injection
29		Vitamin A (retinol) capsules
30		Antibiotic eye ointment/eye cream for newborn

Availability of basic medical equipment was measured as the full complement availability of the following pieces of equipment in functioning order:

i. Thermometer
ii. Stethoscope
iii. Blood pressure apparatus
iv. Weighing scale (adult, child or infant)
v. Examination light

All the equipment must be owned by the facility. Equipment owned by individuals but used for official purposes were not counted. The equipment must also be observed and functional by the enumerator. Availability of basic medical equipment was calculated as either yes or no depending on whether the facility had all 5 pieces of equipment and they were all functional.

Table 14: Example on the Measurement of Availability of Basic Medical Equipment in Health Facilities

Equipment	**Availability (yes=1, no=0)**	**Functionality (yes=1, no=0)**	**Availability (yes=1, no=0)**	**Functionality (yes=1, no=0)**
	Facility 1		**Facility 2**	
Thermometer	1	1	1	1
Stethoscope	1	1	1	1
Blood pressure apparatus	1	1	1	1
Weighing scale (adult, child or infant)	1	0	1	1
Examination light	1	0	1	1

Facility 1 will have a score of zero since two of the items considered are available but not functional while facility 2 will have a score of 1 because all the items are available and functional. Availability of basic equipment in a State is calculated as the total number of facilities with a score of 1 divided by the total number of facilities surveyed. For example, if 60 out of 80 public facilities sampled in a State have a score of 1 for basic equipment, availability of equipment for the state is 75%. Therefore,

$$\text{Drug and equipment availability} = \frac{60 + 75 + 74.7}{3} = 69.9\% \quad (11)$$

8.1.3 Readiness to Deliver Key SOML Services

Five key SOML services were considered in calculating this index namely immunization, antenatal care, skilled birth attendance, family planning and outreach services. Readiness to provide a service was defined as the availability and functionality of items required to deliver the service. We calculated the proportion of facilities that reported available and functional

items. These proportions were averaged for all the items required to provide each service. The items needed for each type of service are listed below:

Readiness to deliver Immunization services: was measured as the availability of the following items i) auto disposable syringes, ii) vaccination cards (blank), iii) register, iv) cold box, and v) safety box. Readiness to deliver immunization services was calculated as the average proportion of facilities where availability of these items were reported.

Readiness to provide antenatal care: was measured as the availability and functionality (where applicable) of the following i) fetoscope, ii) ANC, cards, iii) EID test kits, iv) iron tablets, v) ANC registers, and vi) magnesium sulphate. Readiness to deliver ANC services was calculated as the average proportion of facilities where availability of these items were reported.

Readiness to provide skilled attendance at birth: was measured as the availability and functionality (where applicable) of the following i) partograph, ii) sterile cord clamp, iii) sterile scissors, iv) delivery bed, vi) oxytocin, vii) disinfectant to clean perineum, and viii) resuscitating equipment (bag and mask)

Readiness to provide outreach services: was measured as the average proportion of facilities that participated in the most recent bi-annual MNCH outreach and those that provided vitamin A during the most recent outreach.

Readiness to provide family planning services: was measured as the average proportion of facilities where i) condoms, ii) IUCG/implants, iii) pills, and iv) injectables were available.

For each of the 5 domains described above, the proportion of facilities where availability of items and functionality were reported is calculated. The average is then taken for all items in each domain. Readiness to provide key SOML services is calculated as the average of the 5 domains.

Example on readiness to provide immunization services:
If 60/80 public health facilities had syringes, 70/80 had blank cards, 75/80 had registers, 65/80 had a cold box, and 75/80 had a safety box. Then

Readiness to provide immunization services =

$$\frac{75\% + 87.5\% + 93.7\% + 81.2\% + 93.7\%}{5} = 86.2\% \quad (12)$$

Example on readiness to provide family planning services:
If 75/80 facilities had condom, 50/80 had IUCD or implants, 60/80 had injectables and 54/80 have pills, then

Availability of family planning commodities = $\frac{\left(\frac{75}{80}+\frac{50}{80}+\frac{60}{80}+\frac{54}{80}\right)}{4} = 74.7\%$ (13)

If readiness to provide ANC for the facility is 40%, readiness to provide skilled birth attendance is 50%, and readiness to provide outreach services is 60%, then

Readiness to provide key SOML intervention =

$$\frac{86.2\% + 40\% + 50\% + 60\% + 74.7\%}{5} = 62.2\% \quad (14)$$

8.1.4 Quality of Supervision

Integrated Supportive Supervision is expected to hold quarterly using a standard tool (checklist) to assess performance and promote effective coordination at all levels of health care. It is expected that a copy of the checklist used during the supervision should be left with the facility as evidence that the supervision took place and also to document recommendations made by the supervisor in order to track changes in performance over time. This indicator was measured for primary facilities only.

Quality of supervision was measured using three indicators:

Frequency of supervision: this was measured as the share of facilities that received a supervision visit in the 3 months before the survey. This was calculated by dividing the number of facilities that received a supervisory visit in the 3 months before the survey by the total number of facilities surveyed in the State.

Use of checklist: was measured as the share of facilities visited by a supervisor in the 3 months before the survey where a checklist was used. This was calculated by dividing the number of facilities where a checklist was used during the last visit by the total number of facilities that received a supervisory visit during the 3 months before the survey.

Checklist dropped at health facilities: was measured as share of facilities where a checklist or written feedback for the most recent visit was dropped at the facility. The enumerator saw a copy of the checklist before it was counted. The indicator was calculated by dividing the number of facilities where a written feedback was seen by the total number of facilities where a checklist was used during the last supervision.

Example:
If 72/80 public health facilities received a supervisory visit 3 months prior to the survey, 60 facilities reported use of a checklist during the last supervision, and 40 facilities have a written feedback or copy of checklist dropped after the supervision. Then

Frequency of supervision = 72/80 = 90% (15)

Use of checklist = 60/72 = 83.3% (16)

Checklist dropped = 40/60 = 66.7% (17)

$$\text{Quality of supervision} = \frac{90\% + 83.3\% + 66.7\%}{3} = 80\% \quad (18)$$

8.1.5 Financial Management and Quality of HMIS Data

We considered the following indicators for financial management practices:

Proportion of facilities where expenditure records were observed: this is measured as the number of facilities where expenditure records were observed divided by the total number of facilities surveyed.

Proportion of facilities where observed expenditure records are up to date: is measured as the number of facilities where observed expenditure records were up to date divided by the number of facilities with observed expenditure records.

Proportion of facilities where cash on hand reconciled with recorded balance

Example:

Assuming financial records were observed in 50/80 of facilities in a State, and 22 facilities had up-to-date financial records; if also 18/80 of facilities had cash on hand that reconciled with recorded balance, then

$$\text{Financial management score} = \frac{\left(\frac{50}{80} + \frac{22}{50} + \frac{18}{80}\right)}{3} = 43\% \quad (19)$$

Quality of HMIS data was measured as the average proportion of facilities where data from health facility registers (or source data) reconciles perfectly with the submitted or compiled monthly (summary) HMIS reports of the same health facility for the 3 months preceding the survey. We considered this indicator for

i. ANC first visits
ii. Pregnant women receiving HIV test
iii. Children receiving Penta3

The quality of HMIS data is considered to be accurate only when data from relevant health facility registers reconciles perfectly with the compiled monthly summary. A dummy variable that takes the value 1 when there is a perfect match and 0 otherwise was used. Each indicator is calculated as the proportion of facilities where there is a perfect reconciliation.

Example:
If the number of facilities where accurate data on ANC first time visits was observed is 72/80, 64/80 for data on pregnant women receiving HIV test, and 70/80 for data children receiving Penta3, then HMIS quality will be calculated as

$$\text{HMIS quality} = \frac{\left(\frac{72}{80}+\frac{64}{80}+\frac{70}{80}\right)}{3} = 85.8\% \quad (20)$$

$$\text{Financial management and HMIS quality score} = \frac{43\% + 85.8\%}{2} = 64.4\% \quad (21)$$

Example of computation of the Quality of Care scores
The quality of care scores was calculated as the composite scores consisting of weighted averages of the different components. Using the various examples included in this section and the weights described in the table below, quality of care scores is calculated as:

Table 15: Computation of Quality of Care Scores

Indicator	**Weight**	**Calculation**
Clinical Competence	30%	$0.3 \times 59 = 17.7\%$
Availability of Drugs and Basic Medical Equipment	20%	$0.2 \times 67.5 = 13.5\%$
Readiness to Provide Key SOML Services	15%	$0.15 \times 62.2 = 9.3\%$
Quality of Supervision	20%	$0.2 \times 80 = 16\%$
Financial Management and Quality of HMIS Data	15%	$0.15 \times 64.4 = 9.7\%$
Quality of Care Score	**100%**	**66.2%**

The national scores derived from NHFS (2016) dis-aggregated to geopolitical zones are presented in **Table 16.**

Table 16: National and Zonal Quality of Care Scores

State	**Clinical Competence** (out of 30)	**Drugs and Equipment** (out of 20)	**Readiness to Provide SOML Services** (out of 15)	**Supervision** (out of 20)	**Financial Mgt/HMIS** (out of 20)	**Total Scores** (out of 100)
National Average	9.5	6.2	6.7	8.2	3.7	34.3
Regional Scores						
North Central	8.5	6.2	6.2	6.4	4.6	31.4
North East	10.9	7.2	7.5	10.4	5.4	40.6
North West	9.3	5.8	7.8	11.9	4.8	38.7
South East	9.6	5.8	8.3	6.9	3.7	33.8
South South	10.1	6.2	7.1	5.3	4.3	32.8
South West	7.2	6.1	7.0	7.6	4.6	32.1

9.0 CONCLUSIONS AND RECOMMENDATIONS

9.1 Conclusions

This survey revealed that the clinical competence of health workers is below par as their diagnostic accuracy, adherence to guidelines and ability to propose correct steps and actions in the management of maternal and newborn complications were all less than fifty percent. The knowledge of IMCI guidelines by those who ought to know varied from very low knowledge of the assessment, classification and treatment of pneumonia to a relatively high knowledge of the assessment, classification, and treatment of malaria. This basic knowledge was sadly very low among the main cadres of health workers found at the PHFs i.e. nurses/midwives and CHEWs. Even though the knowledge of IMCI danger signs and key symptoms was moderately low, IMCI training can improve it. Knowledge of providers on eMTCT care and support was quite high across all the geopolitical zones. However, they showed more knowledge in the care of the HIV-positive mothers compared to the care of HIV-exposed infants.

As revealed by the various service area records reviewed, the level of documentation of important elements of care during service provision varied widely. For ANC service documentation, many cases of anaemia in pregnancy might have been missed. This is because documented evidence for the assessment of anaemia during ANC was not available in the majority of ANC records. Health workers were either not aware of the new recommendation of IPTp3+ or were not documenting it due to the current limitation of the pre-printed ANC cards and registers in capturing the data. For suspect malaria in U-5 children, the importance of asking or documenting fever and that of anaemia assessment is probably being taken for granted by health workers during the management of a child suspected to have malaria. For eMTCT services, many women enrolled for the service lacked documentation evidence that they received ARV prophylaxis/long-term ART. Majority of the results of HIV-exposed infants were either not disclosed to their caretakers or such disclosure if done was not documented. Also, they were probably not being offered CPT as recommended.

The overall poor performance of the HFs on the availability of essential drugs and basic medical equipment is a strong pointer to a weak health system and lack of HFs readiness to provide essential care. Other strong pointers to the poor readiness of HFs were low availability of family planning commodities, low capacity for EID in facilities that offer eMTCT services, low availability of important items needed for labour and delivery services in the PHFs, low availability of vaccines and refrigerators for storing vaccines, grossly inadequate skilled birth attendants, low participation in MNCH activities including distribution of vitamin A, unavailability of IMCI guidelines and poor infection control practices. Although, a relatively high proportion of health facilities offer ANC services, this

falls short of the requirements since all PHFs are expected to provide the service. This has huge implications for maternal health in the country. Despite the various shortcomings of the health facilities, many of them had sharp immunisation commodities such as sharp containers and disposable needles; they also have good malaria testing capacity which is commendable but need to be still improved upon.

The reason for the poor results as measured by the indicators in this survey may be linked to poor performance exemplified by the key management indicators of financial management, supervision and HMIS data accuracy. Most of the HFs did not keep records of income and expenditure and even in instances where the records were kept, there were major gaps in accuracy. In order to improve access to health care at the primary level, government has to do more to mobilize and devolve resources directly to PHFs. The current practice of out-of-pocket expenses by care-seeking clients in the majority of facilities is a definite constraint to access. Also the result showed that even though a reasonable percentage of HFs reported a normal frequency of ISS, in many instances a standardized tool was not used and there was no documented evidence of good quality supervision. The result of this survey concerning the accuracy of the health facility data being submitted to the NHMIS calls into question the quality of outcome reports generated by the system and the key decisions based on them.

Results of this survey revealed hidden disparities in the availability and quality of services being provided across the geopolitical zones, States and health facility types. These disparities may be related to health workers' motivation, availability of inputs and political will to improve health service delivery.

The section on SOML quality index indicators describes in detail the project appraisal indicators and their measurements. Clear examples of the calculation of scores based on these indicators using simple arithmetic and the weights attached to the scores in the final determination of the performance of each State are documented.

9.2 Recommendations

Based on the findings of this survey, the following recommendations are suggested:

9.2.1 Clinical Competence of Health Workers and Providers Knowledge

1. Revise the pre-service training modules for all cadres of health workers to include skills needed to manage common childhood diseases and maternal and newborn complications according to standard
2. Organize regular in-service training programmes in clinical care to improve the skills and knowledge of service providers in the management of common childhood diseases and maternal and newborn complications according to standard

3. Continuing Professional Development (CPD) for health workers in the PHFs should focus on filling identified gaps in their knowledge and skills especially with management of common childhood diseases and maternal and newborn complications
4. Increase the frequency of supportive supervision in order to identify lax in the practice of health workers and correct same

9.2.2 Documentation of Care Process

Documentation of Screening for STI /HIV/AIDS during ANC

5. Design interventions that will focus on increasing the uptake of HTS by partners of HIV positive pregnant women and documentation of their results
6. Organize training for health workers providing ANC service to educate them on the importance of screening pregnant women for syphilis and the documentation of the result for the purpose of record audit
7. The importance of screening for complications of pregnancy at every routine ANC visit should be re-emphasised during refresher training and continuous professional education for ANC service providers
8. Supportive supervision of service providers should be strengthened
9. Increase the awareness of health workers in providing and recording IPTp in all facilities offering ANC services in view of the recent change in policy concerning IPTp
10. ANC cards and ANC registers should be re-designed to capture IPTp3+ and distributed to the facilities

Documentation of Care Process for Under-5 Children with Suspected Malaria

11. Health care managers should re-emphasize the importance of taking and documenting the history of fever and temperature reading as well as assessing for common complications of malaria in children to ANC service providers

Documentation of eMTCT Services for HIV-Positive Mother-Infant Pair

12. Make ARVs available in the health facilities
13. eMTCT service providers should ensure that all enrolled clients are placed on drugs with appropriate documentation
14. eMTCT service providers should be trained to ensure that they disclose and document the disclosure of HIV results of HIV-exposed infants to their caretakers
15. Investigate the reason why HIV-exposed infants were not being offered CPT as recommended and address the issue.

9.2.3 Availability of Essential Drugs and Basic Medical Equipment

16. Availability of essential drugs should be made a priority by government at all levels by providing resources to strengthen the drug logistics system and drug revolving funds

17. Both the primary and secondary levels of care should be provided with resources to appropriately equip them with basic medical equipment

9.2.4 Readiness of Health Facilities to Deliver Key SOML Interventions, STIs and TB Services

eMTCT Services

18. Organize refresher training for the staff of PHFs and the lagging SHFs to conduct EID
19. Scale up EID services across the States
20. Provide basic equipment for SHFs to conduct EID services
21. Set up dried blood sample collection facilities at PHFs to enhance their mechanisms to send out samples to a test facility and receive timely results
22. Ensure the availability of maternal and infant ARV prophylaxis in the eMTCT service sites.

Family Planning Services

23. Procure and distribute family planning commodities to PHFs and ensure commodities are always available

Delivery Services

24. Procure essential drugs, basic delivery equipment and supplies for the delivery service area in the PHFs and SHFs where they are deficient

Sick Child /Malaria Services

25. IMCI guidelines should be made available in all PHFs
26. the gaps in malaria test capacity of PHFs should be addressed for enhanced malaria case management

Ante-Natal Care Services

27. Provision of ANC services should be mandated for all PHFs in the country and also create the environment that will make this possible
28. As part of routine ANC services, the provision of key maternal and newborn health interventions for improved health outcomes should be optimised. This is essential to saving the lives of pregnant women and children

Sexually Transmitted Infections Service Availability and Readiness

29. The full range of STI services including diagnosis and treatment services should be properly integrated with other services of the PHFs.
30. The resources, including guidelines, diagnostic kits and drugs required to offer quality STI services should be provided at every point of care.

Tuberculosis Service Availability and Readiness

31. More PHFs should be equipped for the provision of TB diagnosis and management.

32. All the essential guidelines should be made available at the HFs so that service providers will have access to them in order to ensure that they provide quality service.
33. The TB drug management logistic system should be strengthened to ensure that there is no stock out of TB drugs at the HFs offering TB services.

Infection Control

34. Health workers should be trained in the proper storage and final disposal of health care wastes
35. Guidelines and job aids on the proper handling of health care waste should be made available in the health facilities
36. Health facilities should develop and implement written policies on infection control
37. Supportive supervision should be ensured so that problems with infection control are identified and corrected

Provision of Immunisation Services

38. Improve the logistics system for vaccine supply up to the health facility level.

Availability of Skilled Birth Attendants

39. The task-shifting and task sharing policy for maternal and child health in Nigeria should be implemented
40. Consider the review of the training curriculum for CHEWs to include providing maternal health care especially safe delivery practices

9.2.5 Management

Health Care Financing

41. Government at the federal, State and LGA levels should budget adequate resources for PHCs and release budgeted funds timely. They should also double up on their efforts to mobilize resources from donors and coordinate its deployment

Integrated Supportive Supervision (ISS)

42. Federal Government needs to raise awareness of the importance and benefits of quarterly ISS visits using a uniform checklist (a standardized ISS tool has been developed and revised by the FMOH) including proper documentation and feedback to facilities, as part of ways to institutionalize a performance management system across the country
43. Increased awareness among States through presentations/discussions at the National Council on Health, the National SOML PforR Steering Committee Meetings and/or meetings between the Federal SOML PforR Project Management Unit (PMU) and the State SOML PforR Program Managers
44. State Governments need to institutionalize and support the implementation of quarterly ISS to all health facilities within their jurisdictions, including support for training and re-training of staff and logistics

45. Going forward, in the next NHFS, only documented evidence of ISS (copy of standardized ISS tool left at facility) should be accepted by the enumerators as confirmation of an ISS visit having actually been conducted

Health Management Information System (HMIS)

46. The FMOH needs to further strengthen the NHMIS system especially in terms of data generation, collation and verification. This is because ability to produce accurate data will improve the ability of States to plan and implement health interventions effectively.

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