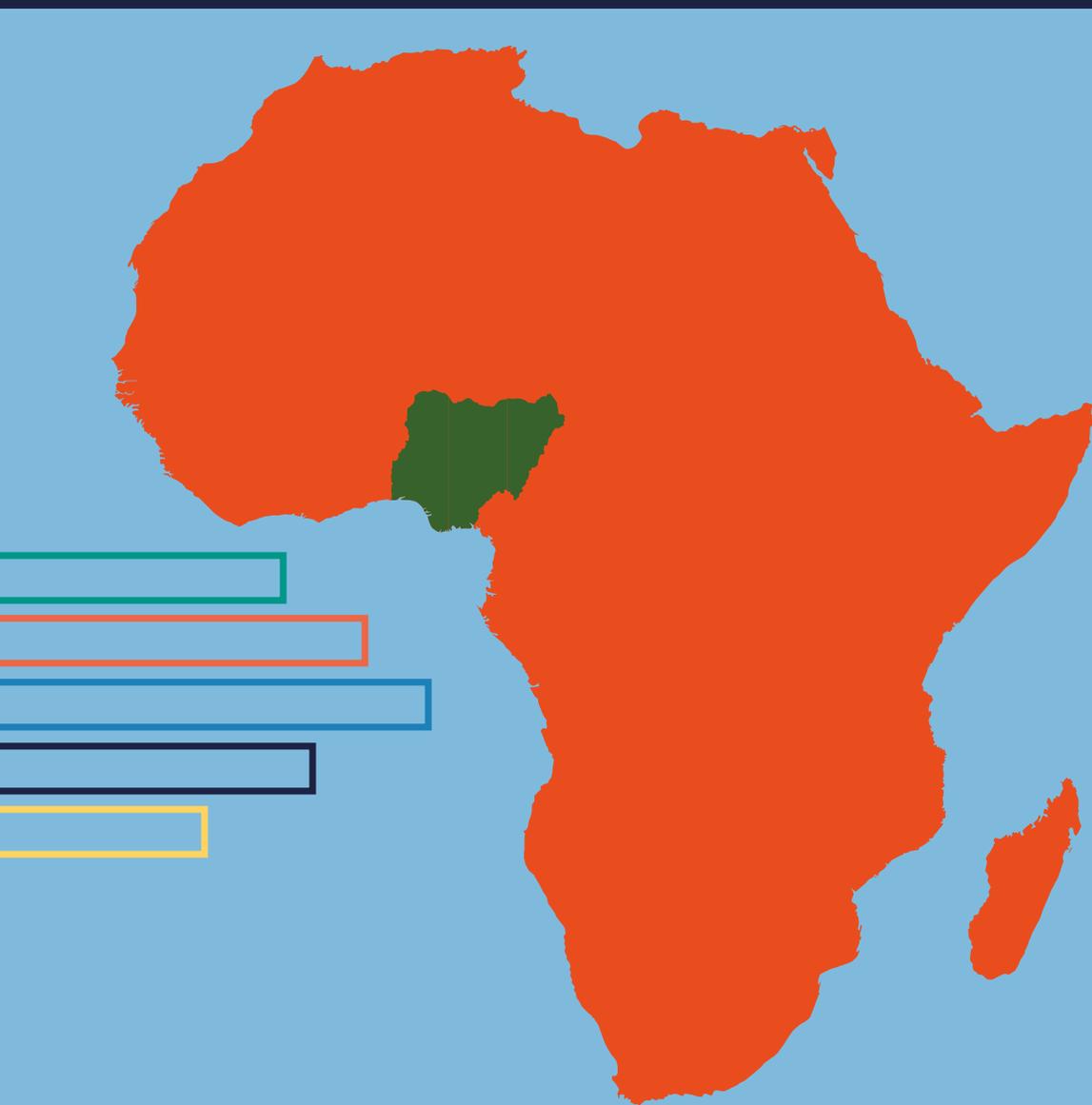


Country Health Systems and Services Profiles

Nigeria



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Key words

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Contents

Preface – Part A	vii
Country Health Systems and Services Profiles of the African Health Observatory on Health Systems and Policies	vii
Structure of the profiles	viii
The African Health Observatory Platform on Health Systems and Policies and its partners	ix
Acknowledgements	xi
About the authors	xiii
List of figures	xv
List of tables	xix
List of abbreviations	xxiii
Executive summary	xxix
Description of the health system	xxix
Health system assessment	xxxvii
Conclusions	xxxix
Chapter 1: Context	1
Chapter 1 key messages	1
1.1 Socio-demographic context	2
1.2 Economic context	5
1.3 Environmental context	8
1.4 Political context	10
1.5 Overview of health status	11
Chapter summary	15

Chapter 2: Organization and governance of the health system	17
Chapter 2 key messages	17
2.1 Organizational structure	18
2.2 Governance	26
2.3 Stakeholder engagement and partnerships	34
2.4 Accountability measures	39
2.5 Recent reforms	42
Chapter summary	46
Chapter 3: Health financing.....	47
Chapter 3 key messages	47
3.1 Health financing policies.....	48
3.2 Health expenditure.....	58
3.3 Sources of health financing and financial flows.....	66
3.4 Overview of the main public financing system.....	68
3.5 Out-of-pocket payments.....	76
3.6 Voluntary health insurance.....	79
3.7 External sources and other systems of financing.....	80
3.8 Payment mechanisms.....	82
3.9 Recent reforms.....	84
Chapter summary.....	86
Chapter 4: Health workforce	87
Chapter 4 key messages	87
4.1 Health workforce policies.....	88
4.2 Health workforce production	95
4.3 Size and distribution of the practising health workforce.....	97
4.4 Recruitment and deployment.....	102
4.5 Retention, mobility and exit.....	103
4.6 In-service training and capacity improvement.....	106
4.7 Traditional and religious practitioners.....	108
4.8 Recent reforms.....	109
Chapter summary	113
Chapter 5: Medical products and health technologies.....	115
Chapter 5 key messages	115

5.1	Governance and regulation	116
5.2	Planning and forecasting	125
5.3	Domestic production and procurement.....	126
5.4	Storage and distribution	131
5.5	Stewardship and use	135
5.6	Traditional medicines and products	138
5.7	Recent reforms	141
	Chapter summary	143
Chapter 6: Health infrastructure and equipment		145
	Chapter 6 key messages	145
6.1	Infrastructure policies	146
6.2	Planning, availability and distribution of health infrastructure and equipment.....	155
6.3	Production, construction and procurement of health infrastructure and equipment.....	162
6.4	Maintenance and functionality of health infrastructure and equipment.....	165
6.5	Recent reforms	166
	Chapter summary	170
Chapter 7: Service delivery		171
	Chapter 7 key messages	171
7.1	Organization and governance of service delivery	172
7.2	Public health services	186
7.3	Referral system and patient pathway	194
7.4	Community-based care	196
7.5	Primary health care	209
7.6	Secondary health care.....	215
7.7	Tertiary care.....	219
7.8	Traditional medical practices	223
7.9	Emergency care.....	224
7.10	Specialized services	230
7.11	Recent reforms	233
	Chapter summary	236

Chapter 8: Health information and information systems	239
Chapter 8 key messages	239
8.1 Governance and organization of health information	240
8.2 Infrastructure and consolidation of systems	247
8.3 Data generation	251
8.4 Data validation and analysis	256
8.5 Dissemination and use of evidence.....	256
8.6 Recent reforms	257
Chapter summary	258
Preface – Part B	259
Chapter 9: Performance of the health system – outputs	261
Chapter 9 key messages	261
Introduction	262
9.1 Access to essential services.....	263
9.2 Quality of care in the provision of essential services	266
9.3 Demand for essential services.....	269
9.4 Resilience of the health system to sustain the provision of essential services	271
9.5 Health system efficiency.....	274
Chapter summary	277
Chapter 10: Health system coverage and system outcomes	279
Chapter 10 key messages	279
Introduction	280
10.1 Availability of essential services.....	280
10.2 Coverage of essential interventions.....	285
10.3 Financial risk protection	288
10.4 Health security	289
10.5 User satisfaction	290
Chapter summary	290
Chapter 11: Conclusions and key considerations	293
References	295

Preface – Part A

Country Health Systems and Services Profiles of the African Health Observatory on Health Systems and Policies

The Country Health Systems and Services Profiles (CHSSPs) of the African Health Observatory on Health Systems and Policies (AHOP) are comprehensive reviews of African countries' health systems and services. Each profile provides an in-depth examination of the organization, financing and delivery of a country's health services. The profiles also look at health care reforms, assess health system performance and highlight the challenges that health systems in Africa face.

Using the latest data from national, regional and international sources, as well as existing reports and literature, the CHSSPs support policy-makers and analysts working on the development of health systems. Each profile covers:

- **legal frameworks:** policies that regulate the organization, governance and delivery of health care in a country;
- **inputs:** health care, finance, health workforce, medical products and technologies, health infrastructure and equipment, and health information;
- **performance of essential services:** access, quality, demand and resilience;
- **outcomes:** coverage and use of essential health services;
- **gaps and inequalities:** challenges to the delivery of health care to all;
- **reforms:** lessons learned, and future prospects for universal health coverage.

or policy-makers, analysts, funders and communicators, the profiles provide evidence and insights for:

- **dissemination** of information on health systems;
- **exchange** of experiences of reform strategies in different countries;
- in-depth **comparative** health policy analyses.

The profiles are developed by regionally based academics and experts and are tailored to the needs of the African region. To help comparisons between countries and across regions, they are consistent with country reviews by AHOP's counterpart observatories in Europe and the Asia-Pacific region.

Structure of the profiles

Framework of Actions for the World Health Organization African Region

In September 2015, Member States endorsed the overarching Agenda for Sustainable Development at the 70th Session of the United Nations General Assembly, moving from the Millennium Development Goals to the Sustainable Development Goals (SDGs). Attaining good health and well-being for all at all ages – Goal 3 of the SDG agenda – became the focal point of health actions. This goal was to be achieved through the health sector, in collaboration with other sectors, under the overarching target of achieving universal health coverage (UHC) (Target 3.8). In November 2016, all 47 Member States of the World Health Organization (WHO) African Region agreed on the scope and expectations of a Framework of Actions for achieving UHC and other health-related SDG targets at a consultation in Windhoek, Namibia. Further consultations led to the endorsement of a comprehensive framework at the 67th Session of the Regional Committee of African Member States in Dakar, Senegal, in 2018 (WHO African Region, 2017b). The Framework of Actions sets out how African health systems should function in an integrated and holistic way that enhances UHC in districts and communities, reduces morbidity and mortality, and improves well-being for the populations, while avoiding social, geographical and financial obstacles to receiving care. Access to these services should be adequate and equitable, with services being responsive to the population's needs.

A profile in two parts

Part A (Chapters 1–8) of the profile focuses on describing the health system building blocks or inputs/processes following the results chain of the WHO African Region Framework of Actions (WHO, 2017). These building blocks are health governance; health financing; health workforce; medical products and health technologies; health infrastructure and equipment; service delivery; and health information and information systems. Chapter 1 describes the Nigerian health system context and Chapters 2–8 align with these building blocks. Part B of the profile focuses on the analytical aspects of outputs (Chapter 9) and outcomes (Chapter 10) (see the preface to Part B).

The African Health Observatory Platform on Health Systems and Policies and its partners

The African Health Observatory Platform on Health Systems and Policies

AHOP is a regional partnership that promotes evidence-informed policy-making. AHOP is hosted by the World Health Organization Regional Office for Africa (WHO African Region) through the Integrated African Health Observatory (iAHO) and is a network of centres of excellence from across the region, leveraging existing national and regional collaborations. National centres currently include the College of Health Sciences, Addis Ababa University, Ethiopia; the KEMRI Wellcome Trust research programme, Kenya; the Health Policy Research Group, University of Nigeria; the School of Public Health, University of Rwanda; and the Pasteur Institute of Dakar, Senegal. AHOP draws on support from a technical consortium including the European Observatory on Health Systems and Policies and the London School of Economics and Political Science (LSE). The initial activities of AHOP were funded by the Bill and Melinda Gates Foundation (BMGF).

Visit the AHOP website at <https://ahop.who.int>.

The Health Policy Research Group, University of Nigeria

The Health Policy Research Group (HPRG) at the University of Nigeria is a multidisciplinary team with theoretical and practical knowledge of health policy and systems research. The HPRG has been a part of multi-country consortia, including the Consortium for Health Policy and Systems Analysis in Africa (CHEPSAA) and the Resilient and Responsive Health Systems (RESYST) research consortium, where it contributed to the development of frameworks and tools for health policy and systems research in Africa and undertook studies on health system resilience, strategic purchasing, health system governance and other critical areas for health system strengthening and achieving UHC. The HPRG team has participated in many research and knowledge translation activities, particularly activities aimed at getting research into policy and practice in many parts of Nigeria and in other African countries.

Visit the HPRG website at <https://hprgunn.com/>

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List of figures

Figure 1.1.1	Map of Nigeria showing the 36 states and the Federal Capital Territory.....	2
Figure 1.1.2	Population by age and sex in Nigeria, latest available year (2024)	4
Figure 1.2.a	Nigerian states' GDP per capita, 2016 (US\$).....	7
Figure 1.2.b	Nigerian states by estimated GDP, 2021.....	7
Figure 1.4.1	Trends in governance indicators (selected years)	11
Figure 1.5.1	Top 10 causes of total number of deaths in Nigeria in 2009 and 2019, all ages combined.....	13
Figure 1.5.2	Relative share of categories of diseases for DALYs in Nigeria, selected countries and the African region, all ages combined	14
Figure 2.1.a	Evolution of the Nigerian health system	18
Figure 2.1.1	Overview of the health system	19
Figure 2.1.b	Organizational structure of the health system (DAPs and partnerships).....	21
Figure 2.3.a	Health actors and coordination mechanisms involved in improving public health.....	36
Figure 3.1.a	Timeline of recent health financing policies and frameworks	48
Figure 3.1.b	Schematic illustrating key features of the BHCPF.....	50
Figure 3.2.1	CHE as a share (%) of GDP in the WHO African Region, latest available year (2020).....	62
Figure 3.2.2	Trends in CHE as a share (%) of GDP in selected countries and WHO African Region, 2000 to latest available year (2020).....	63

Country Health Systems and Services Profiles

Figure 3.2.3	CHE in US\$ purchasing power parity per capita in selected countries and the WHO African Region, 2000 to latest available year (2020).....	63
Figure 3.2.4	CHE through financing schemes across selected countries and the WHO African Region, latest available year (2020).....	65
Figure 3.2.5	Public expenditure on health as a share (%) of GGE across selected countries and the WHO African Region, 2021.....	65
Figure 3.3.1	Financial flows in Nigeria.....	67
Figure 3.4.1	The three dimensions of UHC.....	69
Figure 3.5.1	OOP expenditure as a share (%) of total health expenditure across selected countries and the WHO African Region for the latest available year (2020).....	77
Figure 4.3.a	Percentage distribution of medical doctors and dentists by sex and year.....	100
Figure 4.3.b	Gender distribution of health worker groups in 11 states.....	101
Figure 4.5.a	Number of doctors trained in Nigeria and on the United Kingdom's General Medical Council register, 2016–2022.....	105
Figure 4.5.b	Emigration destinations for Nigerian doctors, 2023.....	105
Figure 4.5.c	Top five countries whose nurses and midwives have joined the workforce in the United Kingdom, March 2018 to March 2022.....	106
Figure 5.3.1	Exports and imports of medical and pharmaceutical products in million US dollars, 2012–2020.....	130
Figure 5.4.a	Drug distribution framework at a glance: pull-and-push process.....	133
Figure 6.1.a	Health infrastructure categories.....	146
Figure 6.2.1	Hospital beds per 10 000 population, WHO African Region and selected countries, 2004–2009 and 2010–2017.....	160
Figure 7.2.a	Organizational structure of the Nigerian health service delivery system.....	186
Figure 7.5.a	Average CHW-to-population ratios in nine countries in sub-Saharan Africa.....	213
Figure 8.1.a	The Nigerian health information system.....	242
Figure 8.1.1	National digital or e-health architecture.....	246
Figure A	Dimensions analysed and their interrelationships.....	259

Figure 9.1.a	Dimensions of health systems performance.....	262
Figure 9.1.1	Number of medical workers per 10 000 population, selected countries and WHO African Region average, 2020	265
Figure 9.1.2	Incidence of household expenditure (%) at 10% of total household income or expenditure, 1990–2018.....	265
Figure 9.1.3	Percentage of girls completing primary school in selected countries and the African Region, latest available year	266
Figure 9.2.1	Stillbirths per 1000 population in Nigeria, comparator countries and the WHO African Region average, 2000–2021.....	268
Figure 9.3.1	Percentage demand met for modern contraceptives, selected countries and WHO African Region, 1993–2019.....	270
Figure 9.3.2	Antenatal coverage (% of pregnant women receiving four or more antenatal visits) in selected countries and WHO African Region average, 2022	271
Figure 10.1.1	Vitamin A supplementation in Nigeria, selected countries and the WHO African Region average, 2022.....	284
Figure 10.2.1	UHC Service Coverage Index for Nigeria, selected countries and WHO African Region average, 2021	287

List of tables

Table 1.1.1	Trends in population and demographic indicators (selected years)	3
Table 1.1.2	Socio-demographic indicators (selected years)	5
Table 1.2.1	Macroeconomic indicators (selected years).....	6
Table 1.3.1	Trends in key environmental indicators (selected years).....	9
Table 1.5.1	Health indicators (selected years).....	12
Table 2.1.a	Health care management and key actors.....	22
Table 2.2.1	Programme- or system-specific health strategies and linkages to national health plans and policies.....	30
Table 2.3.a	Types of partnerships set out in the national policy on PPPs.....	38
Table 2.4.a	Accountability roles in the Nigerian health system	41
Table 3.1.a	BHCPF funding sources and spending priorities/pathways.....	50
Table 3.1.b	Key actors in health financing in Nigeria.....	53
Table 3.2.1	Trends in health expenditure in the country, 2010 to the latest available year (2021).....	60
Table 3.5.1	User charges for health services	78
Table 3.7.a	Major institutional donors for health care financing and areas of support in Nigeria.....	81
Table 3.8.1	Provider payment mechanisms	83
Table 4.1.a	Minimum standards of care for PHC in Nigeria	93
Table 4.2.1	Trends in the production of health workforce in the country by cadre (selected years)	96
Table 4.3.1	Size of the practising health workforce in the public sector in the latest available year	98

Country Health Systems and Services Profiles

Table 4.3.2	Size and distribution of the practising health workforce in the private sector in the latest available year	99
Table 4.3.3	Trends in the distribution of Nigeria’s practising health workforce by cadre.....	102
Table 4.4.1	Percentage of health workers recruited/deployed into public service in 2018.....	103
Table 4.8.a	Policy gaps and suggested future reform proposals.....	109
Table 5.1.a	Legislation and national policies	116
Table 5.1.b	Roles of key agencies responsible for the regulation of medical products and health technologies	120
Table 5.3.a	Top 10 Nigerian pharmaceutical manufacturers by total revenue	128
Table 6.1.a	Summary of infrastructure and equipment laws and policies	149
Table 6.2.a	Census of radiology equipment in Nigeria.....	157
Table 6.2.b	Health facilities by level of care and ownership.....	158
Table 6.2.1	Number and density of health facilities in public, private and non-profit sectors, latest available year (2019).....	159
Table 6.2.c	Distribution of primary, secondary and tertiary health facilities per 100 000 population in Nigeria	159
Table 6.2.2	Items of functioning diagnostic imaging technologies per 1000 population, latest available year	161
Table 6.2.d	Expectant mothers’ mode of transport to primary health facilities (2019)	161
Table 6.3.1	Capital expenditure in Nigeria (2010–2020).....	163
Table 6.3.a	Foreign donations in support of the Nigerian health sector, 2010–2017	164
Table 6.5.a	Key health infrastructure and equipment financing reform initiatives.....	168
Table 7.1.a	Service delivery policies and frameworks	173
Table 7.1.1	Overview of actors responsible for the regulation of providers.....	176
Table 7.1.b	Essential service packages for the primary and secondary levels of health care.....	178
Table 7.1.c	Key regulatory bodies and functions	181

Table 7.2.a	Public health interventions classified by disease type.....	191
Table 7.4.a	Community health providers	200
Table 7.4.b	Selected MCH interventions, products and services provided by CHWs.....	202
Table 7.4.c	Selected programme interventions, products and services provided by CHWs.....	204
Table 7.5.a	Types of health facilities, management and expected coverage	210
Table 7.5.b	Standard staffing for primary health clinics.....	211
Table 7.5.c	Standard staffing for primary health centres.....	212
Table 7.5.d	Distribution of primary health facilities per 100 000 population in Nigeria	213
Table 7.6.a	Health worker distribution and densities	217
Table 7.6.1	Hospital indicators related to secondary care (selected years)	218
Table 7.7.1	Hospital indicators related to tertiary care (selected years)	222
Table 8.1.a	Policies and guidelines governing HISs in Nigeria.....	240
Table 8.1.b	Summary of key roles of federal ministries, departments and agencies within the context of ICT for health	244
Table 8.2.a	Health data infrastructure provided for in the 2023 Appropriation Bill.....	249
Table 8.2.1	Indicators of digital infrastructure, selected years	251
Table 9.1.1	Proxy indicators for each vital sign for access to essential services.....	264
Table 9.2.1	Proxy indicators for each vital sign for quality of care	267
Table 9.3.1	Proxy indicators for each vital sign for demand of essential services.....	269
Table 9.4.1	Proxy indicators for each vital sign related to the resilience of the health system	272
Table 9.5.1	Sources of technical inefficiency.....	275
Table 10.1.1	Tracer essential services for each life cohort	282
Table 10.2.1	The UHC Service Coverage Index	286
Table 10.3.1	Incidence of catastrophic health expenditure	288

List of abbreviations

AMA.....	African Medicines Agency
ANC	antenatal care
AOP.....	annual operating plan
BHCPF.....	Basic Health Care Provision Fund
BMPHS.....	basic minimum package of health services
BPE	Bureau of Public Enterprises
CAC.....	Corporate Affairs Commission
CBHI.....	community-based health insurance
CBHIS.....	community-based health insurance scheme
CHBP	comprehensive health benefits package
CHE.....	current health expenditure
CHEW	community health extension worker
CHIPS	Community Health Influencers, Promoters and Services
CHMIS.....	Community Health Management Information System
CHO.....	community health officer
CHW	community health worker
CMS	central medical stores
CORP	community resource person
CRI	Critical Rescue International
CSO.....	civil society organization
DALY	disability-adjusted life year
DAP.....	department, agency and parastatal
DHIS2.....	District Health Information System 2
DHPRS	Department of Health Planning, Research and Statistics
DHS.....	demographic and health survey

DOTS	directly observed treatment, short-course
DPRS	Department of Planning, Research and Statistics
DQA	data quality assessment
DQR	data quality review
DRF	Drug Revolving Fund
DSNO	disease surveillance and notification officer
EHBP	essential health benefits package
EMR	electronic medical record
EMS.....	emergency medical services
ERA	Emergency Response Africa
FCT.....	Federal Capital Territory
FDS	Department of Food and Drug Services
FFS	fee for service
FGN	Federal Government of Nigeria
FMC	federal medical centre
FMoBEP	Federal Ministry of Budget and Economic Planning
FMoF	Federal Ministry of Finance
FMOH.....	Federal Ministry of Health
FMOH&SW....	Federal Ministry of Health and Social Welfare
FRSC	Federal Road Safety Commission
FSSHIP	Formal Sector Social Health Insurance Programme
GDP	gross domestic product
GGE	general government expenditure
GGHE-D	government domestic general health expenditure
GHS	global health security
HBP.....	health benefits package
HDCC.....	Health Data Consultative Committee
HDGC	Health Data Governance Council
HIS	health information system
HMB	health management board
HMO	health maintenance organization
HRH	human resources for health
HRHIS.....	human resources for health information system
HSS	health systems strengthening

ICT	information and communications technology
IDSR.....	Integrated Disease Surveillance and Response
IHR.....	International Health Regulations
IP.....	intellectual property
IRMNCAH+N..	integrated reproductive, maternal, neonatal, child and adolescent health plus nutrition
ISS.....	integrated supportive supervision
JCHEW.....	junior community health extension worker
LGA.....	local government area
LGHA.....	local government health authority
LMIS	logistics management information system
M&E.....	monitoring and evaluation
MAS.....	Mobile Authentication Service
MCH	maternal and child health
MDA.....	ministry, department and agency
MDAs.....	ministries, departments and agencies
MDCN.....	Medical and Dental Council of Nigeria
MDDC.....	mega drug distribution centre
MICS.....	multiple indicator cluster survey
MNCH	maternal, neonatal and child health
MSP	minimum service package
MSS.....	Midwives Service Scheme
NACA.....	National Agency for the Control of AIDS
NAFDAC	National Agency for Food and Drug Administration and Control
NANTMP.....	National Association of Nigerian Traditional Medicine Practitioners
NBS.....	National Bureau of Statistics
NBTDA	National Biotechnology Development Agency
NCD	noncommunicable disease
NCDC.....	Nigeria Centre for Disease Control and Prevention
NCH	National Council on Health
NCS.....	Nigeria Customs Service
NDDG.....	National Drug Distribution Guidelines

Country Health Systems and Services Profiles

NEMA	National Emergency Management Agency
NEMSAS.....	National Emergency Medical Service and Ambulance System
NEMT.....	national emergency medical treatment
NEWMAP.....	Nigeria Erosion and Watershed Management Project
NGO	nongovernmental organization
NHA	National Health Act
NHFPS.....	National Health Financing Policy and Strategy
NHIA.....	National Health Insurance Authority
NHIS.....	National Health Insurance Scheme
NHLMIS	Nigeria Health Logistics Management Information System
NHMIS	National Health Management Information System
NHP	National Health Policy
NHRHP.....	National Human Resources for Health Policy
NHRHSP.....	National Human Resources for Health Strategic Plan
NHSRIP	National Health Sector Renewal and Investment Programme
NHWR	National Health Workforce Registry
NIMC	National Identity Management Commission
NIMR	Nigerian Institute of Medical Research
NMCN	Nursing and Midwifery Council of Nigeria
NMDR.....	National Malaria Data Repository
NNRA	Nigerian Nuclear Regulatory Authority
NPC.....	National Population Commission
NPHCDA.....	National Primary Health Care Development Agency
NRTB	National Residency Training Board
NSHDP	National Strategic Health Development Plan
NSHDP II	National Strategic Health Development Plan II (2018–2022)
NSHIP.....	Nigeria State Health Investment Project
NSIA	Nigeria Sovereign Investment Authority
NUC	National University Commission
OOP.....	out-of-pocket
PCN.....	Pharmacy Council of Nigeria

PCPSR	Presidential Committee on Pharmaceutical Sector Reform
PHC.....	primary health care
PHCUOR.....	Primary Health Care Under One Roof
PHI.....	private health insurance
PMG-MAN.....	Pharmaceutical Manufacturers Group of the Manufacturers Association of Nigeria
PNC.....	postnatal care
PPMV.....	patent and proprietary medicine vendor
PPP	public-private partnership
PVG/FDIC	Pharmacovigilance/Food and Drug Information Centre
RI.....	routine immunization
SARA.....	service availability and readiness assessment
SCH.....	state council on health
SDDC.....	state drug distribution centre
SDG	Sustainable Development Goal
SEMA.....	State Emergency Management Agency
SERVICOM.....	Service Compact with All Nigerians
SHC.....	secondary health care
SHI.....	social health insurance
SHIS.....	social health insurance scheme
SMoH	state ministry of health
SOML	Saving One Million Lives
SON	Standards Organisation of Nigeria
SOP.....	standard operating procedure
SORMAS.....	Surveillance Outbreak Response Management and Analysis System
SPHCDA/B.....	state primary health care development agency/board
SSHDP.....	state strategic health development plan
SSHIA.....	state-level social health insurance agency
SSHIS.....	state-level social health insurance scheme
SURE-P.....	Subsidy Reinvestment and Empowerment Programme
SWAp.....	sector-wide approach
TB.....	tuberculosis

TCAMCN.....	Traditional, Complementary and Alternative Medicine Council of Nigeria
TFR.....	total fertility rate
THE	total health expenditure
TSTSP	Task-shifting and Task-sharing Policy for Essential Health Care Services in Nigeria
UHC	universal health coverage
UN.....	United Nations
VAT	value-added tax
VDC.....	village development committee
VHC.....	village health committee
VHI	voluntary health insurance
WASH	water, sanitation and hygiene
WDC	ward development committee
WHO.....	World Health Organization
WMHCP	ward minimum health care package

Executive summary

By **Obinna Onwujekwe, Enyi Etiaba, Serge Batialack** and **Beth Kreling**

Description of the health system

- **A rapidly expanding population, slow economic growth, weak governance and a high disease burden constrain health care provision and outcomes.**

Nigeria has the largest population in Africa, estimated at over 200 million, and, with a median age of 18, substantial population expansion is forecast. This large population, combined with a high fertility rate, high disease burden and lower-than-average adult literacy rate, has a significant impact on the health sector. Despite being the largest economy in Africa, with a gross domestic product (GDP) exceeding US\$ 430 billion, Nigeria grapples with low growth and high inflation. These economic hurdles have far-reaching implications for the country's health care, and nearly 63% of the population live in multidimensional poverty and lack access to basic necessities such as clean cooking fuel, adequate sanitation and health care.

Nigeria's health system lacks resilience and is not currently on track to achieve the health-related Sustainable Development Goal (SDG) targets, especially universal health coverage (UHC). Performance against core governance indicators, including control of corruption, freedom of expression, accountability, the rule of law, climate change vulnerability and security, is weak compared with regional averages and remains a cause for concern, with knock-on effects on health system governance. Confidence in the health system is undermined by weak enforcement of laws and regulations, further exacerbated by the complexity of the health sector and the still evolving devolved federal system. However, recent health sector reforms initiated by the Federal Ministry of Health (FMOH) are expected to significantly strengthen health service provision.

- **Nigeria's three-tiered, regionally devolved health system is well organized in theory, but, in practice, better implementation of recent reforms is needed to address significant governance and delivery challenges.**

Health governance is devolved in line with the existing federal governance structure into three tiers: federal, state and local government. Governed by the National Health Act (NHA) 2014 and National Health Policy (NHP) 2016, each of the three tiers has substantial autonomy in principle, although less in practice, over the allocation and utilization of resources. Party political affiliations influence relationships between tiers, weakening coordination in the system.

The federal level is primarily responsible for tertiary health services through a network of teaching and specialist hospitals, although several states also own tertiary hospitals. The FMOH, through its departments, agencies and parastatals, supervises national programmes and provides technical support to states. State governments control secondary health care facilities through state ministries of health and health management boards. The state primary health care development agencies and local government health authorities supervise primary health care (PHC) facilities, guided by the Primary Health Care Under One Roof (2013) policy. Overlaps between tiers and actors, alongside party political influences at all levels, weaken coordination in the system.

Private health providers currently deliver 70% of all health services despite accounting for only 35% of health facilities. Partnerships for health are recognized as a building block of the health system, and strengthening public-private partnerships (PPPs) is seen as key to enhancing health system performance. However, mechanisms for regulation and accountability in the private sector remain weak.

Policies, National Strategic Health Development Plans, monitoring and evaluation frameworks, implementation plans and programme-specific guidelines guide health system governance and organization, albeit with some implementation challenges. State and non-state actors develop and implement these guidelines with aligned interests and defined coordination platforms and mechanisms. However, many of the policies and strategic plans currently in place, including the flagship NHP, need to be revised and updated to align with current trends in the health sector.

Since independence, Nigeria has undergone several core governance reforms, most recently focused on addressing the governance and funding of PHC through a sector-wide approach (SWAp). The current Nigeria Health Sector Renewal Investment programme is expected to help strengthen the health system and improve performance. However, implementation challenges persist, exacerbated by the complexity of the devolved health system and weak accountability and law enforcement at all levels.

- **Low government health spending, high out-of-pocket (OOP) expenditure and limited health insurance coverage characterize health financing.**

Health and health care are primarily funded by government tax revenue from all tiers, health insurance, donor/external funding and private spending, notably OOP payments. Total health expenditure (THE) at the national level is among the lowest globally at just 5% of total government expenditure, well below the Abuja Declaration target of 15%. The overall current health expenditure across the government and private sectors was just US\$ 13.56 billion in 2020, or 3% of GDP, substantially below the global benchmark of 5%. However, there is also scope for increasing spending efficiency and achieving better health outcomes with the available funds.

By contrast, OOP expenditure is among the highest globally, accounting for 75% of THE and giving rise to concerns as to how public expenditure is channelled across the three tiers of government. This leaves the burden of health care costs to individuals/households, exposing Nigeria's predominantly low-income/vulnerable population to catastrophic health expenditure. This undermines progress towards achieving UHC and the SDGs for a largely healthy and wealthy nation.

Only 5% of Nigerians are covered by any form of health insurance, prepayment or risk-pooling mechanism. Existing enrolment is primarily through the Formal Sector Health Insurance Programme of the National Health Insurance Authority. The new National Health Insurance Authority Act 2023 – which prescribes mandatory national health insurance – the 2014 Basic Health Care Provision Fund (BHCPF) and subnational individual health insurance schemes across the 36 states and the Federal Capital Territory offer the potential to improve coverage with financial risk protection mechanisms and equity in pursuit of achieving UHC. This potential has yet to translate into

significant progress, with delays largely attributed to insufficient political will, weak governance and inefficiency of public financial management.

Improvements in health financing are dependent on improvements in the three health financing functions of resource mobilization, resource pooling, and management of funds, as well as a move from the passive to strategic purchasing of health services. The SWAp strategy is expected to lead to the enrolment of more Nigerians into prepayment schemes such as social health insurance schemes.

There is scope to increase the fiscal space for health through domestic resource mobilization, enhanced development assistance targeted at social protection/health insurance schemes and improvements in the financial management of public expenditure. However, all of these rely on enhanced political will to increase funding for health care and drive stronger governance, accountability and efficiency of public health funding.

- **Nigeria's large but insufficient health workforce lacks centralized oversight and monitoring, negatively affecting distribution and capacity, with knock-on effects on health outcomes.**

The health workforce in Nigeria is one of the largest in Africa but remains insufficient to meet population demand, falling below international thresholds for most professions and cadres. With 3.95 doctors for every 10 000 people, its provision is well above the regional average of 1.5, but still below the recommended regional threshold of 4.45 doctors per 100 000 people. The current health workforce crisis is attributed in part to the insufficient implementation of existing policies and strategies, notably strengthening coordination between the national and subnational levels.

Capacity and competency shortfalls, industrial unrest, unfavourable working conditions and poor remuneration, especially in the public health sector, have negatively affected clinical outcomes and eroded public confidence in the health workforce. Mass emigration of health care personnel ("brain drain"), especially after the COVID-19 pandemic, has significantly weakened the remaining workforce. Health workforce production, distribution, deployment and retention are constrained by common implementation challenges. The unreliability and incompleteness of health workforce data pose a significant challenge, with data on the distribution of the health workforce by cadre, gender

and facility being mostly unavailable. A robust health workforce register to help identify gaps and plan and implement existing policies and strategies could help improve health worker distribution and progress towards achieving UHC. Government at all tiers fails to strategically coordinate and manage the health workforce, across both public and private sectors, resulting in persistent staff shortages; underemployment of trained health workers, particularly at the PHC level; the uneven geographical spread of skilled health workers; and disparities between urban and rural areas. Numerous, heterogeneous and fragmented private health providers, especially informal traditional birth attendants and patent and proprietary medicine vendors, operate in ungoverned spaces to the detriment of their patients.

Health workforce challenges could be addressed by strengthening governance and management at and between the national and subnational levels; improving recruitment, training and retraining programmes (particularly targeting unemployed PHC health workers); and developing a workforce information management system that facilitates evidence-informed improvements to practices and staff retention.

- **Low production capacity and poor supply-side regulation result in stock shortages and over-reliance on foreign drug imports.**

National policies and guidelines on medical product regulation and distribution exist but are poorly implemented and audited. Nigeria's National Agency for Food and Drug Administration and Control plays a critical role in regulation, market authorization and supply. Annual procurement plans for medical products and health technologies in Nigeria are coordinated and prepared by the FMOH Department of Procurement for ministries, departments and agencies. Assessing the quantities of medical products that need to be produced and imported is based on past consumption patterns. More stringent policy implementation, tighter policy evaluation structures and the stipulation of sanctions are needed to support supply-side regulation.

Existing national production capacity meets just 30% of the country's needs, making Nigeria overly reliant on imported pharmaceuticals and medical supplies. Foreign direct investment in the pharmaceutical sector and tax incentives offered to local producers are needed to increase domestic production capacity.

The lack of a systematic, well-regulated drug distribution system results in drug deterioration during storage, stock shortages and the circulation of fake products. Prescribing branded medicine is still prevalent despite the specifications of the National Drug Policy to prescribe generic versions of drugs. Regular training in rational drug use for the health workforce could address this. Poor availability of medical technologies for diagnosis and limited capacity to maintain existing health technologies affect the quality of care, as does underinvestment in health technologies.

Most Nigerians in rural and semi-urban areas receive health care from traditional medical practitioners. Efforts to standardize and formally integrate traditional medicine into the health system are under way but this is incomplete.

- **About 80% of Nigeria's health infrastructure is dysfunctional, impeding health care delivery and resulting in losses of US\$1 billion annually to outbound health tourism.**

Insufficient funds for equipment maintenance, absence of planned maintenance programmes and inadequately trained personnel exacerbate the poor health infrastructure and equipment nationwide. This affects service delivery, particularly for conditions requiring specialized care, driving those who can afford it to seek health care outside Nigeria.

Policies and guidelines governing health care infrastructure and equipment exist but are dispersed across various health-related laws and guidance. The absence of an overarching national policy has contributed to poor distribution and allocation of health care facilities within states and across the country. While the BHCPF offers a predictable funding window for infrastructure and equipment, including emergency ambulance services, overall investment is too low to maintain functionality. Private health care providers deliver an estimated 60% of health care services in the country. However, regulation and monitoring of the sector by the government are weak, and the enforcement of standards and compliance is limited.

Existing government reforms to address health infrastructure gaps (e.g. the Central Bank of Nigeria's intervention fund, PPP models and concessionary arrangements) have produced mixed results. Further plans exist to establish a Nigerian health infrastructure development bank to facilitate the acquisition of health infrastructure and equipment.

- **Essential health service coverage is very limited and specialist services are insufficient and unevenly distributed, contributing to Nigeria's poor performance against health indicators. Service delivery reforms and community-level structures exist but need to be more effectively implemented to address limitations.**

The PHC level is the weakest level of health care delivery. However, facilities that can deliver essential health services are lacking at primary, secondary and tertiary levels. Specialist and emergency services exist but are insufficient. Specialized services are confined primarily to urban areas and are often dictated by funding sources. Referral systems are suboptimal, and many patients bypass lower levels of care to access higher levels of care. Emergency medical care exists, but many communities lack ambulance services and prehospital care, and hospital units are ill-equipped to resuscitate critically ill patients. Palliative care is new in Nigeria, with poor access in rural areas and infrastructure challenges being indicative of the larger difficulties in ensuring fair and equal distribution of health care services. Despite the existence of quality assurance mechanisms, they are not effectively used.

Strong community-level structures exist to provide health care services to people who lack access, utilizing a mix of public and private sector providers. However, these structures have not yet translated into the scaled-up delivery of essential health services at the PHC level. This discrepancy constrains progress towards achieving UHC and the health-related SDGs, especially in relation to maternal and child health, and communicable and noncommunicable diseases.

Traditional medicine services are popular due to their perceived efficacy, availability and cultural compatibility. However, the coexistence of traditional and contemporary medicine poses possible risks, emphasizing the need to regulate and incorporate traditional medicine practices into the health system to guarantee patient safety and advocate for evidence-based health care practices.

Service delivery reforms will improve basic package provision and thus accelerate progress towards achieving UHC, but implementation challenges remain. Recent reforms to allocate at least 1% of the Consolidated Revenue Fund to the BHCPF will improve service delivery, providing one functional PHC centre per ward and one general hospital per local government area (LGA). In addition, it is hoped that recent FMOH policy reforms using the SWAp strategy

and the gateways of the BHCPF, especially the National Primary Health Care Development Agency and emergency transport gateways, will revitalize service delivery and decrease health burdens. The financial autonomy that was recently granted to LGAs should also enable them to better support the PHC level for better service delivery.

- **Health information policies and systems exist but are not reflected in practice – normalizing routine data collection and use across the system could improve decision-making and service delivery.**

Nigeria has an established National Health Management Information Systems (NHMIS) policy, and most states have equivalent state-level policies. However, aspirational policy provisions are not reflected in practice, and there is no standardized mechanism for the real-time use of data from routine health management information systems for decision-making. The NHMIS deploys District Health Information System 2 (DHIS2) software to effectively capture routine health data. However, the level of adoption of DHIS2 remains low, and the achievement of NHMIS policy objectives is constrained by poor integration of data, incomplete data from public facilities and persistent underreporting from the private sector.

Routine health facility data are collected through the DHIS2 platform, which harvests data from 38 500 private and public primary and secondary facilities. While the average reporting rate through DHIS2 in 2023 was 92.3%, the on-time reporting rate was just 84.8%. Collecting complete data is also a huge challenge, with significantly fewer data being reported at the health facility level than are collected from national sources. Data use in decision-making could be improved by normalizing the production and dissemination of digital information products, including bulletins, statistical reports and compendia.

The implementation of national health information system (HIS) policies is constrained by chronic underfunding; inadequate basic information and communications technology infrastructure; a weak data use culture and insufficient capacity to collect and utilize health data; the lack of dedicated health records officers; and poor coordination and clarity on HIS roles and activities. HIS governance structures need strengthening to effectively monitor and enforce data reporting from all sectors, notably tertiary health facilities and the private sector. Ensuring that data-reporting requirements are met before renewing annual operating licences could support this strengthening. Scaling

up the DHIS2 mobile phone client to all primary health centres and private hospitals could also help address data completeness and underreporting.

Although the 2020 HIS policy and accompanying strategic plan ignited and set the pace for improving health information management in the country, the need for better coordination and data governance remains. The advent of disease-specific programmes with independent information systems has severely weakened the overall HIS. Intersectoral collaboration and data fragmentation need to be addressed to ensure better health outcomes. Ongoing structural reforms could strengthen in-country capacity in HISs and improve the quality and usage of health data in decision-making.

Health system assessment

- **Nigeria's health system performance remains insufficient for attaining UHC, with performance in the areas of access to, quality of and demand for services being weak and uneven, and overall system resilience being in need of further strengthening.**

Nigeria's health system still faces challenges in delivering optimal outputs and attaining UHC. Performance in the dimensions of access, quality and demand for health services is still suboptimal, at 41%, 40% and 42%, respectively. Moreover, Nigeria's overall health system performance, at 45%, is below the World Health Organization African Region average of 56%. Performance in terms of sociocultural access has improved, with more women and girls in education and employment than before, which could in turn improve access to health services if financial risk protection and functional health facilities are implemented.

The quality of services remains suboptimal, resulting in low demand, especially in the public sector. Access to, the quality of and demand for health services vary significantly across regions, states, urban–rural areas and socioeconomic statuses, in both the public and private health sectors. Disaggregated data are needed to address these discrepancies and facilitate effective UHC planning. Effective implementation of the BHCPF and the National Health Insurance Authority Act is expected to help narrow the wide gaps in these performance dimensions.

Both allocative and technical efficiency are poor due to suboptimal budgetary allocations and use. Identified drivers of technical inefficiencies, such as weak governance and leadership, weak public finance management, corruption and poor accountability, need to be addressed.

Suboptimal health budgets and poor utilization of allocated funds diminish allocative efficiency, while corruption in the health sector plagues technical efficiency. Nigeria has improved its scores in relation to detecting external shocks, especially communicable disease outbreaks. However, inherent health system resilience, including preparedness and response, remains poor and needs to be strengthened.

- **Core health system outcomes – coverage of health services, health security, patient satisfaction and financial risk protection – are all below regional averages, primarily due to sustained underinvestment, poor health infrastructure and inadequate human resources capacity.**

Despite progress for a subset of indicators, Nigeria's absolute coverage of essential services is relatively low at 1.7% below the African Regional average. Nigeria's UHC Service Coverage Index score is also low, at 38.4%, largely due to poor service capacity and access, notably weak health infrastructure and inadequate human resources capacity. This leads to gaps in the availability of essential health services – for example, only 51% of deliveries are supported by skilled birth attendants. The NHA sets out policies and plans to strengthen health service delivery and various essential services. However, regular subnational benchmarking and continuous monitoring are needed to track success and health system performance and promptly address challenges as they arise.

Mandatory health insurance is progressively being implemented, but not rapidly enough, and Nigeria is still far behind its regional and global peers in expanding health insurance coverage. OOP payments as a proportion of THE are extremely high, at 75%, exposing the predominantly poor population to catastrophic health expenditure: 5.8% of multigenerational households experience catastrophic health expenditure over the 10% threshold, almost twice the WHO African Region average of 9.4%.

No nationally representative data are available on user satisfaction with essential health services. Available data suggest variations in client satisfaction

by type of health service and by region. Further data collection is needed to inform future service provision.

Preparedness for public health emergencies is poor, as indicated by the low Global Health Security Index score of 38.0 in 2021 and the downwards trend in the country's International Health Regulations core capacity score since 2022. Critical capacities to monitor and detect zoonotic diseases and dispense medical countermeasures for national use during public health emergencies need to be expanded and sustained. Greater focus on effective government collaboration and commitment to reignite, expand and sustain the preparedness capacities developed during the COVID-19 pandemic could help address current performance issues.

Conclusions

- **Nigeria has made consistent efforts to reform its health system, but sustained investment and effective implementation of reforms are now essential to drive further progress towards UHC.**

Although Nigeria has undertaken numerous policy reforms to enhance its health system and progress towards UHC, significant functionality issues remain. The existence of crucial laws and reforms, such as the NHA, the National Health Insurance Authority Act and the Nigeria Health System Renewal Investment Initiative, demonstrates government dedication to reforming the health system. Nevertheless, converting these ideas into concrete improvements in service provision and health outcomes remains difficult. Implementing existing reforms is essential to achieving UHC and progressing towards achievement of the health-related SDGs. Implementation will facilitate efforts to increase investment in the health sector, bolster health care infrastructure, improve the quality of care, reinforce regulatory frameworks, and ensure fair and equal access to health care services throughout the country.

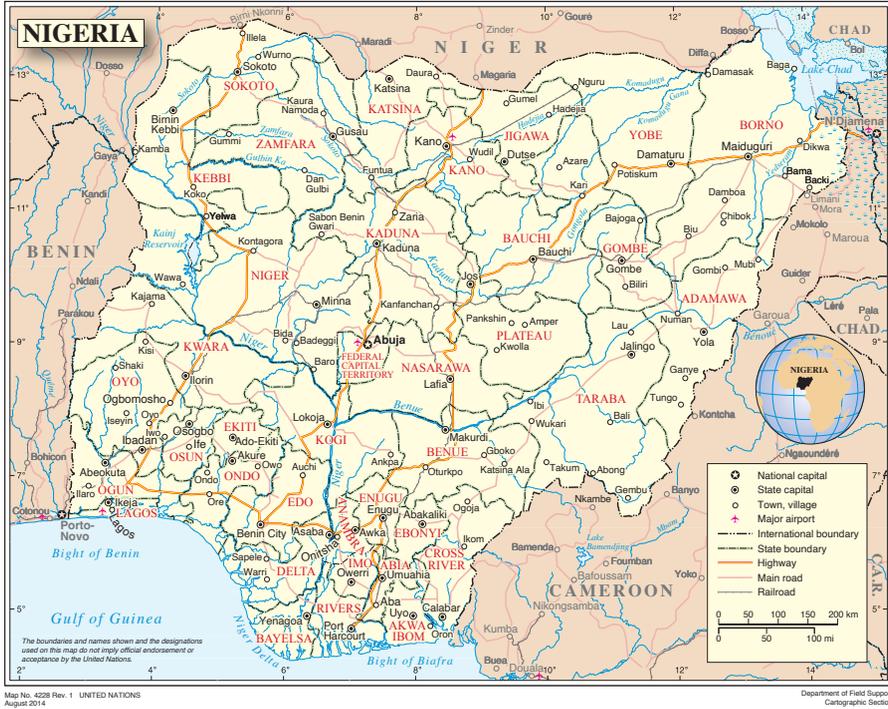
By **Obinna Onwujekwe, Prince Agwu, Enyi Etiaba, Tunde Adewale** and **Adewale Ojogbede**

Chapter 1 key messages

- Nigeria is Africa's most populous country, with over 216 million people. The population is growing rapidly, at 2.5% per year, driven by a high fertility rate. Moreover, Nigeria has the largest youth population in the world, with 70% of Nigerians being under 30.
- Nigeria's economy is the largest in Africa, with a gross domestic product (GDP) of US\$ 441 billion in 2022. Over 15% of its GDP is generated by the information and communications technology (ICT) sector, creating opportunities for ICT-enabled health services. However, the country struggles with low growth and high inflation rates, as well as unemployment and underemployment, with consequences for health.
- Almost 63% of Nigerians are multidimensionally poor, lacking income, education and access to basic infrastructure, including sanitation and health care. The adult literacy rate is below the regional average.
- Health governance is devolved, in line with Nigeria's existing federal governance structure, into the federal, state and local government levels, with 36 states and the Federal Capital Territory at state level and 774 local government areas. Weak core governance indicators, including control of corruption, freedom of expression and the rule of law, remain causes for concern, with knock-on effects on health system governance.
- Population growth has led to high burdens of both communicable diseases and NCDs and increased pressures on the health system. Enteric infections, respiratory infections and tuberculosis, and maternal and neonatal complications are the primary causes of mortality.
- Nigeria's health outcomes remain poor compared with countries with equivalent or lower health expenditure. Further investment in health system strengthening and addressing socioeconomic challenges is needed to improve health outcomes.

1.1 Socio-demographic context

Figure 1.1.1 Map of Nigeria showing the 36 states and the Federal Capital Territory



Source: UN, 2014

Nigeria, located in West Africa, comprises 36 states and the Federal Capital Territory (FCT), and occupies an area of 923 768 km² (910 768 km² of land and 13 000 km² of water) (CIA, 2022). As shown in Fig. 1.1.1, it is bordered to the north by Niger, to the west by Benin, to the east by Cameroon and Chad, and to the south by the Gulf of Guinea (Udo, 2021; CIA, 2022). It shares maritime borders with Equatorial Guinea, Ghana, and Sao Tome and Principe.

Nigeria is the most populous country in Africa, with an estimated population of 216 million in 2022 and projected to hit 233 million by 2025 at a growth rate of 2.5% per annum (UN, 2022). Half of the world’s population growth is expected to be concentrated in Nigeria and eight other countries by 2050 (Macrotrends, 2022b). Nigeria’s rapid population growth (Table 1.1.1) is linked to its high total fertility rate (TFR) of 5.14%. Although in decline, its TFR is among the highest in the world (Macrotrends, 2022a).

Nigeria has the largest youth population globally (Worldometer, 2022), with 70% of its population being under 30 (Table 1.1.1 and also Figure 1.1.2), with a median age of 18.1 years; 49.3% of the population is female (World Bank, 2022e). The high proportion of young people in Nigeria presents potentially huge demographic dividends for the economy, but these are underexplored (Abubakar et al., 2022). It also presents significant challenges for the health system, however, including increased pressure on services and a dual burden of infectious and noncommunicable diseases (NCDs). Environmental deterioration and urbanization as a result of population growth have further knock-on effects on social inequities, sanitation and ultimately health outcomes (Adesola et al., 2024).

Table 1.1.1 Trends in population and demographic indicators (selected years)

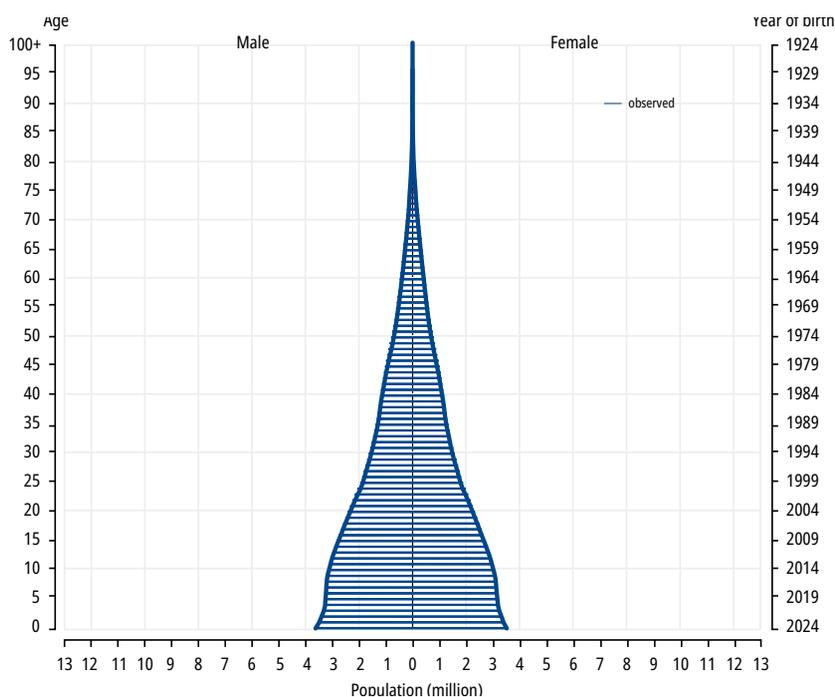
	2010	2015	2020	Latest available year	African regional average (latest available year)
Total population (thousands)	158 503	181 137	206 140	216 000 (2023)	1 162 658 (2021)
Population aged 0–14 (% of total)	44%	44%	43%	40.7% (2023) ^a	41.6 (2021)
Population aged 15–24 (% of total)	19%	19%	19%	19.6 (2021)	19.5 (2021)
Population aged 25–59 (% of total)	32%	32%	33%	34.2 (2021)	33.9 (2021)
Population aged 60 and above (% of total)	5%	4%	5%	3 (2021)	5 (2021)
Population density (people per km²)	174	198.8	226.3	234.3 (2021)	49.3 (2021)
Population growth (average annual growth rate)	2.65	2.67	2.59	2.53 (2023) ^a	2.47 (2021)
Fertility rate, total (births per woman)	5.91	5.74	5.42	4.57 (2023) ^a	4.52 (2021)
Distribution of population in thousands (rural/urban)	89 586/ 68 917	94 485/ 86 652	99 034/ 107 106	100 840.5/ 112 560.5 (2021)	662 117/ 500 541 (2021)

Sources: ^aCIA, 2023; all other data: World Development Indicators (World Bank Group, 2024)

There are multiple ethnic groups in Nigeria, the three most prominent being Hausa, Yoruba and Igbo (Table 1.1.2), dominant in the north-western, south-western and south-eastern regions, respectively. Although over 500 indigenous languages are spoken, English is the official national language (pidgin English is widely used all over the country). The dominant religions are Christianity and Islam. A small proportion of the population does not identify as either Christian or Muslim (CIA, 2022).

The adult literacy rate is 62% (Table 1.1.2), which is below the regional average of 67%. However, there has been a 10.9% increase in literacy since 2008 (World Bank, 2022d). There are also high rates of out-of-school children and illiteracy in many parts of Nigeria, with the highest rates in northern Nigeria (Agence France-Presse, 2022). The correlation between low education levels and poor health outcomes presents a significant challenge for the health system (Adesola et al., 2024).

Figure 1.1.2 Population by age and sex in Nigeria, latest available year (2024)



Source: UN, 2015b

© 2024 United Nations, DESA, Population Division. Licensed under Creative Commons licence CC BY 3.0 IGO. World Population Prospects 2024. <http://population.un.org/wpp/>

Table 1.1.2 Socio-demographic indicators (selected years)

Indicator	Data	Source
Major ethnic groupings	Hausa, Yoruba and Igbo	CIA, 2022
Official language spoken	English	CIA, 2022
Other languages spoken	Hausa, Yoruba, Igbo and over 500 additional indigenous languages	CIA, 2022
Main religious groups	Islam, Christianity and others	CIA, 2022
Adult literacy rate (% of people aged 15 and above)	62.02%	USAID, 2022a
Proportion of men completing education (national average)	National average: 62.99% Primary education: 83.5% Lower secondary education: 41.46% Upper secondary education: 67% Tertiary education: 60%	Universal Basic Education Commission, 2018; Dokua Sasu, 2021; National Center for Education Statistics, 2022
Proportion of women completing education (national average)	National average: 63.46% Primary education: 90.68% Lower secondary education: 43.18% Upper secondary education: 53% Tertiary education: 67%	Universal Basic Education Commission, 2018; Dokua Sasu, 2021; National Center for Education Statistics, 2022
Prevalence rates of harmful social practices	Female genital mutilation: 19.2% Gender-based violence: 33% Smoking: 3.70% Use of unskilled birth attendants: 36.2%	NPC and ICF Macro, 2019; Macrotrends, 2022c; UNICEF Nigeria, 2022

1.2 Economic context

As of 2022, Nigeria's gross domestic product (GDP) was the highest in Africa, at US\$ 441 billion, despite the country undergoing two recessions, in 2016 and 2020, caused by the global and national oil production/pricing crisis and the COVID-19 pandemic, respectively (Kolawole, 2022). However, GDP remains suboptimal against an estimated population of over 200 million, when compared with South Africa's GDP of about US\$ 420 billion, with a population of 60 million people (Trading Economics, 2022). Nigeria's debt

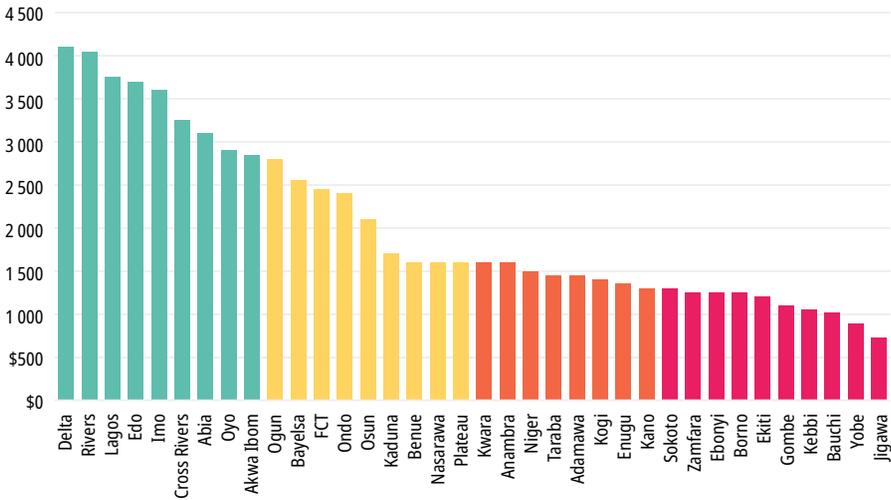
stock keeps rising and government borrowing was forecast to increase by US\$ 8.81 billion between 2023 and 2024. Key macroeconomic indicators are set out in Table 1.2.1.

The economy faces challenges of unemployment, underemployment, high rates of food cost inflation and a declining currency value, which have knock-on effects on health (African Development Bank Group, 2022). Unemployment rose sharply between 2015 and 2020, peaking at 5.71% before recovering to 3.07% in 2023 (Table 1.2.1). Consequently, undernourishment and food insecurity have risen, with improvements in malnutrition measures, such as stunting,

Table 1.2.1 Macroeconomic indicators (selected years)

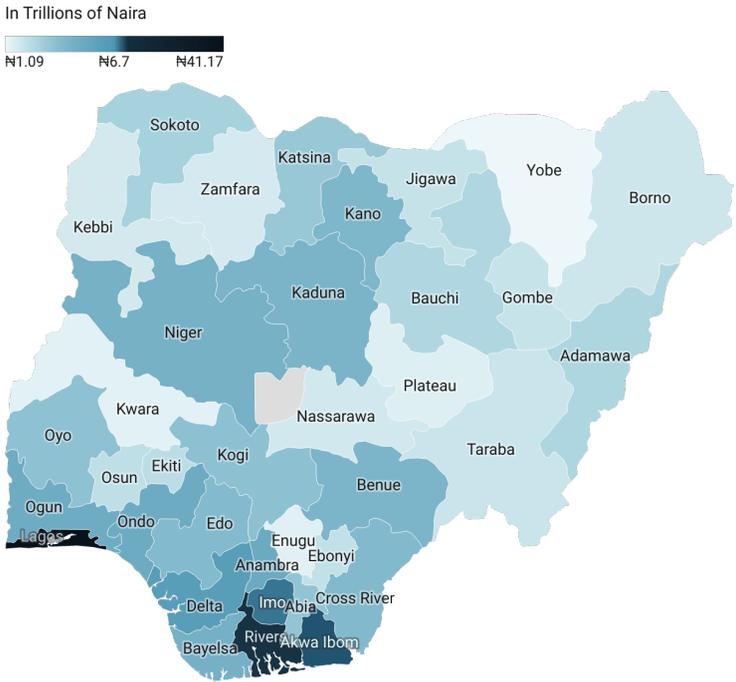
Macroeconomic indicator	2010	2015	Latest available year	Source	African regional average
GDP per capita (current US\$)	2242.87	2687.48	2184.4 (2022)	IQAir, 2022	1690.4 (2022)
GDP per capita, purchasing power parity (current international US\$)	4703.2	5426.3	5860.3 (2022)	World Bank Group, 2024	4423.5 (2022)
GDP annual growth rate (current US \$)	8	2.65	0.8 (2022)	World Bank, 2022c	1 (2022)
Public expenditure (government expenditure as % of GDP)	8.8%	5.9%	Not available	World Bank Group, 2024	1690.4 (2022)
Government deficit/surplus (% of GDP)	-4.17%	-3.80%	-6.44% (2022)	OECD, 2022	Not available
General government gross debt (% of GDP)	9.6%	20.3%	Not available	OECD, 2022	Not available
Unemployment, total (% of labour force)	3.77	4.14	3.07 (2023)	ILO, 2024	6.63 (2020)
Poverty rate (people at risk of poverty or social exclusion by age and sex as % of the total population)	Not Available	Not available	63% (2022)	FGN, 2022d	Not available
Income inequality (Gini coefficient of disposable income)	43	37.5	35.1% (2019)	NBS, 2022c	Not available

Figure 1.2.a Nigerian states' GDP per capita, 2016 (US\$)



Source: Presidential Health Sector Reform Committee, 2023

Figure 1.2.b Nigerian states by estimated GDP, 2021



Source: Data obtained from BudGIT (2022) and created with Datawrapper

stagnating (UNODC, 2022). Subnational analyses demonstrate the significant spatial variation in poverty and income inequality levels, which is mirrored by the uneven spread of health provision and outcomes (UNODC, 2022).

Nevertheless, the growth in information and communications technology (ICT) has significantly contributed to the country's economic expansion. The ICT sector accounts for 15–20% of Nigeria's GDP, with predictions of further growth in the coming years (Akintaro, 2022). Access to and usage of internet and mobile technologies has improved substantially, creating opportunities for telehealth, among other ICT-enabled health services (Olayiwola et al., 2020). During the first month of the COVID-19 pandemic and attendant movement restrictions, digital platforms promoting access to high-quality health services recorded a 400% increase in downloads, but scaling up ICT-enabled health services remains challenging (Babatunde et al., 2021).

Fig. 1.2.a shows GDP by Nigerian state in 2016. Estimated GDP by state in 2021 is depicted in Fig. 1.2.b, which also shows the geographical spread of GDP.

1.3 Environmental context

Nigeria spans three distinct climatic regions, having a tropical monsoon climate in the south, where cocoa, rubber and palm oil are produced; a tropical savannah climate in the central regions; and the Sahelian hot and semi-arid climate in the north, which produces field crops including millet, maize, sorghum and cotton (World Bank, 2022). Given this geographical variation in climate, Nigeria faces wide-ranging environmental challenges and is ranked among the top 10 most vulnerable nations in the world by the Climate Change Vulnerability Index (FMoE, 2022).

Environmental challenges

Environmental challenges include desertification (primarily in the north), deforestation, oil spillage, soil erosion (predominantly in the south-east), biodiversity loss and air pollution (Golub, 2018; World Bank, 2021b). In line with global trends, rates of death and displacement due to natural disasters have increased, with epidemics and flooding posing the most significant threats (World Bank, 2021b). In the Niger Delta, gas flaring and degradation of the environment by oil activities are a major concern. The country ranks among the

top 10 countries in the world in terms of gas-flaring prevalence, with knock-on consequences for population health (PWC, 2019).

Box 1.3.1 Policy responses

In 2018, Nigeria recorded a dangerously high fine particulate matter (PM_{2.5}) reading of 44.84 µg/m³, placing Nigeria in the top 10 most polluted countries in the world. This has since shown a massive reduction, with a reading of 21.40 µg/m³ recorded in 2019 (IQAir, 2022). This positive change can be attributed to several initiatives undertaken by the Nigerian Government. The Federal Ministry of Environment has identified priority areas that have implications for health improvements, including cleaning oil-affected regions, implementing erosion and flood control, implementing waste management and pollution control, and promoting green habitats and wildlife conservation. The ministry signed the Climate Change Bill into law in 2021 (Ladan, 2022) and implemented the Nigeria Erosion and Watershed Management Project (NEWMAP) in over 20 states (FMoE, 2022). NEWMAP is implemented in partnership with the World Bank and has been reported to have had positive outcomes (Usigbe, 2023), which may have contributed to the recent improvement in reported environmental indices. Table 1.3.1 presents trends in key environmental indicators.

Table 1.3.1 Trends in key environmental indicators (selected years)

Environmental indicator	2000	2005	2010	2015	Latest available year	Source	African regional average
Air pollution level (PM _{2.5} air pollution in µg/m ³)	67.5	59.6	52.6	75.4	21.40 (2019)	IQAir, 2022	44.61 (2019)
Use of different fuels: fossil fuel energy consumption (% of total)	18.4	21.6	18.1	18.8	22.2 (2018)	International Energy Agency, 2020; World Bank, 2021b	39.8 (2015)
Combustible renewables and waste (% of total energy)	77.9	73.2	75.9	74.3	74.3 (2015)	IEA, 2020	70.57 (2020)
Energy use (kg of oil equivalent per capita)	703.6	758.4	756.3	763.6	763.6 (2015)	IEA, 2020	687.2 (2015)

1.4 Political context

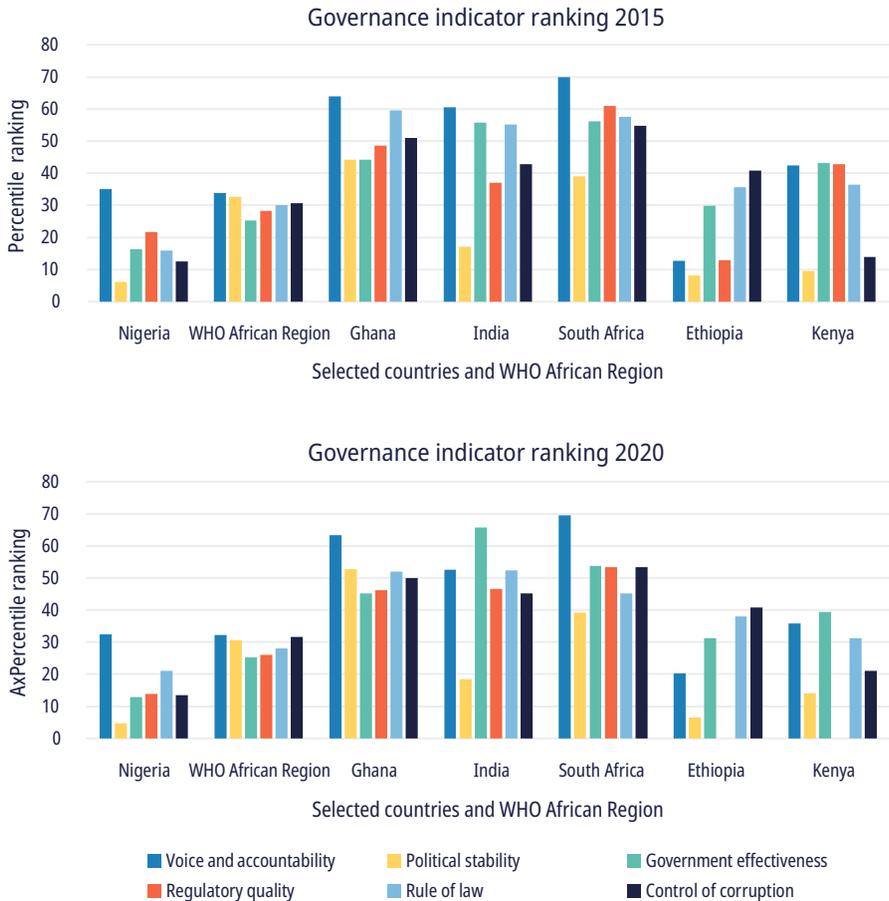
Nigeria is a federal republic with a presidential system of government in three tiers. Power is shared between the federal government at the centre, 36 state governments and the FCT administration, and 774 local government areas, headed by a president, governors and local government chairpersons, respectively (World Bank, 2021c). Each level of government has executive and legislative arms, with the federal and state levels also having a judiciary arm of government. General elections are held every four years.

In line with the separation of powers, different arms of government make (legislature), interpret (judiciary) and implement (executive) laws (Ozekhome, 2021). The legislative arm also spells out the responsibility of each tier of government. The exclusive legislative list contains items whose presiding jurisdiction resides with only the federal government (e.g. defence). In contrast, the concurrent legislative list contains items whose responsibilities are shared across the three tiers (e.g. health). As a result, federal health policies and programmes may not be adopted and implemented at subnational levels, often for reasons related to priorities and resources. Evidence suggests that the current quasi-federal structure needs to be reviewed if health policies and strategies are to be more effectively implemented (Abubakar et al., 2022).

Civil society engagement is active across multiple sectors, with positive engagement in election monitoring processes and sectors, including health, education and psychosocial protection and promotion.

Security across all regions has been unstable for over a decade, compounded by weak systems and the weak application of the rule of law (Ifediora, 2022), as evidenced by low governance indicator scores (see Fig. 1.4.1). These issues contribute to Nigeria's high mortality rates.

Figure 1.4.1 Trends in governance indicators (selected years)



Source: World Bank, 2024

Note: In the bottom panel, regulatory quality percentile figures for Kenya and Ethiopia are from 2019 due to data unavailability for 2020.

1.5 Overview of health status

Despite having the highest GDP in Africa in 2022, health outcomes remain suboptimal in Nigeria (Angell et al., 2022). In addition to the data presented in Table 1.5.1, the incidence of malaria in Nigeria is at 313.76 per 1000 population at risk, making it the 11th most malaria-endemic country in the world (IndexMundi, 2021); NCDs account for 29% of all deaths, with projections for increases in the coming years (WHO, 2018). The impact of the 2020 COVID-19 pandemic on the health system is set out in Box 1.5.1.

Table 1.5.1 Health indicators (selected years)

Indicator	2010	2015	Latest available year	African regional average
Healthy life expectancy, total (years)	51.5	53.13	54.39 (2019)	56 (2019)
Healthy life expectancy, male (years)	50.95	52.49	56.6 (2022) ^a	55 (2019)
Healthy life expectancy, female (years)	52.09	53.79	56.6 (2022) ^a	57.1 (2019)
Life expectancy at birth, total (years)	59.24	61.16	62.62 (2019)	64.49 (2019)
Life expectancy at birth, male (years)	57.75	59.59	64.1 (2022) ^a	62.37 (2019)
Life expectancy at birth, female (years)	60.79	62.8	66.9 (2022) ^a	66.65 (2019)
Life expectancy at 60 years, male (years)	76.51	17.09	17.59 (2019)	16.71 (2019)
Life expectancy at 60 years, female (years)	78.03	18.5	18.86 (2019)	18.95 (2019)
Maternal mortality ratio (per 100 000 live births)	978	931	1047 (2020); 512 (2018) ^b	530 (2020)
Neonatal mortality rate (per 1000 live births)	37.3	37.1	34 (2021)	26 (2021)
Infant mortality rate (per 1000 live births)	80.4	79.5	70.6 (2021)	49.22 (2021)
Under-5 mortality rate (per 1000 live births)	128.5	126.8	110 (2021)	71 (2021)
Adolescent mortality rate (probability of dying between 10 and 14 years of age per 1000 population) ^c	Not available	340.2	6.8 (2021)	6.1 (2021)
Adolescent mortality rate (probability of dying between 15 and 19 years of age per 1000 population)	Not available	340.2	7 (2021)	9.6 (2021)
Adult mortality rate (probability of dying between 15 and 60 years of age per 1000 population), female	378	355	366 (2021)	264 (2021)
Adult mortality rate (probability of dying between 15 and 60 years old per 1000 population), male	378	355	386 (2021)	338 (2021)

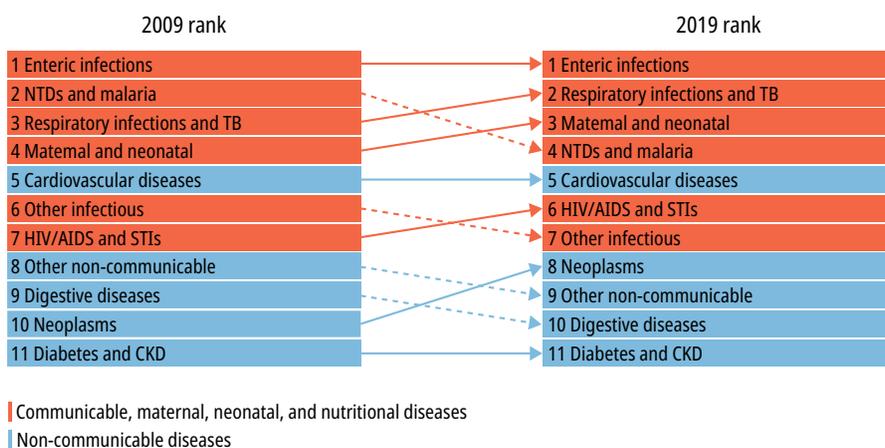
Sources: ^aIHME (2024), ^bNDHS (2018); all other data: WHO (2021) and World Bank Group (2024)

Evidence suggests that scaling up health systems is needed to accelerate progress across health outcomes. Areas identified include further investment across all levels of health care, especially primary health care and urban health; optimization of the health workforce; strengthening psychosocial components of health; and reinforcing accountability and anticorruption (Onwujekwe et al.,

2020b; Agwu et al., 2023). Health system investments are discussed in more detail in Chapter 3.

Life expectancy in Nigeria is increasing but remains below the regional average. Fig. 1.5.1 sets out the top causes of mortality across all ages. In 2019, enteric and respiratory infections were the most significant contributors to deaths in Nigeria (IHME, 2024)

Figure 1.5.1 Top 10 causes of total number of deaths in Nigeria in 2009 and 2019, all ages combined

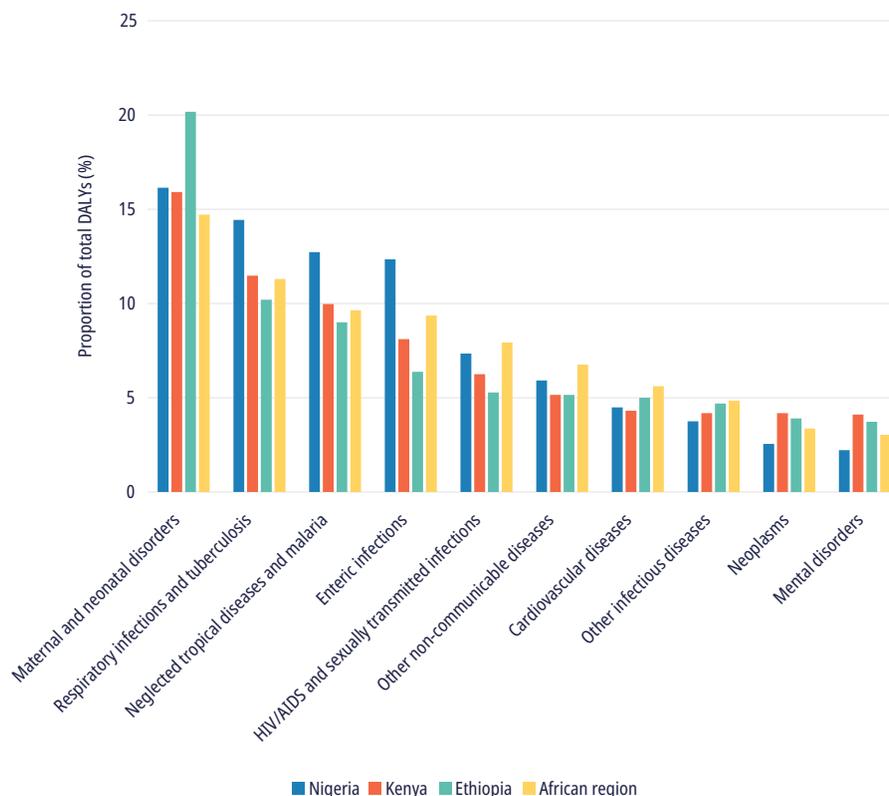


Source: IHME, 2024

Notes: CKD = chronic kidney disease; NTD = neglected tropical disease; STI = sexually transmitted infection.

The burdens of both communicable diseases and NCDs in Nigeria are very high, as evidenced by the sizeable disability-adjusted life years (DALYs) lost due to different health conditions. Global Health Metrics data reveal that communicable, nutrition-related diseases and maternal and neonatal morbidities/mortalities are Nigeria's most significant contributors to DALYs (Vos et al., 2020). Some progress has been made in reducing maternal, under-5 and infant mortality rates, although neonatal mortality has shown no noticeable change (NPC and ICF Macro, 2019). Infectious diseases require further investment (Oyejobi et al., 2022), but disease-specific policies and programmes exist for malaria, HIV/AIDS, tuberculosis (TB), stroke and meningitis (see Chapter 2). Fig. 1.5.2 presents the top 10 conditions that contribute to Nigeria's DALYs.

Figure 1.5.2 Relative share of categories of diseases for DALYs in Nigeria, selected countries and the African region, all ages combined



Source: IHME, 2024

Nigeria’s health outcomes remain poor compared with countries with equivalent or lower health expenditure. This suggests that health system strengthening and targeted interventions to address challenges arising from contextual economic, environmental and socio-demographic factors – such as underinvestment in health, accountability and corruption, poor sanitation and water sources, malnutrition and exposure to air pollution – could significantly improve population health (Onwujekwe et al., 2020b; Angell et al., 2022; Agwu et al., 2023).

Box 1.5.1 Overview of the impact of COVID-19

The COVID-19 pandemic imposed multiple shocks on Nigeria's national health infrastructure, with Nigeria being ranked as the country most affected by COVID-19 in West Africa (NCDC, 2022c). As of March 2023, when centralized data collection ceased, Nigeria had recorded 266 958 cases of and 3155 deaths due to COVID-19.

Demographic impact. Data show that more men have died from COVID-19 than women (about 60% versus 40% of all deaths caused by COVID-19), and the majority of deaths were among those aged 45 years and above (Tan et al., 2021). Other demographic implications include an increase in the domestic abuse of women and a spike in suicide attempts among young people, as well as negative impacts on the informal workforce, who were profoundly affected by lockdowns (JHU, 2023).

Socioeconomic implications. Consequences of the pandemic derived from a fall in global oil prices, policy interventions by the government such as bans on certain types of activities, closure of borders, state lockdowns, school closures and social distancing policies resulted in disruptions that were felt in all sectors of the economy and society (Joab-Peterside, 2021). A quarter of all jobs were lost during the pandemic, with millions of Nigerians dropping out of the labour force completely (United Nations Nigeria, 2022).

Health system impact. The COVID-19 pandemic revealed weaknesses in the health system in terms of capacity to maintain access to essential services. It also demonstrated the benefits of a prompt first response centrally led by the president's office and the value of coordinated multisectoral action. But the failure to institutionalise these innovations and the need to embed subnational-level engagement into decision-making processes have limited longer-term system strengthening (Okeke et al., 2022).

Chapter summary

This chapter describes the varied dimensions of the Nigerian context and their relevance to the country's health system. Nigeria has the largest population in Africa, a high fertility rate, a high maternal mortality ratio and high under-5 mortality, and projections suggest that the population will expand substantially in the years to come. The country is battling low economic growth and high inflation rates and has yet to reap the demographic dividends of its large, youthful population. High levels of poverty and unemployment, weak governance and accountability, and limited health system resilience affect health care provision and outcomes. Rapid growth in the ICT sector is boosting the economy and

Country Health Systems and Services Profiles

opening doors to ICT-enabled health services, but further scaling up is needed to build on existing digital health innovations. Population growth has led to high burdens of both communicable diseases and NCDs and increased pressures on the health system. Although life expectancy is rising, it remains below the regional average. Health outcomes remain poor compared with countries with equivalent or lower health expenditure, and further investment in health system strengthening and addressing socioeconomic challenges is needed to improve health outcomes.

Organization and governance of the health system

By **Enyi Etiaba, Adanma Ekenna** and **Ugenyi Iloabachie**

Chapter 2 key messages

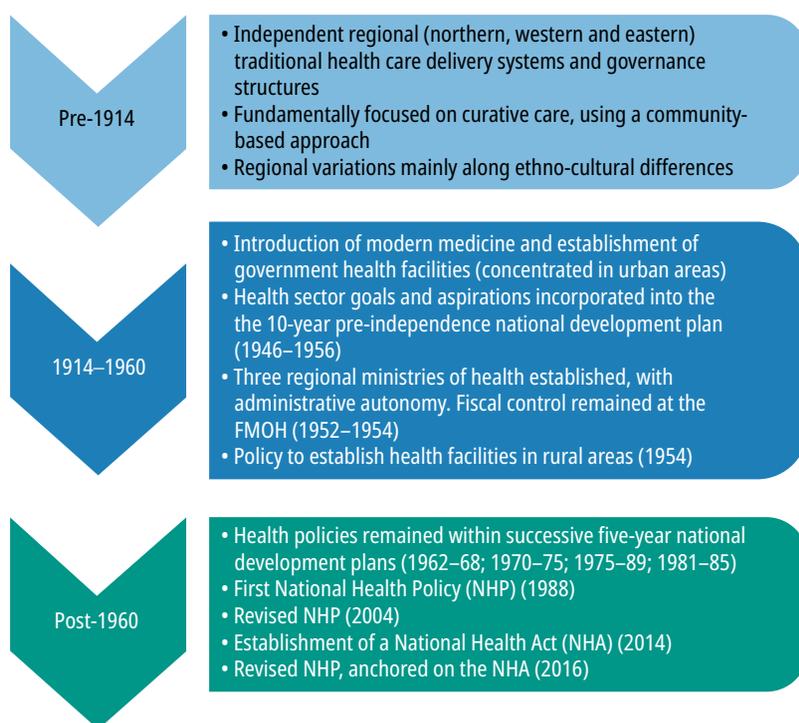
- Nigeria's three-tier (primary, secondary and tertiary) health system structure is governed by the National Health Act (2014) and National Health Policy (2016). Health governance is regionally devolved in line with the existing democratic federal governance structure.
- The federal level is primarily responsible for tertiary health services and the state level for secondary health services. State governments work with local government authorities to supervise primary health services delivered at the local or ward level, guided by the Primary Health Care Under One Roof (2013) policy. Overlaps between tiers and party or political influences weaken coordination in the system.
- Private health providers currently deliver an estimated 70% of all health care services, despite being responsible for only 35% of health facilities. Partnerships for health are recognized as building blocks of the health system, and strengthening public-private partnerships is seen as key to enhancing health system performance. However, mechanisms for engagement, regulation and accountability in the private sector remain weak.
- Nigeria has a federal governance structure with federal, state and local levels. There are 36 states and the Federal Capital Territory at state level, and 774 local government areas. Weak core governance indicators, including control of corruption, freedom of expression and the rule of law, remain causes for concern, with knock-on effects on health system governance.
- Political commitment to global health targets is strong, and reforms including the Nigeria Health Sector Renewal Investment Programme (2023) have put in place the policies and plans needed to guide health service delivery. However, policy implementation remains challenging, exacerbated by the complexity of the regionally devolved health sector and weak accountability and law enforcement at all governance levels. Consequently, progress towards universal health coverage remains slow.

2.1 Organizational structure

Historical development of the health system

The Nigerian health system has evolved through various stages to reach its current form, which aligns with the existing democratic federal governance structure (Fig. 2.1.a).

Figure 2.1.a Evolution of the Nigerian health system



Source: Etiaba, 2021

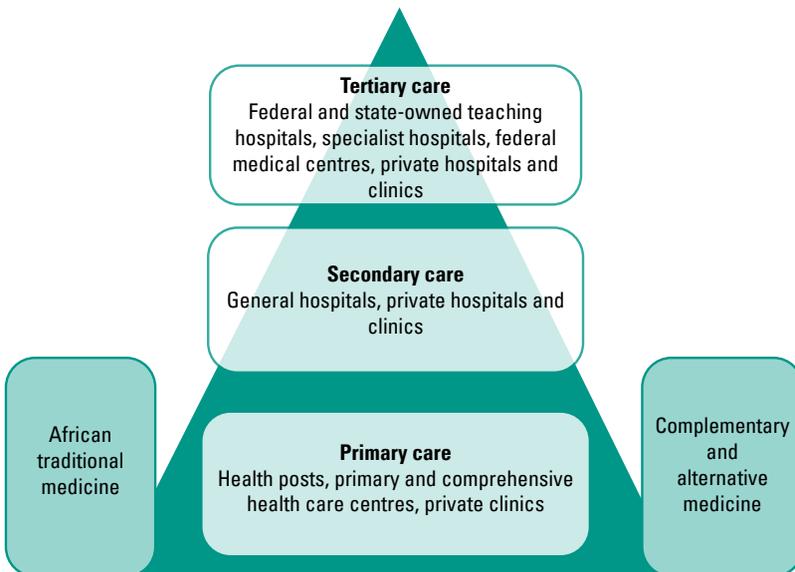
The post-independence era (post 1960) saw the introduction of the first specific national health policy in 1988, with a clear focus on primary health care (PHC). The National Health Act (NHA) entered into force in 2014 and provides a legal framework that aligns health care responsibilities with the three constitutional tiers of government: federal, state and local (FGN, 1999, 2014). Subsequent

health policies, including the current National Health Policy (NHP) (FMOH, 2016) have been aligned with the NHA 2014. Presently, Nigeria's national health system comprises the following (FGN, 2014):

- the Federal Ministry of Health (FMOH), known since 2023 as the Federal Ministry of Health and Social Welfare (FMOH&SW);
- state ministries of health (SMoHs) and the Federal Capital Territory (FCT) department responsible for health care;
- parastatals under the FMOH and SMoHs;
- local government health authorities (LGHAs);
- PHC development committees;
- village health committees;
- private health care providers;
- traditional health care providers;
- alternative health care providers.

The above can be categorized into the three health system tiers, as shown in Fig. 2.1.1.

Figure 2.1.1 Overview of the health system



Source: Adapted from the National Strategic Health Development Plan II (FMOH, 2018b and Aregbeshola, 2021)

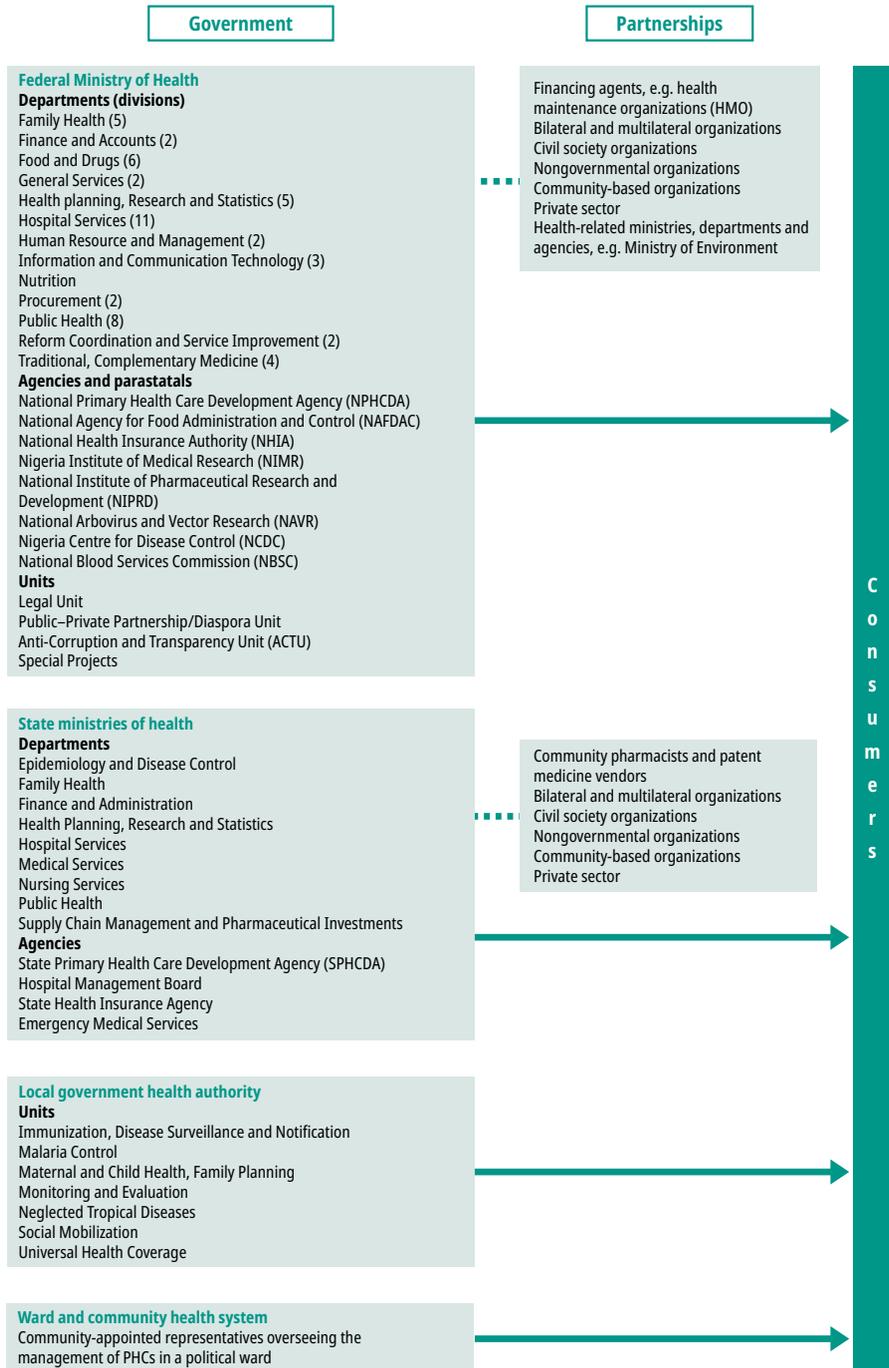
Tertiary-level health services are provided at federal teaching and specialist hospitals, federal medical centres, private hospitals and clinics. The FMOH is structured into departments, agencies and parastatals (DAPs) and units (Fig. 2.1.b). Although agencies and parastatals are domiciled outside the FMOH, departments are within the FMOH and continuously evolve with successive regimes and ministers. Presently, there are 13 departments and five units. Each department is further divided into varying numbers of divisions.

State governments govern secondary-level services, which are provided at general hospitals and private teaching and specialist hospitals in various states. In addition, some states own teaching hospitals that provide tertiary care. Each state has its own SMOH with departments and agencies organized in a similar way as those at the federal government level. The SMOHs are expected to support and supervise PHC service delivery. SMOH agencies include the state primary health care development agencies/boards (SPHCDA/Bs) and the state health insurance schemes (Fig. 2.1.1). The commissioners of health and the directors of the departments and agencies form part of the state councils on health (SCHs).

The local government health authority (LGHA) supervises PHC service delivery at PHC centres and collaborates with the SPHCDA/B to deliver community-based services. The LGHAs form part of the SCHs. They are mandated, according to the NHA 2014, to contribute no less than 25% to the total cost of PHC projects executed. Many health units at the local government area (LGA) level coordinate programme-specific activities on the front line (Fig. 2.1.b).

The political ward is the smallest administrative unit of the Nigerian Government. Wards comprise communities and villages. Each ward has a health committee that advises and supervises PHC at the community ward/village health committee level to ensure the delivery of a range of defined PHC services at the ward level, collectively known as the Ward Minimum Health Care Package (WMHCP) (NPHCDA and WHO, 2007). Ongoing reforms are intended to ensure that each community or village in a ward has at least one fully functional PHC centre.

Figure 2.1.b Organizational structure of the health system (DAPs and partnerships)



Source: Adapted from FMOH organogram (<https://www.health.gov/ng/Source/42/Organogram#>)

Note: Solid line = authority; dotted line = technical supervision.

2.1.1 Health care management and key actors

Table 2.1.a Health care management and key actors

State/public actors	Non-state/private actors		
	Formal	Informal	Community
<ul style="list-style-type: none"> • FMOH and its DAPs • Federal Ministry of Finance, Budget and National Planning • SMOH and its DAPs • FCT Secretariat for Health and Human Services • State ministries of budget and planning • Legislators at the federal (the Senate and House Committees on Health), state (state houses of assembly and house committees on health) and local government levels 	<ul style="list-style-type: none"> • Private sector (for profit) • Private (formal) provider groups • Nongovernmental organizations/civil society organizations (non-profit) • Development partners (non-profit) • Formal faith-based organizations (non-profit), e.g. health facilities provided by faith-based organizations • Academia and public health experts • Chambers of commerce • Economic institutions and enterprises • Professional councils and associations 	<ul style="list-style-type: none"> • Multiplicity of health providers/faith healers and traditional, complementary, alternative and patent medicine vendors • Philanthropists • Labour unions • Clubs/societies 	<ul style="list-style-type: none"> • Health care consumers as individuals, families and community members • Ward development committees

State and non-state actors are identified as key management actors (Table 2.1.a) (FMOH, 2018b). National policy documents set out structures and roles across levels of governance (FGN, 2014; FMOH, 2016c).

Federal public sector management

The FMOH is responsible for defining the overall policy framework for the health system with the participation of the 36 federal states and the FCT. It is also responsible for strengthening technical and managerial competences at the state level in delivering secondary health care (SHC) services, and for defining

norms, standards and protocols in relation to medicines, vaccines, research, hospital services, PHC and health workforce training. The FMOH performs its policy-making and oversight roles through its DAPs.

As stipulated by the NHA 2014, the National Council on Health (NCH) is the highest decision-making body of the Nigerian health system. Membership comprises the Minister of Health (chair), the Minister of State for Health, the Permanent Secretary of the FMOH (secretary), the commissioners of health for each of the 36 states, and the Secretary of Health and Human Services of the FCT (FGN, 2014). See Section 2.3 for details of the NCH's role in stakeholder engagement.

In addition, the Ministry of Finance, Budget and National Planning plays a key role by linking the FMOH with other ministries for planning health and health-related projects.

State public sector management

The SMOHs are responsible for developing and implementing state-level health policies, norms and protocols in the health sector. This may take the form of adopting and implementing national policies and/or initiating state-level policies. In addition, they oversee SHC service delivery and support their LGAs in delivering PHC services. The SMOHs supervise secondary and tertiary health care service delivery, SPHCDA/Bs, schools of health technology, nursing and midwifery, and private health organizations (Fig. 2.1.b).

Governors are the ultimate decision-makers at the state level. They confer with the state executive council, which comprises political appointees of the governor (including the deputy governor, the secretary to the state government and all commissioners). The political and decision-making structure made by the autonomy of the states overrides any national-level decisions taken at NCH meetings (ASMoH and FHI 360, 2013; Eboreime et al., 2017; ESMoH, 2018). This misalignment in governance structure means that, despite the provisions of the NHA 2014, the constitutional executive powers of state governors can create conflict in relation to the transfer and adoption of national policies (Eboreime et al., 2017). The fledgling autonomy of the states is an evolving challenge within the health system.

Before the inauguration of the SPHCDA/Bs, the SMOHs were also responsible for overseeing LGAs health departments and supervising in delivering services at PHC centres. The SPHCDA/Bs were set up to mirror the function of the NPHCDA in coordinating all PHC activities. Their central role is to coordinate

the implementation of the Primary Health Care Under One Roof (PHCUOR) policy, a health system governance reform described in detail in Section 2.5.

Local government health management

Local governments manage the bulk of service delivery points, with fiscal allocations from the state-level government (Ozohu-Suleiman and Chima, 2015; FMOH, 2016c). Legislatively, the LGHAs are managed by the Local Government Service Commission and the SPHCDA/Bs. The LGA PHC director has direct oversight of PHC services. They work with health programme managers in the health department and report to the chairperson of the LGA through the supervisor for health. However, under the present structure, local governments have poor administrative capacity and fiscal autonomy (FMOH, 2016c).

Non-state/private actors

The non-state/private sector is made up of the formal private health care sector, which includes private not-for-profit organizations (operated by faith-based organizations and nongovernmental organizations (NGOs)) and private for-profit organizations, and the informal sector, which includes traditional medicine providers (TMPs), patent medicine vendors, medicine stores, and complementary and alternative practitioners (FMOH, 2018b). The private sector provides an estimated 70% of the health care services in the country despite being responsible for only about 35% of the health facilities (Presidential Health Sector Reform Committee, 2023). It also plays a role in health personnel training and health insurance provision.

Private for-profit providers

The formal for-profit private sector provides predominantly primary and secondary care. In addition, it provides teaching hospitals affiliated with private medical universities and diagnostic and allied health services.

Private not-for-profit providers (faith-based providers, development partners and nongovernmental organizations)

Faith-based health organizations are important private, not-for-profit providers of health care services. Although their activities are mostly

community based and aim to reach the poorest and most vulnerable groups through engagement with local networks (Ayandele et al., 2021), they contribute significantly to various health system functions, notably service delivery. Over 400 health facilities across Nigeria are funded by Catholic organizations alone (Catholic Secretariat of Nigeria, 2020). The recent *Lancet* Nigeria Commission report recognizes the contributions of faith-based health organizations to enhancing complementary access to basic health services (Abubakar et al., 2022).

Bilateral and multilateral organizations have partnered with Nigeria in health emergency management, health care delivery and economic development. These actors influence health programme design and implementation standards and are involved in setting priorities linked to their global mandates or resource inputs. For example, the United Nations Children's Fund's mandate of protecting children allows it to shape immunization policies, programmes and related interventions. The Bill and Melinda Gates Foundation also invests directly in immunization programmes and therefore plays a significant role in immunization governance committees, with advisory and technical functions.

In addition to offering technical and financial assistance in health policy-making and implementation, bilateral agencies channel funds through the World Health Organization and other United Nations agencies to health-related projects (Anamene, 2020). In 2020, the Development Assistance Committee of the Organisation for Economic Co-operation and Development spent US\$ 186.5 million on health in Nigeria (OECD, 2020).

Many national and international civil society organisations and NGOs work to fill the gaps in the health system left by absent or insufficient public sector provision; this work typically involves holding governments accountable and ensuring transparent health system governance. These organizations play a role in decision-making by initiating reform agendas in the sector. For instance, the Health Sector Reform Coalition, an indigenous NGO, led a broad range of stakeholders, including professional bodies, between 2004 and 2014 and advocated for the development and passage of the National Health Bill into law. The Health Reform Foundation of Nigeria and similar organizations at the national and state levels also sit on high-level decision-making panels that aim to strengthen the health system or improve the delivery of specific health interventions.

Informal non-state actors

These include the multiplicity of informal health providers (traditional/complementary/alternative providers and patent medicine vendors), labour unions, and other clubs and societies. They engage more visibly at the community level than at other levels and are usually for-profit organizations.

Community

Individuals and their families are the consumers of health services and play a role in planning, managing, monitoring and evaluating health interventions. More than 70% of health expenditure is accounted for by out-of-pocket expenses, paid directly by the consumers (WHO, 2023b). Communities have played leadership roles in some community-based health insurance schemes (Onwujekwe et al., 2009). In addition, some PHC facilities have been renovated by community members.

Communities are involved in health management through the ward/village/community development committee structure. The political ward is the smallest governance unit, usually comprising 10 000 to 30 000 people. Each ward is meant to have one PHC centre and at least one health post (NPHCDA, 2010). The committees in these wards comprise a chairperson, three community representatives and the officer in charge of the health facility. They provide accountability for PHC management on the front line. In addition, community members hold some decision-making powers through their participation in the National Tertiary Health Institution Standards Committee and the National Health Research Ethics Committee, as stipulated by the NHA 2014.

2.2 Governance

2.2.1 Planning

The NHP 2016 guides activities in the health system, and the strategic health development plans operationalize programmes across the federal, state and local government levels. Health plans are mostly developed independently, but the Ministry of Finance, Budget and National Planning is a hub for the development of intersectoral plans. For instance, the Federal Government of Nigeria (FGN), through its policy on nutrition, stipulates that nutrition is a

multisectoral thematic area. There is no budgetary allocation for intersectoral collaborative projects, but political commitment to adopting a Health-in-All-Policies approach is developing as understanding of this approach grows. The NHA 2014 provides the overarching legal framework for all national policies, plans and programmes (FGN, 2014).

Federal planning

National Health Act

The NHA 2014 provides a framework for establishing, regulating and managing the national health system. It sets out the standards for providing health services and related matters in the country (FGN, 2014). It was passed in 2014 to support the realization of universal health coverage (UHC). The details of the NHA regulatory provisions are outlined in Section 2.2.2.

National Health Policy

The first comprehensive health policy was launched in 1988 and subsequently revised in 2004 and 2016. These policies were developed to capture global mandates and development goals and adapt them to national priorities. The current policy, the NHP 2016, aims to address the unfinished agenda of the Millennium Development Goals, aspirations of the Sustainable Development Goals (SDGs) and other emerging health issues, especially epidemics and climate change. It also reassesses the national targets set out in the NHA 2014. The NHP 2016 envisages UHC for all Nigerians and lays out a foundation for stakeholders in health to achieve the SDGs. It provides objectives for 10 policy areas, namely the following: governance; health service delivery; health financing; human resources for health (HRH); medicines, vaccines, commodities and health technologies; health infrastructure; health information systems; health research and development; community ownership; and partnerships for health (FMOH, 2016c). The details of these objectives, organized by health system function, are described in Chapters 3–8.

National health policies are developed by a consensus of stakeholders from the FMOH and its DAPs, and by representatives from the private sector, academia, NGOs, development partners and regulatory bodies. These actors form a technical working group that reviews the success of previous NHP implementation and proposes new themes and objectives.

National Strategic Health Development Plan

The National Strategic Health Development Plan (NSHDP) is the overarching implementation plan guiding the health system, developed based on the National Health Policy. Nigeria has had two NSHDPs, namely NSHDP I (originally covering 2010–2015) and NSHDP II (originally covering 2018–2022). The implementation period of the first was extended to 2017, and the second expired in 2022. A successor plan (NSHDP III) is in the process of being developed ; in the meantime, the NHA 2014 provides guidance. NSHDP II was anchored in the NHP 2016. Its key purpose was to address long-standing and emerging health sector challenges and build on the progress made through implementation of NSHDP I towards achieving UHC. Programme-specific plans and plans related to the health system's building blocks have also been developed using these NSHDPs. For example, Table 2.2.1 summarizes the specific plans for malaria, HIV/AIDS, tuberculosis (TB) and maternal, neonatal and child health (MNCH), highlighting their linkages to global targets and goals.

NSHDPs are developed through an inclusive and participatory process involving both government and nongovernment stakeholders. The FMOH statutorily leads the development of an NSHDP every five years. Planning starts by developing a framework following validation by all stakeholders; this framework guides states, the FCT and actors at the federal level in the production of their plans. These plans, which are costed, are then aggregated into the NSHDP and validated by stakeholders (FMOH, 2018b).

State planning

The SMOHs are mandated to provide advisory and oversight roles to the government in policy formulation, regulation and implementation in relation to health matters by adapting the NHP to their contexts (state health policies). They develop long- and medium-term sector strategies and short-term annual operating plans (AOPs) for the state. They also develop plans for the training of nurses and PHC workers.

State strategic health development plans (SSHDPs) are developed by the SMOHs, with support from the FMOH, development partners and community members, in a participatory process and in line with the overarching national plan. The development of a monitoring and evaluation framework for each state follows the national framework.

Local government planning

Local government areas are guided by the state's interpretation and implementation of the NHP. They develop AOPs in the last quarter of the year, collating work plans from local government area health programme managers. The costed plans are compiled by the local government area PHC director and approved by the health supervisor and the local government area chairperson. The AOPs are part of the NSHDP and each SSHDP.

Implementation of programme-specific national plans

Programme-specific national plans and policies are shown in Table 2.2.1. The extent of implementation of strategies in key areas is discussed below.

HIV/AIDS

The HIV/AIDS programme has two policy documents that are in line with the recommendations of NSHDP II for the integration of HIV care into an essential package of health care services (FMOH, 2018b), the SDGs and the 90–90–90 targets (Table 2.2.1). The Nigeria HIV/AIDS Indicator and Impact Survey conducted in 2018 showed a 40% reduction in HIV prevalence from the 2017 level; however, the country was not on track to achieve the 90–90–90 targets by the end of 2020 (Adebowale-Tambe, 2020). The National Health Accounts 2022 show that total government expenditure on HIV/AIDS amounted to 94.6 billion Nigerian naira (US\$ 211 million) in 2022 (WHO, 2023b).

Malaria

The National Malaria Programme has had several strategic plans: 2001–2005, 2006–2010, 2010–2013 and 2014–2020 (FMOH, 2020f). The most recent plan represented a transition from a control programme to an elimination programme, which was facilitated by increased government expenditure as stipulated in the 2010–2013 plan (FMOH, 2014b). The 2014–2020 plan aimed to eliminate malaria-related deaths in Nigeria and focused on integrated vector and malaria case management (FMOH, 2020f). A steady decrease in the number of malaria cases from 2010 to 2018 shows that this national programme was effectively implemented (FMOH, 2020f).

Table 2.2.1 Programme- or system-specific health strategies and linkages to national health plans and policies

Specific health programmes or strategies	Key policy	National target	SDG/global target
HIV/AIDS	National HIV and AIDS Strategic Plan 2017–2021 (FMOH, 2017d)	Fast-track national response towards ending HIV/AIDS in Nigeria by 2030	<p>SDG 3.3: to end the epidemics of HIV/AIDS, TB, malaria and neglected tropical diseases by 2030, and to continue combating hepatitis, waterborne diseases and other communicable diseases (UN, 2015a)</p> <p>UN 90–90–90 agenda: this required that 90% of all people living with HIV would know their HIV status, 90% of all people with diagnosed HIV infection would be receiving sustained antiretroviral therapy, and 90% of all people receiving antiretroviral therapy would have viral suppression by 2020 (UNAIDS, 2017)</p>
Malaria	National Malaria Strategic Plan 2021–2025 (FMOH, 2020f)	<p>Reduce mortality attributable to malaria to fewer than 50 deaths per 1000 live births</p> <p>Extend UHC from 5% to 25% by 2025 and ensure all routine and campaign data are added to the National Malaria Data Repository</p>	<p>SDG 3.3: to end the epidemics of HIV/AIDS, TB, malaria and neglected tropical diseases by 2030, and to continue combating hepatitis, waterborne diseases and other infectious diseases</p>
TB	National Strategic Plan for Tuberculosis Control 2021–2025 (FMOH, 2021g)	Accelerate efforts at ending the TB epidemic in Nigeria by ensuring access to comprehensive, high-quality, patient-centred and community-owned TB services for all Nigerians	<p>SDG 3.3: to end the epidemics of HIV/AIDS, TB, malaria and neglected tropical diseases by 2030, and to continue combating hepatitis, waterborne diseases and other infectious diseases</p>

Table 2.2.1 Continued

Specific health programmes or strategies	Key policy	National target	SDG/global target
MNCH	RMNCAH+N Strategy (2021) (FMOH, 2021) Nigeria Every Newborn Action Plan (FMOH, 2018a)	End preventable neonatal deaths and stillbirths by 2030	SDG 3.1: to reduce the global maternal mortality rate to less than 70 per 100 000 live births by 2030 SDG 3.2: to end the preventable deaths of neonates and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least 12 per 1000 live births and under-five mortality to at least 25 per 1000 live births by 2030
HRH	National Human Resources for Health Strategic Plan 2021–2025 (FMOH, 2020e)	To address the most critical health workforce challenges, across multiple intervention areas and through five strategic objectives	SDG 3.1: to substantially increase health financing and recruitment and retention, together with the number of development and training programmes, for the health workforce in developing countries, especially in the least-developed countries and in small island developing states

Note: IRMNCAH+N = integrated reproductive, maternal, neonatal, child and adolescent health plus nutrition; UN = United Nations.

Tuberculosis

The National Tuberculosis, Leprosy and Buruli Ulcer Control Programme of the FMOH produced three strategic plans from 2013 to 2021. This control programme aims to achieve a 50% reduction in the TB prevalence rate and a 75% reduction in TB mortality (excluding HIV-related TB mortality) in Nigeria compared with 2013 levels by 2025 (FMOH, 2015a). In addition, the National Tuberculosis Strategic Plan 2015–2020 aimed to “ensure universal access to high-quality patient-centred TB prevention, diagnosis and treatment services for Nigerians with all forms of TB, regardless of geographic location, income, gender, age, religion, tribe or other affiliation” (FMOH, 2015a). However, the target of the most recent TB strategic plan (2021–2025), providing TB patients with preventive therapy, has not been met (FMOH, 2021g).

Maternal and child health

The Integrated Maternal, Neonatal and Child Health Strategy was launched in 2007. Since then, for each programmatic area in the integrated reproductive, maternal, newborn, child and adolescent health plus nutrition (IRMNCAH+N) spectrum, thematic working groups have been established (FMOH, 2017e). The NHP 2016 and NSHDP II emphasize the importance of reducing maternal and child mortality (FMOH, 2018b). Moreover, the IRMNCAH+N investment case (2017–2030) targets poor and rural populations, considering that they are most affected by maternal and child mortality. It prioritizes providing free MNCH services with strategic purchasing (FMOH, 2017e). Notably, the services are outlined in the NHA 2014 as the Basic Minimum Package of Health Services (FGN, 2014). The IRMNCAH+N Strategy (2018) stipulates that high-impact interventions should be implemented to improve MNCH outcomes, reduce associated costs and reduce maternal mortality (FMOH, 2018a). There has been continued political commitment to MNCH programmes at all levels of governance. Remarkable strides have been made in eradicating polio, but utilization of skilled birth attendants is still suboptimal due to the inadequate supply and inequitable distribution of health care workers, who are concentrated mainly in the south, and to health-seeking patterns. There is still a high prevalence of home deliveries in northern Nigeria (NPC and ICF Macro, 2019).

Human resources for health

Nigeria's focus on HRH is outlined in its National Human Resources for Health Policy (2020) and National Human Resources for Health Strategic Plan 2021–2025 (FMOH, 2020d,e). Implementing HRH policy objectives has been slow, and the health workforce continues to be poorly distributed. Although the policy stipulates collaboration among nongovernment stakeholders, there is little evidence of an intersectoral approach to HRH issues.

2.2.2 Legal and regulatory processes

The overall legal framework for the health system is detailed in the NHA 2014, which also contains an overarching regulatory framework (FGN, 2014). The NHA 2014 defines the organization of the health care system, the service providers

and the relationship between the various tiers. It outlines the framework for the standardization and regulation of health services. It describes the regulations related to responsibility for the following: health, health establishments and technologies; rights and obligations of users and health care personnel; national health research and information systems; HRH; and control of the use of blood, blood products, tissue and gametes in humans (FGN, 2014). The NHA is also notable for its focus on public health priorities.

Federal health acts and regulations

Health laws in Nigeria also include acts establishing the DAPs of the FMOH. The FGN ratifies these acts and describes the legal functions of each DAP. The NHA 2014 confers the right to maintain standards of practice on several professional regulatory bodies. These regulatory bodies are established by acts detailing their functions and legal status. A comprehensive list of regulatory bodies is available on the FMOH&SW website. Representatives of health professional regulatory bodies also serve as members of the technical committee of the NCH, which has an advisory role.

State health laws

States adapt the NHA 2014 to their context for the development of state health laws, which describe the roles of the stakeholders in health in each state. States also have acts establishing the agencies and parastatals of the SMoH. Public health laws are enacted by states for the protection and preservation of the health of the population. They detail the description of a medical officer or environmental health officer and other key aspects of public health, including infectious diseases, vaccination, water, streets and open space trading; the laws differ across states.

Law-making process

As with any law in Nigeria, health laws originate from the executive or the legislature and are presented as bills to the legislature. Bills pass through two readings and are then referred to the relevant committee for deliberation, which may include a public hearing. Thereafter, they are returned to the House of Representatives for a third reading. Following a successful third reading, bills are sent to the Senate for concurrence and transmitted to the President for

assent. The law is then gazetted on assent by the President. A law may still be passed with a presidential veto if a two-thirds majority of the two chambers agrees. At the state level, the process is as above, except that only one state house of assembly can approve a bill and send it to the governor for assent before it becomes a law.

The actors involved in law-making are the legislature, the public and stakeholders in health, who contribute to drafting the proposed bill and to the public reading. At the federal level, these actors include the FMOH, professional/regulatory bodies and development partners. These actors influence laws and regulations by introducing international best practices, with the FMOH and the legislature acting as stewards in implementing different regulations. The stewards' use of informal norms and values is useful in programme design but does not influence legal processes. At the state level, the actors mirror those at the federal level, except that the SMoH, instead of the FMOH, acts as the steward. This arrangement leads to political tensions, especially in policy processes, where subnational policy implementation can depart from the original intent of federal-level policy (Eboreime et al., 2017).

2.3 Stakeholder engagement and partnerships

Stakeholders and their roles are outlined in Section 2.1.1. Stakeholder engagement enables agenda-setting, policy-making, policy adoption, policy implementation, evaluation of health policies and the provision of feedback.

Stakeholder engagement and coordination mechanisms

Public/state health sector engagement is primarily intra-sectoral, occurring among the various units and departments in the FMOH, and coordinated by thematic technical groups and task teams at the federal and state levels. Cross-sectoral engagement and collaboration range from minimal to robust, depending on the committee. For example, the One Health intersectoral committee provides a platform for robust engagement on One Health issues, although this is currently minimal (FMOH, 2023c). Cross-sectoral engagement is more robust during health crises, as seen during the COVID-19 pandemic (FGN, 2020).

National Council on Health

The NCH provides an umbrella health stakeholder engagement platform that meets annually or can be convened by the Minister of Health to address urgent issues. Meetings involve all national and subnational health stakeholders, including professional groups, the private sector and development partners. Engagement activities can be issue based or programme specific. A technical committee chaired by the Permanent Secretary advises the NCH on its functions and any other matters that the council may refer to it. A key challenge with the NCH is that state governors, who retain executive powers at the subnational level, have not historically engaged with NCH meetings; rather, they are represented by the commissioners for health. However, what the commissioners commit to at the meetings, through memoranda of understanding or other means, is not automatically accepted by the absent governors (Eboime et al., 2017).

State councils on health

In addition to biannual meetings, state actors are encouraged to hold SCH meetings in their various states, specifically to engage the following actors on state-specific issues: state actors, LGA stakeholders, non-state sector actors, community groups and community-based organizations and their development partners. Several states across Nigeria have adopted the practice of holding SCH meetings, as provided for in the NHA. However, the frequency of meetings varies across states, probably because they are held at the behest of the executive governors, who may have divergent priorities.

Other coordination mechanisms

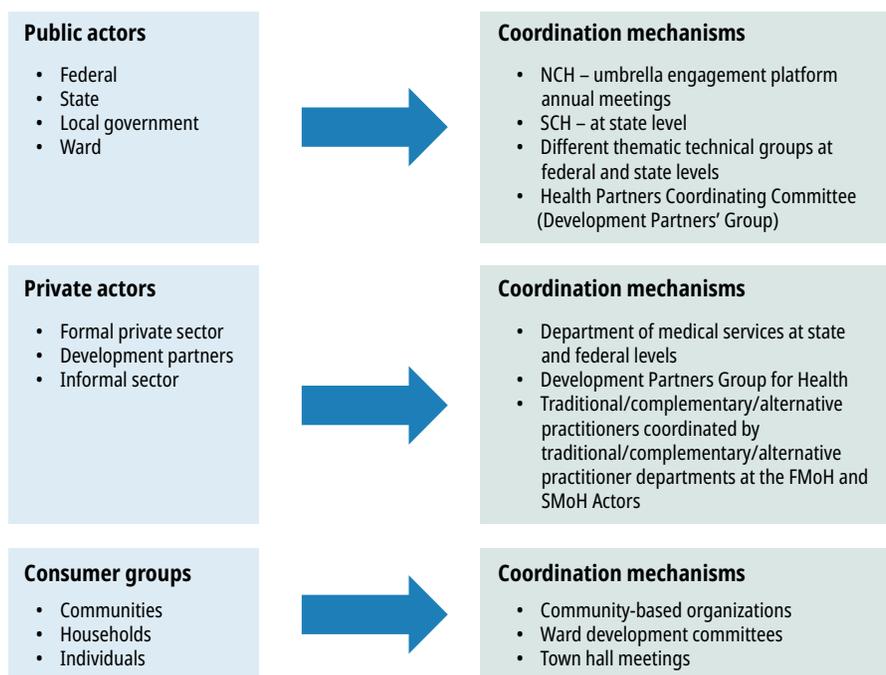
At the federal and state levels, the Development Partners Group for Health, as defined by NSHDP II, is a single engagement point for joint funding agreements, sector-wide approaches (SWAPs) and health sector multidonor budget support (FMOH, 2023c). At the federal level, this group operates through smaller technical working groups, known as interagency coordinating committees, which focus on specific programmes. The Health Partners Coordinating Committee coordinates development partnerships at the state and LGA levels (FMOH, 2018b). At these levels, the platforms are geared towards coordinating the activities of the development partners in line with government plans. These

coordination platforms, however, are less efficient than those at the federal level and have overlapping functions.

Community engagement

In the ward health system, a ward development committee (WDC) is responsible for organizing, managing and assessing implementation of health policies and plans at the PHC level. However, the Nigeria Health Sector Renewal Investment Programme (2023) envisages greater involvement of communities in health through the creation of a community health care system. During the COVID-19 pandemic, community leaders were engaged and identified women as critical stakeholders and intermediaries in the deployment of vaccines, given their familiarity with infant immunization (FGN et al., 2021). However, there are no data on whether or not these structures have been sustained post COVID-19. Further details on community-led action on health are discussed in Chapter 7.

Figure 2.3.a Health actors and coordination mechanisms involved in improving public health



Partnerships for health

The Nigerian health sector identifies partnerships for health as a health system building block in recognition of the pluralism of the sector and the need for strategic partnerships. It describes a partnership as a “collaborative relationship based on mutual understanding for the achievement of common goals” (NPHCDA, 2022). The NHP 2016 and NSHDP II recognize that partnerships among the private sector, NGOs, communities, development partners and other social and economic institutions are essential for the comprehensive delivery of the sustainable health services needed to meet the population’s needs (Fig. 2.3.a). This section describes the two models of partnerships in health, namely public–private partnerships (PPPs) and private sector-led initiatives.

Public–private partnerships

A national policy on PPPs for health in Nigeria was developed in 2005, within the broader framework of national health sector reform (2003–2007), as part of efforts to attain the Millennium Development Goals and the NHP targets (FMOH, 2005b). It defines PPPs for health in Nigeria as “a collaborative relationship between the public and private sectors aimed at harnessing and optimizing the use of all available resources, knowledge, and facilities required to promote efficient, effective, affordable, accessible, equitable and sustainable health care for all people in Nigeria” (FMOH, 2005b). Subsequently, Nigeria became a signatory to the Global Compact of the International Health Partnerships and Related Initiatives in 2008 and joined a complementary country compact with development partners in 2010 (FMOH, 2018b; NPHCDA, 2022).

The national policy on PPPs outlines two types of PPP: contractual and alternative partnerships (Table 2.3.a).

The private/non-state sector’s engagement in partnerships does not involve a complete transfer of public assets to private/non-state owners; rather, private resources are leveraged to improve public health. Engagement methods include contracting or outsourcing, leasing, providing concessions, social marketing, franchising mechanisms and providing incentives such as health commodities or free technical support (FMOH, 2010).

Table 2.3.a Types of partnerships set out in the national policy on PPPs

Contractual partnerships	Alternative partnerships	
	Public/state-driven partnerships	Private/non-state-driven partnerships
<ul style="list-style-type: none"> • Private/non-state (for-profit and not-for-profit) organization performs functions on behalf of the government • May be employed by all tiers of government • Responsibilities of public/state and private/non-state bodies explicitly negotiated at the onset • Agreement documented in a contract or memorandum of understanding 	<ul style="list-style-type: none"> • Initiated by the public/state sector • Public/state sector owns more than 50% of shares and retains decision-making power 	<ul style="list-style-type: none"> • Initiated by the private/non-state sector (for-profit and not-for-profit organizations) • The private/non-state sector owns more than 50% of shares and retains decision-making power • Profit orientation may or may not be a primary goal • Public/state sector acts as a monitoring and standard-setting body

Private/non-state sector-led initiatives

There have been some health initiatives that draw on health and infrastructure donations, developed primarily by the private/non-state sector. The private sector includes the banking sector, businesses, faith-based organizations and community leaders. The initiatives are usually not for profit and involve the government, which plays a supervisory role.

Since the inception of the PPP policy, the FMOH has facilitated several PPPs across the country (FMOH, 2018b). The involvement of the private sector in COVID-19 testing very quickly led to the ramping up of daily testing rates (Nachega et al., 2021; Kabwama et al., 2022). However, inadequate coordination and regulation of the private sector remains a persistent challenge (FMOH, 2018b). NSHDP II (2018–2022) sets out strategic objectives and activities aimed at strengthening PPPs, but their effectiveness has not yet been evaluated.

2.4 Accountability measures

Accountability measures are in place to ensure that responsibilities for carrying out activities are clearly defined in line with health sector plans. Accountability measures for actors in the private/non-state sector are less well defined and implemented than those for actors in the state/public sector.

Federal level

The FMOH conducts periodic reviews of all policies and programme guidelines to assess the country's progress towards achieving its health objectives (FMOH, 2016c). To ensure financial accountability, a tracking and verification system is used (Table 2.4.a) (Uzochukwu et al., 2018). The costs associated with all activities are carefully documented, and funds and expenditure are reconciled against budgetary allocations. The DAPs of the FMOH and SMOHs produce data from administrative and programmatic reports, facility assessments, population-based surveys and joint annual reviews (FMOH, 2018b). The data associated with these activities are presented in biannual and annual reports, briefs, factsheets and mid-term and end-term reports for key audiences, including the NCH (to ensure technical accountability for implementation), the Senate and House Committees on Health and State houses of Assembly committees on Health (to ensure political accountability), non-state actors, community leaders (to ensure social accountability) and PPPs (FMOH, 2018b). In these forums, feedback is received and then reflected in the next planning cycle (FMOH, 2016c). Non-state actors are demanding more social and political accountability, considering existing limitations. The coordination and regulation mechanisms for the non-state/private sector, however, remain inadequate (FMOH, 2018b).

State level

At the state level, SPHCDA/Bs supervise PHC centres as part of external accountability mechanisms. This supervision involves monitoring the quality of care and HRH training that PHC centres provide, assessing PHC centres' organization of public health programmes, performing periodic audits and monitoring PHC centres' use of public funds and community engagement levels (Uzochukwu et al., 2018; NPHCDA, 2022). Secondary health facilities are overseen

by state hospital boards, which hire staff and can impose sanctions and give rewards. The SMOH conducts health facility assessments and carries out the supportive supervision of primary facilities, supporting staff to continuously improve their practice (FMOH, 2016c).

Local government level

Local government authorities develop AOPs based on national strategic development plans and SSHDPs (FMOH, 2016c). They also conduct periodic reviews and prepare reports. Integrated supportive supervision is carried out quarterly by state and national authorities (NPHCDA, 2022). In addition, local government funds are managed by experienced treasurers and auditors, finance officers and a general memorandum committee (Uzochukwu et al., 2018).

Primary health care (ward) level

Health care providers are held accountable by each primary health facility's WDC (NPHCDA, 2010). To facilitate this process, health committee members (a subcommittee of the WDC) meet with the facility officer in charge to address financial management, maintenance and community mobilization. However, there is some evidence that these committees tend to focus on government priorities instead of highlighting the community's priorities (Abimbola et al., 2022). The facility heads also report to the LGHAs. For communities that receive support from the Basic Health Care Provision Fund (BHCPF), business plans are drawn up quarterly and vetted by local and state health authorities (FMOH et al., 2018).

Accountability measures for development partners

At the federal level, the Ministry of Finance, Budget and National Planning has consultatively developed a country framework agreement for development partners. It also conducts joint reviews to monitor and evaluate programmes alongside the relevant ministries. However, this country framework agreement is not consistently implemented by all partners.

Table 2.4.a Accountability roles in the Nigerian health system

Accountability mechanisms	Federal	State	Local government	Health facility	Community	Non-state
Planning	<ul style="list-style-type: none"> Defining implementation guidelines and role specifications 	<ul style="list-style-type: none"> Defining implementation guidelines and role specifications 	<ul style="list-style-type: none"> Defining implementation guidelines and role specification 	<ul style="list-style-type: none"> Defining implementation guidelines and role specification 	<ul style="list-style-type: none"> Presenting interests and mandates to WDC before policy formulation 	<ul style="list-style-type: none"> No explicit mechanisms in place
Monitoring and supervision	<ul style="list-style-type: none"> Oversight role External auditors monitor implementation Results linked to revenue dispersal process Also involved in supportive supervision 	<ul style="list-style-type: none"> Oversight role External auditors monitor implementation Supportive supervision Results linked to revenue dispersal process 	<ul style="list-style-type: none"> Oversight role External auditors monitor implementation Supportive supervision Results linked to revenue dispersal process 	<ul style="list-style-type: none"> Oversight role External auditors monitor implementation Monitoring by WDCs 	<ul style="list-style-type: none"> Monitoring the release of funds, their allocation and the implementation of associated activities Participating in WDCs Regulatory bodies supervise the standards of practice of members 	<ul style="list-style-type: none"> No explicit mechanisms in place
Reporting	<ul style="list-style-type: none"> Online financial reporting 	<ul style="list-style-type: none"> Online financial reporting Qualified financial managers carry out the separation of accounts 	<ul style="list-style-type: none"> Qualified financial managers carry out the separation of accounts 	<ul style="list-style-type: none"> Financial record-keeping Providing online payment system for health services 	<ul style="list-style-type: none"> Publishing project reports 	<ul style="list-style-type: none"> No explicit mechanisms in place

Systems set up for health system performance

Health system performance is monitored by the FMOH through joint annual reviews (FGN, 2014). Statutorily, national and state strategic plans contain monitoring and evaluation frameworks that track progress towards achieving national health targets, usually in tandem with tracking progress towards achieving global targets. Implementation of available policies and guidelines remains suboptimal, and there is still little involvement of the private sector in health planning and service delivery processes, where its input on strategic interventions to improve access to high-quality health care is required (FMOH, 2023b).

2.5 Recent reforms

The key health system organization and governance reforms developed in the last decade are summarized below. An overarching national plan intends to accelerate these reforms and close gaps, to achieve the health-related SDGs and UHC (FGN, 2021a).

Primary Health Care Under One Roof (2013)

This reform aims to partially recentralize governance, to address the poor management capacity of local government authorities by integrating PHC structures and programmes into a single state-level body, the SPHCDA/B, using the “one management, one plan, and one monitoring and evaluation system” principle (NPHCDA, 2010). The initial concept was endorsed as a national policy agenda in 2011, and implementation guidelines were developed in 2013. As a result, each state was required to institute its own agency or board. The PHCUOR reform has nine domains (NPHCDA, 2015).

A scorecard-based evaluation of these domains in 2015 showed wide regional variation in implementation, with the lowest score (19%) observed in the south-eastern zone and the highest score (55%) observed in the north-western zone (NPHCDA, 2015). A subsequent assessment in 2018 showed that performance scores had increased to 50% and 57%, respectively, in these zones. The details of these assessments are outlined in the 2018 scorecard assessment report (NPHCDA, 2018). The implementation of this reform is ongoing, and

stakeholders are optimistic that the next, long overdue, assessment will show continuing improvement.

Basic Health Care Provision Fund of the National Health Act (2014)

The BHCPF is a PHC-financing reform, predominantly financed through an annual grant from the FGN, of not less than 1% of the Consolidated Revenue Fund. Approximately 25% of BHCPF funding comes from state and local government grants from international donors, and funds generated from innovative sources such as tax levies on specific activities or goods, such as tobacco or alcohol, deemed harmful to individuals or society. These funds are expected to ensure that good-quality PHC is affordable, accessible to all and thus equitable (Uzochukwu et al., 2018). Details of this reform and its implementation are provided in Chapter 3.

National Health Insurance Authority Act (2022)

This act replaces the National Health Insurance Scheme Act 2004 and its predecessor the NHIS Act 1999 (see Chapter 3, Section 3.1). The new act aims to establish the National Health Insurance Authority (NHIA) (overseen by a governing council), implement a state health insurance and contributory scheme for all citizens, ensure that the BHCPF is administered in every state and set aside a vulnerable group fund to cater for the health care needs of vulnerable populations. States are required to register all residents in a mandatory social health insurance scheme (KPMG, 2022). The new NHIA Act empowers the NHIA to regulate and provide (or manage) prepayment insurance schemes, which presents a conflict of interest. Implementation of NHIA guidelines, released on 10 October 2023, has yet to be assessed. This issue is further discussed in Chapter 3.

Health Sector Reform Committee (2021)

This committee was established in 2021 and concluded and published its report in May 2023, in which it made six recommendations for health system

governance and leadership as requisites for the country's progress towards UHC (Presidential Health Sector Reform Committee, 2023). Its recommendations, however, have yet to be fully implemented.

The federal government has initiated an ambitious reform agenda and the necessary regulation and structures to facilitate meaningful health system strengthening are largely in place. For many of the reforms, it is too early to evaluate their effectiveness, but signs suggest that implementation challenges are widespread. The complexity of the health sector, the fledgling operation of the devolved federal system, party political influence between governance tiers and weak enforcement of law and regulations contribute to these implementation challenges. In addition, many of the policies and strategic plans, including the overarching NHP, need to be revised and updated to align with current health system trends.

Government of Nigeria strategic vision for the health sector (2023–2026)

The FGN has set out a strategic blueprint for the health sector with the goals of saving lives, reducing physical and financial pain and delivering health to all Nigerians. The strategic vision is anchored in four core pillars: effective governance; efficient, equitable and high-quality health systems; unlocking value chains; and health security. The blueprint also identifies cross-cutting enablers that will facilitate the achievement of strategic objectives: data and digitization, financing, and culture and talent within ministries, departments and agencies.

Sector-wide approach

The adoption of a SWAp to deliver these reforms was approved by the NCH in November 2023 and further endorsed by the President. The SWAp will leverage the redesigned BHCPF as its foundational basis and aims to build a more unified, effective and sustainable health sector. To ensure the successful implementation of the SWAp, health sector players (states and development partners) signed an agreement in 2023, committing to fiduciary responsibility, transparency and delivery of impact against targets. This approach translates into one plan, one budget, one report and one conversation for the health sector:

- **One plan** ensures a common understanding of cross-cutting priorities that will dovetail into the development of an AOP for implementation across all states.
- **One budget** ensures the visibility of sources and flow of funds against plans; agreement on pooled fund options and how funds relate to performance; strengthened accountability systems (e.g. performance-linked funding) such as disbursement-linked indicators; and agreement on pooled technical assistance and funding.
- **One report** ensures agreement on indicators to track progress on priorities and joint annual reviews.
- **Coordinated** missions and site visits will be carried out by development partners and the capacity and responsiveness of monitoring, evaluation, research and learning systems will be strengthened.
- **One conversation** establishes forums for routine sector-wide dialogue (e.g. quarterly performance dialogues) and sets up technical working groups to facilitate subsectoral strategic dialogue, coordination of inputs and prioritization of needs.

Nigeria Health Sector Renewal Investment Programme

The new single plan for the health sector, known as the Nigeria Health Sector Renewal Investment Programme, was proposed by the new Minister of Health and approved by the NCH as part of the SWAp in November 2023. Its main objectives relate to:

- financing and organizing services, namely decentralizing facility financing, operationalizing a vulnerable group fund, strengthening community-based health services, improving the quality of care and harmonizing technical assistance support for the BHCPF initiative;
- mobilizing systems for improved outcomes, namely by improving commodity security, implementing a national emergency medical service and ambulance scheme, and increasing the use of digital technologies in the health sector;
- health security;
- governance, financing and accountability, namely by defragmenting sector financing for improved efficiency, establishing federal–state

partnerships for improved ownership and accountability, and improving citizen engagement and social accountability.

Implementation of these policies is still in progress, making it too soon to evaluate their effectiveness.

Chapter summary

Chapter 2 provides an overview of how the Nigerian health system is organized, governed, planned and regulated. Nigeria has a three-tier health system organized across federal, state and local levels, with each level having substantial autonomy in principle, although less so in practice, over the allocation and utilization of resources. The federal level is primarily responsible for tertiary health services through a network of teaching and specialist hospitals, although several states also own tertiary health care facilities. The FMOH, through its DAPs, supervises national programmes and provides technical support to states. State governments control secondary health care facilities through SMOHs and health management boards. The SPHCDA/Bs and LGHAs supervise PHC delivery at the local or ward level, guided by the PHCUOR (2013) policy.

In line with partnerships for health being a crucial building block of the Nigerian health system, harnessing health resources holistically through partnerships is a key focus of stakeholder engagement efforts. However, the monitoring and accountability mechanisms for partnership activities remain ineffective.

An ongoing programme of health sector reform initiated by the FMOH has ensured that policies, guidelines and implementation plans are in place to guide health service delivery, most recently via the 2023 Nigeria Health Sector Renewal Investment Programme. State and non-state actors develop and implement these guidelines, frameworks and plans in line with their common interests and defined coordination platforms and mechanisms. However, implementation challenges are widespread across policies, exacerbated by the complexity of the health sector and its federal operating system and weak accountability and law enforcement at all governance levels.

By **Charles Ezenduka** and **Obinna Onwujekwe**

Chapter 3 key messages

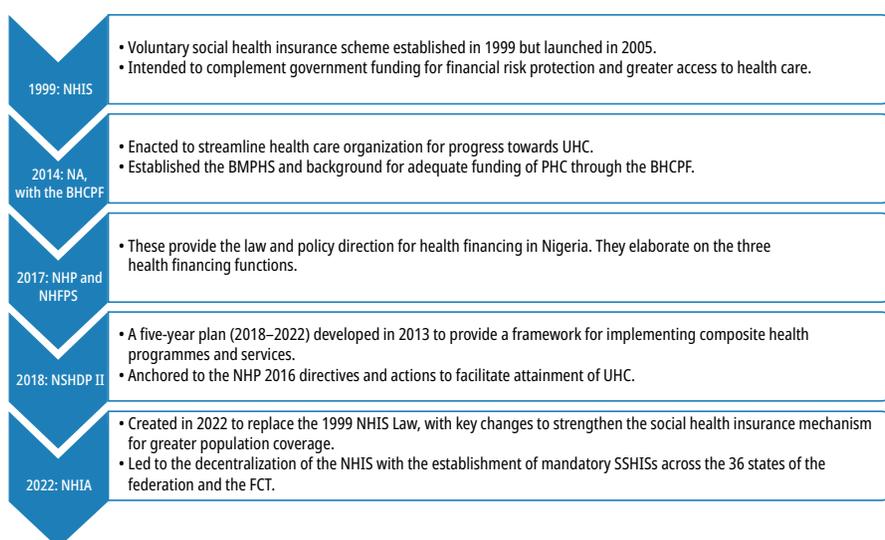
- The Nigerian health system is primarily funded by government tax revenue, health insurance, donor/external funding and private spending.
- Nigeria spends less on health as a share of gross domestic product (GDP) than nearly every other country in the world. The national health budget remains below 5% of the total government budget and below the Abuja Declaration target of 15%. Current health expenditure across both the public and private sectors was just 4% of GDP in 2021, which is below the global benchmark of 5%.
- Out-of-pocket (OOP) spending accounts for more than 75% of total health expenditure, one of the highest levels of OOP expenditure globally. This exposes the low-income population to catastrophic health spending and impoverishment.
- Only 5% of Nigerians are covered by any health insurance, prepayment or risk-pooling mechanisms. Coverage is limited by weak technical capacity to implement health insurance schemes nationwide, labour unions' refusal to accept worker contributions to the Formal Sector Social Health Insurance Programme (FSSHIP) and poor public understanding of health insurance. Existing enrolment is primarily through the FSSHIP of the National Health Insurance Authority (NHIA) and state-level health insurance programmes.
- The NHIA Act 2022, the Basic Health Care Provision Fund 2014 and the recently established subnational individual health insurance schemes across the 36 states and the Federal Capital Territory offer potential to improve coverage, with financial risk protection mechanisms and greater equity.

3.1 Health financing policies

Key policies

Five key policies commit explicitly to specific levels of health care financing in Nigeria. These are the previous National Health Insurance Scheme (NHIS) law (1999), now replaced with the National Health Insurance Authority (NHIA) Act 2022; the National Health Act (NHA) 2014, which encompasses the Basic Health Care Provision Fund (BHC PF); the National Health Policy (NHP) (FMOH, 2016c); the National Health Financing Policy and Strategy (NHFPS) (2016); and the National Strategic Health Development Plan II (NSHDP II) (2018–2022) (FMOH, 2018b) (Fig. 3.1.a).

Figure 3.1.a Timeline of recent health financing policies and frameworks



Notes: BMPHS = basic minimum package of health services; FCT = Federal Capital Territory; PHC = primary health care; SSHIS = state-level social health insurance scheme; UHC = universal health coverage.

Nigerian National Health Insurance Scheme Act, 1999 (now the National Health Insurance Authority Act, 2021)

The first NHIS Act was established in 1999 as a social health insurance (SHI) mechanism to complement government funding for health and provide financial risk protection and greater access to good-quality health care services. This

was replaced by the NHIS Act of 2004. This launched its flagship programme, the Formal Sector Social Health Insurance Programme (FSSHIP), in 2005, which focused on formal sector workers in the country (Onwujekwe et al., 2019b), in addition to three other programmes for specific population groups. However, in 2022 the NHIS Act 2004 was replaced with the NHIA Act 2022 (FGN, 2022c) (see Chapter 2, Section 2.5).

National Health Act, 2014

Nigeria's commitment to universal health coverage (UHC) is enshrined in the NHA 2014, which provides the legal framework for the operation of the health system in Nigeria (See Chapter 2, Section 2.2). The act streamlines the organization of health services, clarifying citizens' right to health through the basic minimum package of health services (BMPHS). It provided the foundation for adequate health funding by establishing the BHCPF as a financing vehicle for the BMPHS, to ensure that the most vulnerable populations have access to basic health care.

Basic Health Care Provision Fund, 2014

The BHCPF is an integral part of the NHA 2014, established to support primary health care (PHC) services and financial risk protection, and enhance access to affordable and quality health services targeting, mostly, Nigeria's poor and vulnerable population (see Chapter 2, Section 2.5). The fund specifies the development of a BMPHS that should be provided by and accessible through primary, secondary and tertiary health facilities (FGN, 2014). The sources of funding and spending priorities for the BHCPF are summarized in Table 3.1.a.

Initially, up to 50% of the fund was to be disbursed through the NHIS for the provision of BMPHS, 45% disbursed through the National Primary Health Care Development Agency (NPHCDA) for primary health facility upgrades, maintenance and essential medicines supply, among others, and 5% to be disbursed through the Federal Ministry of Health (FMOH) for national health emergency responses, such as emergency medical treatment. However, in 2022, the NHIA (formerly the NHIS) gateway was reduced to 48.5%, and 1.5% of the fund was allocated to the Nigeria Centre for Disease Control and Prevention (NCDC) as the fourth gateway. According to the NHA, access to the fund by states is contingent on meeting 25% counterpart funding from the states and local governments (FGN, 2014).

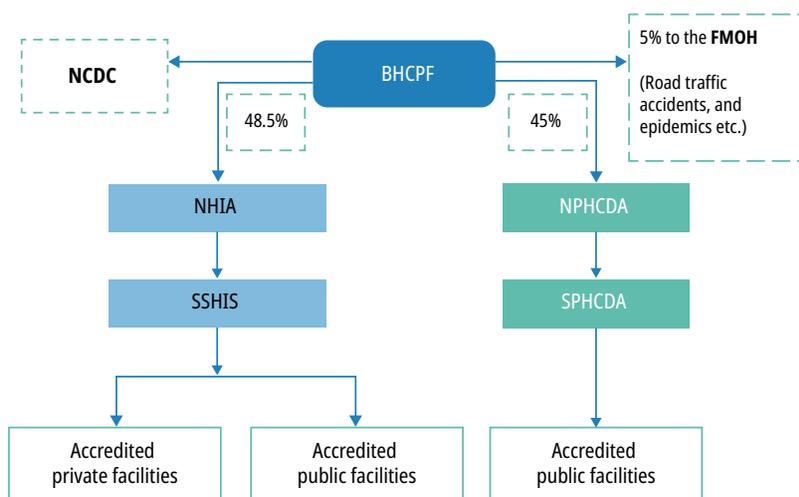
Table 3.1.a BHCPF funding sources and spending priorities/pathways

BHCPF funding source	BHCPF spending priority
Annual federal government grant of at least 1% of the Consolidated Revenue Fund	Paying for the provision of the BMPHS through the NHIS gateway
International partners/donor funds	Funding the PHC centres across Nigeria through the National Primary Health Care Development Agency gateway
Funds from other sources, such as states and local governments	Funding the provision of basic emergency medical services through the emergency medical treatment gateway
–	Paying for disease control through the Nigeria Centre for Disease Control and Prevention

Sources: FMOH, 2016c

The BHCPF is designed to leverage and galvanize additional domestic and external investments to increase fiscal space for health (FMOH, 2017c). Fig. 3.1.b illustrates key features of the fund.

Figure 3.1.b Schematic illustrating key features of the BHCPF



Source: Adapted from Hafez, 2018

Notes: SPHCDA = state primary health care development agency; SSHIS = state-level social health insurance scheme.

National Health Policy, 2016

The NHP gives overarching policy direction to the health system (FMOH, 2016c) and sets operational standards (see Chapter 2, Section 2.2). It stipulated actions for efficient and equitable health financing to achieve UHC in line with the NHA 2014, including advocacy for increased budget allocation, facilitating budgetary provisions for the BHCPF, exploring additional sources for domestic resource mobilization, promoting revision of the 1999 NHIS Act to make insurance mandatory and the NHIS a regulator rather than an implementer, and promoting a strategic health purchasing mechanism, focused on high-impact cost-effective interventions (FMOH, 2016a). While the policy has helped establish key financing frameworks and infrastructure to improve health service delivery, it requires revisions to align with current health system trends.

National Health Financing Policy and Strategy, 2016

The NHFPS provides guidance to federal, state and local governments and other actors in the health system on how to maintain an equitable and efficient health financing system that can help the country to significantly strengthen health system financing to achieve UHC by 2030. It sets the goals, structure, governance and policy direction of health financing for UHC in Nigeria, including guiding revenue generation, revenue pooling and purchasing. It establishes the appropriate regulatory framework for health financing as part of the stewardship role of government. It details the roles and responsibilities at the federal, state and local government area (LGA) levels as well as for other stake stakeholders for achieving universal financial risk protection and UHC. The strategy also lays out policy directions for increasing efficiency and equity in the health system.

National Strategic Health Development Plan II, 2018–2022

NSHDP II provides the reference framework for implementing health programmes and services, anchored on the NHP 2016 (see Chapter 2, Section 2.2). From a health financing perspective it expands prepayment SHI schemes for UHC and aims to ensure that adequate and sustainable funds are available and allocated for accessible, affordable, efficient and equitable health care provision and consumption at the local, state and federal levels.

National Health Insurance Authority Act, 2022

The updated NHIA Act 2022 strengthened the country's health insurance mechanism (see Chapter 2, Section 2.5). The act has various programmes that cover different population groups. It makes the NHIA the regulator, aggregator (risk pooling) and standard-setter for some purchasing functions, including defining benefits packages and setting provider payment rates and mechanisms. The act provided for decentralization of the scheme and access to BHCPF support, catalysing the establishment of state-level social health insurance schemes (SSHISs) nationwide. As of 2023, all of the states of the federation have introduced mandatory SSHISs, backed by relevant laws, to further progress towards UHC. The decentralization of the mandatory insurance mechanism across states is expected to significantly increase population coverage in terms of financial risk protection. However, the insurance system is limited by challenges of weak technical capacity, administrative inefficiencies, poor public perception and financial sustainability (see section "Challenges of health insurance operations" in Section 3.1).

Sector-wide approach, 2023

As part of the Federal Government of Nigeria's strategic vision for the health sector (2023–2026), in 2023 the FMOH introduced a sector-wide approach to facilitate resource mobilization and allocation, and programme implementation, monitoring and reporting, as outlined in Section 2.5, Chapter 2. The approach is still being implemented, making it too soon to assess its effectiveness.

Key actors

Key health financing actors and their respective roles are set out in Table 3.1.b.

Table 3.1.b Key actors in health financing in Nigeria

Category	Key player	Role
Federal government and line ministries	Federal Executive Council	Approval of policies with macroeconomic and financial implications before operationalization.
	Ministry of Finance	Critical role in advising the Federal Executive Council to ensure that health financing reforms align with macroeconomic realities of the country.
	National Assembly	Responsible for budget allocations for the health sector and monitoring budget implementation through National Assembly standing committees on health.
FMOH and its agencies	FMOH	Statutorily responsible for developing health policies and designing programmes and interventions. The Health Financing Unit under the FMOH is responsible for promoting the use of evidence in the design and implementation of health reforms, coordinating the Technical Working Group on Health Financing Reforms and engaging with stakeholders. The ministry works with the NHIA and NPHCDA in developing guidelines for managing the BHCPE.
	NHIA	Runs and manages the FSSHIP while overseeing the HMOs' operations in the country. Through the zonal and state offices, the authority supports the SSHIS.
	NPHCDA	Focuses on improving quality and uptake of essential health services for vulnerable groups through interventions that incorporate both supply and demand-side financing, such as the Midwives Service Scheme, SURE-P and the NSHIP. The role of NPHCDA includes to ensure that services are provided at the primary health centre level.
Development partners and other donor agencies	Development partners and other agencies	Involved in the pooling and management of financial resources, technical expertise and support in health financing and public finance management. Technical support with strategic purchasing of services based on their experiences in using implementing partners to deliver critical health interventions to Nigerians.
Private sector	Upstream actors (e.g. the Private Sector Health Alliance)	The upstream actors are those involved in resource mobilization and domestic revenue mobilization, as well as investors. The upstream players also include foundations and corporate organizations that earmark resources for corporate social responsibility activities.
	Downstream	The downstream players are mainly the service providers; over 70% of health services are delivered by the private sector.

Table 3.1.b Continued

Category	Key player	Role
HMOs	HMOs	Interface between government and private providers of health care in the SHI schemes.
Academia	Academia	Expand the knowledge base and generate evidence to bridge the policy–research gap. Build capacity for health financing. Serve as a repository of knowledge.
Citizens and related groups	Civil society organizations	Ensure quality of care by guaranteeing accountability and value for money. Informing and mobilizing citizens.
	Media	Informing and mobilizing citizens.
States and local governments	SSHIA	Important roles in initiating and sustaining health financing reforms. States are expected to own and domesticate all health policies that are approved and adopted by the National Council on Health, to ensure proper implementation. While the state government runs the SSHISs, community-based health insurance and mutual aid are often managed at the LGA level by the local government health authority.

Source: Onwujekwe et al., 2019b

Notes: HMO = health maintenance organization; NSHIP = Nigeria State Health Investment Project; SSHIA = state-level social health insurance agency; SURE-P = Subsidy Reinvestment and Empowerment Programme.

Key financing policies and strategies for universal health coverage

In addition to provisions in the country’s financing policies, specific strategies have been put in place to provide a strong framework for achieving UHC and improving health outcomes more generally. Section “Key policies” in Section 3.1 describes the NSHDP II as a UHC policy framework and the BHCPF as a mechanism to generate additional funding for health care, alongside the NHIA and SSHISs. Other UHC relevant policies include the Presidential Summit Declaration on UHC in 2014, the national UHC policy framework and the country programme for achieving the United Nations (UN) SDGs. Most relevant is the Federal Government of Nigeria’s 2016 NHFPS, which sets clear policy direction to guide governments at all levels to deliver an equitable, efficient and sustainable health financing system that will guarantee UHC by 2030 (Uzochukwu et al., 2015; FMOH, 2017c). However, minimal progress has been made in policy implementation due to inadequate funding and health system inefficiencies (Ams, 2020).

Health benefits package

Categories of health benefits packages

There are two broad categories of health benefits packages (HBPs) in Nigeria: the essential health benefits package (EHBP) and comprehensive health benefits package (CHBP) (Ogundeji et al., 2019). While the EHBP covers basic PHC services and occasionally a few related secondary health services (e.g. maternal and child health (MCH) care, minor surgery and services for minor illnesses), the CHBP covers a wide range of services across primary, secondary and emergency health care, as defined under the NHIA and many SSHISs. These services include management of chronic conditions, such as diabetes, and major surgery (Ogundeji et al., 2019). Most of the SSHISs' HBPs are comprehensive.

Essential health benefits packages: minimum service package

The NHA 2014 defines and designs the country's HBPs, as set out by the BMPHS, based on a minimum service package (MSP). This package includes priority services (promotive, preventive, curative and rehabilitative) (FGN, 2014). Services are provided across all three levels of government health care provision: local, state and federal (FMOH, 2016c). The package is to be applied across the states and adapted to the local disease burdens in line with NHP recommendations (Ezenduka et al., 2022). Following from this lead, fragmented HBPs now exist across the country, in the form of EHBPs and CHBPs that differ in disease focus and patient groups, depending on the government or programme.

Under the government budget system, the Department of Food and Drugs of the FMOH defines all EHBPs/MSPs to be provided in public health facilities, including the provision of medicines on the national Essential Medicines List. Service packages provided under the government system are supported in large part by donor-funded disease control priorities and funding streams (Ezenwaka et al., 2022). The MSPs adopted by the EHBPs do not specify any cost-sharing requirement/limit, allowing providers to charge users fees for services (FFSs) that are intended to be provided for free (FMOH, 2018b).

Comprehensive health benefits packages: Formal Sector Social Health Insurance Programme and state-level social health insurance schemes

The FSSHIP has an explicit benefits package that is more robust and comprehensive than the BMPHS (FGN, 2022c). The package comes with gatekeeping and a well-defined referral system, and with an existing mechanism for determining members' needs. Similarly, the SSHISs have benefits packages for their enrollees, adapting the BMPHS to suit the local prevailing disease burden and resource availability.

Health benefits packages funding

Under the NHIA Act 2022, nongovernmental organizations (NGOs) are included as members of the governing council, while development partners and NHIA support state-level social health insurance agencies (SSHIAAs) in developing HBPs. The BMPHS is funded by the BHCPF, as established under the NHA. Therefore, the formulation of the BMPHS is informed by prioritization decisions, which are based on, for example, the availability of resources from the BHCPF. Consequently, budgets for the BMPHS reflect funding flows from the BHCPF, which also include contributions from donor/non-state actor funds. International/non-state actors therefore play important roles in supporting and influencing the HBP design, with financial contributions to the BHCPF.

Public policy towards mandatory and voluntary insurance schemes

The NHIA Act 2022 empowers the NHIA to regulate the operations of both voluntary and mandatory health insurance schemes, and to provide support to the various SSHIAAs. Regulation, which is carried out in collaboration with stakeholders, is implemented through the development and enforcement of standards and operational guidelines; accreditation of facilities and providers; high-level advocacy for support and quality supervision; and monitoring and evaluation. Under the FSSHIP, the NHIA contracts with health maintenance organizations (HMOs) as third-party administrators to undertake purchasing functions. Regulation of providers and third-party payers is described below.

Challenges of health insurance operations

The major challenges facing health insurance systems include insufficient funding, ineffective management, and political and bureaucratic interference with scheme management by government, which contributes to unscrupulous practices and lack of managerial expertise. There are significant financial and operational sustainability challenges facing the schemes in terms of the availability of adequate and sustainable funding, a large informal sector that is not easily captured and enrolled, weak and inadequate infrastructure for health care delivery, and unfavourable public perceptions of the insurance mechanism (FMOH, 2012a). Other challenges include limited institutional and technical capacities to operate the schemes, limited enforcement of mandatory requirements and the existence of multiple pools (at both the national/NHIA and state/SHI levels) due to the federal system of operation (FMOH, 2012a). The NHIA operates over three pools – the FSSHIP, a community-based health insurance scheme (CBHIS) and a vulnerable group health insurance programme – in addition to the various SHI schemes/programmes across the states.

Resource allocation and expenditure processes

The federal government, through the Federal Ministry of Finance (FMOF) and Federal Ministry of Budget and Economic Planning (FMOBEP), allocates an annual budget envelope to the FMOH, which is then distributed to relevant departments, agencies and parastatals, such as the NPHCDA, the National Agency for Food and Drug Administration and Control (NAFDAC) and the NHIA (for BHCPF) (Akinyemi et al., 2021). The FMOH monitors all activities of the agencies involved in purchasing services to ensure adherence to established financial guidelines on the use of public funds. These processes are replicated at the state and LGA levels, where the state ministry of health (SMoH) and local government health authority (LGHA) play similar roles. For financial accountability, the NHIA Act mandates the NHIA to maintain an annual account of income and expenditure, which is to be audited by auditors appointed by the NHIA in accordance with the guidelines set by the Auditor General of the Federation (Etiaba et al., 2018). These reports/audited accounts are open for review by the legislature through the Public Account Committee and NGOs. However, public financial management is characterized by administrative

inefficiency, delays in budget approvals and releases, misappropriation, corrupt practices and embezzlement (FGN, 2022c).

Government regulation of third-party payers

The FMOH regulates third-party payers/insurance schemes through the NHIA, which has a mandate under the NHIA Act 2022 to monitor all health insurance operations (FMOH, 2017c). The NHIA governing council oversees NHIA management. The governing council reports to the government through the FMOH and has the autonomy to liaise with the FMoF and FMoBEP on budget matters and appropriation (FGN, 2022c). The NHIA contracts and regulates HMOs through guidelines and periodic reports. The HMOs contract with and regulate their providers through monitoring visits, to ensure that quality standards and guidelines are maintained. Similarly, for SSHISs, the SMOH and local government health authority, as the purchasing agencies, regulate and monitor providers (e.g. through periodic visits) (Akinyemi et al., 2021). Reduced premium rates are available via CBHISs targeting enrolment of low-income populations. At present, there are no provisions for tax incentives or subsidies. However, the health insurance agencies are currently engaging with tax authorities to stop tax being collected on capitation and to stop FFSS being paid to service providers.

3.2 Health expenditure

Health expenditure trends between 2011 and 2021 are shown in Table 3.2.1 and suggest notable underfunding of the health sector. Government domestic general health expenditure (GGHE-D) accounted for 13% of current health expenditure (CHE) in 2021, down from a peak of 16.4% in 2015. Within the same period, GGHE-D stagnated at 4% of general government expenditure (GGE), which is well below the 15% Abuja Declaration target (FGN, 2022c). Nigeria, alongside fellow African Union member states is a signatory to the 2001 Abuja Declaration, which commits signatories to allocating 15% of their annual government budgets to health (AU, 2001). Persistently low levels of government investment in health care over the years have undermined progress towards UHC, a critical indicator for achieving the SDG 3 health goal (WHO, 2011).

This is reflected in a lower-quality and inadequate health infrastructure and workforce (see Chapter 4).

Household out-of-pocket (OOP) expenditure – payments made by individuals or households at the point of accessing care – accounted for 76.2% of total health spending in 2021, having remained consistently high between 2011 and 2021 (Table 3.2.1) (Jowett et al., 2016). High OOP expenditure (resulting from low public health expenditure (DFID, 2018)) contributes to the inaccessibility of health services and to inequitable and inefficient health financing.

Voluntary health insurance (VHI) remained at just 1% of CHE between 2019 and 2021, down from a peak of 1.1% in 2010. Although this percentage had increased from 0.4% in 2018 to 1% by 2019, it remains very low, limiting the impact of VHI in complementing SHI in terms of population coverage and prepayment mechanisms.

External funding accounted for 7.9% of CHE in 2021, averaging 12.1% since 2010 and fluctuating from 8% in 2011 to a peak of 12.8% in 2013, before declining to 7% in 2018. This translates to an average of US\$ 8.13 per capita over the period, and US\$ 7 per capita in 2021. External funding remains influential in addressing specific disease conditions, such as HIV/AIDS, malaria, tuberculosis (TB) and COVID-19, as well as immunization services, which have benefited significantly from external funding support (Hafez, 2018) (see Section 3.7.1). The declining trend calls for increased domestic resource mobilization to sustain the gains of donor support, alongside improved coordination of external support to ensure alignment with national health priorities. Coordinating and tracking donor support over time remains a major challenge that may result in underestimates in reported data (DFID, 2018). The new NHA data should help address this shortcoming.

Table 3.2.1 shows that spending on PHC accounted for more than half (59%) of domestic government health spending in 2021. Government expenditure on/contribution to PHC represents just 10.4% of total PHC expenditure, when the contributions of other financing sources to PHC are taken into account. This indicator peaked at 73% in 2016 and significantly declined to 59% in 2021, indicating inconsistent and inadequate government prioritization of, and resource allocation to, PHC.

Table 3.2.1 Trends in health expenditure in the country, 2010 to the latest available year (2021)

Indicator	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Domestic health expenditure as % of CHE	93.7	92.1	91.6	87.6	87.7	90.1	89.7	92.1	92.1	88	90	92.1
GGHE-D as % of CHE	13.6	14.4	16.2	14.3	13.3	16.4	13.0	14.2	14.9	16	15	13.3
PVT-D as % of CHE	80.1	77.7	75.4	73.3	74.4	73.6	76.7	77.9	77.3	73	75	78.9
VHI as % of CHE	1.1	1.0	0.8	0.7	0.7	0.6	0.6	0.4	0.4	1	1	1
OOP as % of CHE	76.9	74.7	72.8	70.9	71.9	71.9	75.2	77.2	76.6	71	75	76.2
GGHE-D as % GDP	0.4	0.5	0.5	0.5	0.4	0.6	0.5	0.5	0.6	0.48	1	0.5
GGHE-D per capita in US\$	10.4	12.2	15.0	14.7	14.4	16.1	10.3	10.5	12.5	11	10	11
PVT-D per capita in US\$	61.5	65.6	69.8	75.1	80.3	72.0	60.9	57.6	64.7	51	53	66
External health expenditure per capita in US\$	4.8	6.6	7.8	12.8	13.3	9.7	8.2	5.8	6.6	8.0	7	7
OOP expenditure per capita in US\$	59.0	63.1	67.5	72.7	77.5	70.3	59.7	57.1	64.2	50	52	64
PHC expenditure per capita in US\$	NA	51.3	57.9	48	40	63						
PHC expenditure as CHE	NA	NA	NA	NA	NA	NA	68	69	67.1	69	57	75.4
GGHE-D on PHC as % of GGHE-D	NA	NA	NA	NA	NA	NA	73	40	51	52	54	59.1
GGHE-D on PHC as % of PHC	NA	NA	NA	NA	NA	NA	14	8	12	12	14	10.4
GGHE-D as % of GGE	3	3	4	3	3	5	5	4	4	4	4	4.1
External health expenditure as % of CHE	6	8	8	12	12	10	10	8	7	12	10	7.9
CHE as % of GDP	3	3	3	3	3	4	4	4	3	3	3	4.1

Source: WHO, 2022a**Notes:** GDP = gross domestic product; NA = data not available; PVT-D = domestic private health expenditure.

Current health expenditure as a share (percentage) of gross domestic product in the World Health Organization African Region

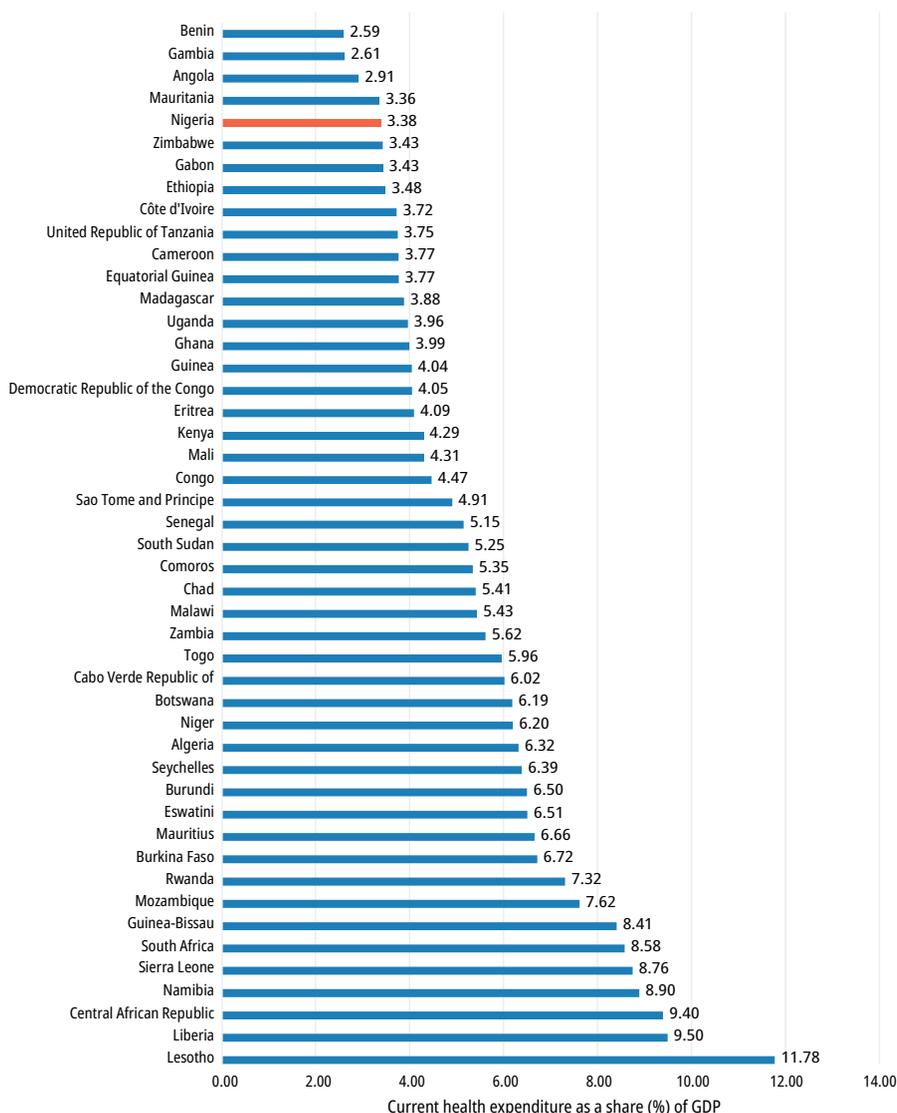
Nigeria's CHE as a share of gross domestic product (GDP) (3.38% in 2020) is well below the international benchmark of 5% and the World Health Organization (WHO) regional average of 5.6% (DFID, 2018). Comparator African countries with similar health system structures and health financing reforms, such as Ethiopia, Ghana, Kenya, Mali and South Africa, all have a higher CHE share of GDP – whether looking at a snapshot (Fig. 3.2.1) or at trends over time (Fig. 3.2.2). Of countries with similar democratic and health system governance structures, only India spends less than Nigeria, averaging 3.55% against Nigeria's 3.65%. South Africa sits significantly ahead of other direct comparator countries, averaging 7.58% for the period measured.

Trends in current health expenditure as a share (percentage) of gross domestic product in Nigeria

CHE as a share of GDP has been consistently low since 2000 (Fig. 3.2.2), declining from 5.1% in 2003 to 3.4% in 2020. The sharp decline from 3.9% in 2018 to 3.0% in 2019 is notable, indicating the lack of consistency in health care investment. The downwards trend overall suggests insufficient government efforts to increase investment in health care, even during a period of economic growth, although the likely impact of the deteriorating macroeconomic context in 2020/21 due to the COVID-19 pandemic is acknowledged (WHO, 2022a). Underinvestment has continued despite the increased focus on health resulting from the COVID-19 pandemic.

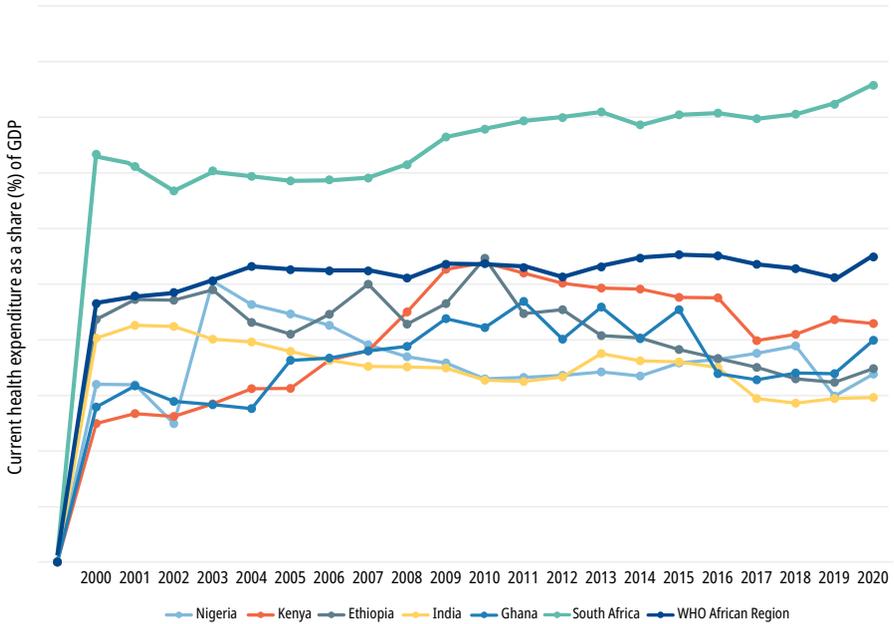
Fig. 3.2.3 compares the CHE trend within the same period across Nigeria's West and East African neighbours, including South Africa and India, which share similar democratic governance and health financing structures. It shows that Nigeria's performance falls below the rest of the countries, except for India and Ethiopia, which both averaged 3.55% against Nigeria's 3.65%. South Africa towers above the rest, at US\$ 490 per capita within the period.

Figure 3.2.1 CHE as a share (%) of GDP in the WHO African Region, latest available year (2020)



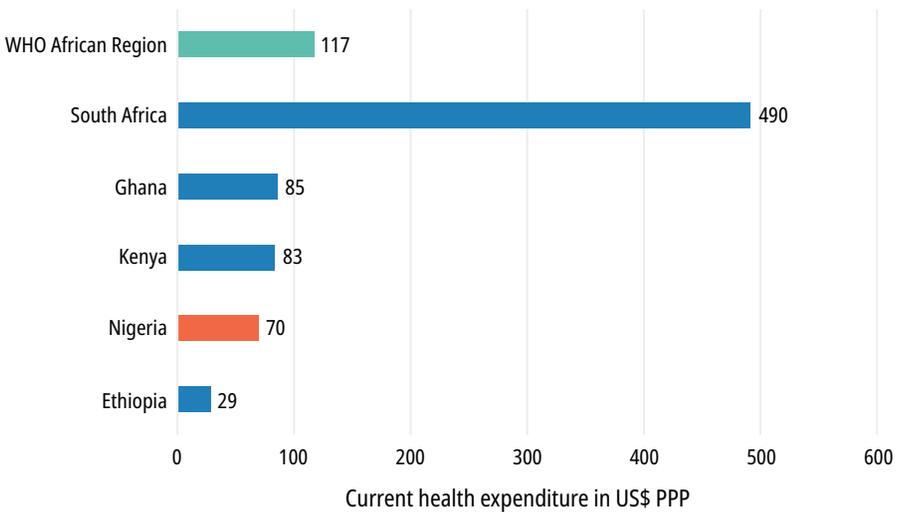
Source: WHO, 2022a

Figure 3.2.2 Trends in CHE as a share (%) of GDP in selected countries and WHO African Region, 2000 to latest available year (2020)



Source: WHO, 2022a

Figure 3.2.3 CHE in US\$ purchasing power parity per capita in selected countries and the WHO African Region, 2000 to latest available year (2020)



Source: WHO, 2022a

Health expenditure in purchasing power parity per capita

When measured per capita in US dollars based on purchasing power parity, CHE amounted to US\$ 70 per capita in 2020 (Fig. 3.2.3), which is lower than the regional average of US\$ 116.9 and well below the WHO's recommended threshold of spending a minimum of US\$249 per capita (WHO, 2024b). Data for high-performing South Africa, at US\$ 490 per capita, and most other comparator countries reveal these comparator countries show a greater government commitment to health funding than Nigeria. Even low-performing countries such as Kenya, at US\$ 83 per capita, and Ghana, at US\$ 85 per capita, perform better than Nigeria. According to 2022 World Bank data, Nigeria's health expenditure per capita is less than nearly every country in the world. This is reflected in Nigeria's poor health indicators, as it accounts for a higher health burden for most diseases (FMOH, 2017c).

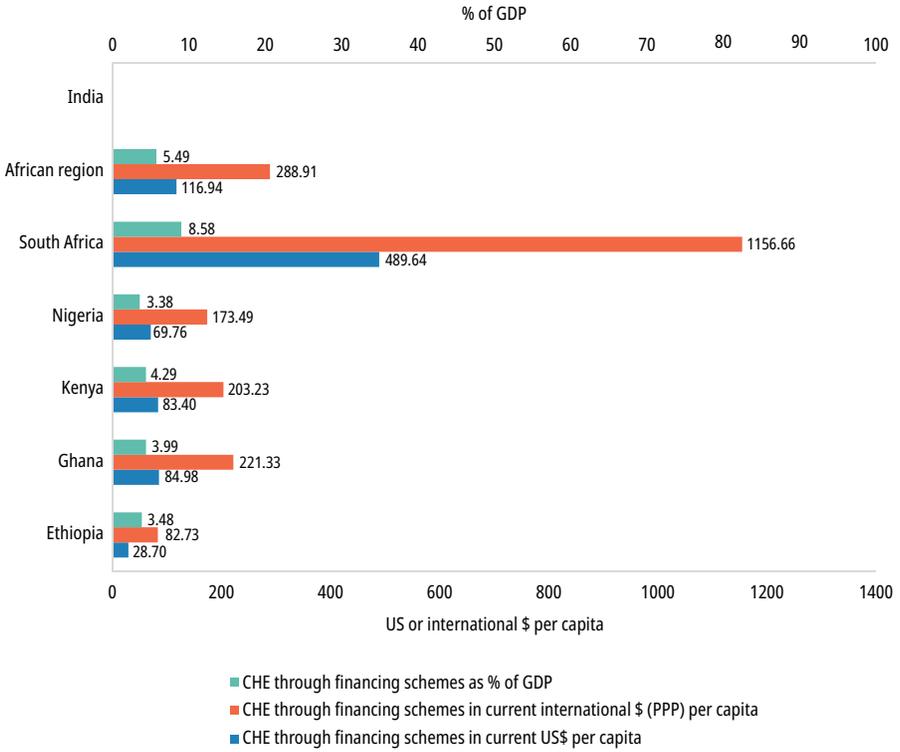
Fig. 3.2.4 compares Nigeria's CHE through financing schemes across selected countries and the WHO African Region in 2020, and, again, confirms Nigeria's regional underperformance in terms of health care financing:

- As a percentage of GDP, Nigeria's CHE stands at just 3.4%, below the WHO African Region's average of 5.49%.
- Measured in terms of US dollars per capita and current purchasing power parity, Nigeria's CHE amounted to US\$ 70 and US\$ 173 per capita, respectively, which are below the regional averages of US\$ 117 and US\$ 289, respectively. These performances are worse than those based on previous data (2018) for all described indicators, representing significant declines, consistent with Nigeria's sustained poor investment in health care.

Public health expenditure as a percentage of general government expenditure

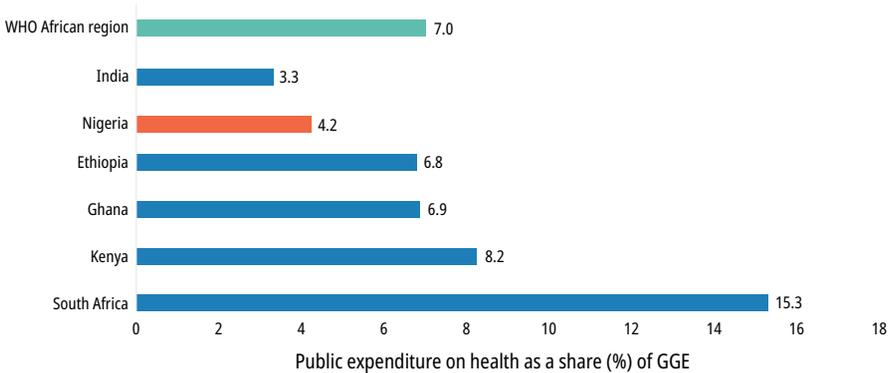
Data for public health expenditure as a percentage of GGE indicate a significant difference between Nigeria and the WHO African Region's better-performing countries. Fig. 3.2.5 compares public health expenditure as a share of GGE across selected countries. Nigeria performed better than India (3.3%), but ranks lowest among the remaining countries. South Africa and neighbouring Ghana invest more in health care than Nigeria, at 15.3% and 6.9% of GGE, respectively.

Figure 3.2.4 CHE through financing schemes across selected countries and the WHO African Region, latest available year (2020)



Source: WHO, 2022

Figure 3.2.5 Public expenditure on health as a share (%) of GGE across selected countries and the WHO African Region, 2021



Source: WHO, 2022

3.3 Sources of health financing and financial flows

As described in Section 3.2, health care is financed through government general tax revenue, health insurance schemes, private OOP expenditure and external/donor funds. OOP spending dominates as the leading source of health financing. However, data accuracy may be affected by the methodological challenges of estimating, tracking and linking health expenditure across states (FMOH, 2017c). The current institutionalization of the National Health Accounts (Odeyemi and Nixon, 2013) offers a standardized approach to estimating and tracking health expenditure data and linking them across states based on standardized classifications and methodology, supported by the WHO and the World Bank (FMOH, 2019a). This approach should make these data more reliable.

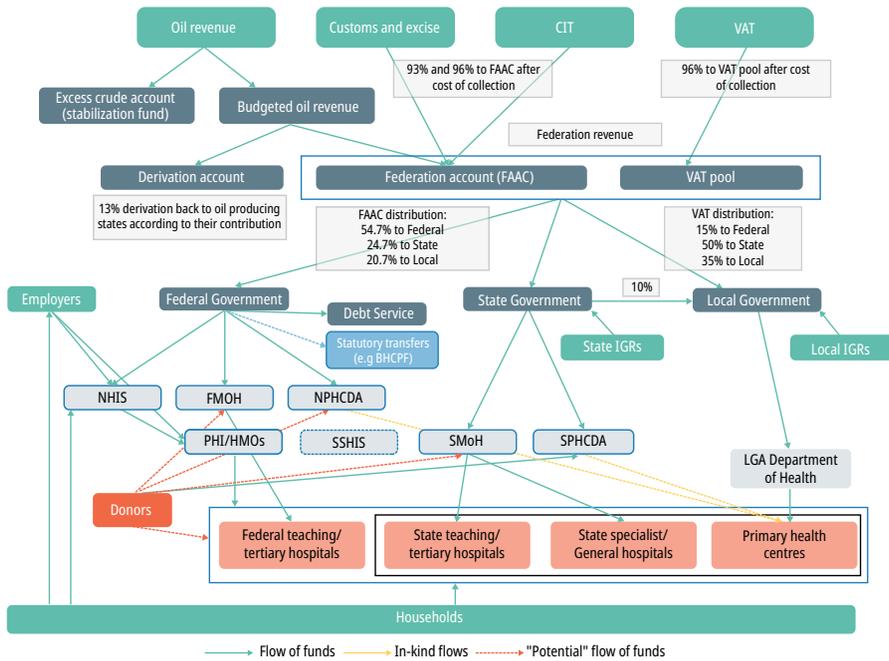
As at 2021, health insurance/prepayment mechanisms for financial risk protection made an average contribution of 1% to CHE. Population coverage has been sitting at 5% of the population over the last 10 years, with cover mostly coming from the NHIS. While the poor performance of health insurance systems has been attributed to low income, administrative inefficiency, poor public perception, lack of technical capacity, a large informal sector, etc. (Onoka et al., 2016), the lack of up-to-date data on health insurance coverage, especially for private or community-led VHI systems (private health insurance (PHI), CBHISs) (FMOH, 2019a), may also explain the failure of the NHIS to go beyond 4% coverage outside the formal sector (Onoka et al., 2016; Hafez, 2018). However, current efforts suggest that significantly higher coverage, beyond 5%, may be achieved, especially with the introduction of the SSHISs across the 36 states and the Federal Capital Territory (FCT).

The contribution of low GGHE-D as a share of GGE, high household OOP expenditure, at 75% of CHE, and critical external funding support are outlined in Section 3.2. However, the challenges of estimating and tracking these health expenditure indicators over time affect the reliability of the data available.

Financial flows

Fig. 3.3.1 illustrates the key financial flows for health care across the different segments of the health financing system. Funding for health care is generated through general tax revenues specifically assigned according to the level of government. The federal government collects revenue from nine sources,

Figure 3.3.1 Financial flows in Nigeria



Source: Uzochukwu et al., 2015

Notes: CIT = company income tax; IGR = internally generated revenue; SPHCDA = state primary health care development agency.

including crude oil sales, petroleum profit taxes, royalties and other oil charges, company income taxes, customs and excise duties, and value-added tax (VAT). State governments collect 25 taxes and levies primarily from personal income tax (pay-as-you-earn and direct assessment for the self-employed) and ministries, departments and agencies for services to residents (e.g. user fees). The LGAs collect 21 taxes and levies, mainly for licence fees, market dues and other levies (Onwujekwe et al., 2019b). Tax revenue efficiency depends on factors such as the tax revenue base, tax rates, administrative efficiency and financing compliance (NBS, 2017). Poor revenue generation from taxes, despite Nigeria's large revenue base, contributes to the low budget allocation for the health sector. Revenue generation is characterized by administrative inefficiency and high levels of corruption (FMOH, 2017c). In 2020, Nigeria's tax revenue decreased to 5.5% of GDP, from 6% in 2019, making it the lowest in the world, and significantly lower than the regional average of 16% (based on data from 31 African countries) (Hafez, 2018). Recent data from the National Bureau of Statistics (NBS) indicate that tax revenues have

since nearly doubled year-on-year to 10.9% of GDP in 2021, but this trend is mainly due to revised calculations.

Health insurance revenue sources, which operate single pools covering about 5% of the population (covered mostly by the NHIS), are based on payroll-tax contributions, equity funds, grants and other sources. The various SSHISs also operate single pools of revenue, including tax premiums from the formal sector, states' equity funds, enrolled citizens, grants and the BHCPF stream from federal allocation, in line with the NHA (Hafez, 2018). The percentage of the population covered by these state-level schemes is presumed to be growing, but data are not yet available to confirm this. Private health insurers also operate in Nigeria, relying solely on contributors' premiums (FGN, 2014), but their coverage is very limited.

3.4 Overview of the main public financing system

As a public system, revenue for health care derives from the government budget with inflows from taxes and other government revenue sources. The government budget funds federal, state and local governments. Other revenue sources include contributions from health insurance systems (e.g. community-based health insurance (CBHI) and private insurance) pooled by individual/statutory insurance schemes across the country. Various government agencies and insurance systems pool external sources' contributions depending on the funding target. While these sources contribute to the general revenue for health care, OOP spending accounts for the commanding share of CHE. Significant inefficiencies in resource generation from government sources have persisted, and data suggest that most states spend less than 5% of their total budgets on health (Hafez, 2018; FMOH, 2019a). Altogether, expenditure from all tiers of government represents less than 25% (including external funding) of total health expenditure in the country. Private sector expenditure accounts for the remaining 75%, over 95% of which is household OOP expenditure (FMOH, 2019a). The inefficiency of the government revenue system informed the establishment of national and state insurance mechanisms to complement government funding and provide financial risk protection to enhance access to high-quality services, although the success of these insurance mechanisms remains limited (see Section 3.3) (FMOH, 2017c).

There is wide variation in the level of financial mobilization for health care by the public sector across states, depending on their roles in health

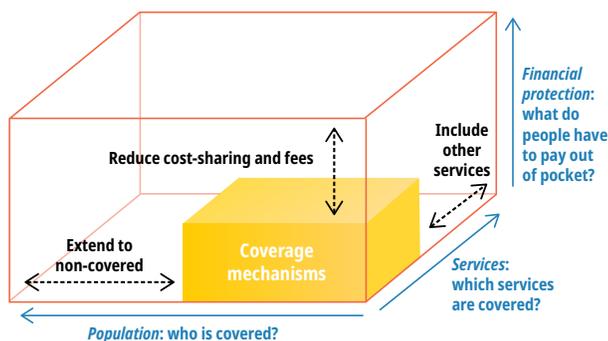
care provision. For instance, while the public sector provides about 30% of health care services in the southern part of the country, leaving over 70% to the private sector, the public sector in the north is responsible for over 90% of all health services (FMOH, 2019a). The extensive private sector health care provision, mostly based on an FFS model, explains the high OOP spending, reported to be over 92%, in the south-east (FMOH, 2019a). The lack of adequate and effective risk protection mechanisms make care costs prohibitive to many low-income populations. Financial inflows could be improved by increasing the fiscal space for health through domestic resource mobilization, enhancing development assistance targeted at social protection schemes/health insurance and improving financial management of public expenditure (USAID, 2014; Ezenduka et al., 2022).

3.4.1 Coverage

As shown in Fig. 3.4.1, the achievement of UHC (as defined by the WHO) is assessed along three dimensions: the population covered by pooled funds, the services covered by pooled funds and the cost–benefit of services covered through pooled funds (Hagen-Zanker and Tavakoli, 2012). Current data indicate low coverage across these dimensions in Nigeria (see Chapter 10).

While the government’s tax-revenue system targets every citizen, health care indicators reveal that low-income populations are disproportionately burdened by high OOP spending due to the paucity of financial risk protection mechanisms in place.

Figure 3.4.1 The three dimensions of UHC



Source: Mathur et al., 2015

Service coverage

As set out in Section 3.1, there are two categories of public HBP: the EHBP, defined by the FMOH, covers essential services provided at government health facilities, while CHBPs, for example the FSSHIP or SSHIS, contain more benefits, covering primary, secondary and tertiary services. Additional disease-specific services are often included in donor-funded or supported EHBP programmes, based on disease focus or patient groups (as described in Section 3.1). The BMPHS includes a more comprehensive package of services than just essential health services and is largely provided at PHC facilities. The BMPHS includes preventive, curative and rehabilitative health care services, such as MCH services, inclusive of immunization services, and is financed through the BHCPF. This forms the basis of the EHBP. However, the EHBP needs improvement, given that other sources are expected to contribute to the cost of the BHCPF (WHO, 2010c). Service delivery of key MCH interventions achieves at most 40% coverage of eligible target populations (USAID, 2014) (see Section 10.2 in Chapter 10). There is no cost-sharing policy and so providers charge user fees for the services delivered. For private and CBHI systems, there are no standard HBPs, but packages are designed according to the ability of the target population to pay for them. For CBHISs, which are mostly not-for-profit, targeting low-income populations, the benefit packages are based on the EHBP but are made more comprehensive when supported by the government, while the PHI packages are based on the CHBP.

Population coverage

FSSHIP remains the primary health insurance mechanism (WHO, 2010c) housed under the NHIA (formerly NHIS), and is the main strategic instrument for achieving UHC. However, since its inception in 2005, FSSHIP coverage has been limited to formal sector public servants and the organized private sector, who pay the earning-based premium to access services. The scheme is estimated to cover only 4% of the population (FGN, 2022c). For the mandatory SSHISs, enrolment is open to citizens in formal and informal sectors who pay annual premiums, as well as to poor and vulnerable population groups who are exempt from premium payments (Enabulele, 2020; Ezenduka et al., 2022). Other insurance schemes, such as PHI and CBHISs, complement the NHIS for enhanced coverage, and cover a further 1% of the population (Ezenduka et al., 2022). As at 2020, available data suggest that less than 5% of Nigerians

are covered by any prepayment mechanism, including the VHI (Uzochukwu et al., 2015), which is well short of the WHO recommended target of 90% (FMOH, 2017c). The NHIS's lack of legal frameworks for mandatory health insurance, weak technical capacity to implement health insurance schemes nationwide, and poor understanding and perceptions of health insurance among the population have been identified as the major constraints to achieving coverage objectives (WHO, 2010c; FMOH, 2017c). The establishment of the various SSHISs is expected to boost population coverage beyond 5%.

Financial protection

The SSHISs run an explicit benefits package of health services based on the BMPHS, adapted to suit the individual state's disease burden and resource capacity (FMOH, 2017c). While the FSSHIP adopted the BMPHS policy across health facilities, their FSSHIP package appears more robust than other schemes (FGN, 2022c), with cost-effectiveness information as a criterion for inclusion of interventions in the package. There are mechanisms for determining the health needs of enrollees, in addition to measures for awareness creation, benefit entitlement and choice of provider. The SSHISs have a well-defined cost-sharing policy for medications and some diagnostic tests (FMOH, 2012a). They operate a similar cost-sharing policy with the NHIA, which is 10% user charges on medications and selected laboratory services.

3.4.2 Collection

General government budget

Government tax revenues (see Section and 3.3 and Fig. 3.3.1) are pooled at the federal level (through the ministries, departments and agencies) and are shared between the three tiers of government. The states also generate taxes through internally generated revenue and allocations to the SMOH for health care purchasing (FGN, 2022c). Contributions from the national pool are then combined with state pools to finance services. Taxes include direct and indirect tax collected by state and federal governments. Consumption taxes are collected at the federal level as VAT – currently 7.5% on designated goods and services since 2020 (FGN, 2022c). Revenues are pooled into VAT and Federal Allocation Accounts and then distributed across the three levels

of government. The remainder is allocated horizontally across the states and local governments. However, according to the NBS, the states' total revenue in 2016 comprised 26% of internally generated revenue, and, hence, they relied more on federal allocation. The states' poor revenue performance has been attributed to weak tax administration, a large, inaccessible informal sector, huge reliance on federal allocations, the multiplicity of taxes, poor capacity to pay and the lack of compliance by individuals (Hafez, 2018; NBS, 2022b).

Low government revenue, more broadly, has been attributed to the following:

- A low tax base: only about 14% of eligible Nigerians pay tax.
- A low tax rate: Nigeria had the lowest VAT rate in Africa in 2016, at 5%. It rose to 7.5% in 2020.
- Inefficiency in tax administration and poor compliance by registered companies (NBS, 2022b). Even the federal government is not fully compliant, especially regarding deductions and remittances on workers' salaries (Hafez, 2018).

As a non-contributory and mostly tax-financed scheme, the BHCPF represents earmarked funding for health care intended to boost access to quality health care for vulnerable populations in Nigeria (Hafez, 2018), but the fund remains constrained by low tax revenues.

Taxes, contributions or premiums pooled by a separate agency

Revenue under the SHI system is generated through a single pool comprising premiums/contributions from enrollees and government equity funds for poorer and more vulnerable population groups, among other sources (see Section 3.4). Under the NHIA, the FSSHIP operates a single pool of premiums based on payroll-tax contributions of federal civil servants and the organized private sector (10% employers and 5% employees' basic salary, deducted from source), and the BHCPF stream from the federal government (45%) (DFID, 2018). Similarly, the SSHISs operate single pools of revenue comprising tax premiums from enrollee premium contributions, states' equity funds for poor and vulnerable groups, grants and the BHCPF streams. A few private health insurers also operate, depending exclusively on contributors' premiums (FMOH, 2018b). The NHIA and the various SSHIAs are responsible for setting premium/contribution rates and payment methods after actuarial studies on benefits

packages, in collaboration with other stakeholders (government, employees, employers, HMOs and health care providers) (FMOH, 2016a). The equity funds are used to pay for identified and registered poor and disadvantaged citizens within the population who are exempted from premium payments.

Progressivity and equity of financing

Progressivity and equity are constrained by limited risk protection and high OOP expenditure (Eboh et al., 2016). Low-income populations face significant barriers to accessing essential health services, with the burden of health financing disproportionately borne by individuals and households who are exposed to catastrophic health expenditure (FMOH, 2016a; World Bank, 2017). It is calculated that 14.8% of households in the south-west and south-east regions spend more than 10% of their annual income on health care (Hafez, 2018).

3.4.3 Revenue pooling

Under the government budget system, revenue is collected and pooled at the federal level by the FMoF. The FMoBEP allocates the budget envelopes to the FMOH (Fig. 3.3.1) and the FMOH distributes them to its relevant agencies and departments to pay their respective providers/health facilities for service delivery (see Section 3.3). As a pooling mechanism, budget estimates are often based on resource/funding needs. However, the envelope system, which is historically prorated based on funding availability, does not always realistically capture current needs.

Resource pooling under the insurance system is managed by the NHIA through the FSSHIP as a single risk pool, along with two other programmes for the informal sector (described in section “Challenges of health insurance operations” in Section 3.1) (Onoka et al., 2011). The operation of these three pools leads to fragmentation. The FSSHIP is implemented through a managed care model funded by contributions from employers and employees. Collected funds are pooled at the federal level and allocated to HMOs that then pay providers for service delivery. The pooling process is replicated by the SSHISs, where the insurance agencies act as both purchasers and pooling agents, receiving an allocation from enrollee premiums and other contributions and then allocating the funds to providers for service delivery. Various CBHISs and PHI schemes across the country contribute little to coverage due to various

challenges (Odeyemi, 2014; FGN, 2022c). Once fully implemented, the SSHISs should have sufficient citizen enrolment to reach an adequate size and spread the risk across the population.

3.4.4 Allocating resources to purchasers

The FMOH allocates approved health care budgets/pooled resources to its relevant agencies and departments (e.g. the NPHCDA, Health Management Board (HMB) and the NAFDAC for medicines and health commodities) for provider payments for service delivery at different levels of health care. Criteria for allocation across these purchasing agencies are based on the budget envelope system and Medium-Term Expenditure Framework, both of which are input based, comprising salaries, overhead, consumables and medical supplies (Eboh et al., 2016). The process is similar across state governments through each SMoH. The budgeting/financing processes in Nigeria have been characterized by poor governance and delays in approval and releases, leading to misappropriations, corrupt practices and embezzlement (FMOH, 2017c).

Under the FSSHIP, premiums/contributions from enrollees are transferred from the NHIA (under the NHIF) to the HMOs for payment to the providers (public and private) through monthly capitation to primary providers, based on a predetermined package of services and FFS payment to secondary and tertiary health care providers, based on volume of services after delivery. The prepaid monthly capitation is made 14 days before the due date (Ezenwaka et al., 2022). Other payment methods include monthly staff salaries or per diem payments to secondary and tertiary providers for bed space. In the social health insurance schemes (SHISs), the NHIA and the various SSHISs are the designated purchasing and pooling agencies.

3.4.5 Purchasing of services

Payment systems

Health care purchasing is based on contract arrangements between purchasers and providers. The government's tax-funded system operates the public health integrated payment system, and providers are directly employed by the ministries of health and paid through salaries and line-item budgets for

service delivery. The SHIS models employ a contract system where providers are paid through a mixed system of capitation for PHC and an FFS model (Ezenwaka et al., 2022). Other payment models include a block grant used to pay facility providers for the block purchase of services and per diem payments for inpatient bed space. Drug purchasing and health commodity supply are based on the approved list included in the operational guidelines and on NAFDAC approval for quality.

Purchaser–provider operations

Under the government budget system, the FMOH is the purchasing agency and it delegates purchasing functions to its relevant agencies, such as the NPHCDA for PHC and the HMB for secondary and tertiary health care. The NAFDAC purchases medicines and health commodities (FGN, 2022c). Health care purchasing under this system is undertaken for the entire population. Fund transfers to health facilities are mostly made through in-kind commodities and global budgets (FMOH, 2012a). The purchasing agencies monitor/interact with providers through quarterly visits and reporting as part of the regulatory mechanisms to ensure adherence to quality standards and guidelines. However, this approach is rarely enforced due to challenges within the public integrated system where providers' employer ministries are not separate (FGN, 2022c). Providers are selected based on qualifications as registered health workers and not on contract arrangements. As a result, there is no purchaser–provider split, and therefore no incentive for provider accountability and performance improvement, falling short of strategic health care purchasing principles (FMOH, 2012a). Penalties/sanctions are in place for deviation from guidelines but are rarely enforced (Ezenduka et al., 2022). The FMOH, through the departments, agencies and parastatals, undertakes purchasing functions, including selecting and monitoring benefits package design. The decentralization of governance and complexity of the health system means multiple purchasers across the states (Ezenduka et al., 2022). Under the public health model, there are no cost-sharing policies, and so providers charge users FFSs.

Purchaser–provider regulation

Under the FSSHIP, the NHIA, as the main purchasing agency, contracts with the HMOs that purchase services, paying providers for service delivery through

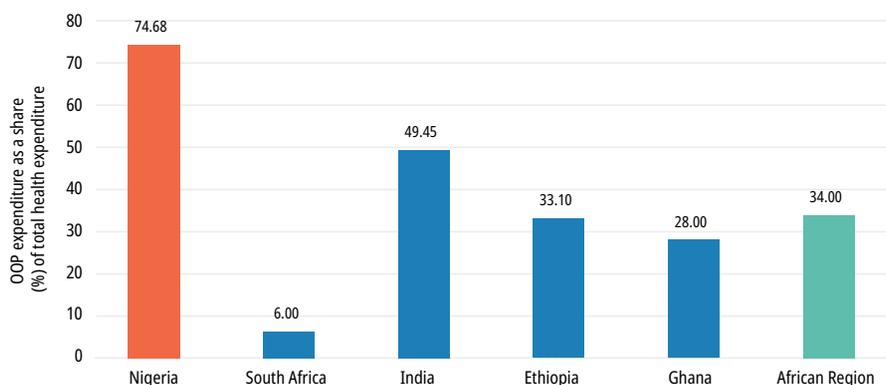
capitation and FFS payments. The NHIA regulates and monitors the HMOs in accordance with guidelines, to ensure adherence to contract requirements and timely payment of providers. The HMOs submit annual audit reports through the NHIA to the governing council (Ezenwaka et al., 2022). Deviation or default from the agreement is subject to sanctions, as provided for under the law. Unfortunately, monitoring of HMOs is rarely enforced due to conflicts, political interference and corruption, as most HMOs are members of the NHIA Board (Ezenwaka et al., 2022; FGN, 2022c). On behalf of the NHIA, HMOs contract with providers (public and private) that meet the required standards. The contract process involves application, screening, accreditation and reaccreditation processes. The NHIA selects the providers based on their ability to provide relevant services, expecting them to satisfy a set of minimum requirements regarding facilities, personnel, equipment and registration with relevant professional bodies (Onwujekwe et al., 2019b). The providers are monitored for performance quality and standards through quarterly on-site inspections of facilities and reports sent to NHIA for analysis and decision-making. The HMOs also perform secondary performance assessments using qualitative and quantitative methods at the facility level. Cost-sharing requirements limit providers' use of service charges.

The dominance of the government tax-funded/public health system makes passive purchasing the predominant purchasing arrangement across states, contributing to inefficient resource allocation (FGN, 2022c). Given the inadequacy of the government's health funding and very limited financial risk protection, payments are made directly to providers at the point of care, contributing to high OOP spending.

3.5 Out-of-pocket payments

Nigeria's consistently high OOP spending (outlined in Section 3.2) is among the highest in the world (Ezenduka et al., 2022), considerably higher than the regional average of 34% in 2020, and substantially higher than the WHO target of 30–40% (Hafez, 2018) (Fig. 3.5.1). Individual states – for example Anambra and Imo states – report even higher OOP spending, at over 92% (WHO, 2010c).

Figure 3.5.1 OOP expenditure as a share (%) of total health expenditure across selected countries and the WHO African Region for the latest available year (2020)



Source: WHO, 2022a

Consistently high OOP spending has exposed most low-income populations to the risks of catastrophic health spending (WHO, 2010c) (see Section 3.4). The establishment of the NHIS in 1999 was intended to reduce OOP spending through enabling risk pooling, offering greater financial risk protection and providing higher-quality services through public-private partnership. However, given that only 5% of the population has insurance coverage, this has yet to be achieved.

OOP expenditure mostly comprises direct payments for health goods and services to health care providers at the point of care, although more data are needed on the exact proportions. Health insurance users pay part of the cost of health care received via user charges. Table 3.5.1 shows user charges spread across different health services in Nigeria, indicating services that attract co-payment arrangements and their cost-sharing levels. Primary care services do not receive user charges, but outpatient prescription medicines attract up to a 10% co-payment and high-cost medicines attract up to a 50% co-payment. Some specialty services, such as high-cost investigations (e.g. computed tomography scan, magnetic resonance imaging and radiotherapy), attract a 50% co-payment, but these are reduced for children (DFID, 2018).

Table 3.5.1 User charges for health services

Health service	Type of user charge in place	Exemptions and/or reduced rates	Cap on OOP spending	Other protection mechanisms
Primary care	For some services, including MCH services in some places	Exist in some instances on a case-by-case basis	No	Yes; include free MCH services and BHCPF
Outpatient specialist visit	For some services, including MCH services in some places	Exist in some instances on a case-by-case basis	No	Yes; include free MCH services and BHCPF
Outpatient prescription drugs	10% co-payment, generally 50% on high-cost medicines for people covered by NHIA or SSHIA. Non-enrollees pay up to 100%	Exist in some instances on a case-by-case basis	No	Yes; include free MCH services and BHCPF
Inpatient stay	For some services, including MCH services in some places	Exist in some instances on a case-by-case basis	No	Yes; include free MCH services and BHCPF
Dental care	No	No	No	No
Medical devices	No	No	No	Limited
Other (please specify)	50% co-payment on high-cost investigations (e.g. CT scan, MRI, radiotherapy)	Reduced rates for children on high-cost investigations (e.g. CT scan, MRI)	No	NA

Source: Authors compilation from NHIA (2022) data (FGN, 2022c)

Notes: CT = computed tomography; MRI = magnetic resonance imaging; NA = data not available.

3.6 Voluntary health insurance

VHI is provided via CBHI and PHI schemes (FGN, 2022c).

Community-based health insurance schemes

A rural CBHIS was introduced by the NHIS in 2010 (FMOH, 2012a). It was intended to improve basic service coverage for poor and vulnerable rural populations working in the informal sector who lack access to adequate public, private or employer-sponsored insurance (FGN, 2022c). Implemented mostly as a public-private partnership model, CBHI was piloted on a small scale in Anambra, Lagos and Kwara states, but operations later expanded to many communities across the country (Adinma and Adinma, 2010). Poor enrolment rates have constrained implementation due to challenges including lack of trust in scheme management, poor benefits packages, the unaffordability of the premium and the quality of the health care provided (Adinma and Adinma, 2010). To enhance enrolment and coverage, CBHISs were packaged with incentives, including tax exemptions, a comprehensive benefits package (BMPHS) and minimal premiums. However, these incentives have yet to translate into increased enrolment due to poor targeting and failure to enforce exemption systems (Aregbeshola, 2018).

Private health insurance schemes

PHI schemes were introduced as a profit-based mechanism for individuals willing to pay a premium for additional health services. These PHI schemes were set up across a few federation states to contribute to expanding coverage and are estimated to cover about 1 million people, less than 1% of the population (Aregbeshola, 2018).

Evidence of the impact of both community and private voluntary schemes is mixed (Adinma and Adinma, 2010). Indications are that CBHISs failed to expand coverage to the poor and vulnerable populations (Bonfrer et al., 2018), while PHI schemes similarly showed poor capacity to extend coverage (Odeyemi, 2014). Voluntary membership, limited government support and poor management are cited as explanations for the poor performance of these schemes (Onoka et al., 2016). Data on the contribution of both schemes to total health expenditure

are unreliable, but Table 3.2.1 suggests that VHI contributions have remained at about 1% of CHE since 2011 (Obansa and Orimisan, 2013).

3.7 External sources and other systems of financing

3.7.1 External sources of funds

External funding support represents a key source of financing for Nigerian health care. It comes in different forms, including direct loans and grants, technical assistance and expertise, commodities (drugs and medical equipment), training and research funding (WHO, 2022a). Donor support has also been provided in the form of debt relief attached to the financing of programmes implemented to achieve the SDGs (e.g. distribution of free insecticide-treated bed nets and antimalarial medicines), making a positive contribution to the financing of PHC (Uzochukwu et al., 2015; Eboh et al., 2016).

As described in Section 3.2, external or donor-funded support for health care has declined over the period and currently contributes about 7.9% of CHE in 2021 (Oyibo and Ejughemre, 2015), which is relatively low compared with total funding requirements. Nevertheless, external contributions have significantly impacted the health system. The majority of resources are applied to health programmes used as vehicles for managing and addressing key diseases (Oyibo and Ejughemre, 2015), including HIV/AIDS, malaria, TB and COVID-19 (DFID, 2018). Table 3.7.a lists major donor agencies and institutions that contribute to external funding for health care. Data on the level of funding provided are not readily available.

Many donors, including global public-private partnerships, focus on specific health conditions or diseases: the Global Alliance for Vaccine Initiative, the Medicines for Malaria Venture and the Partnership for Maternal, Newborn and Child Health have all invested in Nigeria (Oyibo and Ejughemre, 2015), and the Global Fund allocated US\$ 660.7 million to Nigeria for three diseases in their 2017–2019 funding cycle, one of the largest country donations made by the fund (Oyibo and Ejughemre, 2015).

Donor support has significantly strengthened Nigeria's health system, particularly PHC. Reduction in HIV/AIDS and TB prevalence, guinea worm eradication, as well as capacity development and health facility infrastructural upgrades, have all been attributed to donor support (DFID, 2018). However,

Table 3.7.a Major institutional donors for health care financing and areas of support in Nigeria

Main donor institution	Support area(s)
Bill and Melinda Gates Foundation	Health financing services across programmes and immunization, among others
Global Alliance for Vaccine Initiative	Immunization/vaccine provision
Global Fund to Fight AIDS, Tuberculosis, and Malaria	HIV/AIDS, TB and malaria
International Development Association	MCH, nutrition and SOML initiative
Swiss Agency for Development and Cooperation	COVID-19 palliative care
United Kingdom of Great Britain and Northern Ireland Foreign Commonwealth and Development Office (formerly Department for International Development)	PHC, HSS, MCH, malaria/support to national malaria project
United States Agency for International Development	HSS, PHC, health workforce, HIV/AIDS (PEPFAR)
World Bank	HSS, PHC and MCH (International Development Association, Global Fund)
WHO	HSS, health finance, PHC, MCH, nutrition and immunization
Other UN agencies (UNDP, UNICEF, UNFPA, UNAIDS, among others)	RH, MCH, adolescent health, immunization and HIV/AIDS, among others

Notes: HSS = health systems strengthening; PEPFAR = President's Emergency Plan for AIDS Relief; SOML = Saving One Million Lives; UNAIDS = Joint United Nations Programme on HIV/AIDS; UNDP = United Nations Development Programme; UNFPA = United Nations Population Fund; UNICEF = United Nations Children's Fund.

between 2010 and 2021, donor funding declined from US\$ 13.2 per capita in 2014 to US\$ 7.0 per capita in large part due to the recategorization of Nigeria as a middle-income country in 2008 (Oyibo and Ejughemre, 2015). The recategorization will limit the country's ability to access future preferential terms for grants, concessional loans and debt relief (Oyibo and Ejughemre, 2015). External funding also brings challenges, notably around sustainability but also in terms of the lack of coordination of vertical programmes, misdirection of donor funds from areas of greatest need, corruption in donor-supported programmes and over-reliance on donor funding, leading to the rolling back of government provision at all levels (Oyibo and Ejughemre, 2015).

3.7.2 Other systems of financing

Various levels of government have explored other financing initiatives to complement health financing, including conditional cash transfers, free MCH programmes, fee exemption schemes, the Saving One Million Lives (SOML) initiative, the Midwives Service Scheme and free malaria programmes (Oyibo and Ejughemre, 2015). Primary health centres are meant to receive cash and in-kind support through the fund flow arrangements described in Fig. 3.3.1 (Oyibo and Ejughemre, 2015). The SOML initiative, a federal government-led initiative funded by a World Bank facility, and the Nigeria State Health Investment Project (NSHIP) were established for improving PHC services (for MCH, HIV/AIDS, malaria and TB immunization coverage, and essential medicines and commodities). The initiatives contributed significantly to improving MCH outcomes (Oyibo and Ejughemre, 2015). Despite these systems, OOP remains the most common source of external health financing (Hafez, 2018).

3.8 Payment mechanisms

3.8.1 Paying for health services

Table 3.8.1 shows the mixed payment mechanisms used to pay providers for health services across different service levels in Nigeria. While capitation is paid to PHC providers, FFS models dominate at the secondary and tertiary health service levels. However, salary payments remain the major payment mechanism in areas of the health system yet to be included in SHI mechanisms. As an input-based system, this has been fraught with attendant poor performance and inefficiencies in service delivery (Hafez, 2018). Output-based payment systems, such as performance-based financing or payment for results, which tie payment for health services to performance, have been used by the SOML initiative and NSHIP, among other programmes, to enhance service quality through staff motivation and infrastructure strengthening in several states, with significant positive impacts on the health care delivery system. However, these positive impacts are undermined by the challenges of inadequate funding, poor infrastructure and limited workforce (WHO, 2022a).

Table 3.8.1 Provider payment mechanisms

Payer/provider	Ministry of Health	Other ministries	Regional ministry of health/health service	Local health authority	Central SHI institution	SHI funds	Other SHI systems	Private/voluntary health insurers
Health centres	Salary	Salary	Salary	Salary	Capitation	Capitation	Capitation	Capitation
General practitioners	Salary	Salary	Salary	Salary	Capitation/salary	Capitation/salary	Capitation/salary	Capitation/salary
Ambulatory specialists	Salary	Salary	Salary	Salary	Not covered	Not covered	FFS	FFS
Other ambulatory provision	Salary	Salary	Salary	Salary	Not covered	Not covered	FFS	FFS
Acute hospitals	Salary	Salary	Salary	Salary	FFS	FFS	FFS	FFS
Other hospitals	Salary	Salary	Salary	Salary	Capitation/FFS	Capitation/FFS	FFS	FFS
Hospital outpatient	Salary	Salary	Salary	Salary	Capitation/FFS	Capitation/FFS	FFS	Capitation/FFS
Dentists	Salary	Salary	FFS	FFS	FFS	FFS	FFS	FFS
Pharmacies	Salary	Salary	Salary	Salary	FFS	FFS	FFS	FFS
Public health services	Salary	Salary	Salary	Salary	Not covered	Not covered	NA	FFS
Social care					Not covered	Not covered	Not covered	FFS

Source: Authors' compilation

Notes: NA = data not available.

Paying for health workers

Current health system operations are geared towards strategic health purchasing, and PHC providers are therefore paid monthly salaries. This input-based approach results in inefficiencies in service delivery due to a lack of incentives or motivation. By contrast, given the operation of the SHISs across the federation, at the secondary and tertiary levels, health care providers are paid via an FFS model. Other output-based payment mechanisms include the block grant and per diem payments to secondary and tertiary providers for bed space.

3.9 Recent reforms

The Nigerian health system has undergone various reforms to improve health care delivery and enhance population health objectives (see Chapter 2 for an overview of health system governance and reforms). Fig. 3.1.a shows the progression of health care financing reforms.

Pre-National Health Policy reforms

Health care financing reforms before the introduction of the NHP in 2016 focused on reallocating public expenditure in line with identified priorities, appropriate pricing policies, the NHIS and community financing (FMOH, 2018b). Spending reallocation prioritized shifting investment from curative services to preventive services, to address the high risk of morbidity from preventable infectious and avoidable diseases (FMOH, 2018b).

Health system strengthening reforms

Weak health systems cannot achieve UHC. Consequently, the Presidential Summit Declaration on UHC in 2014 led to the creation of a central coordinating unit for UHC within the health systems strengthening (HSS) division of the Department of Health Planning, Research, and Statistics, FMOH, in June 2015 (FMOH, 2017c). This unit was mandated to provide overall policy and strategic direction for achieving the presidential mandate on UHC. Its activities involved

galvanizing and technically coordinating relevant health care financing efforts by leveraging existing resources and building appropriate partnerships, which led to the development of the National Health Care Financing Roadmap, the establishment of the National Health Care Financing Equity and Investment Technical Working Group in 2015, and the development of the NHFPS in 2016. Subsequently, these efforts were replicated in all 36 states and the FCT. Health insurance and contributory scheme laws were also enacted in all states and the FCT (FMOH, 2017c).

Universal health coverage focused reforms

Subsequent reforms were geared towards achieving UHC, a key target of the UN's health-related SDGs (Target 3.8). They started with the enactment of key financing policies and strategies (NHA 2014, BHCPF 2014, NHP 2016 and NHIS (now NHIA)) (see Fig. 3.1.a), all of which were designed to achieve UHC (Obansa and Orimisan, 2013). Reforms centred around implementing a sustainable health financing system, to ensure that every citizen has equal access to good-quality, efficient and equitable health care, irrespective of socioeconomic status. This requires restructuring the health care financing strategies needed to achieve UHC, as described in Section 3.1. Measures were implemented to increase funding, improve efficiency, promote innovative health financing and ensure equity in providing and utilizing health services with assured financial risk protection, to achieve improved health indices and global health goals (Obansa and Orimisan, 2013).

Impact of reforms

Reforms to address the arrangement and management of health funding and financing were implemented to support UHC principles. These include the decentralization of the NHIS, for greater financial risk protection and improved access to good-quality health care (FGN, 2022c), and implementation of the BHCPF (FMOH, 2017c), for increased funding. Measuring the impact of these reforms is difficult: many health NGOs and development partners implement vertical programmes, resulting in poor coordination and measurement challenges (FGN, 2022c). When their effectiveness is measured by key performance indicators linked to UHC, data suggest that, to date, they are

not achieving their objectives: population coverage by the new insurance mechanism remains less than 5%, well below the 90% target; and OOP expenditure is above 75% of CHE, well above the 30–40% regional benchmark (WHO, 2022a). This poor performance can be attributed to the challenges of persistent government underinvestment in health care, limited capacity to implement health insurance programmes and administrative inefficiencies. SHISs are considered a critical step towards UHC and are expected to boost performance, but further data are needed before a more objective assessment and wider financing reforms can be undertaken (Onwujekwe et al., 2019b).

Chapter summary

Chapter 3 analyses the level of available resources and the financial flows in Nigeria's health system. Health care financing in Nigeria is characterized by insufficient investment in health, high OOP expenditure and limited financial risk protection mechanisms. Health expenditure as a percentage of GDP is among the lowest globally, while OOP expenditure is among the highest. Only 5% of the population has health insurance of any form. Budget allocation to health is hampered by Nigeria's minimal tax revenues, which are among the lowest regionally and globally. The burden of health care costs falls on individuals/households, exposing Nigeria's predominantly poor and vulnerable population to catastrophic health expenditure. This undermines progress towards achieving UHC and the SDGs for a healthy and wealthy nation. Reforms, including establishing a new health insurance mechanism and the earmarked BHCPF, have not made significant progress towards increasing equitable access to good-quality health care. Lack of progress has been attributed to insufficient political resolve, weak governance and the inefficiency of public financial management. Improvements in the three health financing functions of resource mobilization, pooling funds and managing funds are needed, along with a move from the passive to strategic purchasing of health services. There is scope to increase the fiscal space for health through improved domestic resource mobilization, enhanced development assistance targeted at social protection/health insurance schemes and improvements in the financial management of public expenditure. However, all of these rely on enhanced political resolve to increase funding for health care and drive stronger governance and efficiency of public financial management.

By **Nkoli Uguru** and **Uche Ezenwaka**

Chapter 4 key messages

- Nigeria's health workforce is one of the largest in Africa. The provision of doctors, nurses and midwives is above regional averages, but below the threshold recommended by the World Health Organization. The workforce increased between 2010 and 2021, but not at a fast enough rate to meet demand.
- Strategic coordination of the health workforce by the government is lacking, resulting in staff shortages and an uneven distribution of the skilled health workforce across the country.
- Staff capacity and competence shortages, industrial unrest and poor remuneration and working conditions, especially in the public health sector, have had knock-on effects on clinical outcomes and reduced public confidence in the health workforce.
- Retaining health workers is a significant challenge, with health professionals moving from rural to urban areas or out of the country, attracted by higher remuneration packages and better working conditions.
- A workforce information management system to help identify gaps and plan and implement existing policies and strategies is much needed. Data on the distribution of the health workforce by cadre, gender and facility are currently mostly unavailable.
- Health workforce challenges could be addressed by strengthening governance and management at and between the national and subnational levels, improving training and retraining programmes, and using research evidence to improve practice and staff retention.

4.1 Health workforce policies

Concerted efforts have been made to improve the health workforce via policies and strategic plans aimed at addressing the size, distribution and skills mix of the health workforce; increasing the production of health workers; addressing low absorption capacities in the public and private sectors; and defining the scope of responsibility, productivity scales and remuneration rates at all levels. Major policies and strategies currently in place with relevance to health workforce include:

- National Health Act (2014)
- National Health Policy (2016)
- National Strategic Health Development Plan II (2018–2022)
- National Health Workforce Registry (FMOH, 2020g; Okorafor et al., 2022)
- National Human Resources for Health Policy (2020)
- National Human Resources for Health Strategic Plan (2021–2025)
- Task-shifting and Task-sharing Policy for Essential Care Health Services in Nigeria (2014, reviewed 2022)

See Chapter 2 for essential details on major health policies and further details on broader health governance policies and reforms. Details of how these major policies relate to health workforce specifically are set out below.

National Health Act (2014)

Objectives

The NHA 2014 establishes provisions for the development and distribution of the health workforce, the appropriate distribution of health care providers, regulations about the management and establishment of training institutions, conflict resolution and the conditions for medical treatment outside the country. It also stipulates that:

- the National Council on Health shall develop policies and guidelines for and monitor the provision, distribution, development, management and utilization of the health workforce within the national health system;

- the policies and guidelines developed shall facilitate and advance (i) the adequate distribution of the health workforce, (ii) the provision of appropriately trained staff at all levels of the national health system to meet the population's health care needs and (iii) the effective and efficient utilization, functioning, management and support of the health workforce within the national health system.

Implementation

The NHA – implemented by the Federal Ministry of Health (FMOH) and state ministries of health (SMoHs), their departments and affiliated agencies (supported by donor agencies), health care providers and professional health care associations – has yet to achieve its goals regarding the health workforce. Barriers to implementation and challenges include a low level of awareness of the contents of the NHA among health care providers and other health stakeholders, and inadequate coordination between the FMOH and the subnational levels (Enabulele and Enabulele, 2016). Poor evaluation, accountability and government oversight are significant challenges to successfully implementing the NHA, particularly in relation to the health workforce (Enabulele and Enabulele, 2016).

National Health Policy (2016)

Objectives

A key objective of the NHP 2016 is to ensure that the health workforce is adequate and appropriate at all health system levels. The policy aims to strengthen the institutional framework for the planning, production, recruitment, distribution and management of the health workforce, while ensuring clarity regarding the roles and responsibilities of all stakeholders involved in health workforce planning, production and management (FMOH, 2016c).

Implementation

Implementation of the NHP 2016 has been suboptimal, with an apparent lack of oversight by government agencies. Barriers to implementation include poor accountability and transparency concerning the use of funds, poor

implementation of policy guidelines due to inappropriately trained staff at the subnational levels, a low level of awareness of the policy and its contents among health professionals, and political interference fuelled by ethno-religious and cultural sentiments (Ilesanmi et al., 2023).

National Strategic Health Development Plan II (2018-2022)

Objectives

NSHDP II aims to address health workforce gaps in the country by addressing health workforce production needs. This includes addressing the low levels of motivation in the health workforce (Presidential Health Sector Reform Committee, 2023) and the uneven distribution of the health workforce geographically, across the various levels of care and between urban and rural populations. The overarching goal is to provide optimal health care services by ensuring that the health system has the correct number of staff with the appropriate skills mix, and that staff are competent, motivated, productive and equitably distributed (FMOH, 2018b).

Implementation

Many aspects of NSHDP II remain poorly implemented, especially concerning the health workforce, considering that the uneven distribution of the health workforce across geographical areas still poses a considerable challenge. A high percentage of skilled health workers are clustered in urban areas and tertiary institutions, while only small numbers are found in rural and PHC centres (Nwankwo et al., 2022; Presidential Health Sector Reform Committee, 2023).

National Health Workforce Registry (2018)

Objectives

The National Health Workforce Registry (NHWR) was developed in 2018 by the FMOH, in collaboration with the WHO and in line with the global strategy for HRH. The NHWR strategy envisaged that the attainment of UHC and the Sustainable Development Goals required the provision of high-quality health

care services, most importantly through ensuring the equitable distribution of an appropriate number of qualified health workers with the appropriate skills mix (Okoroafor and Christmals, 2023). The NHWR reflects the WHO Global Code of Practice on the International Recruitment of Health Personnel to help track health worker movement (WHO, 2010b). The overall goal is to ensure that all people in all places have access to skilled health workers who are well equipped, motivated and supported to meet their health care needs.

Implementation

Currently, 14 professional regulatory bodies regulate and maintain training and practice standards for health professionals in their specialty areas in Nigeria. These include the Medical and Dental Council of Nigeria (MDCN), the PCN, the Nursing and Midwifery Council of Nigeria (NMCN), the Community Health Practitioners Registration Board of Nigeria and the Medical Laboratory Science Council (FMOH, 2020g). Although the FMOH has general oversight responsibilities, there is no central regulatory body for health professionals. Friction and overlap between the different professional bodies reduce the effectiveness of health workforce monitoring and the accreditation of training institution programmes (FMOH, 2016c). Of all 36 states – including the FCT – 25 have established a health workforce registry, which should feed into the NHWR. However, just 11 states have uploaded their information to the NHWR online platform. This is due to insufficient guidelines and standardized tools on using the NHWR, weak governance mechanisms for health workforce information and low levels of capacity among relevant stakeholders, especially subnational stakeholders (Okorafor et al., 2022). In addition, there is a lack of capacity-building materials for training and mentoring HRH managers tasked with managing the NHWR. As a result, the information remains largely untapped and inadequate for planning reforms (Presidential Health Sector Reform Committee, 2023).

National Human Resources for Health Policy (2020)

Objectives

The FMOH, supported by donor partners, developed the National Human Resources for Health Policy (NHRHP) in 2020 to provide strategic policy direction

for Nigerian states and the Federal Capital Territory (FCT) on developing their respective health workforce plans and policies (FMOH, 2020d). In line with the provisions of the NHRHP, states are expected to establish health workforce units in their respective ministries of health and departments of planning, research and statistics to provide an institutional hub for health workforce policy formulation, planning and management (FMOH, 2018b).

Implementation

The 36 states and the FCT have now established HRH units based in the Department of Health Planning, Research and Statistics (DHPRS) of each SMOH. FMOH health workforce issues are currently handled by the national DHPRS and the Public, Private Partnership/Diaspora Unit in the Office of the Permanent Secretary. As a result, states lack the autonomy to act through a stand-alone unit in a single department with dedicated, skilled staff and financial and material resources, which compromises implementation. However, the national HRH branch of the FMOH has advocated for improved funding, and some states' HRH units now have dedicated staff and budget lines/provisions, with HRH issues being handled by the DHPRS (Presidential Health Sector Reform Committee, 2023). Whether or not this new structure has reduced the implementation constraints has yet to be evaluated.

National Human Resources for Health Strategic Plan (2021-2025)

Objectives

The National Human Resources for Health Strategic Plan (NHRHSP) was developed in 2021 as a pillar of NSHDP II to guide the implementation of the NHRHP at all levels, with policy implementers from the Federal Ministries of Health and Finance, their departments and agencies, and professional associations and regulatory bodies related to the health sector. The NHRHSP provides a framework for resource mobilization based on priority areas for intervention in health workforce planning, management and development (FMOH, 2021b). It aims to ensure that adequate numbers of skilled and motivated health workers are available and equitably distributed to provide high-quality health services throughout the country. Documented evidence

of the health workload can be seen in the National Primary Health Care Development Agency (NPHCDA) minimum standard of care document for primary health care (PHC), wherein the criteria for the operation of PHC centres consider the health workforce workload using available data on regional standards. The PHC manual proposes the minimum number, mix and skill set of staff required in each facility type. Staff cadres are matched to services based on their competences. The cadres are community health officer, nurse/midwife, community health extension worker (CHEW) and junior community health extension worker (JCHEW) (see Table 4.1.a).

Table 4.1.a Minimum standards of care for PHC in Nigeria

Staff	Primary health clinic	Primary health centre
Health care staff	<ul style="list-style-type: none"> • Two midwives or nurse midwives • Two CHEWs • Four JCHEWs 	<ul style="list-style-type: none"> • One medical officer (if available) • One CHO (must follow specific instructions for supporting patient care in emergency situations) • Four nurses/midwives • Three CHEWs (must work with standing order) • One pharmacy technician • Six JCHEWs (must follow specific instructions for supporting patient care in emergency situations) • One environmental officer • One medical records officer • One laboratory technician
Support staff	<ul style="list-style-type: none"> • Two health attendants/assistants • Two security personnel 	<ul style="list-style-type: none"> • Two health attendants/assistants

Source: FMOH, 2018b

See Chapter 7, Section 7.5, for further details on PHC facilities, services, management and coverage.

Implementation

The NHRHSP outlines strategies and options for implementation to tackle the HRH issues in the health sector (FMOH, 2020e), evident in the inequitable geographical distribution of skilled health workers across the country and the

inadequate ratio of health professionals to citizens. Although the doctor-to-population ratio of 3.95 per 10 000 is above the sub-Saharan African regional average of 1.5 doctors per 10 000 population, it is below the WHO global recommendation of 4.45 doctors per 10 000 population (Scheffler et al., 2016). Despite having a comparatively robust health worker density, the uneven distribution of the health workforce means that the country still suffers from significant and chronic shortages of skilled health workers in certain areas. Moreover, HRH issues have been worsened by the increased emigration of health personnel and the incessant interprofessional rivalry between medical specialities, which is mostly based on disparities in financial and professional values and unhealthy competition between health professionals (Presidential Health Sector Reform Committee, 2023). The failure to overcome these considerable implementation challenges since the development of the NHRHSP can be attributed to inadequate management and poor accountability related to use of the funds earmarked for implementation, a lack of skilled personnel at the subnational level and poor government oversight (Presidential Health Sector Reform Committee, 2023).

Task-shifting and Task-sharing Policy for Essential Health Care Services in Nigeria (2022)

Objectives

The Task-Shifting and Task-Sharing Policy for Essential Health Care Services in Nigeria (TSTSP) aims to mobilize available human resources to deliver essential health care services; ensure equity, accessibility and effectiveness; achieve universal health coverage (UHC); and ultimately serve the health needs of the population. The policy was introduced in 2014 for adaptation and implementation at all levels of the national health system. It was last reviewed in 2022 to reflect the tiered accreditation system of the Pharmacy Council of Nigeria (PCN) for patent and proprietary medicine vendors (FMOH, 2022c). Broadly, the TSTSP promotes the rational redistribution of tasks among existing health workforce cadres. It guides the transfer of specific tasks, where appropriate, from highly qualified health workers to those who have been trained for a shorter period and have fewer qualifications, to ensure the efficient use of available health workers and to improve access to services (FMOH, 2014c).

Implementation

The policy has been implemented by ministries of health at the national and subnational levels and by health professional associations, regulatory bodies, civil society groups, development partners and stakeholders in health. Implementation has been enabled by a range of factors, including the political will of the health sector leadership, the acceptance of task-shifting and task-sharing by health workers, and the training of health workers to improve their knowledge and skills and enable them to shift or share tasks. Optimal implementation has however been hindered by the persistent shortage of health workers, intercadre rivalry, perceptions that beneficiary cadres have suboptimal capacity and a lack of adequate equipment for the delivery of essential services. Task-shifting and task-sharing could be improved by increasing staff numbers, scaling up training and retraining, providing more mentoring and supportive supervision, and improving the use and dissemination of evidence generated (Okoroafor and Christmals, 2023).

4.2 Health workforce production

Between 2010 and 2021, the number of health care workers in Nigeria increased. However, this increase has not improved the country's health indicators. Nigeria ranked 47th out of 55 countries based on the WHO health workforce indicators. Table 4.2.1 shows that the actual number of health care workers in Nigeria is significantly below the WHO recommended ratios of 4.45 doctors and 83 nurses per 10 000 population (FMOH, 2020g; WHO African Region, 2021). Furthermore, the uneven spread of different types of health care workers across the country makes it difficult to provide specialized treatment in some areas (Presidential Health Sector Reform Committee, 2023).

Nigeria has 48 colleges of medicine and 11 dental schools. A total of 40 colleges are fully accredited, and 8 are partially accredited (FMOH, 2022c; MDCN, 2023). A total of 1433 medical doctors and 82 dentists graduated from medical and dental institutions in 2022 (FMOH, 2022c). If the numbers produced were fully utilized and supported by appropriate funding and deployment and retention strategies, a relatively sustainable health workforce that meets the demands of the population could be maintained (FMOH, 2020g). However, the reality on the ground suggests either that these institutions have not produced the numbers, quality and skills mix of frontline health workers required or

that the number of health workers who leave the country to work elsewhere far exceeds the number who remain in the country to work in the national health system. Thus, the available workforce remains unevenly distributed, with zonal and geographical discrepancies (Presidential Health Sector Reform Committee, 2023).

Table 4.2.1 Trends in the production of health workforce in the country by cadre (selected years)

Health workforce cadre	2010	2015	2018	2021 (latest available year)	Source
Medical specialists (master's and higher pre-service training)	2 376	3 402	3 035	NA	WHO African Region, 2021
Medical officers/general practitioners	55 987	80 163	74 543	84 277	WHO African Region, 2021
Specialist surgeons	NA	1827	NA	NA	WHO African Region, 2021
Clinical officers	NA	598	NA	NA	WHO African Region, 2021
Nurses	215 055	185 101	110 105	201 735	WHO African Region, 2021
Midwives	101 275	141 275	71 237	131 922	WHO African Region, 2021
Dentistry staff (including technicians)	11 720	4 081 ^a	25 487	27 547	WHO African Region, 2021
Pharmaceutical staff (including technicians)	23 546	20 035 ^b	24 668	23 124	WHO African Region, 2021
Laboratory staff (including technicians)	NA	NA	311 269	71 735	WHO African Region, 2021
Radiology staff (including technicians)	NA	NA	680 (2017)	NA	WHO African Region, 2021
Environmental and public health workers	13 238	NA	14 743 (2019)	1 234	WHO African Region, 2021
CHWs (formally trained and reimbursed on a nationally standardized scale)	NA	NA	116 454	7 912	WHO African Region, 2021
Rehabilitation services staff (physiotherapy)	4 278	NA	5 153	5 089 (2019)	WHO African Region, 2021
Palliative care staff	NA	NA	NA	NA	NA
Health management and support workers	NA	NA	NA	NA	NA
Total	427 475	436 482	757 374	554 575	WHO African Region, 2021

Notes: NA = data not available; ^aonly dentists; ^bonly pharmacists.

A key challenge for health workforce production in Nigeria is the asynchrony between needs and production, which is partly attributable to the poor implementation of policies and plans targeting the health workforce in most states, and to poor data collection and availability. Table 4.2.1 suggests that significantly more community health workers (CHWs), community health extension workers (CHEWs), nurses and laboratory staff are being produced than medical doctors, dentists and medical specialists (FMOH, 2018b). However, disaggregated data on health workforce production trends are incomplete and inconsistent, which limits analysis. Limited data availability prevented authors from including planned Table 4.2.2, “Disaggregated data on the trends in the production of health workforce in the country (selected years)” which would usually form part of our template description of a country’s health system and services.

Despite the apparent increase in Nigeria’s health workforce from 2010 to 2021, research studies suggest that production is not increasing at a fast enough rate to meet demands, with estimates indicating that the country will require approximately 149 852 doctors and 471 353 nurses by 2030. However, based on a population growth rate of 2.4%, it is estimated that only 99 120 doctors and 333 494 nurses will be available. This means that, by 2030, there will be 50 120 fewer doctors and 137 859 fewer nurses than required, representing gaps of 33.45% and 29.25% in the supply of doctors and nurses, respectively (Adebayo et al., 2016). These shortages highlight the inadequacy of Nigeria’s health care system for catering to the needs of its fast-growing population of over 200 million (FMOH, 2020g). These indicators also point to a lack of support and safeguarding due to incorrect skills mixes, the poor coordination of training sessions, the poor quality of training delivered and the poor enforcement of HRH standards and norms (Presidential Health Sector Reform Committee, 2023).

4.3 Size and distribution of the practising health workforce

Skilled health workforce indices show that the doctor-to-population ratio in Nigeria is 3.95:10 000, compared with the sub-Saharan African average of 1.5:10 000, and the nurse and midwife density is 15.64 per 10 000 population, compared with a regional average of 12.44 nurses and midwives per 10 000 population (Saralegui-Gainza et al., 2022). However, these values remain below the WHO-recommended ratios of 4.45 doctors and 83 nurses per 10 000 population (FMOH, 2020g; WHO African Region, 2021).

The limited data available on specific health workforce cadres suggest that there are more health workers in the public sector than in the private sector (Tables 4.3.1 and 4.3.2). This difference may be explained by the fact that many health professionals in the public sector, especially doctors, also work in the private sector, masking the level of private sector activity. Poor data management and the inconsistent collection and storage of data on the health workforce may also explain the difference; for example, not all doctors who work in private practice are registered with the MDCN.

Table 4.3.1 Size of the practising health workforce in the public sector in the latest available year

Health workforce cadre	Year		
	2018	2022	Source
Medical specialists (master's and higher pre-service training)	NA	NA	NA
Medical officers/general practitioners	NA	NA	NA
Specialist surgeons	NA	NA	NA
Clinical officers	NA	NA	NA
Nurses	NA	NA	NA
Midwives	10 978	NA	FMOH, 2018b
Dentistry staff (including technicians and other allied dental health professionals)	44 188	NA	FMOH, 2018b
Pharmaceutical staff (including technicians)	NA	NA	NA
Laboratory staff (including technicians)	27 421	NA	FMOH, 2018b
Radiology staff (including technicians)	NA	NA	NA
Environmental and public health workers	4 447	NA	FMOH, 2018b
CHWs (formally trained and reimbursed on a nationally standardized scale)	NA	NA	NA
Rehabilitation services staff	268	NA	FMOH, 2018b
Palliative care staff	NA	NA	NA
Health management and support workers	NA	NA	NA
Medical doctors and dentists (excluding technicians and other allied dental health professionals)	19 800	48 774	FMOH, 2022c

Note: NA = data not available.

Table 4.3.2 Size and distribution of the practising health workforce in the private sector in the latest available year

Health workforce cadre	Year		
	2018	2022	Source
Medical specialists (master's and higher pre-service training)	NA	NA	NA
Medical officers/general practitioners	NA	NA	NA
Specialist surgeons	NA	NA	NA
Clinical officers	NA	NA	NA
Nurses	NA	NA	NA
Midwives	NA	NA	NA
Dentistry staff (including technicians)	4 131	NA	FMOH, 2018b
Pharmaceutical staff (including technicians)	NA	NA	NA
Laboratory staff (including technicians)	27 081	NA	FMOH, 2018b
Radiology staff (including technicians)	NA	NA	NA
Environmental and public health workers	6 972	NA	FMOH, 2018b
CHWs (formally trained and reimbursed on a nationally standardized scale)	NA	NA	NA
Rehabilitation services staff	1 015	NA	FMOH, 2018b
Optometry personnel	5 103	NA	FMOH, 2018b
Palliative care staff	NA	NA	NA
Health management and support workers	NA	NA	NA
Medical and dental professionals	5 062	9 021	NHWFP 2022
Total	49 364	NA	FMOH, 2018b

Note: NA = data not available. A breakdown of health workforce numbers by type of private sector provider (e.g. Private for-profit; Private not-for-profit; Faith-based organization; NGO etc) was not available.

The numbers of laboratory workers in public and private facilities were similar in 2018, with 27 421 of all laboratory workers working in the public sector and 27 081 in the private sector. This suggests that the majority of laboratory personnel work in both public and private facilities, indicating the reality of dual practice. Moreover, in 2018, there were 4447 environmental and public health workers in the public sector and 6972 in the private sector, and a total of 268 rehabilitation services personnel in the public sector and 1015 in the

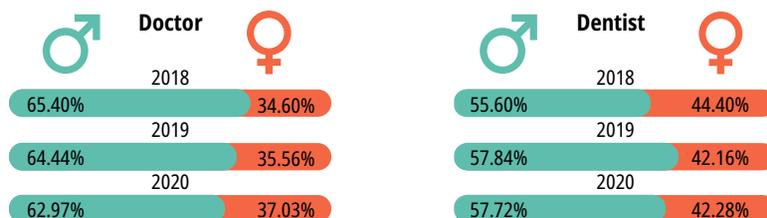
private sector (FMOH, 2020g). However, the quality of the data sets on the health workforce in the public and private sectors is uncertain.

The shortage of skilled health workers in Nigeria’s health sector has been exacerbated and further complicated by the unequal distribution of the health workforce. The poor implementation of policies guiding distribution has led to arbitrary postings and transfers of health workers, which are often influenced by the administrative officers’ personal and political interests (Abimbola et al., 2016; FMOH, 2018b).

Health workforce disaggregation by sex

Data disaggregated based on sex show that a larger percentage of doctors and dentists registered in the country from 2018 to 2020 were male (Fig. 4.3.a). These figures can be attributed to a range of causes, including internal and external health worker mobility.

Figure 4.3.a Percentage distribution of medical doctors and dentists by sex and year

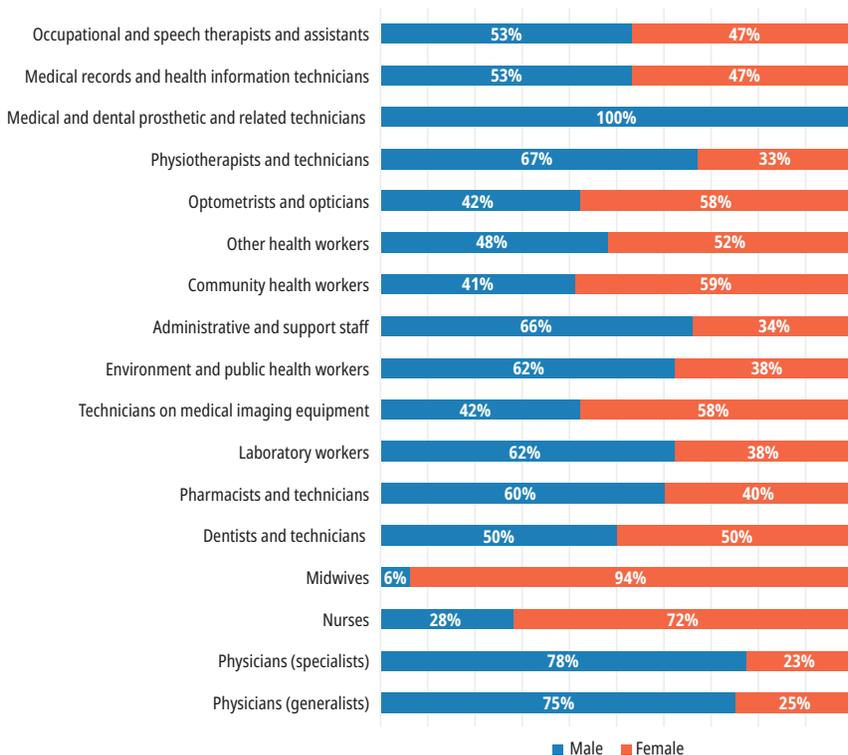


Source: Adapted from NBS (2022a) using data from the Medical and Dental Council of Nigeria.

The male-dominated landscape of Nigerian society drives de facto job segregation between male and female health workers. Career choices often follow traditional gender roles, with the majority of physicians, pharmacists and medical laboratory technicians being men, and women more often being seen in “caring” roles, such as nursing and midwifery, or with a focus on antenatal care, labour and family planning (Ngobua, 2023). These gender-based inequalities are rooted in social norms, with early marriage being commonly practised, and women typically undertaking more domestic labour. These factors limit women’s career choices and professional development. Moreover, several cultural norms discourage male health workers from entering nursing and

midwifery training (Ngobua, 2023), for example cultural perceptions that men carrying out specific tasks or belonging to certain cadres is “inappropriate”. Nursing, midwifery and working as a CHEW or JCHEW are perceived as women’s jobs; hence, very few men go into such professions. Men are also discouraged from careers in nursing or midwifery because of female patients’ preference to be attended by female health providers. This has created a considerable gender gap in the professions, with women constituting 87% of nurses and midwives (Ngobua, 2023). Further disaggregation of data on other health professions by gender is presented in Fig. 4.3.b, which shows that there is a higher proportion of women working in community health settings than in other health professions. However, the disaggregated data in the NHWR are incomplete, given that only 11 states have uploaded health workforce data to the NHWR system. Nevertheless, the data give some insight into the health workforce profile nationwide, which is broadly in line with gender distribution regionally, where women make up 65% of nurses (Boniol et al., 2019).

Figure 4.3.b Gender distribution of health worker groups in 11 states



Source: Okoroafor et al., 2022

The density of dentistry personnel per 10 000 population, as shown in Table 4.3.3, declined between 2010 and 2021. The 2021 figures of 0.20 personnel per 10 000 population are considerably lower than the regional average of 0.44 per 10 000 population for the same year (Okoroafor et al., 2022). The densities of other health workforce cadres have shown more variation than that for dentistry personnel (Ahmat et al., 2022). Oral health has been said to be neglected by the Nigerian health system (Etiaba et al., 2015), with the inadequate production and distribution of dentistry personnel further reinforcing this. This could be attributed to the fact that only nine dental schools produce dentists in Nigeria, and seven of them are in the south-west region. An average of 150 dentists per year graduate from these schools, and the Dental Therapy and Technology Board registers an average of 170 dental personnel per year (Amedari et al., 2022).

Table 4.3.3 Trends in the distribution of Nigeria’s practising health workforce by cadre

Health workforce cadre density	2010	2015	2019	2021
Medical doctors (per 10 000 population)	3.782	4.494	3.667	3.95
Specialist surgeons (per 10 000 population)	NA	0.10	NA	NA
Dentistry personnel (per 10 000 population)	0.53	0.22	0.22	0.20
Nursing and midwifery personnel (per 1000 population)	13.57	17.55	15.01	15.6
Pharmaceutical personnel density (per 1000 population)	0.73	1.11	1.23	0.81

Source: WHO-African Region, 2021

Note: NA = data not available.

4.4 Recruitment and deployment

The Nigerian health system has no stand-alone recruitment, deployment or remote service incentive policies. They have all been incorporated into the NHA 2014. When vacancies arise, health workers are recruited and deployed through the Civil Service Commission at the federal and state levels. The recruitment process includes identifying vacant positions and producing job advertisements, sourcing applicants, testing/interviewing and evaluating/screening candidates, and candidate selection, onboarding and deployment.

The available data on the numbers of health workers, by cadre, recruited to public health facilities at the federal level are presented in Table 4.4.1, along with the proportions of health workers who take up their posts. This replaces planned Table 4.4.1 “Number of the health workforce recruited into public service annually for the past 10 years and proportion who take up their posts” which would usually form part of our template description of a country’s health system and services. Planned Table 4.4.2, “Ratio of unfilled posts to total number of posts”, has also been excluded due to lack of data. See Section 4.1 for further details on challenges in implementing health workforce registries nationally and gaps in data collection.

Table 4.4.1 Percentage of health workers recruited/deployed into public service in 2018

Health workforce cadre	2018 (%)
Dental therapists	83
Dental nurses	77
Dental surgery technicians	74
Dental surgery assistants	80
Health record officers	50
Physiotherapists	82
Occupational therapists	82
Occupational therapist assistants	82
Speech therapists	70
Optometrists	NA
Medical laboratory scientists	62

Source: FMOH, 2018b

Note: NA = data not available.

4.5 Retention, mobility and exit

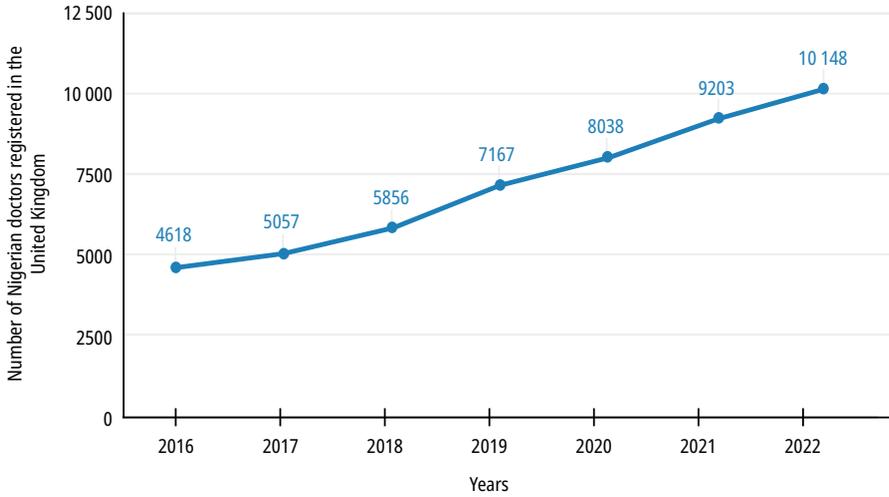
Retaining health workers is a significant challenge, without standardized mechanisms for motivating and retaining staff. This is especially evident in rural areas where incentives to attract workers are limited and most health care facilities do not have up-to-date equipment to work with. Security and

basic facilities such as secure accommodation and social amenities important for family life, including schools, are also lacking. Health workers often feel that they have no choice but to live apart from their families, who remain in urban areas, while they work in rural health facilities, or they refuse to relocate to and work in rural areas (Okereke et al., 2021). However, many trained health workers, particularly those prepared for the PHC system, remain unemployed, leading to some working as volunteers in PHC facilities (Abubakar et al., 2022).

Health workforce migration and “brain drain”

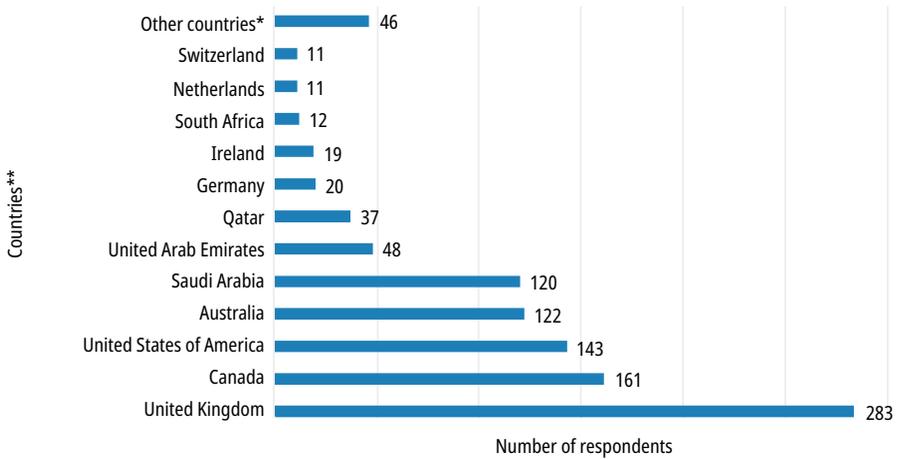
Health workforce migration within and emigration outside the country pose significant challenges. Within the country, registered or qualified health professionals move out of the health sector for more attractive remuneration packages or move from rural to urban areas, attracted by higher remuneration, better social amenities and the economic environment that the latter offer. However, health worker emigration is more common than movement within the country, as the pull factors are much more substantial. Historically, “brain drain” – the migration of skilled health workers to high-income settings – has been a significant problem (FMOH, 2020g) and accounts for 80% of the total health workforce exported from Africa (FMOH, 2018b). The aftermath of the COVID-19 pandemic coupled with health workers’ consistent dissatisfaction with poor remuneration, falling health sector standards, insecurity and declining economic viability have led to a progressive increase in health worker emigration rates. A total of 4618 doctors left Nigeria for the United Kingdom of Great Britain and Northern Ireland alone in 2016, more than doubling to 10 148 by 2022 (see Fig. 4.5.a) (Lawal et al., 2022). Within the last five years, about 5000–7000 doctors have emigrated to both the United Kingdom and the United States of America (TRT Afrika, 2023) The United Kingdom is the top migration destination for Nigerian doctors, followed by Canada, the United States, Australia and Saudi Arabia (see Fig. 4.5.b) (Onah et al., 2022). The number of nurses/midwives emigrating to the United Kingdom from Nigeria increased from 276 in 2019 to 3010 in 2022 (Lawal et al., 2022) (Fig. 4.5.c). The total number of emigrating nurses/midwives was 3561 in 2018, compared with 7000 in the first 9 months of 2021, with the United States and Canada being the top migration destinations (Almendral and Ibanga, 2023). The number of emigrating physiotherapists has also increased, with most emigrating to the United Kingdom, the United States and Canada (FMOH, 2020g).

Figure 4.5.a Number of doctors trained in Nigeria and on the United Kingdom's General Medical Council register, 2016–2022



Source: Lawal et al., 2022

Figure 4.5.b Emigration destinations for Nigerian doctors, 2023



Source: Onah et al., 2022

Note: Preferred emigration destinations of physicians unwilling to continue practice in Nigeria. *Singapore, Belgium, France, Trinidad and Tobago, Grenada, Japan, Kuwait, Seychelles, China, Sweden, and Jamaica;

**Multiple responses

Figure 4.5.c Top five countries whose nurses and midwives have joined the workforce in the United Kingdom, March 2018 to March 2022



Source: Almendral and Ibanga, 2023

4.6 In-service training and capacity improvement

A range of professional cadres, departments and agencies oversee the training and development of health professionals. Both medical doctors and dentists can choose to follow one of a variety of training pathways. These include clinical, academic, research or administrative routes, all of which require continuous professional development. Training needs emerge through the identification of deficiencies in specific areas, specializations or skills. The regulation of clinical in-service training for medical doctors and dentists in tertiary health facilities falls under the purview of the MDCN. National and West African postgraduate medical colleges identify vacancies and areas in which the densities of particular specialists are low (Oseni, 2019). Other health professional bodies adopt similar processes. The academic training pathway is typically governed by the National University Commission (NUC), host universities, departments and parastatals under the Federal Ministry of Education. These institutions assess training needs using formal and informal methods to enhance staff skills and efficiency and institutions' capacities for research and technological innovation, and to address ongoing labour market challenges. Comparable assessments are conducted for all health workforce cadres, including pharmacists, midwives and nurses, whose in-service training is jointly regulated by the PCN, NMCN and NUC (Oseni, 2019; MDCN, 2023).

Unfortunately, inadequate health workforce information systems hinder data collection on the numbers or percentages of health worker cadres receiving in-service training after graduation. The FMOH and Federal Ministry of Education jointly oversee the training and deployment of health professionals through their regulatory bodies, including the NUC, MDCN and PCN, as well as the HRH unit of the FMOH. However, the absence of clear-cut roles or defining criteria for the different types of training and the fact that different professional bodies and institutions are responsible for the different types of training make collating health workforce data difficult. Inadequate planning for fair and effective training, recruitment and retention significantly contributes to the current workforce crisis. Poor execution of existing policies, particularly in enhancing coordination between national and subnational levels, has worsened this issue (Abubakar et al., 2022).

The recent presidential health sector reform report advocates for establishing a national residency training board (NRTB) to oversee posts accredited by postgraduate medical colleges. The NRTB would manage all resident doctors' employment and basic salaries in public and private hospitals, at the national and subnational levels, with the host institution/hospital handling the remuneration for call duties (extra hours worked). Each hospital would appoint a residency training programme director or coordinator who would directly or indirectly oversee a public health facility or related organization with accredited resident training slots (Presidential Health Sector Reform Committee, 2023). The successes and challenges of one example of an in-service training programme for PHC staff are outlined in Box 4.6.1.

Box 4.6.1 Successes and challenges of in-service training for PHC staff on management of hypertension in people living with HIV/AIDS

In-service training for PHC workers on a task-strengthening strategy for integrating hypertension management into HIV care in Nigeria

Aim: On-site and virtual training of nurses and CHOs to improve management of NCDs in PLWHA.

Successes

- The use of different training modules and methods improved knowledge and uptake
- Improved skill sets led to better patient management
- Adequate donor funding encouraged participation, as there were no direct costs to the participants

Box 4.6.1 Continued**Challenges**

- Frequent interfacility staff transfers and increased health worker attrition due to emigration made consistent training in cohorts difficult
- Recruiting staff for training was difficult because of the increased workload from inadequate staffing
- There were administrative challenges in engaging staff of government agencies because of constantly conflicting programmes
- Training sessions had to be conducted repeatedly because of the constantly changing staff attendance patterns

Source: Oladele et al., 2023

Note: CHO community health officer; NCD non communicable disease; PLWHA people living with HIV/AIDS.

4.7 Traditional and religious practitioners

The National Association of Nigerian Traditional Medicine Practitioners (NANTMP) was founded in 2006, with the number of registered members growing from an initial 146 to about 2000 in 2021 (Ezigbo, 2021). After NANTMP was founded, some Nigerian states started registering traditional healers as a precursor to them being recognized by the MDCN. In December 2019, the MDCN registered 32 complementary and alternative medical practitioners (Vanguard, 2019). As part of efforts to enhance traditional medicine practice, in 2021 the FMOH announced the registration of over 2000 traditional healers in a database developed to track their activity in the field (FMOH&SW, 2023). Nigeria has no accredited training institution for alternative medicine practitioners (FMOH, 2020g). However, NANTMP claims to have trained about 800 members in the north-east region and that ongoing training programmes are running in six of Nigeria's geopolitical zones (Tyokua, 2020). There is no evidence to substantiate these claims. The Federal Executive Council recently approved the establishment of a council – the Council for Traditional, Alternative and Complementary Medicine Practice – that will regulate traditional medicine practice in Nigeria. This council, established in 2021, will oversee training programmes and accredit institutions in traditional medical practice (FMOH&SW, 2023). See Chapter 7, Section 7.8, for further details on traditional medicine practices.

4.8 Recent reforms

Nigeria's primary health workforce reforms have yet to be fully implemented. The TSTSP (described in Section 4.1) was developed to ensure the devolution of service provision to lower-level cadres trained to provide services. However, many states have yet to implement this policy. Past health sector reforms have had pockets of health workforce reforms embedded within programmes implemented to mitigate severe health workforce shortages, particularly among vulnerable populations. Notable examples include the Midwives Service Scheme (MSS) and the maternal and child health (MCH) project of the Subsidy Reinvestment and Empowerment Programme (SURE-P). The latter aimed to ensure the availability of sufficient numbers of skilled nurses and midwives to provide MCH services, particularly in rural and underserved areas of the country. However, these interventions did not survive beyond the pilot/initial phase of implementation (FMOH, 2018b) as described below. Progress with implementation of the country's primary health workforce reforms are set out in Table 4.8.a.

Table 4.8.a Policy gaps and suggested future reform proposals

Health workforce policies and strategies	Policy gaps	Future reform proposals
National Health Act 2014	<ul style="list-style-type: none"> • Low level of awareness of the NHA among health care providers and stakeholders in health • Poor accountability related to the use of funds and government oversight • Overlap of strategies with the NHP • Poor implementation of migration policy 	<ul style="list-style-type: none"> • Avoid the issuance of conflicting policies that confuse health care professionals • Include health in the concurrent list of the constitution • Improve dissemination and communication of policy and strategies between all the key stakeholders in health • Implement a national health migration policy in line with the WHO Code of Practice to guide the international recruitment of health workers
National Health Policy 2016	<ul style="list-style-type: none"> • Poor implementation of the policy due to poor oversight by the FMOH • Poor awareness and inappropriately trained staff to implement policy at subnational levels 	<ul style="list-style-type: none"> • The FMOH and National Assembly should limit the proliferation of regulatory bodies and streamline the laws/scope of the different regulatory bodies to ensure no duplication • Encourage health professional associations to adopt health facilities for voluntary services in rural areas

Table 4.8.a Continued

Health workforce policies and strategies	Policy gaps	Future reform proposals
National Strategic Health Development Plan II (2018–2022)	<ul style="list-style-type: none"> • Poor implementation of costed plan for health workforce strategies • Poor funding of the strategic plan • Poor data quality and availability 	<ul style="list-style-type: none"> • Increase funding sources for the strategic plan with a focus on the health workforce • Increase the use of evidence-based research to inform the implementation of strategies
National Health Workforce Registry 2018	<ul style="list-style-type: none"> • NHWR is still incomplete and underdeveloped because of poor data availability • Ineffective definition and distribution of roles and tasks to regulating bodies • Poor funding and lack of accountability related to the use of disbursed funds • Lack of staff with the skills to manage the registry at national and subnational levels 	<ul style="list-style-type: none"> • Finalize NHWR/conduct annual National Workforce Account • The human resources departments in the FMOH and at the subnational levels should be professionalized and managed by HRH experts who can connect • HRH policies and human resources management • Carry out research periodically on the projection of health workforce needs and trends of retention and migration • Monitor regulatory bodies such as the MDCN and oversee regular updates of health workforce profiles and production of data
National Human Resources for Health Policy 2020	<ul style="list-style-type: none"> • Not fully implemented, especially concerning the retention and mobility of staff • Poor data availability due to irregular collating and updating of health workforce data • Lack of autonomy as a stand-alone unit with trained staff • Poorly trained staff, especially in institutions at the subnational level and various government agencies 	<ul style="list-style-type: none"> • Review training capacity and absorption of health workers in Nigeria • Undertake a health labour market analysis in the health sector, including the private sector • Enhance training and recruitment of health workforce to fulfil established HRH standards and staffing norms (identified through workload indicator of staffing needs or health workforce projections)
National Human Resources for Health Strategic Plan 2021–2025	<ul style="list-style-type: none"> • Poorly trained staff, especially at the subnational level and the various agencies • Poor accountability mechanisms for managing funds 	<ul style="list-style-type: none"> • Identify and provide the additional training capacity needed • Increase funding sources for the strategic plan with a focus on the health workforce

Table 4.8.a Continued

Health workforce policies and strategies	Policy gaps	Future reform proposals
Task-shifting and Task-sharing Policy for Essential Health Care Services in Nigeria 2014, reviewed 2022	<ul style="list-style-type: none"> • Shortage and uneven distribution of skilled health workers • Intercadre rivalry • Deficient training and mentorship and poor supportive supervision of junior cadres • Poor remuneration of staff 	<ul style="list-style-type: none"> • Review training capacity and absorption of health workers, in addition to providing mentorship and supportive supervision modalities • Institutionalize incentives to retain health workers in rural areas • Invest in increased training and recruitment of community midwives from within their catchment areas in the next five years

Source: Presidential Health Sector Reform Committee, 2023

Midwives Service Scheme (2009-2015)

Objectives

The MSS was created and implemented between 2009 and 2015 to address the shortage of skilled obstetric care providers and poor access to basic emergency obstetric care, which contribute to the high maternal and infant mortality in Nigeria, particularly in rural and underserved areas. The MSS was administered by the NPHCDA and funded by the special Millennium Development Goals Debt Relief Gains Account. The scheme involved recruiting and deploying newly qualified, unemployed and retired midwives to provide basic emergency obstetric care at primary health centres linked through a cluster model in which four such facilities with the capacity to provide basic emergency obstetric care are clustered around a secondary care facility (Okeke et al., 2017). The MSS included a memorandum of understanding between the federal government and subnational governments agreeing that (i) midwives' salaries should be paid by the federal, state and local governments at a ratio of 3:2:1; (ii) local governments would provide accommodation for midwives; (iii) midwives should be employed for an initial one-year period with appointments renewed annually, subject to satisfactory performance; and (iv) at the end of the project, state governments would take over from the federal government and implement the scheme in partnership with local governments (Okeke et al., 2017).

Implementation

Despite slight improvements in maternal health metrics such as ante-natal care attendance quality and midwife deliveries, maternal and infant mortality remained high (Okeke et al., 2017). The scheme faced challenges that halted its continuation after the initial phase, including issues with midwife retention, availability, training and insufficient essential medicine supply. The MSS's design relied heavily on federal programme managers' understanding of maternal health and workforce challenges, while underestimating the decentralized health system. Its implementation was hindered by lack of management and logistical capacity to support the complex structure, inadequate local support for midwives, insufficient ongoing supervision and welfare challenges affecting midwives.

These findings highlight the necessity of considering the overall health system, local context and health workers' preferences when developing effective human resource retention strategies. An inclusive approach that engages local stakeholders in policy decision-making is essential. The MSS could be restructured to be led by state and local governments, emphasizing robust supervision, monitoring and evaluation (Ikpeazu, 2018).

Maternal and child health project of the Subsidy Reinvestment and Empowerment Programme (2012-2015)

Objectives

SURE-P was implemented between 2012 and 2015 to invest profits from fuel revenues into a social protection fund for vulnerable populations (FGN, 2013). The MCH component of the programme, comprising both supply and demand components, aimed to improve the lives of mothers and their infants. The supply component intended to widen access to high-quality maternity services and to improve MCH outcomes through the provision of resources, including by recruiting and training PHC workers (2000 midwives and 10 000 CHEWs and village health workers), developing infrastructure and increasing the availability of supplies and medicines. The demand component aimed to increase the utilization of health services during pregnancy and at birth using a conditional cash transfer programme (which involved providing a stipend of 5000 Nigerian naira (about US\$ 30)) (Ezenwaka et al., 2021).

Implementation

Similar to the MSS, the MCH project was carried out in clusters in states at PHC centres linked to secondary referral facilities, which suggests that the MCH project achieved its objectives. However, in April 2015, with the emergence of a new federal government, funding for the programme ceased and it was terminated (Onwujekwe et al., 2020a).

Chapter summary

Chapter 4 provides an overview and assessment of Nigeria's health workforce. Nigeria has the largest health workforce in Africa, but supply remains too low to meet population demand. Health workforce production is rising, but remains well below international standards. Robust health workforce policies are in place, but are diffused across a wide range of health-related legislation and planning, impeding implementation and monitoring. The current health workforce crisis is attributed in part to the insufficient implementation of existing policies and strategies, notably strengthening coordination between the national and subnational levels. Health workforce production, distribution, deployment and retention are constrained by common implementation challenges. These include the lack of a robust workforce registry or database providing disaggregated data to inform workforce planning and management; weak strategic coordination of the workforce at all levels of government resulting in persistent staff shortages, the uneven geographical spread of skilled health workers and disparities between urban and rural areas; and poor management and poor training of the existing workforce resulting in worker dissatisfaction, the underemployment of available health workers and vulnerability to rising health worker emigration. This extends beyond the public sector to the large, heterogeneous and fragmented private health providers, especially informal traditional birth attendants and patent medicine sellers, who operate in ungoverned spaces, to the detriment of their patients. A range of health workforce reforms, particularly primary care reforms, have been set out but have not yet been implemented. Addressing the implementation challenges identified will be essential for progressing with these reforms.

Medical products and health technologies

By **Chinyere Okeke, Nwadiuto Ojielo and Ifeoma Okeke**

Chapter 5 key messages

- National policies and guidelines on medical product regulation and distribution exist but are poorly implemented and audited. Nigeria's National Agency for Food and Drug Administration and Control plays a critical role in regulation, market authorization and supply. More stringent policy implementation, tighter policy evaluation structures and the stipulation of sanctions are needed to support supply-side regulation.
- Nigeria has about 150 local pharmaceutical manufacturing companies, but they meet only 30% of the country's needs. This limited national capacity to produce medical products has resulted in over-reliance on imported pharmaceuticals and medical supplies. Foreign direct investment in the pharmaceutical sector, the provision of critical manufacturing infrastructure and tax incentives for local producers could improve domestic production capacity.
- Policies and guidelines exist to strengthen supply chain management. However, the lack of a systematic, well-regulated drug distribution system results in the deterioration of drugs during storage, stock shortages and the circulation of fake products. If effectively implemented, the National Drug Distribution Guidelines could improve supply and distribution nationwide.
- Despite policy intervention efforts, overprescription of branded medicines remains prevalent. Loss of patient and prescriber confidence in generic medicines and the absence of a national prescription policy and sufficient drug use training remain obstacles.
- Poor availability of medical technologies for diagnosis and limited capacity to maintain existing health technologies affect quality of care.
- The majority of Nigerians in rural and semi-urban areas receive health care from traditional medical practitioners. Standardization and formal integration of traditional medicine into the health system is under way but incomplete.

5.1 Governance and regulation

Legislation and national policies

A range of national policies guides the regulation of medical products and technologies (FMOH, 2022a). See Table 5.1.a for a list of legislation and policies currently in place.

Table 5.1.a Legislation and national policies

Policy	Year introduced	Objective	Implementation
Zero-tax Policy on Pharmaceuticals	2024	To strengthen the health care value chain, addressing rising drug prices and the depreciation of the Nigerian naira	This is being implemented across the nation and has led to a marked reduction in the cost of imported medicines
Nigeria Standard Treatment Guidelines (third edition)	2022	To assist prescribers in deciding on appropriate treatments for specific clinical problems, aiming to beneficially influence prescribing behaviour at all levels of care	This has been disseminated but not widely enough to ensure usage by all formal health providers at all levels of care in Nigeria
National Drug Policy	2021	To guide domestic drug production and procurement	There are low prescription rates for generic medications in Nigeria, and, currently, no law regulates the prescription of drugs, although the government has recently inaugurated a steering committee for a national prescription policy
Nigerian Vaccine Policy (first edition)	2021	To encourage local production of vaccines and to ensure self-sufficiency in vaccine availability, which will further boost the existing National Immunization Policy	Funds are currently being sourced for the necessary equipment and partnership to commence vaccine production

Table 5.1.a Continued

Policy	Year introduced	Objective	Implementation
Guideline for Donated Medical Products in Nigeria	2021	To guide NAFDAC's mechanism for pharmacovigilance and safety monitoring, regulation of medical products and health technology donations	This is being implemented
National Health Supply Chain Strategic and Implementation Plan (NHSCSIP)	2021–2025	To provide direction for medicine supply chain systems to accurately quantify, procure and cost-effectively distribute high-quality medicines and other health products down to the last mile	This is being implemented by some state ministries at the subnational level, but most stakeholders frequently ignore stipulated supply chain functions and processes, leading to poor coordination, integration and harmonization of multiple supply chains and their activities
Nigeria Essential Medicines List for Children (first edition)	2020	To prevent inappropriate prescriptions for children less than 12 years, over- and underprescription, use of inadequate preparations and dosage, and the use of expensive new drugs instead of cheaper alternatives	This has been implemented and has found to be useful
Nigeria Essential Medicines List (seventh edition)	2020	To prevent inappropriate prescription, over- and underprescription and the use of expensive new drugs instead of the cheaper alternatives	This is available and comprehensive enough for use at all levels of health care in Nigeria but needs to reach all primary health care facilities in Nigeria
Nigerian National Pharmacovigilance Policy and Implementation Framework	2020	To support monitoring of adverse events and guide drug safety monitoring in Nigeria	This is being implemented across the country Sort codes need to be made available for all medicines in the country for easy reporting

Table 5.1.a Continued

Policy	Year introduced	Objective	Implementation
Bill establishing a council for traditional, alternative and complementary medicine practice	2020	To create an environment conducive for the development of traditional complementary and alternative medicines for national health system development and economic benefits	This is being implemented and it helps protect the traditional concept of ownership of traditional medicines
Five Plus Five-Year Validity (Migration to Local Production) policy	2019	To enhance local production of pharmaceuticals in Nigeria	This has not been fully implemented, as most medicines are not licensed for local production of their raw ingredients
Guidelines for Handling and Disposal of Unwholesome Medicines and NAFDAC Regulated Products (Food, Medicines, Medical Devices, Cosmetics, etc.) in Nigeria	2018	To properly manage unwholesome medicines and NAFDAC-regulated products at a facility level	Poor compliance with the national guidelines for expired medication disposal is prevalent, despite the threat of confiscation and arrest of those in possession of expired drugs by officials of the Nigeria Customs Service (NCS) and NAFDAC
National Policy for Controlled Medicines	2017	To enhance regulated accessibility to controlled medicines for medical purposes	This is being implemented across the country
Nigeria Supply Chain Policy for Pharmaceuticals and other Health Care Products	2016	To set policies and guidelines for the planning and forecasting of medical products and health technologies	This has been partially implemented, but the lack of a systematic, well-regulated supply chain system results in the deterioration of drugs during storage and stock shortages
Counterfeit and Fake Drugs and Unwholesome Processed Food (Miscellaneous Provision) Act (Amendment) Bill, 2015	2016	To enable the regulation of fake and counterfeit drug circulation in Nigeria, to reduce treatment failures	This has been only partially implemented because of logistical issues with monitoring

Table 5.1.a Continued

Policy	Year introduced	Objective	Implementation
National Quality Assurance Policy for Medicines and Other Health Products	2015	To ensure that medicines and health products are quality-assured, effective, affordable and safe for use, and to protect the supply chain from falsified or substandard medicines and other health products	This has been only partially implemented, as adequate funds are lacking for the monitoring required
National Drug Distribution Guidelines	2012	To guide drug supply and distribution nationwide	This has been partially implemented, but the lack of a systematic, well-regulated drug distribution system results in the deterioration of drugs during storage and stock shortages Despite the use of third-party logistics, long waiting times still persist
Guidelines for Donation of Medicines and Health Care Equipment in Nigeria	2007	To guide pharmacovigilance and safety monitoring, regulation of medical products and health technology donations	This is being implemented across the country
Traditional Medicine Policy	2007	To empower NAFDAC, as the regulatory authority for traditional medicines in Nigeria, to regulate and control the manufacture, importation, exportation, distribution, advertisement, sale and use of traditional medicines and products	This has been partially implemented, but some traditional medicines without NAFDAC approval are still sold in the country, due to inadequate monitoring
Guidelines on Medical Equipment Management in Nigeria	2005	To provide guidance to health facilities to support the maintenance of records of medical equipment and calibration and quality control procedures to track history and use and identify problems	This has been only partially implemented due to a lack of funds for the logistics of reaching all health facilities

Note: NAFDAC = National Agency for Food and Drug Administration and Control.

Policies are formulated and revised at intervals based on need. Nigeria has not yet signed, ratified or deposited the treaty establishing the African Medicines Agency (AMA). The approval process is under way, and stakeholder consultation is still ongoing, with delays attributed to Nigeria’s signing and ratification procedures. The AMA, when fully operational, is expected to improve medicine regulation and access by permitting more bulk imports, bringing down medicine prices and thus limiting the supply of substandard and fake medicines. It will also enable local pharmaceutical manufacturers to increase production and export more products.

Regulatory system and responsible regulatory bodies

The regulation, licensing and standardization of medical products and health technologies are implemented by various government agencies (FMOH, 2022a). Key agencies and their roles are highlighted in Table 5.1.b.

Table 5.1.b Roles of key agencies responsible for the regulation of medical products and health technologies

Agency	Key role	Source
Federal Ministry of Health (FMOH), Department of Food and Drug Services (FDS)	<ul style="list-style-type: none"> • Formulation of policies and guidelines on medical products and health technologies. 	FMOH, 2022a
National Agency for Food and Drug Administration and Control (NAFDAC)	<ul style="list-style-type: none"> • The national regulatory authority for medical products and health technologies. The NAFDAC Act Cap N.1 LFN 2004 authorizes NAFDAC to regulate the manufacture, importation, exportation, distribution, marketing and use of medical products and health technologies in Nigeria • This includes oversight for clinical trials and guidelines for regulating medical products and donated health technologies. It also inspects manufacturing facilities and distribution channels and outlets. It is responsible for advertisement control, pharmacovigilance, post-market surveillance, import and export control, and quality control laboratories for medicines, vaccines and other biologics, including traditional medicines and products 	NAFDAC, 2017a

Table 5.1.b Continued

Agency	Key role	Source
National Institute for Pharmaceutical Research and Development (NIPRD)	<ul style="list-style-type: none"> • Researches and develops medicines, vaccines, diagnostics, biological products and pharmaceutical products. Conducts quality control and quality assurance tests for medicines, food, cosmetics, herbal products and raw materials and sets the standards and specifications for the manufacture of pharmaceuticals 	NIPRD, 2020
Pharmacy Council of Nigeria (PCN)	<ul style="list-style-type: none"> • Registers and licenses pharmacists and pharmaceutical premises in Nigeria • Issues permits to pharmacy technicians, registers and licenses PPMVs, and regulates the marketing of pharmaceutical products 	PCN, 2021a
Institute of Chartered Chemists of Nigeria (ICCON)	<ul style="list-style-type: none"> • Regulates the teaching, learning and practice of chemists in Nigeria with regard to chemical products and drugs 	ICCON, 2020
Institute of Public Analysts of Nigeria (IPAN)	<ul style="list-style-type: none"> • Analyses and standardizes medical products and health technologies • Certifies product composition, safety and use 	IPAN, 2022
Nigerian Nuclear Regulatory Authority (NNRA)	<ul style="list-style-type: none"> • Approves the registration of medical diagnostic and imaging technologies, medical devices and aids 	NNRA, 2020
Nigeria Natural Medicine Development Agency (NNMDA)	<ul style="list-style-type: none"> • Responsible for research, development, documentation and promotion of Nigeria's indigenous medicine for sustainable integration into the national health care delivery system 	NNMDA, 2019

Note: PPMV = patent and proprietary medicine vendor.

Market authorization of medicines and health technologies

Market authorization for medical products and health technologies requires product registration with the National Agency for Food and Drug Administration and Control (NAFDAC) and the issuing of a NAFDAC registration number, which takes about 120 days (NAFDAC, 2017b), or 21 days for life-saving commodities (WHO, 2016). Product advertisements require advert approval from NAFDAC and vetting approval from the Advertising Practitioners Council of Nigeria. The Investigation and Enforcement Directorate of NAFDAC keeps track of compliance with regulations. The directorate manages the disposal of NAFDAC-regulated

products that are defective, unsafe, false, sub-par, expired, adulterated and/or unwholesome (NAFDAC, 2017b). Consumers can file drug-related complaints using the pharmacovigilance rapid alert system by sending a prepaid short text message with the name of the medicine and the problem or reaction to a short code (20543). They can also utilize the Mobile Authentication Service (MAS), which consists of a scratch-off code and texting capabilities to verify the authenticity of medicines prior to use (WHO, 2016).

Regulation of medical devices and aids

NAFDAC regulates health technologies including medical diagnostic and imaging technologies and medical devices and aids via the national regulatory framework for medical devices. The framework prohibits medical device production, importation, exportation, marketing or distribution without registration (NAFDAC, 2018). Registration can be approved by NAFDAC, the FMOH or the Nigerian Nuclear Regulatory Authority (NNRA) (WHO, 2016). The registration process entails a manufacturing quality assessment of the medical device, inspection of legal documents, approval of the device by the relevant regulatory body and issuance of a NAFDAC identification number (NAFDAC, 2018). The registration process takes three to six months and is valid for one to five years (WHO, 2016; NAFDAC, 2018). Medical devices require registration with NAFDAC before import (WHO, 2016). The Drug Registration and Regulatory Affairs Directorate approves and certifies medical devices and directs national legislation to regulate medical devices (WHO, 2016). The NNRA formulates policy and regulates medical equipment with sources of radiation. It monitors nuclear safety and radiological protection and can administer approval certificates for medical devices with radiation sources (Idowu and Okedere, 2020). The Standards Organisation of Nigeria verifies and certifies that imported medical devices and aids meet acceptable Nigerian industrial standards. A medical device requires Standards Organisation of Nigeria Conformity Assessment Programme certification to get the approval of the Bureau of Public Procurement, needed for inclusion in the national list of approved medical devices and manufacturers (WHO, 2016).

Regulation of wholesalers, pharmacies and vendors

The Pharmacy Council of Nigeria (PCN) registers all forms of pharmacy premises ranging from retail, wholesale and manufacturing to hospital and online pharmacies (PCN, 2021b), as well as the premises covered by the Corporate Affairs Commission (CAC) (PCN, 2004). The CAC incorporates and registers new businesses in Nigeria. PCN registration requires premises to meet PCN location and size requirements. The operation of online and mail order pharmacies is permissible only through a registered community pharmacy and in line with the regulations and guidelines of the PCN. Advertisement of pharmaceutical products is regulated by information and communications technology (ICT) laws such as the National Information Technology Development Agency Act and the Cyber Crime (Prohibition and Prevention) Act (PCN, 2021b).

Requirements for the registration of manufacturing premises are similar to those for new retail, distribution or importation premises, together with the list of products to be manufactured, company organigram and staff qualifications and duties (PCN, 2021b). The PCN ensures that coordinated wholesale centres meet personnel, storage facility and good storage practice requirements (PCN, 2021b). Only licensed pharmacists, operating from licensed premises, are authorized to trade in drugs and supply and dispense drugs to the populace (PCN, 2004). Premises are regularly inspected by PCN pharmaceutical inspectors (PCN, 2021a). However, over-the-counter medications can be sold in patent medicine stores controlled by patent and proprietary medicine vendor licences. All donated medicines and health technologies must meet the regulation requirements stipulated in the Guideline for Donated Medical Products in Nigeria (NAFDAC, 2021).

The FMOH is responsible for federal medical warehouses, federal central medical stores (CMS), and warehouse and distribution coordinating units. It supervises the activities of federal and zonal warehouses across the country to ensure the proper warehousing of medicines and health products procured for or donated to the country (FMOH, 2022a). All medical stores must have quality control laboratories and be suitably located, well constructed and well equipped, with storage facilities maintained at appropriate temperatures at every level of the medicine distribution system under the supervision of a pharmacist (FMOH, 2021e). Although a central computerized inventory control system has been established by the Department of Food and Drug Services (FDS) to effectively manage medical products and health technologies, this is difficult to fully operationalize because Nigeria has medical stores at the

national, state and local government area levels, with federal health institutions operating autonomously.

Pricing, tax and reimbursement regulations

The regulation and market authorization of medicines and health technologies depend on their clinical trial profiles. However, to improve the affordability of medical products, strategies such as the Drug Revolving Fund (DRF) are used within the public sector (FMOH, 2022a; USAID, 2022b). Procurement from local manufacturers is encouraged and price markups are controlled based on the production cost of the medical product. A 10% price markup is allowed on expensive medical products such as anticancer agents, while as much as a 20–50% markup is permitted on more affordable medical products.

Medical and pharmaceutical products, instruments and appliances used in medical, dental or veterinary sciences and health care-related services are exempt from value-added tax (VAT). Essential medical equipment and supplies are exempt from import duty and VAT for an initial six-month period. In addition, the raw materials used in manufacturing pharmaceutical products are also exempt from VAT (FIRS, 2022). Nigerian regulatory requirements do not include mandatory clawback stipulations.

Reimbursement for medicines, vaccines, biologics and medical devices does not currently abide by established processes. However, the government makes payments for equipment and services supplied directly to local distributors. Foreign suppliers receive payments through negotiations with their local partners (export.gov, 2019).

Clinical trials and quality control regulations

NAFDAC provides oversight for clinical trials in Nigeria and has also issued guidelines to supplement the NAFDAC Act. All clinical trials should be conducted in line with the approved protocol, good clinical practice and NAFDAC requirements (NAFDAC, 2017b). NAFDAC is responsible for pharmacovigilance and safety monitoring, regulation of medical products and health technology donation. According to NAFDAC's Guideline for Donated Medical Products in Nigeria, the recipient organization must demonstrate the capacity to handle the type and quantity of the donated drug product. At the

same time, the pharmacovigilance unit monitors any adverse drug reactions associated with the product's use (NAFDAC, 2021). The FMOH has produced the Guidelines on Medical Equipment Management in Nigeria (2005). Health facilities are expected to maintain records of medical equipment to track history and use. A similar record of calibration and quality control procedures must be maintained to track and identify episodes that may have led to problems (FMOH, 2005a).

5.2 Planning and forecasting

Policies and guidelines for the planning and forecasting of medical product and health technology needs in Nigeria include the National Drug Policy, the National Drug Distribution Guidelines (NDDG) and the Nigeria Supply Chain Policy for Pharmaceuticals (FMOH, 2018b). The annual procurement plans for medical products and health technologies are coordinated and prepared by the Department of Procurement of the FMOH for the ministries, departments and agencies. The procurement of medicines follows the drug supply chain as stipulated in the National Drug Policy and is based on the Essential Medicines List. The planning process for medical products is carried out using requisition lists received from all relevant programmes, departments and agencies. The FDS, through the National Product Supply Chain Programme, coordinates, manages and supervises the supply chain of pharmaceuticals and other health care products in Nigeria (FMOH, 2022a). The FDS also harmonizes the supply chains of all health care programmes in the country. Assessments of the quantities of medical products needed are based on past consumption patterns, and shortages are prevented by subjecting suppliers to a competitive bidding process through a DRF technical committee, where applicable, or a pharmacy technical committee.

Disease-specific procurement

For HIV/AIDS drugs, Nigeria uses the Pooled Procurement Mechanism established by the Global Fund and the United States President's Emergency Plan For AIDS Relief. These drugs are reserved for national programmes and are made available at no cost at designated treatment health facilities in Nigeria. HIV/AIDS and tuberculosis drugs are also available in pharmacies supplied

by independent marketers, but without government or donor involvement. For malaria medicines, many locally manufactured medicines are available, and normal planning and quantification processes for essential medicines at all health care levels are followed. However, malaria medicines from the Global Fund are also procured through public-private mix approaches from World Health Organization (WHO) prequalified pharmacies, while other malaria medicines are purchased from local pharmacies and are usually given out for free during designated programme activities.

5.3 Domestic production and procurement

Domestic production and procurement policies

The National Drug Policy 2021 guides domestic production and procurement. In 2019, NAFDAC introduced the Five Plus Five-Year Validity (Migration to Local Production) policy, to encourage the production of essential medicines locally. As of 1 May 2019, imported medical products capable of being produced locally are given a maximum of 10 years (initial registration period of five years and then renewal of registration for another five years) to transition to local production. Partnership with a Nigerian company is acceptable (Fatokun, 2020). The Migration to Local Production directive applies to manufactured pharmaceutical products, pharmaceutical ingredients (both active and non-active) and packaging materials. Failure to abide by migration guidelines results in a product's registration being cancelled, thus preventing distribution and even importation into the country (Fatokun, 2020). The Five Plus Five-Year Validity (Migration to Local Production) policy aims to decrease and discourage the import of pharmaceutical products over time and to increase the capacity to utilize local manufacturing facilities, thereby encouraging the production of essential medicines locally. However, the policy currently faces significant implementation challenges.

In 2016, the Economic Community of West African States Common External Tariff on pharmaceutical raw materials was removed. A 20% import adjustment tax was then added to four groups of imported drugs capable of being produced by local manufacturers: vitamins, antimalarials, antibiotics and alkaloid derivatives (Fatokun, 2020). In addition, Federal Executive Order No. 003 stipulated in 2017 that at least 40% of the government's procurement expenditure should be for locally manufactured goods or services. Nevertheless,

the policy acknowledged that not every product can be manufactured locally, and some imports are necessary.

The Pharmaceutical Manufacturers Group of the Manufacturers Association of Nigeria (PMG-MAN) is an umbrella organization of 150 manufacturers that advocates for national self-sufficiency in producing high-quality, safe and affordable medicines (Ezeobi, 2022). The group has called for policies that encourage private investors and sustain local manufacturers. An expedited medicines access programme, a partnership between the FMOH and local manufacturers, has been proposed.

The government came under pressure from the Pharmaceutical Society of Nigeria (PSN) to control the preponderance of fake drugs in Nigeria. A counterfeit and fake drugs decree was introduced in 1988 to make sales and distribution in open markets illegal without a registration licence (Erhun et al., 2001). A task force was set up to enforce this, and penalties meted out to offenders. The decree was amended subsequently to overcome shortcomings, including inadequate empowerment of NAFDAC to carry out its responsibilities and insufficient penalties for offenders. The bill was passed into law in November 2016 to make comprehensive provisions for the prohibition and control of counterfeit and fake medical products. These provisions are now being implemented and NAFDAC has been empowered to impose stiffer penalties on offenders.

Evidence suggests that policies facilitating the abolition of the import licence system and VAT on pharmaceutical raw materials and the decrease in tariffs on raw materials have encouraged local production (Ogbonna et al., 2015). A two-year executive order introducing zero tariffs, excise duties and VAT on imported pharmaceuticals, aimed at revitalizing Nigeria's health sector, came into effect in June 2024.

Local capacity for production

Nigeria's pharmaceutical sector has a 60% production capacity (Okereke et al., 2021). However, approximately 70% of drugs consumed in Nigeria are imported (Fatokun, 2020; Olutuase et al., 2022). About 150 local pharmaceutical manufacturing companies meet only 30% of Nigeria's needs (Ezeobi, 2022). Challenges identified by PMG-MAN include the "brain drain", the high cost of production, diesel costs and uncollectable loans (Ezeobi, 2022). These factors undermine the sector's capacity to produce and thrive. A customized package of

fiscal and non-fiscal incentives could facilitate local pharmaceutical production at a competitive price (Fatokun, 2020; PharmAccess, 2022).

What is produced and by whom?

Nigeria is the largest pharmaceutical manufacturing country in West Africa, accounting for more than 60–65% of local drug production (Obasanjo et al., 2015; Onyebuchi, 2016). In 2021, there were approximately 600 pharmaceutical manufacturers in Africa, 80% of which were concentrated in eight countries (South Africa, Egypt, Algeria, Morocco, Nigeria, Tunisia, Kenya and Ghana), with Nigeria ranking fifth based on market size (Ussai et al., 2022; Intelligence, 2023). The 150 registered local manufacturers in Nigeria compete with imported brands. Local production began in Nigeria in 1944 with the establishment of May and Baker Nigeria plc, Nigeria’s first pharmaceutical company.

Table 5.3.a Top 10 Nigerian pharmaceutical manufacturers by total revenue

Rank (from highest to lowest revenue)	Manufacturer
1	GlaxoSmithKline Nigeria
2	May and Baker Nigeria plc
3	Fidson Healthcare plc
4	Emzor Pharmaceutical Industries Ltd
5	Juhel Nigeria Ltd
6	Evans Medical plc
7	Swiss Pharma Nigeria Ltd
8	Nigerian-German Chemicals plc
9	Ranbaxy Nigeria Ltd
10	Vitabiotics Nigeria Ltd

Source: Data from UNIDO, 2011

Nigerian manufacturers currently produce drugs including antimalarials, analgesics, antiretrovirals, herbal preparations and drugs for sickle cell disease. However, the current tax environment remains a constraining influence on the pharmaceutical sector and local manufacturers.

Import requirements and procedures

Companies intending to clear imported drugs, controlled/psychotropic substances and/or drug precursors from the ports must submit an application to the Director-General of NAFDAC, signed by the Superintendent Pharmacist.

Import application requirements are as follows (NAFDAC,2024):

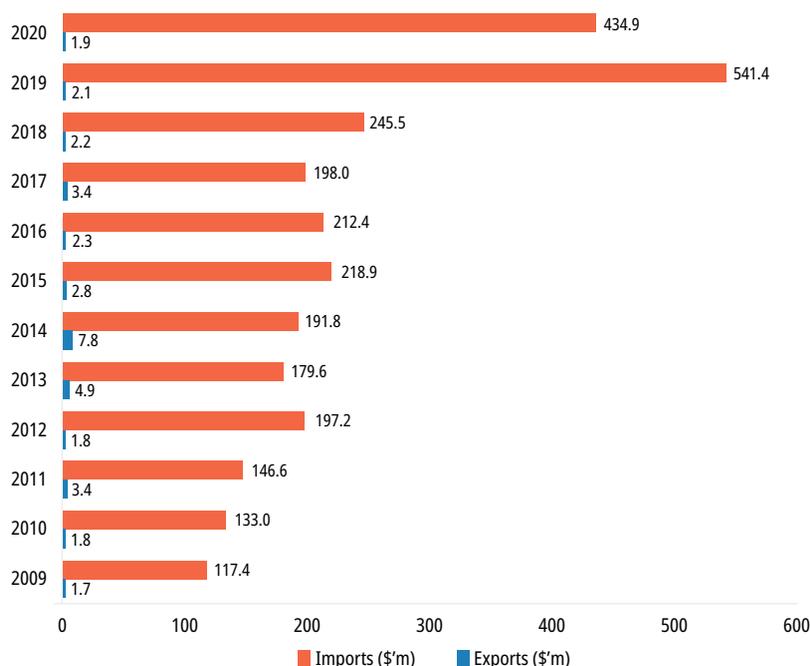
- name
- quantity of each item
- port of entry
- single goods declaration form
- commercial invoice
- pre-arrival assessment report
- manufacturer's certificate of analysis
- clean report of inspection and analysis for shipments from China, Egypt and India
- packing list
- form M (a legal document that importers must complete to import goods into Nigeria)
- bill of lading/airway bill
- photocopy of permit to import
- evidence of product registration/letter of recommendation from Registration and Regulatory Affairs (new applicants only)
- evidence of payment of stipulated fee.

Procurement systems

Different procurement systems exist for different health programmes. Some programmes are centrally procured at the national level and distributed to the CMS of the various states. This is widely used for national programmes and is beneficial in terms of the improved availability, accessibility and affordability of high-quality drugs. However, procurement and key supply chain decisions are made at the ministry level without engaging state decision-makers, resulting in an inefficient system. Open tenders and direct procurement are widely used by some programmes. Payment delays for past orders lead to stock-outs of essential drugs at public health facilities. Unfortunately, drugs expire and spoil during peripheral storage due to poor storage facilities and lack of personnel.

In addition, delays in clearance by NAFDAC and the Nigeria Customs Service (NCS) result in medicines arriving at storage facilities close to their expiry dates, thus leading to expired drugs along the downstream supply chain.

Figure 5.3.1 Exports and imports of medical and pharmaceutical products in million US dollars, 2012–2020



Source: UN Trade and Development and CEIC data taken from PharmAccess, 2022

Due to lack of data, Figure 5.3.1 shows the values, in US dollars, of medical and pharmaceutical products imported to and exported from Nigeria between 2012 and 2020, rather than the “Annual amounts spent on procurement of medical products and health technologies as a proportion of THE (total health expenditure)” which would usually form part of our template description of a country’s health system and services . Additionally, Figure 5.3.2, “Annual amounts spent on procurement of medical products and health technologies by source of funding”, which would also usually form part of our template description, has been excluded again due to a lack of data.

Chapter 3, Section 3.7.1, provides further details on external sources of funds and institutional donor engagement. Data on total product expenditure by

funding source (public, private and external sources) are currently unavailable. Chapter 6, Section 6.3, contains further information on health infrastructure procurement.

Supply-side constraints, such as limited domestic production, have led to high costs of medicines, and distribution bottlenecks have negatively affected health service delivery, resulting in poor clinical outcomes, inhibiting progress towards achieving universal health coverage.

5.4 Storage and distribution

Drugs are stored centrally and then distributed to peripheral points. Temperature monitoring equipment is available to ensure acceptable standards and temperatures are maintained in medicine storage facilities. However, this equipment is not available in all facilities and medicines are often stored in conditions that exacerbate deterioration and the degradation of their active ingredients. Unreliable electricity supply also affects storage and reduces potency, thus resulting in drug deterioration (Olotuase et al., 2022).

Drugs are distributed from central storage points via road transport. Vehicle shortages significantly affect distribution. The absence of a functioning drug management information system to effectively coordinate the public drug supply and poor staff performance regarding monitoring and evaluation also negatively affect distribution (NHW, 2022). However, to mitigate this shortcoming, last-mile distribution of health products has been privatized to third-party logistics providers and this has been very successful in terms of reducing drug stock-outs.

The lack of effective system coordination falls short of the drug supply management stipulated by the National Drug Policy. For this reason, the federal government established the Presidential Committee on Pharmaceutical Sector Reform (PCPSR) in 2003. The committee is mandated to develop strategies to facilitate an effective drug distribution system in Nigeria and has developed NDDG. The National Health Supply Chain Strategic and Implementation Plan 2021–2025 has also been developed and is being implemented in some states at the subnational level. It harmonizes existing policies to develop an evidence-based guideline intended to strengthen governance and improve quality and coordination in supply chain management (NHW, 2022).

Chapter 6, Section 6.2, provides further information on laboratory, diagnostic and medical equipment infrastructure, including distribution

and maintenance, and systems for handling donated equipment. Chapter 8, Section 8.2, also provides information on digital systems for handling supply chains.

Warehousing and distribution policies

The drug distribution guidelines developed by the PCPSR assign clear roles and responsibilities. Manufacturers and importers are responsible for ensuring drug availability; they sell to only mega drug distribution centres (MDDCs) in the country's six geopolitical zones and state drug distribution centres (SDDCs). MDDCs are driven by the private sector and sell to only wholesalers. In contrast, the SDDCs service the public sector at the state level (Ojo, 2014) and are also permitted to sell to national health programmes and wholesalers. Wholesalers are important because they can sell to public and primary health care (PHC) facilities, community pharmacies and private health institutions and directly to end users/consumers (Onyebuchi, 2016). Community pharmacies are also permitted to sell to private health facilities. All stakeholders are subject to professional disciplinary measures for non-compliance as defined by the regulatory bodies, namely the PCN and NAFDAC (Ogbonna et al., 2015).

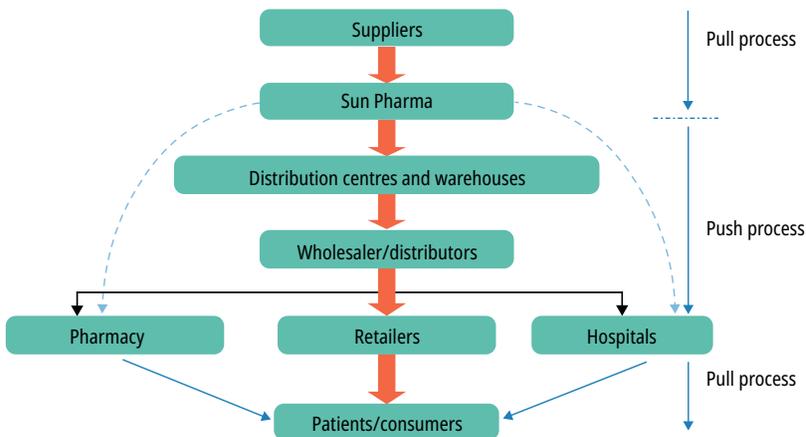
At the state level, drug supply to the public being undertaken through the CMS contributes to the out-of-stock syndrome seen in government hospitals, since these hospitals cannot purchase directly from reliable companies, nor can they undertake emergency purchases; instead, they rely solely on supplies from the CMS. The drug distribution network is chaotic because stakeholders fail to adhere to guidelines (NAFDAC, 2019b). Open market stakeholders, including community pharmacies, patent and proprietary medicine vendors (PPMVs), private and public hospitals, importers, pharmaceutical manufacturers and distributors, and wholesalers, frequently ignore stipulated responsibilities in terms of supply chain functions and processes. The coordination, integration and harmonization of multiple supply chains and their activities is also poor (NAFDAC, 2019b).

PPMVs do not have formal education, and most have little or no training, yet they make diagnoses, treat patients and prescribe and dispense medicines based on practical experience. Statutorily, they should sell only over-the-counter drugs but, in practice, they sell all types of drugs. Drugs are sold on the streets, in the market and even on buses. Evidence suggests that most drugs sold informally are adulterated, substandard or fake (Onyebuchi, 2016).

Warehousing and distribution practices

The drug distribution framework uses the pull-and-push process (see Fig. 5.4.a). There is a pull from the suppliers for raw materials for production, then the pharmacies produce medicines, which they push to the distribution centres and wholesalers who then push them to the hospitals, pharmacies and retailers. The patients then pull from these sources by buying from them as recommended by the Nigeria Supply Chain Integration Project in 2014.

Figure 5.4.a Drug distribution framework at a glance: pull-and-push process



Source: Manikandan and Sundarakani, 2019

Warehousing and distribution capacity

Good warehousing practices and distribution capacities across supply chain operations should ensure effective coordination of warehouse operations to supply health programme commodities to health facilities. This process should include:

- appropriate and timely stock replenishment and warehouse space utilization;
- ensuring temperature monitoring equipment is available and functional and temperatures comply with acceptable standards;
- monitoring the distribution activities of third-party logistics service providers;

- adequate transport;
- maintaining relevant documentation (e.g. a quarantine tracker, expiry tracker and pallet utilization tracker) to provide routine summary reports as required.

Capacity in Nigeria is underutilized and suboptimal, with health facilities often purchasing directly from the CMS, to avoid long waiting periods for supplies.

Stock-outs and shortages

The major procurement methods used – open tender and direct procurement – are prone to delayed payments for previous orders, leading to stock-outs of essential drugs at public health facilities. Drug expiry at central or peripheral storage points further contributes to stock-outs. Studies have shown that 87% of health facilities have experienced stock-outs. Of these, 69.5%, of which 85.2% were hospitals, experienced stock-outs of vital and essential medicines (Chukwu et al., 2017).

Drug demand and supply issues are mostly attributed to a lack of raw materials for manufacturing, problems with logistics and manufacturing, seasonal demand, unpredictable demand and high product-specific demand. A unified definition of drug shortage is lacking, which has been identified as a barrier to effectively addressing the issue.

WHO established global mitigation strategies to curb drug shortages in 2016. These include operational improvements to lower the risk of shortages and to activate early warnings, governmental policy changes, and training health professionals to avoid and manage shortages (WHO, 2016; Shukar et al., 2021; Olutuase et al., 2022). While these are currently being implemented in the Nigerian context, there are no structures for policy evaluation and there is a lack of strict punishment for defaulters and an absence of funds to conduct regular training.

Management of expired products

The most common expiry date management approach is the “first expired, first out” method (Johnston et al., 2014). In theory, this approach is adopted to reduce the rate of drug expiration and spoilage. However, this method is not

always appropriate because of improper storage/filing of drugs and limited training of drug-handling personnel.

NAFDAC uses incineration to dispose of expired drugs at the central level, alongside a state-run disposal system. Expired substances are separated from in-date and in-use drugs, labelled “expired” and included in inventory reports (NAFDAC, 2019a). Best practice is, however, rarely followed in drug warehouses, given that poor compliance with the national guidelines for expired medication disposal is prevalent, despite the threat of confiscation and arrest of those in possession of expired drugs by officials of the NCS and NAFDAC. Others dispose of expired drugs via rubbish bins, the general municipal waste system and burning and by pouring expired liquid medicines down sinks.

Waste management

Despite the large volume of medical waste generated, a standardized evaluation and management framework is currently lacking. Waste segregation is not commonly practised. Waste storage is also suboptimal, with many bins lacking lids. The rating of health care waste management practice was found to be level 0, unsustainable with regards to segregation, storage and packaging (Abah and Ohimain, 2011). Waste is collected at centralized open dumpsites, and either burnt or buried. Hospital waste, including human body parts, used swabs and expired drugs, is usually disposed of with the general waste, without prior treatment. Burning and burying medical waste, especially needles and other sharp items, is widespread, despite managed incineration being preferable (Aigbavboa and Mbohwa, 2020).

5.5 Stewardship and use

Rational use of health products and technologies

The FMOH coordinates the development of policies to guide and encourage the rational use of health products and technologies. The National Drug Policy, National Supply Chain Policy for Pharmaceuticals, NDDG, Nigeria Essential Medicines List (seventh edition 2020), Nigeria Essential Medicines List for Children (first edition 2020), National Vaccine Policy, National Action Plan for Antimicrobial Resistance 2017–2022, Nigerian Standard Treatment Guidelines

(third edition, 2022) and the National Drug Control Master Plan 2021–2025 are examples of such policies. The licensing and regulation of human resource development for health, together with the training and continued medical education of health personnel, are practices carried out to encourage the rational use of health products and technologies across Nigeria's health services and communities (Olutuase et al., 2022).

Government supervision and monitoring of rational use

The Nigeria Essential Medicines List (seventh edition 2020) and the National Drug Policy seek to prevent inappropriate prescription, over- and underprescription and the use of expensive new drugs instead of cheaper alternatives. The concept of an essential medicines programme was introduced with the National Drug Formulary and Essential Drugs List Act (1989) to help improve rational prescribing and reduce health care costs. In 2017, the FMOH developed the National Policy for Controlled Medicines to enhance regulated accessibility to controlled medicines for medical purposes.

NAFDAC and the PCN jointly regulate drug supply, distribution, stock and sale in Nigeria. The PCN sets practice standards, including monitoring and supervision, to encourage rational use of medicines at the national, subnational, facility and shop levels. Supervision and monitoring practices are not well defined or standardized across all levels. Medicines and therapeutic committees are formed in health facilities and monitoring is done through surveillance. The National Primary Health Care Development Agency coordinates and supervises vaccine delivery and rational use at the PHC level using reporting forms. The DHIS2 platform also supports supervision and data collection through mobile technology at the national and subnational levels.

Concerted efforts in this area have been made by government at all levels by providing training in rational drug use for health personnel involved in diagnosis and the prescription and dispensing of drugs and also for consumers. Standard treatment guidelines and the national formulary are provided for all prescribers according to the level of care (primary, secondary or tertiary care), although health worker retraining in this area is needed (Mostafa et al., 2021).

Rational use practice is regulated through supportive supervision from relevant professional bodies and senior colleagues. To improve drug use practices, health institutions rely on feedback collected through communication

between staff and patients, hospital complaint boxes and the public posting of the phone numbers of key management staff. Moreover, efforts are being made by the FMOH and PCN to strengthen prescription practices by developing a prescription policy, increasing monitoring and ensuring that only licensed pharmacies dispense prescribed drugs. Prescription errors are common, including prescribing incomplete doses, omitting details of dosage by age and duration of drug use, and prescribing medications that could adversely interact with each other. Utilization of the WHO prescription guide (De Vries et al., 1994) as a reference standard for regular clinical audits could help assess prescription quality across the country.

Monitoring adverse events

The Nigerian National Pharmacovigilance Policy and Implementation Framework was developed in 2012 and revised in 2020 to support the monitoring of adverse events and guide drug safety monitoring in Nigeria (FMOH, 2020h). Monitoring is coordinated by the National Pharmacovigilance Centre or Pharmacovigilance/Food and Drug Information Centre (PVG/FDIC) at NAFDAC, which was established in 2004 as part of NAFDAC and is affiliated with the WHO Collaborating Centre for International Drug Monitoring. PVG/FDIC has developed guidelines for monitoring the safety of health products and technologies in Nigeria. Pharmacovigilance units have been established nationwide to collect, evaluate and disseminate information on adverse drug events. Reporting can be done by any health worker or marketing authorization holder by texting details of the problem to 20543, a toll-free short code. The Med Safety app (WEB-RADR) can also be used for adverse drug reaction reporting in Nigeria, and there is a functional national database on adverse drug reactions and other medicine-related problems (NNPPIF, 2020).

Prescribing patterns: generic or branded

Policies to encourage the use of medicines in their generic rather than branded forms have been designed to minimize expenditure on medicines and improve access to affordable and essential medicines (Hassali et al., 2012; Mostafa et al., 2021). However, in practice, prescribing branded medicine is still prevalent in many public health institutions, despite the specifications of the Essential

Drug Act (Government of Nigeria, 1990), now superseded by the National Drug Policy. This practice has held back the expected gains of the essential drugs programme. Likewise, low prescription rates for generic medications contradict the Nigeria Standard Treatment Guidelines (Fadare et al., 2016). Currently, no law regulates the prescription of drugs, although the government has recently inaugurated the Steering Committee for a National Prescription Policy.

Most hospital pharmacies are stocked based on the Essential Drugs List, with dispensing based on the generic medicines available. On the other hand, profit-led community pharmacies stock mostly branded medicines, given that their clients usually present prescriptions with specific brand-name medicines. Prescribing patterns are shown in Table 5.5.1. Note that the private sector is expected to align with the national treatment guidelines.

5.6 Traditional medicines and products

Governance and regulation

The Federal Government of Nigeria, through the FMOH, established the Traditional Medicine Policy in 2007. The policy empowers NAFDAC, as the regulatory authority for traditional medicines in Nigeria, to regulate and control the manufacture, importation, exportation, distribution, advertisement, sale and use of traditional medicines and products (FMOH, 2005c).

In addition, a traditional, complementary, and alternative medicines department was created at the FMOH in 2018 to develop, implement, review and monitor compliance with policies; initiate the development of legislation relating to traditional, complementary and alternative medicines; promote the development and commercialization of indigenous traditional medicines; and integrate traditional, complementary and alternative medicines into the national health care system (FMOH, 2018d, 2022). The department collaborates with NAFDAC and the Traditional, Complementary and Alternative Medicine Council of Nigeria (TCAMCN), to strengthen cooperation between traditional medicine and other health care providers. It also provides reliable information to consumers on the proper use of available traditional medicine products (FMOH, 2022a).

The Drug Registration and Regulatory Affairs Directorate of NAFDAC coordinates the registration/listing of, labelling of, advertisement of, inspection

of manufacturing facilities for, laboratory analysis of and post-marketing and safety monitoring of traditional herbal medicines in Nigeria using the Guidelines for the Registration and Control of Herbal, Medicinal Products and Related Substances in Nigeria. Approximately 1035 traditional medicines and products have been registered by NAFDAC, according to its drug product database (FMOH, 2018d). The registration status of each product should be renewed every five years. The traditional herbal medicines listed are those whose therapeutic/medicinal claims have not been assessed through clinical trials and whose listed status should be renewed every two years (WHO African Region, 2022c).

Some state governments have enacted a traditional medicine board law allowing traditional medicine to be practised legally. State-level laws are guided by the Nigerian Traditional Medicine Practitioners' Council Act. The practitioners liaise with state boards of traditional medicine to ensure compliance with the policies and guidelines outlined in the Federal Traditional Medicine Board Act, then they establish model traditional medicine clinics, herbal farms, botanical gardens and traditional medicine manufacturing units in various regions of the country, working with organizations that have similar interests.

Research, development and manufacturing

The National Institute for Pharmaceutical Research and Development conducts research on phytomedicines. It identifies, collects, processes, conserves and standardizes medicinal plants and herbal medicines through its Department of Medicinal Plant Research and Traditional Medicine (NIPRD, 2020). The Centre for Research in Traditional, Complementary and Alternative Medicine collaborates with the Nigerian Council of Physicians of Natural Medicine and other traditional medical practitioners to coordinate research that will ensure safety and show the efficacy of potential herbal remedies. It also trains researchers from governmental and nongovernmental institutions and traditional medical practitioners (Balogun, 2022). Other privately and publicly funded research institutes, universities and pharmaceutical manufacturing firms also form partnerships and contract research to foster the development of traditional medicines. Although the scientific literature on traditional medicines in Nigeria has expanded recently, information on emerging developments and promising medicinal plants is still very limited (Balogun, 2022).

Organization and practices

Organization and provision differ across the country. Traditional health care practitioners differ by ethnic group. The Igbos call them *dibia* and the Yorubas call them *babalawos*, while the Hausas call them *boka*. Traditional medicine providers vary in nature and include traditional bonesetters, birth attendants, traditional doctors, herbalists and spiritual healers and others associated with alternative and complementary treatments.

Numerous herbal medicines are in circulation. While some have approval from the country's drug regulator – NAFDAC – others are sold illegally (Oladipupo-Okorie and Viatonu, 2014). Manufacturers are free to advertise their products; however, NAFDAC requires that advertisements be accurate, complete, clear and designed to promote credibility and trust among the general public and health care practitioners. There are two main classes of traditional medicine suppliers: local producers and distributors of imported products, most of which are from the south-west and south-east geopolitical zones.

There are several herbal medicine and homeopathy training institutions, including the Federal College of Alternative and Complementary Medicine in Lagos. Most modern traditional health practitioners combine their knowledge with mainstream skills and abilities in processing and preserving herbal medicines, as well as in the management of illnesses.

Acceptance and use

Traditional medicines and products are widely used in Nigeria and continue to gain acceptance, particularly in remote, rural and peri-urban areas of the country, where they are used by up to 80% of the population (Balogun, 2022). The ratio of traditional healers per head of population in these settings is much higher than that of medical doctors per head of population. Different reasons drive the use of herbal medicine by people of all classes. Some see it as the only affordable, easily accessible form of health care; others turn to it when conventional medicine has failed them. The use of Islamic medicine mixed with traditional Hausa medicine to treat ailments is gaining popularity, especially in the northern parts of the country (Oladipupo, 2021).

To accelerate the health agenda in Nigeria, there is a focus on institutionalizing traditional medicine alongside orthodox medicine in health care provision. Traditional medicine products have yet to be included in the

Nigeria Essential Medicines List. However, there are plans to develop a national essential list of complementary and alternative medicines for Nigeria (FMOH, 2018d). The Medical and Dental Council of Nigeria is also contemplating integrating homeopathy into the country's health care delivery.

Knowledge and intellectual property rights

The government assures traditional medicine practitioners' intellectual property (IP) rights for their products. However, traditional healers gain little from the current IP regime due to a lack of IP awareness, the lack of globally recognized IP regimes and difficulties obtaining patents in the informal sector (Ekong, 2021). The Nigeria Natural Medicine Development Agency has institutionalized and provides a protective mechanism for traditional medical knowledge and has raised awareness of and sensitized stakeholders to the issue. A draft policy and draft IP framework have been developed. This is being implemented by the Traditional, Complementary and Alternative Medicines Department of the Federal Ministry of Health and Social Welfare. The scope of protection provided extends to traditional knowledge that is generated, conserved and transmitted in a traditional and intergenerational context, as well as through biological resources. A further bill to protect the traditional concept of ownership, which is usually communal, was approved by the federal government in 2020 and allows for the establishment of a council for traditional, alternative and complementary medicine practice in Nigeria. These policies and frameworks are being implemented by the TCAMCN of the Federal Ministry of Health and Social Welfare.

5.7 Recent reforms

The Health Sector Reform Committee was established in 2022 to improve diagnosis and health care delivery by addressing infrastructure and equipment deficiencies. The committee began by commissioning a diagnostic needs assessment of the health sector. The findings are expected to improve diagnostics in Nigeria's public health facilities.

Second, the DRF system, a concept that promotes access to and ensures the availability and affordability of drugs, guarantees the sustainability of drug supplies and services. The DRF scheme is also linked with community voice and

accountability mechanisms to ensure responsiveness and promote equity and the rational use of drugs, based on the Essential Medicines List. It was adopted in 1988 based on the Bamako Initiative – a regional public health strategy aimed at increasing the availability of essential drugs and services across the continent – and reviewed in 2007. However, weak political, socioeconomic, managerial and administrative structures negatively impact the DRF system's operations in Nigeria (Ogbonna et al., 2015). Various organizations and projects have recently invested in reviving the DRF in some states. The introduction of state social health insurance schemes and the implementation of the Basic Health Care Provision Fund in the country have helped to improve the availability of essential medicines and reduce stock-outs. The FMOH has embarked on a comprehensive overhaul of the failing DRF scheme across health care facilities with a view to strengthening sustainable service delivery. It is also working on the development of a national DRF policy. Unchecked theft from the DRF account has been a major challenge for the scheme, and legislation has been recommended by various interest groups, such as the PSN and Association of Hospital and Administrative Pharmacists of Nigeria, as a solution.

MAS scratch codes for all antimalarials and antibiotics were introduced nationwide in 2012 to stop the retailing of fake medicines. However, challenges in implementation have been attributed to context issues, including mobile network issues and constant power outages. Low literacy levels and limited phone ownership have also contributed to low MAS success rates (Oyetunde et al., 2019). More information is available in Chapter 8, Section 8.2.

NAFDAC has introduced the implementation of pharmaceutical traceability using Global Standards 1 to secure the supply chain by enabling the visibility of movement of medical products. In this way, the history of a product or the intended route of a product can be tracked (NAFDAC, 2022).

Innovative approaches to strengthening local production capacity – such as the implementation of the zero-tax policy for importation of medicines and pharmaceuticals, including equipment and low-interest loans for such purposes – should be applauded and embraced by pharmaceutical companies. Building the capacity of health workers in supply chain management at the federal and state ministries of health and facility levels, as well as dissemination of these current policies and guidelines to the end users, will improve current practice in the country. There is also a need for technology adoption to enhance the production of medicines and vaccines.

Chapter summary

Chapter 5 describes Nigeria's policies and practices relevant to the range of medical products and health technologies needed for the effective provision of essential health care services. National policies and guidelines govern the production, procurement, distribution and use of medical products and health technologies in Nigeria, with NAFDAC playing a pivotal role in regulation, market authorization and supply. However, policy implementation and auditing of progress remain weak.

Annual procurement plans for medical products and health technologies are coordinated and prepared by the FMOH's Department of Procurement, for the ministries, departments and agencies. Assessing the quantities of medical products that need to be produced and imported is based on past consumption patterns. More stringent policy implementation, tighter policy evaluation structures and the stipulation of sanctions are needed to support supply-side regulation.

Existing national production capacity meets just 30% of the country's needs, making Nigeria overly reliant on imported pharmaceuticals and medical supplies. The lack of a systematic, well-regulated drug distribution system results in the deterioration of drugs during storage, stock shortages and the circulation of fake products. Prescribing branded medicines is still prevalent in many health institutions, despite the specifications of the National Drug Policy to prescribe generic versions of drugs. Limited availability of medical technologies for diagnosis and limited capacity to maintain existing health technologies affect the quality of care, as does underinvestment in health technologies.

Most Nigerians in rural and semi-urban areas receive health care from traditional medical practitioners. The standardization and formal integration of traditional medicine into the health system is under way but is still incomplete.

Health infrastructure and equipment

By Emmanuel Okechukwu, Hyacinth Ichoku, Oluwatosin Olushola and Chikezie Ifeanyi

Chapter 6 key messages

- About 80% of Nigeria's public health infrastructure is dysfunctional, which impedes the country's ability to provide health care to its citizens and leads to losses of about US\$ 1 billion annually to outbound health tourism.
- Insufficient funds, the absence of plans for equipment maintenance and inadequately trained personnel exacerbate the poor state of the health infrastructure and equipment nationwide.
- Development partners have filled gaps in the provision of laboratory, diagnostic and medical equipment. Several funded programmes – such as those for malaria, HIV/AIDS and tuberculosis – provide laboratory consumables, diagnostic kits and machines.
- Policies and guidelines governing health care infrastructure and equipment are dispersed across various health-related laws and guidance. The absence of an overarching national policy has contributed to the poor distribution and allocation of health care facilities within states and across the country.
- Private health care providers deliver an estimated 70% of the health care services in the country. However, the regulation and monitoring of the sector by the government is weak, and the enforcement of standards and compliance is limited.
- The Basic Health Care Provision Fund offers a predictable funding window for infrastructure and equipment, including emergency ambulance services, but the overall level of investment is too low to maintain functionality.
- Existing government reforms to address health infrastructure gaps – including the Central Bank of Nigeria's intervention fund, public-private partnerships and concessionary arrangements – have produced mixed results.

6.1 Infrastructure policies

Categories of health infrastructure and equipment

Health infrastructure encompasses physical structures and the technologies and medical equipment needed to deliver health care services for diagnostic, curative or rehabilitative purposes (FMOH, 2019a). These are set out in Fig. 6.1.a.

Figure 6.1.a Health infrastructure categories

Physical infrastructure	Buildings, beds, service delivery facilities, physical facilities, power generating systems (electricity or solar infrastructure), water infrastructure, road and transportation systems: vehicles, ambulance, etc.
Technology systems	Computers, robots, telephony, information and communications technology (ICT) hardware and software, drones, internet connectivity, etc.
Medical equipment	Work tools or instruments for diagnostic, curative or rehabilitative purposes: cold-chain equipment, radiotherapy machines, ventilators, surgical equipment, X-ray, MRI, ultrasound scanners, CT scanners, laboratory equipment, reagents, etc.

Source: FMOH, 2018b

Notes: CT = computed tomography; MRI = magnetic resonance imaging.

National norms and standards

Health care facilities and services are categorized hierarchically into primary, secondary and tertiary health institutions, predominantly serving rural populations, mixed populations and urban dwellers, respectively. The National Health Act (NHA) regulates health establishments and technologies, including by issuing certificates of standards to health facilities, while the Federal Ministry of Health (FMOH) has developed basic equipment requirements for a minimum care package across the three tiers of health care delivery. The National Tertiary Health Institutions Standards Committee oversees teaching hospitals and

federal medical centres, while the National Primary Health Care Development Agency (NPHCDA) conducts facility assessments of primary health care (PHC) facilities, including of their infrastructure and equipment. The states' hospital management boards and the health facility monitoring and accreditation agencies are responsible for registering and supervising the operations and standards of public and private health care establishments. However, the regulation and monitoring of private health care providers by the government is generally weak, and enforcement of standards and compliance is limited. As a result, the quality of infrastructure, personnel and services in private health facilities is difficult to assess (Obasanjo et al., 2016). Health promotion personnel in departments and units within health facilities ensure the functionality of service delivery hardware, while coordinating committees at different levels ensure the development, adaptation and review of guidelines regarding infrastructure and equipment management.

Distribution of health infrastructure and equipment

Policies and guidelines on health care infrastructure and equipment, and their construction, geographical distribution and procurement, exist in several health-related laws, administrative policies and programmatic guidelines issued by the Federal Government of Nigeria (FGN). But the absence of an overarching national policy has contributed to poor distribution and allocation of health care facilities and services. This leads to underutilization of public health facilities (usually situated in rural communities) and other facilities (usually located in urban centres) being overstretched. As a result, Nigeria's health infrastructure cannot deliver the quality and level of care that citizens need. Consequently, the country loses about US\$ 1 billion annually to outbound health tourism due to the paucity of infrastructure and expertise for managing complex surgery, cardiology, neurology and cancer (Adeoye, 2023)

The NHA provides overall strategic direction, while the National Health Policy (NHP) provides for a well-distributed network of health care infrastructure that meets quality and safety standards, including compliance by health facilities regarding biomedical equipment and its maintenance. The National Strategic Health Development Plan II (2018–2022) (NSHDP II) provides guidelines for health programmes, including the strengthening of infrastructure and equipment (see Table 6.1.a and Chapter 2, Section 2.2, for further details).

Procurement and management of health infrastructure and equipment

The FGN, through the FMOH and other ministries, departments and agencies (MDAs), formulates national health policies. The states and local government areas (LGAs) contextualize these policies to reflect their respective contexts. Existing policies addressing health infrastructure and equipment are summarized below (see also Chapter 2, Section 2.5, and Chapter 3, Section 3.1).

Acceptance, distribution and use of donated infrastructure and medical equipment

The International Cooperation Unit of the Department of Planning, Research and Statistics (DPRS) of the FMOH is responsible for coordinating international cooperation and collaboration on health with development partners, civil society organizations (CSOs) and other health actors (FMOH, 2020a). Specifically, the unit:

- registers nongovernmental organizations (NGOs) active in the health sector;
- monitors, collates and disseminates reports on the activities of health NGOs in the country.

Generally, equipment donations for donor-funded projects form an integral part of intervention projects. The extent to which the unit is involved in, or influences, the donation and deployment of project-specific equipment could not be ascertained.

Table 6.1.a Summary of infrastructure and equipment laws and policies

Policy	Date introduced	Objective	Implementation challenges	Source
National Health Act (NHA)	2014	<ul style="list-style-type: none"> • Provides a framework for the regulation, development and management of the health system, including standards for facility construction and delivering health care services across the country • Regulates and standardizes health establishments, infrastructure, technologies and equipment • Issues certificates of standards for health facility structures and premises • Established the National Tertiary Health Institutions Standards Committee to monitor and enforce quality compliance and standards of tertiary health care institutions • Created the BHC PF 	<ul style="list-style-type: none"> • Regulation and monitoring of private health care providers by government is weak, and enforcement of and compliance with standards are limited, making quality of provision in the private sector hard to assess 	FGN, 2014
National Health Policy (NHP)	1988; 2016	<ul style="list-style-type: none"> • Addresses facility management and maintenance as well as the standardization and distribution of health infrastructure • Provides for upgrading health infrastructure and security systems in institutions that handle biological agents of public health importance • Requires the upgrade of health infrastructure and technologies in at least one tertiary hospital in each geopolitical zone • Stipulates standards for injection safety and disposal, cold-chain equipment and inventory requirements for immunization service delivery 	<ul style="list-style-type: none"> • Absence of an overarching national policy has contributed to poor distribution and allocation of health care facilities and services, leading to underutilization 	FMOH, 2016d

Table 6.1.a Continued

Policy	Date introduced	Objective	Implementation challenges	Source
National Health Insurance Authority Act (NHIA Act)	2022	<ul style="list-style-type: none"> • Replaced the National Health Insurance Act of 2004 • Sets out the provision and maintenance of ICT infrastructure for the integration of national and state health insurance scheme data 		FGN, 2022c
National Health Promotion Policy (NHPP)	2006; revised in 2019	<ul style="list-style-type: none"> • Addresses the poor health infrastructure across Nigeria that limits access and jeopardizes service provision efficiency • Sets standards and guidance on health promotion at various levels to address infrastructural deficits and maintenance • Defines health promotion divisions at the FMOH and state ministry of health (SMoH) levels and health promotion units, to oversee infrastructure and equipment maintenance, at the LGA level 	<ul style="list-style-type: none"> • Poor infrastructure and limited technological capacity continue to impede health care delivery due to the absence of overarching policy, guidelines and operational procedures and the lack of effective enforcement and oversight mechanisms, in addition to other systemic challenges 	FMOH, 2006
National Strategic Health Development Plan II (2018–2022) (NSHDP II)	2010; revised in 2018	<ul style="list-style-type: none"> • Reflects the strategic health development plans (SHDPs) of the 36 states and FCT and provides a federal-level SHDP aimed at coordinating the health sector • Promotes strategies for improving the availability and functionality of health infrastructure required at all levels of care delivery • Guides the formation of norms and standards for health infrastructure • Provides for capacity strengthening and partnerships for health infrastructure maintenance and management 	<ul style="list-style-type: none"> • National health strategies are prone or susceptible to uneven implementation across the country because health is on Nigeria's Concurrent Legislative List whereby federal health laws and regulations are essentially advisory and subnational entities may or may not adhere strictly to the provisions 	FMOH, 2018b

Table 6.1.a Continued

Policy	Date introduced	Objective	Implementation challenges	Source
Public–Private Partnership (PPP) Policy established by the Infrastructure Concession Regulatory Act	2005	<ul style="list-style-type: none"> • Promotes equity, efficiency, accessibility and quality in health care through collaboration between the public and private sectors • Promotes PPP models and infrastructure concessionary arrangements • Fosters joint facility management, basket funding and has an impact on investments (FMOH, 2005a). • Sets out proposal for the Nigerian Health Infrastructure Development Bank to facilitate the acquisition and maintenance of health infrastructure and equipment 	<ul style="list-style-type: none"> • The adoption and implementation of the PPP model by many states across the country have been quite limited due in part to sociopolitical and economic considerations, which oftentimes do not sufficiently prioritize population health, health care infrastructure and equipment 	FMOH, 2005a
The Public Procurement Act and Policy	2007	<ul style="list-style-type: none"> • Guides procurement of infrastructure and equipment by the health MDAs • Provides for policies, guidelines and practices related to the acceptance, distribution and use of donated infrastructure and medical equipment 		FGN, 2007
Guidelines on Medical Equipment Management in Nigeria	2005	<ul style="list-style-type: none"> • Guides the selection, procurement, installation and maintenance of medical equipment • Provides for the calibration of diagnostic equipment • Supports the environmental and occupational safety of infrastructure/equipment and staff 	<ul style="list-style-type: none"> • An overarching plan for the provision and distribution of diagnostic and medical equipment does not exist and public and private operators implement their own respective plans due to the lack of effective guidance or oversight mechanisms 	FGN, 2005a

Notes: BHCPF = Basic Health Care Provision Fund; FCT = Federal Capital Territory; ICT = information and communications technology.

Oversight of investment decisions, regulation and enforcement

Health care services are decentralized, with government and non-state actors participating at different levels. Accordingly, investment decisions, regulation and enforcement vary. The national and state legislatures and the supervisory councillors for health at the LGA level make investment decisions, develop regulations and perform oversight functions. Moreover, the Ministry of Defence, private operators and non-profit organizations, including faith-based organizations, make substantial contributions to health care, including through the provision of infrastructure. Oversight functions on the implementation of infrastructure and equipment types and standards in health facilities are performed by the authorities responsible for their registration and accreditation.

The agencies involved and their roles are outlined below.

The **Federal Ministry of Health (FMOH)** is responsible for policy-making, regulation, strategy and oversight in the health sector. Through its parastatals (the NPHCDA, National Agency for Food and Drug Administration and Control, National Health Insurance Authority (NHIA) and the Nigeria Centre for Disease Control and Prevention), it provides policies on resource requirements (human, infrastructure, materials and equipment) for health service delivery. The Health Promotion Division of the FMOH facilitates compliance with regulations on infrastructure and equipment, for both public and private health operators.

The **National Primary Health Care Development Agency (NPHCDA)** was merged with the National Programme on Immunization in 2007, and makes decisions on the procurement of goods and services for PHC, including the set of minimum standards for PHC facilities in the following areas: health infrastructure dimensions, furniture and medical equipment (NPHCDA, 2010). It also produces guidelines for the administration, disbursement and monitoring of the Basic Health Care Provision Fund (BHCPF).

The **National Health Insurance Authority (NHIA)**, introduced in 2021, replaced the defunct National Health Insurance Scheme, launched in 2004. The NHIA regulates health maintenance organizations (FGN, 2022c), while its flagship BHCPF ensures vulnerable Nigerians have access the basic minimum package of health services provided by PHC centres and secondary facilities.

The **Basic Health Care Provision Fund (BHCPF)** was created under the NHA to promote the provision of high-quality health infrastructure for PHC in line with the NHP (see Chapter 2, Section 2.5). Specifically, 25% of BHCPF resources are reserved for procuring drugs and equipment and 15% for the provision and maintenance of facilities and equipment for and transport to PHC facilities (FMOH, 2020a). The maintenance component of the BHCPF caters for the renovation and maintenance of infrastructure and equipment (FMOH et al., 2020).

The **National Emergency Medical Treatment Committee** provides integrated emergency medical and ambulance services. It maps state-level emergency assets and infrastructure such as ambulances (public and private), as well as the provision of infrastructure, equipment for the operation of medical emergency response centres, personal protective equipment and standard operating procedures (SOPs).

The **Standards Organisation of Nigeria (SON)** was established in 1990 for the determination and approval of standards relating to products, measurements and materials, including the certification of products, the improvement of measurement accuracy and the circulation of information relating to standards. SON regulates and enforces standards in relation to technologies, equipment and non-drug consumables (SON, 2020).

The **Nigerian Nuclear Regulatory Authority (NNRA)** registers, licenses, inspects and enforces nuclear safety and radiological practices, ensuring the safety and security of radioactive sources and nuclear materials. It also regulates nuclear diagnostic and interventional services, radiotherapy services, nuclear medicine, and X-ray and radioimaging services, among other things.

The **National Biotechnology Development Agency (NBTD)**, through its medical biotechnology, genetics, genomics and bioinformatics departments, provides solutions for infectious and non-infectious diseases. It deploys recombinant technology for relevant application in health care products and transgenic animal development, and for the discovery, design and development of novel molecular diagnostic protocols and point-of-care diagnostics.

Priority disease control programmes ensure that diseases of public health importance, of which there are several, receive priority attention from

the FGN through agency-level interventions. These include the National Tuberculosis, Leprosy and Buruli Ulcer Control Programme; the National Malaria Elimination Programme; the National Agency for the Control of AIDS; and the National AIDS and Viral Hepatitis and STIs Control Programme (see also Chapter 2, Section 2.2). A number of these funded projects have a health systems strengthening component, which entails ensuring that equipment supplies (e.g. testing machines and kits) are sufficient and refurbishing or upgrading facilities.

Health professional regulatory and accreditation agencies set standards for, monitor and oversee the medical and health professions. They enforce government laws and standards of practice. These include the Medical and Dental Council of Nigeria, Pharmacy Council of Nigeria, Nursing and Midwifery Council of Nigeria, Radiographers Registration Board of Nigeria and Medical Laboratory Science Council of Nigeria.

State governments make decisions and investments to ensure that National Strategic Health Development Plan (NSHDP) objectives are achieved. Adherence to health policies and programmes set out by the FGN through the FMOH is usually managed through the National Council on Health, the Governors' Forum and the Nigeria Health Commissioners' Forum. National health laws and guidelines, among other instruments, are domesticated by the states according to their respective contexts. The state ministries of health (SMoHs) are responsible for the registration, monitoring and enforcement of standards for health facilities (public and private), including their infrastructure.

The **local government areas (LGAs)**, of which there are 774 across the 36 states and the Federal Capital Territory (FCT), are responsible for the PHC facilities through the supervisory councillors for health and health departments. In addition, community structures such as ward development committees, village development committees and health facility committees bear the responsibilities of demand creation, monitoring accessibility and ensuring a high quality of health service delivery, and community mobilization and participation.

6.2 Planning, availability and distribution of health infrastructure and equipment

The distribution of health care infrastructure and medical equipment operationally reflects a hierarchical pyramid, with PHC centres being less well equipped than tertiary hospitals, which possess advanced machines and highly skilled personnel. Equipment inadequacies and the lack of capacity for local manufacturing of consumables cause operational challenges at all levels. In line with Nigeria's decentralized model, the planning, provision and distribution of health infrastructure and equipment are determined by facility ownership (governments at the federal, state and LGA levels, and private and not-for-profit operators).

Infrastructural planning

Government agency oversight

Health infrastructure planning is decentralized to the federal, state and LGA levels. The Department of Hospital Services produces policy guidelines (assessment checklists) for the various units of tertiary health facilities. The federal health institutions are semi-autonomous, with their own boards that oversee their operations, including the provision and maintenance of infrastructure and equipment. The BHCPF requires that, to access its funding, states should identify one functional PHC centre per political ward for accreditation and issuance of a certificate of standards. The BHCPF also provides guidelines on physical infrastructure planning for the PHC centres. According to NSHDP II, infrastructure and equipment departments and units ensure the functionality of health infrastructure and equipment. Infrastructural coordinating committees contribute to the development, adaptation and review of policies and guidelines regarding infrastructure and equipment maintenance.

Long-term planning

A long-term national plan for the expansion of health care infrastructure is contained within the strategic plans of respective health MDAs. Owners of health facilities at the different levels make strategic decisions based on their respective objectives and organizational mandates. According to the Presidential

Health Sector Reform Committee, long-term options include developing public-private partnership (PPP) models within specific services (e.g. laboratories or radiology) or for selected hospitals. The Lancet Nigeria Commission (Abubakar et al., 2022) has recommended setting national standards for the digitization of health records and boosting disease testing infrastructure, including point-of-care test kits at the PHC level (Abubakar et al., 2022). Finally, the National Development Plan (FGN, 2021a) proposed mainstreaming accountability in planning and budgeting for medical procurement (FGN, 2021a). One of four agenda points of the FMOH is to bolster Nigeria's pharmaceutical and health care manufacturing capabilities to reduce the country's current reliance on imports for about 70% of its pharmaceuticals (Public Health Journal, 2024).

Laboratory, diagnostic and medical equipment

Effective laboratory, diagnostic and imaging infrastructure is critical to the provision of high-quality health care services. However, poor fund management, dilapidated infrastructure and limited technological capacity (see Table 6.2.a) currently impede health care delivery. For example, the numbers of computed tomography, radiotherapy and mammography units per million women in Nigeria are far below the World Health Organization (WHO) African Region average (Obasanjo et al., 2016).

Medical imaging services are provided by both public and private operators. Generally, radiology practice is constrained by an erratic power supply, equipment acquisition costs, maintenance downtime and spare parts availability (Idowu and Okedere, 2020). An overarching plan for the provision and distribution of diagnostic and medical equipment does not exist, and public and private operators implement their own respective plans. SON, the NNRA and the NBTDA are also involved in the regulation of infrastructure and equipment related to medical laboratory and imaging services.

Donated physical infrastructure and equipment

Nigeria has benefited substantially from development partners filling gaps in the provision of laboratory, diagnostic and medical equipment. Several funded programmes (e.g. for malaria, HIV/AIDS and tuberculosis (TB)) provide a supply of laboratory consumables, diagnostic kits and machines (e.g. GeneXpert for TB), given the health systems strengthening component of their implementation. Development partners that support commodity logistics

Table 6.2.a Census of radiology equipment in Nigeria

Equipment type	Current estimate	Year estimate was computed
X-ray	5000	2006
CT	183	2018
MRI	58	2018
Ultrasound	4500	2018
Mammography	180	2018
Fluoroscopy	28	2018
LINAC	5	2017
Cobalt-60 machine	3	2016
SPECT	3	2016

Source: Idowu and Okedere, 2020

Notes: CT = computed tomography; LINAC = linear accelerator; MRI = magnetic resonance imaging; SPECT = single-photon emission computed tomography.

and transportation include the United States President's Emergency Plan For AIDS Relief; the Global Fund to Fight AIDS, Tuberculosis and Malaria; the United States Centers for Disease Control and Prevention; the United Kingdom Foreign, Commonwealth and Development Office (formerly the Department for International Development); and Gavi. There is a Nigerian national laboratory network system for enhanced case finding for TB and viral load monitoring for HIV.

The International Cooperation Unit of the DPRS of the FMOH is responsible for coordinating international collaborations on health with development partners, CSOs and other actors (FMOH, 2020a).

Availability and distribution of health facilities

There are 40 184 operational health facilities in Nigeria, including 115 public tertiary health institutions (teaching hospitals, federal medical centres and specialist eye, ear, orthopaedic and neuropsychiatric hospitals) across Nigeria with an average bed space of 490. Table 6.2.b shows the total numbers of health facilities (hospitals and clinics) according to the level of care they provide, and whether the facilities (hospitals and clinics) are publicly or privately

owned. PHC centres account for 85.2%, while secondary and tertiary facilities account for 14.4% and 0.4%, respectively, nationwide. Primary and tertiary facilities are mainly owned by the government, while secondary facilities are predominantly privately owned, with more public health facilities located in the north (Makinde et al., 2018). Although only 35% of facilities are privately owned, private provision of health care services predominates, at about 70% of total provision (Omogbolagun, 2021; Presidential Health Sector Reform Committee, 2023).

Table 6.2.b Health facilities by level of care and ownership

Level of care	Ownership, number (or percentage) of facilities		Number of facilities	Percentage of total number of facilities at all levels
	Public	Private		
Primary care	24 319 (76.4%)	7 496 (23.6%)	31 815	85.2%
Secondary care	1 480 (18.2%)	6 648 (81.8%)	8 128	14.4%
Tertiary care	115 (47.7%)	126 (52.3%)	241	0.4%
All levels	25 914 (64.5%)	14 270 (35.5%)	40 184	100.0%

Source: FMOH, 2023a

Table 6.2.c shows the geopolitical disparities in the distribution of primary, secondary and tertiary health facilities per 100 000 population. Populations in the north-central region have access to more primary health facilities than those in other zones, while secondary health facilities are predominantly located in the southern zones.

Table 6.2.1 provides a breakdown of the number, distribution and density of available health facilities across the different levels of care and ownership of facilities within the health care system in Nigeria. The levels are grouped under the public, private and non-profit categories (FMOH, 2023a).

Table 6.2.c Distribution of primary, secondary and tertiary health facilities per 100 000 population in Nigeria

Geopolitical zone	Number of facilities per 100 000 population		
	Primary	Secondary	Tertiary
North-central	23.3	2.400	0.055
North-east	17.9	0.669	0.028
North-west	14.0	0.462	0.028
South-east	17.9	5.441	0.048
South-south	11.8	2.137	0.062
South-west	16.9	3.421	0.064
National	16.6	2.184	0.046

Source: Makinde et al., 2018

Table 6.2.1 Number and density of health facilities in public, private and non-profit sectors, latest available year (2019)

	Public		Private		Non-profit	
	Number	Per 100 000	Number	Per 100 000	Number	Per 100 000
Primary health centres/clinics	27 015	13.00	7 449	3.70	432	0.200
Secondary hospitals	1 222	0.60	3654	1.80	194	0.100
Tertiary hospitals	110	0.05	100	0.05	15	0.007
Other	NA	NA	NA	NA	NA	NA

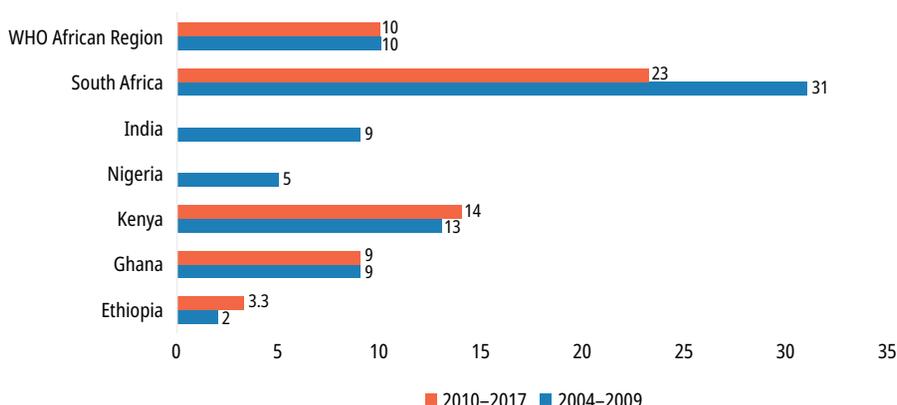
Source: CCIH, 2021

Note: NA = data not available.

Health facilities within the public sector substantially outnumber those owned by private sector operators. In 2019, there were 3.3 times as many publicly owned PHC facilities as privately owned PHC facilities, and 2.9 times as many publicly owned secondary health care facilities.

Fig. 6.2.1 shows Nigeria’s hospital bed availability per 10,000 population in comparison with other countries in the WHO African Region. Nigeria’s provision of 5 beds per 10,000 population is below the regional average of 10.3 and well below those of Kenya and South Africa (WHO African Region, 2017c).

Figure 6.2.1 Hospital beds per 10 000 population, WHO African Region and selected countries, 2004–2009 and 2010–2017



Source: WHO, 2021

The implementation guidelines of the BHCPF provide for the establishment and operations of a national emergency medical treatment (NEMT) service, to provide an integrated emergency ambulance system across Nigeria. The BHCPF allocates 5% of its resources to emergency medical services (EMS). The FMOH in 2018 produced a policy on EMS to coordinate all EMS including organizational stakeholders such as the National Emergency Management Agency. This agency hosts the national emergency call centre number – 112 – in collaboration with services including the Federal Road Safety Corps, paramedic training schools, the accident and emergency units of all hospitals, the armed forces medical services, the security services, the police, the Federal Fire Service, customs, prison services, port health services and aviation medical systems and private organizations operating ambulance services (FMOH, 2016d). The NEMT service is expected to serve as a support system for the actualization of the federal government’s strategic vision (2023–2026) for the health sector (Okunola, 2024).

National and regional data on functioning diagnostic imaging equipment per 1000 population suggest gross inadequacy (Table 6.2.2), signposting the overall diagnostic infrastructure and equipment deficit in the country.

Table 6.2.2 Items of functioning diagnostic imaging technologies per 1000 population, latest available year

Imaging technology	Nigeria	Year	African Region average
MRI units	0.0003	2018	0.66 (2013)
CT scanners	0.0009	2018	1.17 (2013)
Radiotherapy machines	0.00002	2016	0.17 (2013)
X-ray machines	0.025	2006	NA
Ultrasound machines	0.023	2018	NA

Source: Idowu and Okedere, 2020

Notes: CT = computed tomography; MRI = magnetic resonance imaging; NA = data not available.

Limited data availability prevented authors from including planned Table 6.2.3, “Number and density of transport infrastructure, latest available year”, which would usually form part of our template description of a country’s health system and services. Proxy data on transport to primary health facilities for childbirth are shown in Table 6.2.d instead. Proxy data on transport to secondary and tertiary facilities were unavailable.

Table 6.2.d Expectant mothers’ mode of transport to primary health facilities (2019)

Mode	Primary care N (% of Total 1)
Public transport/ambulance	21.2
Private transport/ambulance	20.5
Motorcycle	30.7
Bicycle	0.8
Boat	0.6
Other (walking)	21.7
Total	95.5

Source: NPC and ICF Macro, 2019

Notes: NA = data not available.

Table 6.2.d shows the various ways in which expectant mothers travel to health facilities for childbirth in Nigeria. The majority arrive by motorcycle (30.7%) or on foot (21.7%). Public and private transport, including ambulances, account for 21.2% and 20.5% of arrivals, respectively. Prior to the introduction of the National Emergency Medical Service and Ambulance System (NEMSAS), the estimated 1000 ambulances available nationwide (based predominantly in Lagos state and the FCT) and low personnel capacity were able to meet only 20% of national needs for all emergencies, including childbirth (FMOH, 2018b).

Targeted public health initiatives on EMS are described in Chapter 7, Section 7.9. For example, in 2018, the FMOH launched the National Emergency Medical Services Policy and developed guidelines for national ambulance services. NEMSAS was established in 2022 and rolled out as a national multisectoral service, complemented by the Rural Emergency Services and Maternal Transportation scheme.

Distribution of health infrastructure and medical equipment

The distribution of health care infrastructure and medical equipment reflects the level of socioeconomic development across the country. Primary, secondary and tertiary health institutions predominantly serve rural populations, mixed populations and urban dwellers, respectively. Distribution of infrastructure and equipment follows the same trend, with PHC centres being less well equipped than tertiary hospitals. Within states, similar variables define the numbers and sophistication of health facilities, their infrastructure and their equipment. Infrastructure and medical equipment distribution favours urban areas, where the ability to pay is greater. Similarly, regional disparities exist between the north and south. Overall, publicly owned health facilities (65%) outnumber privately owned health facilities (35%), although for secondary health facilities specifically, the majority belong to private operators (FMOH, 2023a), with more secondary facilities being located in the south.

6.3 Production, construction and procurement of health infrastructure and equipment

The production, construction and procurement of health care infrastructure favours urban areas. The Economic Recovery and Growth Plan planned to revitalize 10 000 PHC centres and establish one functional PHC centre in

each political ward by the end of 2020. The Presidential Health Sector Reform Committee proposed the following interventions, but these have not been fully realized:

- facility upgrades of three selected general hospitals across all states and the FCT;
- implementation of health equipment and facility upgrades through managed equipment schemes;
- equipment and infrastructure upgrades in all federal teaching hospitals;
- implementation of a programme to deliver 12 health PPPs and concessionary financing for private health facilities;
- deployment of digitized systems for the integration of the procurement of all health commodities within states and strengthening of logistics and supply chain systems, as well as the improvement of local manufacturing of health commodities (FGN, 2017).

Capital health expenditure data are set out in Table 6.3.1.

Table 6.3.1 Capital expenditure in Nigeria (2010–2020)

	2010	2015	Latest available year (2020)	WHO African Region average
Capital health expenditure, total (million current purchasing power parity)	2086	1414	744.20	134.37
Capital health expenditure, total (million US\$)	834	176	1850.78	334.64
Domestic public capital health expenditure (% of CHE)	13.60	16.44	0.15	0.25
Domestic private capital health expenditure (% of CHE)	80.14	73.64	0.002	0.02
External capital health expenditure (% of CHE)	6.25	9.91	0.01	0.11

Source: WHO, 2021

Note: CHE = current health expenditure.

The data in Table 6.3.1 demonstrate that capital health expenditure has decreased over time. Total capital health expenditure (million current purchasing

power parity) declined by 32% between 2010 and 2015, and by a further 47% between 2015 and 2020. Total capital health expenditure (million US dollars) also declined sharply, by 79%, between 2010 and 2015, but then increased significantly, nearly 10-fold, between 2015 and 2020. Conversely, domestic public capital health expenditure and external capital health expenditure as a percentage of current health expenditure (CHE) increased over the period 2010–2015 and then declined sharply between 2015 and 2020. Private domestic capital expenditure as a percentage of CHE decreased slightly from 2010 to 2015 and then dropped sharply from 2015 to 2020 (FMOH, 2019a). This fluctuation in government health expenditure is the result of macroeconomic volatility and sundry shocks and interruptions, including recessions and a global pandemic (Lawal et al., 2023). The direct impact has been a reduced budgetary allocation to the health sector, including for infrastructure and equipment.

Donated health infrastructure and equipment

Specific data on the sources and value of donated health infrastructure and equipment are not accessible. However, over the period 2010–2017, although foreign-donated resources to the health sector increased overall, there was a steady decline in the percentage of total foreign transfers (Alonge, 2020).

Table 6.3.a Foreign donations in support of the Nigerian health sector, 2010–2017

Year	Amount (US\$)	Percentage (%) of total foreign transfers
2010	7 785 491	77.0
2011	4 628 523	23.3
2012	3 048 483	19.5
2013	8 116 466	28.3
2014	24 432 623	34.9
2015	16 322 655	10.3
2016	39 439 790	8.4
2017	32 011 695	3.4

Source: Alonge, 2020

6.4 Maintenance and functionality of health infrastructure and equipment

Asset management practices

The FMOH in 2017 published the *Essential Equipment List for Tertiary Health Care Facilities in Nigeria* (FMOH, 2017a), which identified the following prerequisites for the use and maintenance of equipment:

- access to utilities needed to use equipment, including power supply, adequate quantities and quality of water, and effective waste disposal facilities;
- availability of skilled biomedical engineers with technical capabilities to check, repair and service equipment;
- training of staff (e.g. on equipment guidelines and SOPs);
- availability of consumables, accessories and spare parts.

However, public health facilities in major cities suffer from insufficient funds for maintenance works, absence of planned maintenance programmes and inadequately trained personnel (Ebekozi et al., 2022). The inadequate maintenance of public hospital buildings has been attributed to six causes: statutory requirements, design stage, construction stage, budget for maintenance tasks, managing maintenance unit activities and user perception of maintenance management (Anaemene, 2016). Most public sector organizations do not have sufficient technical capacity to manage complex infrastructural projects (Bobou, 2017).

Maintenance of existing health infrastructure and equipment

The FMOH in 2005 produced guidelines on medical equipment management together with frameworks for the acquisition of equipment so that its procurement complies with the international standard rules and regulations on procurement (FMOH, 2005a). The Medical Support Unit conducts an annual assessment of the objectives, scope, performance and effectiveness of the medical equipment management plan that includes preventive maintenance, disposal of obsolete equipment and the production and supply of medical

oxygen. In addition, the National Center for Equipment Maintenance and Development at the University of Nigeria hosts training courses on equipment maintenance, installation and repairs (UNN, 2020). The departments of hospital services at the FMOH and SMOHs as well as the health facility monitoring and accreditation agencies of states are responsible for registering facilities and supervising operations and standards in private health care establishments, while the respective national agencies are responsible for accrediting degrees and training institutions, as well as overseeing the conduct of medical and health professionals.

Maintenance of staffing capacity

About 80% of public health facilities are reportedly in varying states of dysfunctionality, ranging from structural dilapidation to lack of water and electricity. Secondary- and tertiary-level facilities have obsolete and non-functional equipment due to lack of maintenance (FMOH, 2023c). According to the NSHDP, health promotion departments and units within health facilities should ensure functionality of service delivery hardware, while coordinating committees at different levels ensure the development, adaptation and review of guidelines regarding infrastructure and equipment management. Some teaching hospitals have a biomedical engineering department that is responsible for medical equipment management, including calibration, safety and performance testing, maintenance and repairs and training of users, as well as for the safe disposal of obsolete medical equipment and ensuring an adequate supply of medical gas. The paucity of technical personnel is further exacerbated by the emigration of trained personnel to other countries.

6.5 Recent reforms

Several challenges constrain health care sector reforms: weak political will, absence of community involvement, lack of transparency in implementation and poor accountability (Sambo, 2020). As indicated in Section 6.1, a number of factors constrain the effective implementation of initiatives on health infrastructure and equipment across Nigeria. These include the lack of an overarching national policy on the distribution and allocation of health care facilities, limited equipment deployment, poor enforcement mechanisms and the fact that socioeconomic and political considerations of states sometimes fail

to align with priorities and targets set at the national level. However, a number of reforms have been initiated by the FGN in recent years (see Table 6.5.a). These reforms endeavour to promote and institutionalize PPPs and concessionary arrangements for the acquisition and maintenance of health infrastructure and equipment in order to address health infrastructure gaps. Some examples of such reforms are outlined below.

- **The Nigeria Sovereign Investment Authority (NSIA)**, in partnership with the FMOH, signed agreements in 2016 on modernizing and expanding health care services through private sector participation (Oxford Business Group, 2016). The initiative sought to develop the capacity of specialist hospitals and diagnostic centres to provide advanced medical care services by channelling public funds into health care institutions, as well as to boost technical cooperation between private hospitals and federal health institutions. The initial promise to refurbish 14 teaching hospitals by VAMED, a hospital support company, has not materialized (Muanya, 2015), but other initiatives are currently being implemented (see Table 6.5.a).
- **The Bureau of Public Enterprises (BPE)** supports the development of the health sector by both government and private sector investors through the provision of expertise and technical finance resourcing services (BPE, 2022).
- **The Central Bank of Nigeria** – to mitigate the impact of COVID-19 on the health sector – created a special-purpose vehicle to facilitate long-term, low-interest financing for health care infrastructure development in the country.

Prior to the 2023 general elections, the Health Sector Reform Coalition of Nigeria produced a charter of demands for the political parties and their candidates, stipulating that they must prioritize health care (Adejoro, 2023), while other CSOs currently advocate for full implementation of the NHA, including the enforcement of a certificate of standards. In December 2023, the FGN unveiled Nigeria's Health Sector Renewal Investment Initiative and signed the Health Sector Renewal Compact with state governments and development partners on achieving universal health coverage (2023b). Finally, one of the four main priorities of the current leadership of the Federal Ministry of Health and Social Welfare is to prioritize medical industrialization, strengthen the sector's value chain and promote the local production of vaccines and pharmaceuticals.

Table 6.5.a Key health infrastructure and equipment financing reform initiatives

Reform initiative	Key interventions	Implementation and evaluation	Source
Petroleum Trust Fund (PTF), 1994	Provided substantial financial resources to the pharmaceutical sector to upgrade facilities and improve their operation, including through enabling the local manufacture of drugs	The initial gains and impact were not sustained after the change of government in 1999	FGN, 2017
VAMED (2002)	Refurbishment of 14 teaching hospitals with the installation of diagnostic equipment	The programme had limited impact and was short lived	Muanya, 2015
NSIA (2022)	Supports domestic investments in health infrastructure development	Successfully established three pilot centres in Umuahia, Kano and Lagos, and is in the process of establishing 23 medical diagnostic centres across six geopolitical zones	NSIA, 2022
BHCPF (2014)	Deploys 15% of its resources for health infrastructure and equipment and 5% for NEMT	Relevant MDAs are leveraging the BHCPF to strengthen targeted functions; for example, the NCDC uses it to support state infectious disease treatment centres, the National Reference Laboratory and state public health laboratories, and a digital surveillance and response system	NCDC, 2022a
National Policy on PPPs for Health (2005)	Operationalizes a framework for private sector participation in health infrastructure financing	Its initial promise of the refurbishment of 14 teaching hospitals by VAMED did not materialize The planned revitalization set out in the ERGP of 10 000 PHC facilities, among other things, by 2020 was also not actualized, while targets set by the Presidential Health Sector Reform Committee were also not fully realized	FGN, 2017
Central Bank of Nigeria's Health Care Sector Intervention Facility (2010)	Provides a low-interest funding window for equipment acquisition and facility upgrades	93 billion Nigerian naira (US\$ 66 million) was disbursed out of the 100 billion Nigerian naira (US\$ 71 million) intervention portfolio	FGN, 2017

Table 6.5.a Continued

Reform initiative	Key interventions	Implementation and evaluation	Source
BPE and Infrastructure Concession and Regulatory Commission (ICRC) (2022)	The BPE promotes investments by government and private sector investors through expertise and technical financing, while ICRC facilitates PPPs through service concessions and infrastructure supply and/or local equipment manufacture	The BPE is charged with implementing the policy on privatization and commercialization; its activities in the health sector are marginal The ICRC has various projects under development or at procurement stages across the country	ICRC, 2022
NHIA (2022)	Funds the provision of ICT infrastructure for the HMIS	The rolling out of funds to cover all groups eligible according to the NHIA Act has been slow	FGN, 2022c

Notes: ERGP = Economic Recovery and Growth Plan; HMIS = health management information system; ICT = information and communications technology; NCDC = Nigeria Centre for Disease Control and Prevention.

Collaboration with development partners and the private sector

In addition, development partners and multilateral agencies are helping Nigeria to close the health infrastructure gap. For example, the International Finance Corporation, World Bank and African Development Bank are engaged in providing investments to develop the private health sector in the country through infrastructure provision and equipment acquisition (NSIA, 2016). Similarly, donor-funded disease control programmes support the provision and maintenance of infrastructure and equipment supplies through their health systems strengthening components (see section “Infrastructural planning” in Section 6.2). Over 95% of ready-to-use therapeutic food (specially designed dietary supplements) procured by the United Nations Children’s Fund was from local factories (UNICEF, 2023), complementing its investments in water, hygiene and sanitation and oxygen production. Moreover, the collaboration of Dutch turnkey health infrastructure advisory, engineering, procurement and construction firms with the FMOH, the Infrastructure Concession Regulatory Committee and the NSIA on pipeline PPP projects led to the African Export–Import Bank investing US\$ 1 billion in Nigerian health care, including funding the US\$ 300 million African Medical Centre of Excellence based in Abuja

(PharmAccess, 2022). Meanwhile, PharmaAccess's Medical Credit Fund, which mitigates risks for African banks lending to health sector small and medium-sized enterprises, facilitated integrated loan products, such as the former Diamond Bank's Mediloan QualityCare programme, in Nigeria. Thus far, the contributions of these initiatives to improving the public health infrastructure and equipment subsectors appear to be of limited scale and impact, limiting progress towards meeting population needs.

Chapter summary

Chapter 6 describes the relevant policies and practices governing the development and maintenance of Nigeria's health infrastructure and equipment. Health infrastructure encompasses physical structures and the technologies and medical equipment needed to deliver health care services. Nigeria's health system is strained by a huge infrastructure deficit, with about 80% of its public health infrastructure being in varying states of dysfunctionality. The system is unable to cater to the health needs of Nigerian citizens, fuelling annual losses of about US\$ 1 billion to outbound health tourism for conditions requiring specialist care. Insufficient funds for equipment maintenance, the absence of planned maintenance programmes and inadequately trained personnel exacerbate the poor state of the health infrastructure and equipment nationwide. Policies and guidelines governing health care infrastructure and equipment are included in several health-related policies and guidelines, but the absence of an overarching policy has contributed to the maldistribution and poor functionality of health care facilities within states and across the country.

Health infrastructure planning is decentralized to the federal, state and LGA levels. Regional disparities exist between north and south and between different levels of care, with primary facilities being less well equipped than tertiary hospitals and infrastructure distribution favouring urban areas. While the BHCPF offers a predictable funding window for infrastructure and equipment, including emergency ambulance services, the overall level of investment is too low to maintain functionality.

Existing government reforms to address health infrastructure gaps (e.g. the Central Bank of Nigeria's intervention fund, PPP models and concessionary arrangements) have produced mixed results. Further plans exist to establish a Nigerian health infrastructure development bank, to facilitate the acquisition of health infrastructure and equipment.

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Chapter 7 key messages

- Essential health service coverage is very limited, contributing to Nigeria's poor performance against health indicators. Primary health care (PHC) is the weakest level of health care delivery, although facilities with the capacity to deliver the basic package of essential health services are lacking at the primary, secondary and tertiary levels.
- The regional distribution of tertiary health care facilities is uneven, with a greater concentration in major urban centres and more developed regions than in rural and less developed areas.
- Emphasis remains on curative care, and challenges persist in prioritizing and funding public health interventions. Limited funding, inadequate infrastructure and health care workforce shortages constrain the effectiveness and reach of existing screening programmes.
- Strong community-level structures exist, but have not translated into the scaled-up delivery of essential health services at the primary health level.
- Specialist and emergency services are insufficient. Specialist services are confined primarily to urban areas and are often dictated by funding sources. Emergency medical care exists, but many communities lack ambulance services and prehospital care, and hospital units are ill-equipped to resuscitate critically ill patients.
- Referral systems are suboptimal, and many patients bypass lower levels of care to access higher levels.
- The coexistence of traditional and contemporary medicine poses possible risks, emphasizing the necessity of regulating and incorporating traditional medicine practices into the health care system.
- Service delivery reforms will improve basic package provision, but implementation challenges remain. Recent reforms to allocate at least 1% of the Consolidated Revenue Fund to the Basic Health Care Provision Fund will improve service delivery, providing for one functional PHC centre per ward and one general hospital per local government area. However, funding limitations, infrastructure constraints, cultural barriers and logistical difficulties continue to constrain implementation.

7.1 Organization and governance of service delivery

Health system governance is devolved to three levels of care (see Chapter 2 for an overview of the organizational structure of the health system). This is mirrored at the operational level, with primary health care (PHC) operating at the local government level, secondary health care (SHC) at the state level and tertiary health care at the federal level. PHC is the cornerstone of health policy and provides the first point of contact with the health system for most Nigerians.

While the federal government provides national laws and policies, states also regulate and provide health care services. Service delivery is mainly through public and private for-profit facilities. In addition, faith-based and voluntary organizations also provide services at different levels. Table 6.2.1 in Chapter 6 outlines the distribution of the various types of health facilities. The tertiary and primary levels have a preponderance of public facilities, while private facilities dominate SHC.

Structures and functions of primary health care at the local government area level

- **Local government areas** (LGAs) are geographical areas with devolved administrative responsibilities defined by the constitution. There are 774 LGAs and 36 states and the Federal Capital Territory in Nigeria. The populations of the LGAs vary: Bakassi LGA in Cross River state has the smallest population, at 48 200, while Alimosho LGA in Lagos state has the largest, at 1 953 500 (NPC and NBS, 2022). Many communities, in both urban and rural areas, have their own administration systems. The LGA is the level of government closest to the community, and is best situated to implement socioeconomic development activities and enable decision-making.
- **Ward health systems** are the smallest administrative unit in which health services are provided by trained personnel. They often revolve around a health facility or a group of health facilities. There are 9565 political wards in Nigeria, which are currently the focus of PHC development. Each ward has a minimum of one health centre.

- Local government health authorities (LGHAs)** oversee a self-contained segment of the national health system, comprising the population served and the institutions and personnel providing health care, including referral systems.

7.1.1 Service delivery policies and frameworks

Overarching national and subnational health system policies and legal frameworks (e.g. the National Health Act (NHA), National Health Policy, National Strategic Health Development Plan, National Health Insurance Authority Act and state strategic health development plans) are already outlined and discussed in Chapter 2, Section 2.2. Core system- and programme-specific policies are outlined in Table 2.2.1 in Chapter 2.

Additional specific disease and service delivery policies and frameworks are outlined here, in Table 7.1.a.

Table 7.1.a Service delivery policies and frameworks

Policy	Date introduced	Objective
One Health Strategic Plan (FGN, 2019)	2019–2023	To address human–animal ecosystem public health challenges
National Policy and Strategic Plan of Action on the Prevention and Control of Noncommunicable Diseases (FMOH, 2013a)	2013	To develop and ensure the implementation of policies and programmes that will engender and guarantee a healthy lifestyle and good health for all Nigerians
National Strategic Plan for Tuberculosis Control (FMOH, 2021g)	2021–2025	To address the future challenges and priorities in prevention, care and treatment in relation to TB and TB–HIV
National Biosecurity Policy and Action Plan (FGN, 2022b)	2022–2026	To provide a framework for the design and implementation of programmes, to facilitate effective communication, collaboration and coordination of activities in a multisectoral biosecurity environment
National Mental Health Act (FGN, 2021b)	2021	To guide a national response to the delivery of mental health services
National Policy and Strategic Plan for Ear and Hearing Care in Nigeria (FMOH, 2019b)	2019–2023	To present evidence-based interventions to prevent, identify and treat ear diseases and hearing loss through the health system

Table 7.1.a Continued

Policy	Date introduced	Objective
National Policy on Emergency Medical Services and Operational Guidelines for the National Ambulance Scheme (FMOH, 2016d)	2018	To get people safely to the hospital from the site of acute injury or illness
National Oral Health Policy (FMOH, 2012b)	2020	To reduce the rate of oral disease among Nigerians
National Policy and Strategic Plan for Hospital and Palliative Care 2021 (FMOH, 2021f)	2022	To ensure the provision of good-quality and equitable hospice and palliative service

Source: Authors' compilation

Note: TB = tuberculosis.

The minimum standards for PHC referenced in Chapter 2 are described in more detail below in relation to service delivery.

Minimum standards for primary health care

These standards uniformly define the various levels of fixed health facilities and the minimum standards for PHC structures (systems, staffing, equipment and service delivery) at the local government level, to improve access to and the quality of services. They also provide a vital tool for guiding adequate supervision, monitoring and evaluation, and for informing effective planning, development and delivery of PHC services. Minimum standards are defined in the following areas:

- **health infrastructure:** the types/levels of PHC facilities, including recommended infrastructure dimensions, furniture and equipment;
- **human resources for health:** minimum recommended staff number and cadre for each type of health facility;
- **service provision:** recommended minimum PHC services for each facility type, including the minimum requirements for medical equipment and essential drugs (from the Essential Medicines List) required to achieve these services (NPHCDA, 2010).

The regulation of financing practices for both public and private health providers in Nigeria is guided by the National Health Financing Policy and Strategy, which focuses on revenue generation, pooling, allocation and purchasing, to facilitate universal health coverage (UHC). In addition, the NHA 2014 sets a framework for standards and the regulation of health services, encompassing both public and private providers, with an emphasis on cooperation, responsibility and the rights of citizens to access health care services. The actors responsible regulating health service providers are summarised in Table 7.1.1.

Essential service packages

The essential service packages for the primary and secondary levels of care are summarized in Table 7.1.b. The National Primary Health Care Development Agency (NPHCDA) established a ward-level health care minimum package for PHC, while the National Health Insurance Authority (NHIA) promotes, integrates and regulates health insurance schemes, and enforces the basic minimum package of health services (BMPHS) across all health insurance schemes nationwide.

Table 7.1.1 Overview of actors responsible for the regulation of providers

	Legislation	Planning	Licensing/accreditation	Pricing/tariff setting	Quality assurance	Purchasing/financing
Public providers	<ul style="list-style-type: none"> • SMOH 	<ul style="list-style-type: none"> • Department of Planning and Administration 	<ul style="list-style-type: none"> • Medical and Dental Council of Nigeria • Nursing and Midwifery Council of Nigeria • Medical Laboratory Science Council of Nigeria • Board of Nursing 	<ul style="list-style-type: none"> • Competition and Consumer Protection Tribunal 	<ul style="list-style-type: none"> • National Health Research Ethics Committee • Pharmacy Council of Nigeria • NAFDAC 	NA
Public health services	<ul style="list-style-type: none"> • SMOH 	<ul style="list-style-type: none"> • Department of Planning and Administration 	<ul style="list-style-type: none"> • Medical and Dental Council of Nigeria 	NA	<ul style="list-style-type: none"> • National Health Research Ethics Committee 	NA
Primary care (including community-based providers)	<ul style="list-style-type: none"> • SMOH • Local government health authority • Community Health Practitioners Registration Board of Nigeria 	<ul style="list-style-type: none"> • Department of Planning Research and Statistics 	<ul style="list-style-type: none"> • SMOH • Community Health Practitioners Registration Board of Nigeria 	NA	<ul style="list-style-type: none"> • State health research ethics committees 	NA
Secondary care	<ul style="list-style-type: none"> • SMOH 	<ul style="list-style-type: none"> • Department of Planning Research and Statistics 	<ul style="list-style-type: none"> • Medical and Dental Council of Nigeria • State health board 	NA	<ul style="list-style-type: none"> • State health research ethics committees 	NA

Table 7.1.1 Continued

	Legislation	Planning	Licensing/accreditation	Pricing/tariff setting	Quality assurance	Purchasing/financing
Tertiary care	<ul style="list-style-type: none"> • FMOH • Pharmacy Council of Nigeria • Medical Laboratory Science Council of Nigeria 	<ul style="list-style-type: none"> • Department of Planning and Administration 	<ul style="list-style-type: none"> • Medical and Dental Council of Nigeria • Nursing and Midwifery Council of Nigeria • Medical Laboratory Science Council of Nigeria • Pharmacy Council of Nigeria • Medical Rehabilitation Therapists (Registration) Board of Nigeria 	NA	<ul style="list-style-type: none"> • Issuance of annual practising licence • Continuing professional development • National Health Research Ethics Committee 	Department of Accounts
Traditional medicine providers	<ul style="list-style-type: none"> • SMoH (state and local government boards) 	<ul style="list-style-type: none"> • FMOH • Traditional, Complementary and Alternative Medicine Council of Nigeria 	<ul style="list-style-type: none"> • Federal Ministry of Innovation, Science and Technology 	Does not exist	<ul style="list-style-type: none"> • NAFDAC (for traditional medicines) • Traditional medicine provider boards and councils 	NA
Private providers	<ul style="list-style-type: none"> • SMoH 	<ul style="list-style-type: none"> • Does not exist 	<ul style="list-style-type: none"> • SMoH (renewable yearly) • Pharmacy Council of Nigeria 	Does not exist	<ul style="list-style-type: none"> • Corporate Affairs Commission • SMoH (Department of Health Services) 	NA
Diagnostic and imaging centres	<ul style="list-style-type: none"> • Corporate Affairs Commission 	<ul style="list-style-type: none"> • Does not exist independently 	<ul style="list-style-type: none"> • Medical Laboratory Science Council of Nigeria • Nigeria Nuclear Regulatory Authority 	Does not exist	NA	NA

Source: Authors' compilation

Notes: FMOH = Federal Ministry of Health; NA = data not available; NAFDAC = National Agency for Food and Drug Administration and Control; SMoH = state ministry of health.

Table 7.1.b Essential service packages for the primary and secondary levels of health care

Primary level	Secondary level
<ul style="list-style-type: none"> • General consultation with prescribed drugs from accredited PHC facilities • Consultation with a health care professional in authorized PHC facilities, together with the provision of necessary medications • Health education and disease prevention • Surgery • Primary eye care • Paediatrics • Internal medicine (adult) • HIV/AIDS and other sexually transmitted diseases • Mental health management • Maternal, neonatal and child health • First aid and emergency services • Basic laboratory investigation 	<ul style="list-style-type: none"> • Consultation with a health care professional in authorized SHC facilities, together with the provision of necessary medications • Emergencies occurring outside the usual residence or accredited health care provider • Hospital admission • Treatment and procedures included in the BMPHS that cannot be handled at the primary level • Surgery • Paediatrics • Internal medicine (adult) • HIV/AIDS (opportunistic infections as defined in the HIV treatment protocol) • Obstetrics and gynaecology • Laboratory investigations • Physiotherapy

Source: Authors' compilation

7.1.2 Health facility management

Primary health care

Local government councils oversee the administration of PHC services through health care centres and health posts (FGN, 1999). The LGA councillor is accountable to the LGA chairperson, with duties that include supervision of service delivery in the LGA. The National Health Policy is based on the PHC system, with linkages to other levels of care through a two-way referral system (FMOH, 2016c). Health facility committees facilitate community representation and enhance accountability, offering a means to address coverage, access and utilization issues.

Secondary health care

SHC is managed and funded by state governments. It includes general hospitals and cottage hospitals. Patients requiring specialist care are usually referred from PHC to SHC.

Tertiary health care

The federal government manages tertiary health care. This is a specialized health care level to which patients are referred from PHC or SHC facilities, although referral routes are frequently bypassed. Tertiary health care includes federal teaching hospitals, federal medical centres (FMCs) and specialty hospitals. The federal government funds tertiary health care. The government has adopted various public-private collaborative strategies to increase health care efficiency. These include public-private partnerships whereby the government builds the medical facilities while the private operator manages them contractually (see section “Partnerships for health” in Chapter 2, Section 2.3). Other strategies have involved the government and a private operator co-investing in setting up and managing a facility, or the government and a private operator co-investing in setting up a medical facility with an independent operator managing the facility. See Chapter 3, Section 3.7, for further details.

7.1.3 Quality assurance, supervision and support processes

The quality of health care services provided by the different levels of care varies. Operationally, the quality of services is ensured through the development of facility accreditation, standard operating procedures, training, provision of work aids, reminders and work supervision provided by the Department of Planning, Research and Statistics and the Department of Hospital Services. These measures are also expected to be replicated at the state level. For example, the Health Facilities Monitoring and Accreditation Agency in Lagos state has the responsibility of monitoring both private and public health facilities to ensure the delivery of high-quality services (HEFAMAA, 2023).

Quality assurance mechanisms

Following accreditation, various bodies and mechanisms are employed to ensure and sustain a high quality of service delivery, primarily through regular supervision, monitoring and evaluation.

The NHIA established quality assurance protocols that include accreditation of health care providers, periodic performance evaluations and adherence to clinical guidelines. These measures have resulted in better compliance with treatment protocols and improved health outcomes for insured patients.

This section describes key regulatory bodies and quality improvement activities.

Key regulatory bodies and their functions

The key regulatory bodies in Nigeria and their functions are shown in Table 7.1.c. This table categorizes the regulatory bodies and programmes into national regulatory bodies, professional regulatory councils, and other regulatory councils and bodies. It also includes regulatory instruments and acts, and international guidelines, and provides a clear overview of their functions and relationships. These bodies collectively ensure the regulation, quality and delivery of health care services; the protection of patient rights; and the maintenance of professional standards in Nigeria.

Each regulatory body has distinct roles that often overlap with others to ensure comprehensive health care regulation. The Service Compact with All Nigerians (SERVICOM) focuses on service quality, the Federal Competition and Consumer Protection Commission on consumer protection, the National Agency for Food and Drug Administration and Control (NAFDAC) on drug and food safety, and various professional councils on maintaining standards in their respective fields. They all operate within the legal frameworks provided by national acts and the constitution, and align with international guidelines as applicable. These interrelationships ensure a robust and integrated regulatory environment for health care in Nigeria.

Table 7.1.c Key regulatory bodies and functions

Category	Regulatory body/ programme	Function
National regulatory bodies	SERVICOM, launched 2004	<ul style="list-style-type: none"> • Coordinate efforts to develop and implement high-quality service charters service wide • Conduct independent surveys on customer satisfaction with public services • Raise awareness of public demands for satisfactory services from ministries, departments and agencies • Build the skills of public servants to deliver excellent service by promoting best practices in service delivery
	Federal Competition and Consumer Protection Commission, established through the Federal Competition and Consumer Protection Act 2018	<ul style="list-style-type: none"> • Handle cases of medical negligence • Achieve safe medical practices and consumer satisfaction • Operate with the Competition and Consumer Protection Tribunal
	Patient's Bill of Rights of the Consumer Protection Council, launched in 2018	<ul style="list-style-type: none"> • Aggregate patients' rights from various instruments, including the 1999 Constitution of Nigeria and several acts • Ensure patients' rights to information, confidentiality and quality of care • Promote access to patient- and fee-related information
	NAFDAC, established through the National Agency for Food and Drug Administration and Control Decree in 1992	<ul style="list-style-type: none"> • Regulate and control the manufacture, importation, exportation, distribution, advertisement, sale and use of food, drugs, cosmetics, medical devices, packaged water, chemicals and detergents • Maintain laboratories and conduct tests to ensure compliance with standard specifications • Inspect production premises and raw materials for food and drugs • Compile standard specifications, regulations and guidelines • Oversee the Federal Task Force on Counterfeit and Fake Drugs
	National Tertiary Health Institutions Standards Committee, established through the NHA 2014	<ul style="list-style-type: none"> • Maintain standards of tertiary hospitals through the issuance of certificates of standards and penalties • Advise the government on the financial needs of tertiary health facilities regarding service delivery, training and research
Professional regulatory councils	Medical and Dental Council of Nigeria	<ul style="list-style-type: none"> • Regulate the practice of medical doctors and dentists • Ensure medical and health standards

Table 7.1.c Continued

Category	Regulatory body/ programme	Function
Professional regulatory councils	Pharmacy Council of Nigeria	<ul style="list-style-type: none"> • Register and license all pharmacists, pharmaceutical premises (manufacturing, importation, distribution, wholesale, retail and hospital pharmacies), as well as issue permits to pharmacy technicians, and register and license PPMVs • Oversee an investigating panel and disciplinary committee • Statutorily register community pharmacies
	Nursing and Midwifery Council of Nigeria	<ul style="list-style-type: none"> • Ensure high-quality nursing and midwifery education • Maintain high standards of professional nursing and midwifery practice • Ensure discipline within the profession • Review and regulate the standards of nursing and midwifery practice in Nigeria
	Association of Medical Laboratory Scientists of Nigeria	<ul style="list-style-type: none"> • Regulate the practice of medical laboratory science in Nigeria • Regulate the training of scientists, technicians and assistants in institutions in Nigeria and give periodic accreditation to institutions • Regulate the production, importation, sales and stocking of diagnostic laboratory reagents and chemicals
Other regulatory councils and bodies	Radiographers Registration Board of Nigeria	Set specialized regulations in the respective health professions
	Health Records Officers Registration Board of Nigeria	Set specialized regulations in the respective health professions
	Community Health Practitioners Registration Board of Nigeria	Set specialized regulations in the respective health professions
	Medical Rehabilitation Therapists (Registration) Board of Nigeria	Set specialized regulations in the respective health professions
	Dental Technologists Registration Board of Nigeria	Set specialized regulations in the respective health professions
	Environmental Health Officers Registration Council of Nigeria	Set specialized regulations in the respective health professions

Table 7.1.c Continued

Category	Regulatory body/ programme	Function
Other regulatory councils and bodies	Optometrists and Dispensing Opticians Registration Board of Nigeria	Set specialized regulations in the respective health professions
	Dental Therapist Registration Board of Nigeria	Set specialized regulations in the respective health professions
Regulatory instruments and acts	1999 Constitution of Nigeria, Chapter II, Section 17(3)(d)	Ensures the right to health and adequate medical and health facilities for all persons
	Consumer Protection Act 2018	Promotes and protects the interest of consumers over all products and services. It is empowered to eliminate hazardous and substandard goods from the market.
	Child Rights Act 2003	Provides and protects the rights of a Nigerian child and other related matters.
	Freedom of Information Act 2011	Makes public records and information more freely available; provides for public access to public records and information; protects public records and information to the extent consistent with the public interest and the protection of personal privacy; protects serving public officers from adverse consequences of disclosing certain kinds of official information without authorization; and establishes procedures for the achievement of those purposes.
	NHA 2014	Provides a legal framework for national health policies and their implementation.
	Medical and Dental Practitioners Act, Cap 221 Laws of the Federal Republic of Nigeria 1990	Provides guidelines for medical and dental practitioners licensing and practice.
International guidelines	WHO guidelines on the integrated management of childhood illness	<ul style="list-style-type: none"> • Improve the quality of care for children aged under 5 years • Standardize PHC consultations for childhood illnesses • Focus on diagnosing and treating conditions responsible for the majority of child mortality

Source: Authors' compilation

Notes: NAFDAC = National Agency for Food and Drug Administration and Control; PPMV = patent and proprietary medicine vendor; SERVICOM = Service Compact with All Nigerians; WHO = World Health Organization.

Quality improvement activities

While some quality assurance mechanisms have been created, many of them have not yet been effectively adopted or used holistically, notably in the absence of national-level assessments. Recent analyses of the quality of Nigerian health care suggest that regulatory agencies have failed to embed quality as an operating principle and that inadequate budgetary allocation has constrained quality of care assessments; these concerns need to be addressed (FMOH, 2022e). The quality enhancement activities are outlined as follows:

- **Clinical audit** refers to the assessment of practice, for example prescribing, dispensing and laboratory procedures, and documenting of findings to generate appropriate reports to be reviewed and presented to staff for communication and education. Such audits highlight promising practices and areas requiring improvement.

Example of implementation: clinical audits have proved useful in developing antimicrobial stewardship programmes (Kpokiri et al., 2020).

- **Integrated supportive supervision (ISS)**, conducted by the federal government and its subsidiary organizations, ensures effective resource management and the best delivery possible of health care services in health facilities. It involves inspecting, controlling and supporting health workers to improve their skills and performance and, ultimately, health service delivery.

Example of implementation: state-level data suggest that ISS has positive effects, including improved infrastructure, health workforce and essential drugs in Katsina state; an increase in family planning acceptance rates in Zamfara and Akwa Ibom states; and an increased uptake of adolescent health services in Ogun, Plateau, Niger and Edo states. However, poor coordination of the various ISS activities in the country has led to the duplication of ISS tools and scarce resources being wasted by health partners and the Federal Ministry of Health (FMOH) (FMOH&SW, 2023). Since the last national ISS survey in 2011, reported by the National Bureau of Statistics, no further information on any holistic ISS at any level has become available. However, the FMOH has addressed this shortcoming

by collaborating with health partners to develop comprehensive national ISS tools at the primary, secondary and tertiary health levels for use by the FMOH and all health partners (FMOH&SW, 2023). This ISS/data quality assessment (DQA) platform contains electronic versions of the updated ISS and DQA tools, to ensure efficient coordination of ISS and DQA in the country and ease data collection and analysis. The DQA tool improves the quality of National Health Management Information System data at all data management levels via better coordination. On the platform, data can be collected across the various levels of health care, stored, analysed and validated. The data can also be visualized on the data analytics page for more in-depth analysis. The platform is accessible to all health partners and provides the FMOH with a bird's-eye view of ISS activities being conducted nationally. The system has been effective, based on data from the dashboard, although not all states and LGAs have uploaded their data (FMOH&SW, 2023).

- **Standard operating procedures** are written instructions describing the step-by-step process for performing a routine procedure. For example, the Medical and Dental Consultants' Association of Nigeria has provided a protocol to ensure easy COVID-19 identification as well as the protection of all health care providers from suspected or confirmed cases of COVID-19 (Anyanwu et al., 2020).

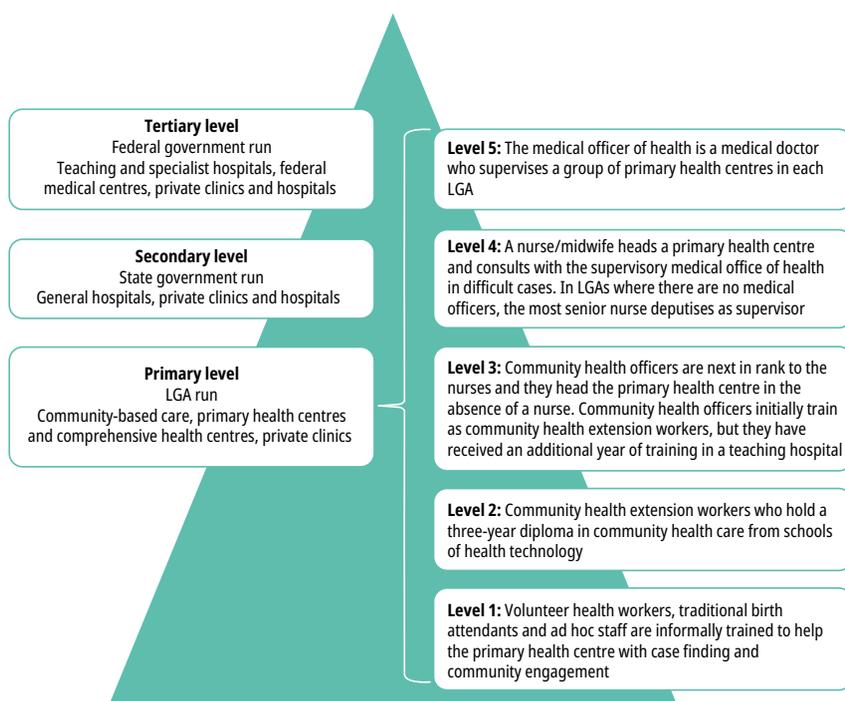
Example of implementation: while this standard operating procedure applies to all cadres of health workers, there is no information on whether or not it has been adopted by health workers.

7.2 Public health services

This section describes the organization and provision of public health services, as well as specific health promotion and prevention interventions available in Nigeria (Fig. 7.2.a).

Organization and provision of public health services

Figure 7.2.a Organizational structure of the Nigerian health service delivery system



Source: FMOH, 2018b

Primary health care provision

PHC is primarily implemented through primary health centres and home visits. These services align with the minimum service components for PHC outlined in the World Health Organization (WHO)/United Nations Children's Fund Declaration of Alma-Ata of 1978 on PHC and set out in Section 7.1.1.

Most services are delivered at the PHC level, meaning that primary health centres have high potential to have an impact on the health system. The government's proposed health sector renewal programme focuses on patient health outcomes and strengthening prevention through PHC and community health care. It aims to galvanize the Basic Health Care Provision Fund (BHCPF) for PHC and expand service packages (Chinonso, 2023). The lack of health workers and access to health care in primary health centres has led to health care service innovations, to foster more effective and efficient delivery using available health personnel. Most notable has been the introduction of community health workers (CHWs). CHWs use their skills to provide health care to and educate their communities. These functions are facilitated by CHWs' close relationships with community members, bridging the gap between the community and the health care system. There are different types of CHWs, each receiving varying levels of training (see Section 7.4 for details). Community health extension workers (CHEWs) receive two to three years of "health-related training" approved by the Community Health Practitioners Registration Board of Nigeria. This gives CHWs the skills required to provide basic primary care in line with national policy (FMOH, 2014c).

Secondary health care provision

SHC provides specialized services to patients through outpatient and inpatient services at general hospitals under the control of state governments. State ministries of health (SMoHs) provide services through secondary-level health facilities and technical assistance to LGA health departments. Each state has a state PHC management board/agency. The governing body includes individuals representing the interests of their communities, as well as their professional, official or political interests. Governing bodies also have representatives from historically under-represented communities or otherwise excluded groups, such as women and children.

Tertiary health care provision

At the tertiary level, the Directorate of Public Services has divisions of safe motherhood and family planning, health education, disease control, nutrition, the National Programme on Immunization/Diarrhoeal Disease Control Programme, workforce development and training, and PHC monitoring and

evaluation. Service delivery challenges include long waiting times, administrative issues due to bureaucratic bottlenecks, bypassing lower-level facilities and lack of space.

Organization of occupational health services

Nigeria's occupational health services are governed through various channels, including government agencies, private sector initiatives and collaborations with international organizations. The Federal Ministry of Labour and Employment manages occupational health and safety rules, laws and programmes. The regulatory framework includes the Factories Act, Labour Act and Employees' Compensation Act, which define obligations and standards for workplace health, safety and welfare (ILO and FGN, 2016). There are challenges related to enforcement, resource allocation and awareness that need to be addressed to ensure effective protection of workers' health and safety. Occupational health professionals, such as physicians, nurses, hygienists and safety officers, are employed by the various organizations, such as the oil and gas industries located in Lagos, Port Harcourt and Abuja.

Public health interventions

Historically, the health care system has been oriented more towards treatment than towards prevention, and has given greater attention and resources to curative services than to public health initiatives such as sanitation, health education or other preventive health care services (Abubakar et al., 2022). As a result, public health campaigns receive less funding than hospitals and clinics. Public health interventions have gained significance in response to diseases such as COVID-19, Lassa fever and Ebola, given that strengthened disease surveillance systems, priority health services for the rural poor and immunization programmes have been implemented to provide basic health services. Despite these efforts, the emphasis remains on curative care, and challenges persist in prioritizing and funding public health interventions.

Disease surveillance

LGAs have mechanisms for disease notification and surveillance of disease outbreaks through their disease surveillance and notification officers (DSNOs).

The mechanisms for notification and surveillance of disease outbreaks in Nigeria include the routine Integrated Disease Surveillance and Response (IDSR) and event-based surveillance systems. These are ongoing surveillance activities and are conducted in all states through the Nigeria Centre for Disease Control and Prevention (NCDC, 2024). At the local government level, the mechanisms for notification and surveillance of disease outbreaks are part of the IDSR framework. DSNOs are responsible for disease surveillance and notification in the LGAs and the IDSR framework is designed to improve early detection and prompt response to acute public health events, including disease outbreaks.

Environmental officers in LGAs have environmental and communicable disease control functions, such as preventing contamination of drinking water, open defecation and refuse dumping; food inspection; and issuance of abatement notices. Details on each programme are provided below.

National screening programmes

Nigeria has several national screening programmes that run in collaboration with international organizations and nongovernmental organizations (NGOs) to address public health challenges. These include screening programmes for cervical cancer, breast cancer, HIV/AIDS, tuberculosis (TB), malaria, diabetes and hypertension, and eye health issues. However, limited funding, inadequate infrastructure and health care workforce shortages constrain the effectiveness and reach of existing screening programmes.

Environmental and communicable disease control functions

Most of the highest-ranked causes of disability-adjusted life years in Nigeria are related to environmental risk factors. These include lower respiratory infection associated with air pollution; chronic respiratory diseases; cardiovascular diseases; enteric infections; diarrhoeal diseases; and communicable, maternal, neonatal and nutritional diseases. The nationwide One Health Strategic Plan (2019–2023) combines environmental, animal and human health management for better health security. The plan, which was jointly developed by the FMOH, the Federal Ministry of Agriculture and Rural Development and the Federal Ministry of Environment, as well as their agencies, reinforces Nigeria's commitment to strengthening multisectoral collaboration for health security. The Nigeria Centre for Disease Control and Prevention is tasked with spearheading communicable disease prevention, detection and control within government. Its functions are

to prevent, detect, investigate and control communicable diseases of national and international public health importance.

Public health interventions to address major risk factors

Nigeria has implemented public health interventions to address major risk factors, including smoking and contaminated water, through regulation, health promotion activities and education:

- The country introduced a policy to enact the Framework Convention for Tobacco Control in 2015, and the National Tobacco Control Act to domesticate the convention. Public health campaigns and education programmes raise awareness about smoking risks and encourage cessation. However, challenges include loopholes in the law, corruption, lack of political will and the tobacco industry's influence (Ukwueze et al., 2018).
- Water, sanitation and hygiene (WASH) programmes have been implemented to improve access to clean water, sanitation facilities and hygiene practices, especially in rural areas. In 2018, the WASH sector was declared in a state of emergency, with 60 million Nigerians living without basic drinking water. The government constructed over 2300 water points and 6546 sanitation compartments and hygiene facilities across the country (World Bank, 2021a). NAFDAC regulates packaged water quality and monitors performance against health indicators.

Table 7.2.a sets out further public health interventions by disease type.

Food inspection services

Food safety, defined as the assurance that food will not cause harm to the consumer when it is prepared or eaten according to its intended use, is an integral part of food and nutrition security. Nigeria's NAFDAC and FMOH oversee food inspection services, which ensure that food products meet safety and quality standards. NAFDAC and FMOH conduct regular inspections, monitor imported products, issue licences and conduct sampling and testing. They also enforce compliance through recalling products, imposing sanctions and fines, and taking legal action. Several guidelines and policies are in place to guide

these functions (NAFDAC, 2012). Despite these efforts, inadequate funding, limited capacity, weak enforcement mechanisms and informal food markets limit NAFDAC's inspection capabilities, necessitating continued investment, capacity-building and public collaboration.

Table 7.2.a Public health interventions classified by disease type

Communicable	Noncommunicable	Other
<p>HIV/AIDS</p> <ul style="list-style-type: none"> • Providing antiretroviral therapy • Offering HIV prevention, treatment, care and support services through a multisectoral approach 	<p>Injuries</p> <ul style="list-style-type: none"> • Integrating injury surveillance, detection, management and control into existing national strategies and plans • Promoting strategies for the prevention and management of occupational injuries • Raising awareness of legislation and building capacity to respond to all forms of violence, including gender-based violence and violence against children • Establishing trauma care centres at all levels of care, building the capacity of health systems in support of injury prevention and control • Establishing a national emergency ambulance service 	<p>Pandemic preparedness</p> <ul style="list-style-type: none"> • Developing and maintaining the capabilities of stakeholders for regular risk analysis, including vulnerability and risk assessment • Developing and implementing health emergency and disaster preparedness plans and risk-specific contingency plans, including pre-positioned emergency medical stocks and supplies • Implementing strategies to mitigate the health impacts of disasters and environmental health issues • Strengthening health emergency management capacity and emergency coordination mechanisms at all levels • Strengthening the capacity of the surveillance and response systems in line with the International Health Regulations of 2005 • Upgrading health infrastructure and security systems in public health institutions that handle biological agents of public health importance

Table 7.2.a Continued

Communicable	Noncommunicable	Other
<p>Malaria</p> <ul style="list-style-type: none"> • Implementing an integrated vector management strategy • Implementing prevention and treatment strategies 	<p>Cardiovascular diseases</p> <ul style="list-style-type: none"> • Screening for early detection of hypertension, stroke, heart attack and risk factors • Strengthening capacity for the detection and management of cardiovascular diseases • Establishments for the rehabilitation of clients with long-term sequelae of cardiovascular disease 	<p>Water and sanitation</p> <ul style="list-style-type: none"> • Promoting the provision of adequate and safe water and appropriate sanitary facilities in urban and rural areas through multisectoral collaboration, public–private partnerships and effective community engagement • Developing and implementing quality standards for safe potable drinking water • Developing and implementing a national framework for water quality monitoring and surveillance strategies • Promoting awareness on the risks linked with the consumption of unwholesome water
<p>TB and leprosy</p> <ul style="list-style-type: none"> • Implementing prevention and treatment strategies • Providing high-quality integrated services for all people coinfecting with TB and HIV 	<p>Diabetes mellitus</p> <ul style="list-style-type: none"> • Promoting screening for early detection of diabetes and risk factors • Building capacity in the detection and management of diabetes mellitus • Establishing rehabilitation centres for the management of long-term complications of diabetes mellitus 	<p>Health promotion</p> <ul style="list-style-type: none"> • Promoting awareness on the rights and responsibilities of consumers • Mobilizing the potential of mass media for health promotion • Strengthening partnerships and multisectoral collaboration for health promotion • Strengthening capacity in health promotion, including the channelling of resources at all levels • Promoting the inclusion of health promotion in school curricula at all levels • Promoting the inclusion of health promotion in workplace health programmes

Table 7.2.a Continued

Communicable	Noncommunicable	Other
<p>Neglected tropical diseases</p> <ul style="list-style-type: none"> • Implementing integrated vector management strategies 	<p>Cancers</p> <ul style="list-style-type: none"> • Promoting strategies for routine screening and early detection of cancers in relevant age groups • Strengthening the existing cancer treatment centres for the management of patients • Improving the quality of life of cancer patients and providing palliative care • Strengthening cancer registries across the country • Developing innovative financing mechanisms for cancer patient care provision 	
<p>Immunization and vaccine-preventable diseases</p> <ul style="list-style-type: none"> • Ensuring vaccine security for appropriate routine immunization coverage • Setting standards for injection safety and disposal, cold-chain equipment and inventory requirement for immunization service delivery • Promoting equity in access to and the utilization of services across all communities 	<p>Sickle cell</p> <ul style="list-style-type: none"> • Providing universal screening and genetic counselling for the general populace • Strengthening the structures and capabilities for the management of sickle cell disease • Promoting research on innovative methods of management of sickle cell disease to improve the quality of life and life expectancy of people with sickle cell disease 	

Source: FMOH, 2016c

Health promotion and social marketing

The National Health Promotion Policy revised in 2019 guides best practice for health care providers on health promotion. Each LGA health promotion unit is responsible for managing, implementing and documenting LGA-level activities, including community mobilization and oversight of health promotion

activities at the ward and community levels (FMOH, 2019d). The government has prioritized social marketing, advocacy activities and campaigns through its various institutions and agencies in an effort to change attitudes and address high levels of corruption. A study on the Nigerian perspective of social marketing campaigns using the Ebonyi State Action Committee on AIDS as a case study showed that, with proper message timing and frequency, broadcast media campaigns are likely to influence people's social life, just as appropriate information can alter people's behaviour or attitude. Several health promotion programmes have used social marketing strategies, including a programme that increased the uptake of pap smears among women in an urban slum area of Lagos (Olubodun et al., 2022).

Public health implementation challenges

Nigeria's public health initiatives face challenges such as inadequate funding; poor health infrastructure and inequities in the distribution of service delivery structures; insecurities; inadequate capacity to carry out essential public health functions; the simultaneous challenges of responsiveness and continuity; and disjointed decision-making without necessary data and knowledge. These challenges are exacerbated by weak health care governance. Successful programmes such as the Saving One Million Lives initiative have improved maternal and child health (MCH) through targeted incentives and partnerships; however, scaling up digital health and strengthening PHC facilities remain key priorities, as they are likely to have a substantial impact.

7.3 Referral system and patient pathway

Overview

In principle, Nigeria has processes in place for a two-way referral system, initiated at the primary care level as the first point of contact, with cases beyond the capacity of the primary level referred to the secondary level and then on to the tertiary level, with feedback being provided to the referring facility (FGN, 2022c). Referrals can be external or internal, outside or within the health care level. Referring physicians are mandated to refer a patient promptly, to guarantee efficient, cost-effective, optimal and high-quality care for the patient.

Physicians in the receiving hospital or health care facility are required to refer the patient back after treatment to the facility or physician who initiated the referral, with clear feedback on the findings observed, investigations conducted and treatment given. However, in practice, this has taken various forms, with the most common pathways outlined below:

- **Self-referral:** 60–90% of patients present at any health care system level without a referral, usually bypassing the primary level of care due to perceptions that the facility and services at this level will be of a low quality, and patients' perceptions of the severity of their symptoms (Koce et al., 2019).
- **Physician self-referral:** physicians involved in dual practice (i.e. working in both public health care institutions and private practices) divert or refer patients to a facility outside their primary employer institution for financial reasons, particularly if the physician owns that facility or will receive financial gains from referring a patient to it.
- **e-Referrals:** computerized systems are used in clinical settings for managing and referring patients and for the subsequent electronic transfer of medical records. This system is rudimentary in Nigeria. Plans for the wider implementation of electronic records management include providing a technology learning support centre and a reference library. Providing these services at the electronic records management level will greatly facilitate referrals, thus enhancing service quality. Good examples of systems already in use in Nigeria are SaferMom and MOBicure, two cheap health technologies that can deliver vital health information to nursing mothers and pregnant women through short message service and voice calls. Referral efficiency is increased through the use of eConsult, which streamlines asynchronous clinician-to-clinician interactions through a web-based electronic health record platform. These technologies have led to improved access to specialty care in underserved populations, better care coordination, clinician satisfaction and cost savings (Olayiwola et al., 2020). Access to health information in local languages will increase coverage and ensure the effective communication of public health issues to people in rural areas.

Implementation successes and challenges

The referral system can be seen as a measure of the health system's overall performance, and shows the government's ability to manage all the systems and human resources involved in the referral process. However, in many low- and middle-income settings like Nigeria, referral systems are characterized by inefficiencies (especially poor provision of feedback to the referring physician/facility), with a negative impact on cost, equity and quality of care. In some cases where referral is impossible, patients are retained in care and managed with low-cost but effective interventions. The gatekeeping function of PHC centres needs improvement, as linkages between the different health system tiers are ineffective. This leads to patients accessing health care directly from the secondary and tertiary health levels, which is more expensive, especially for poorer populations (Amedari and Ejidike, 2021).

7.4 Community-based care

Overview and summary of challenges

Nigeria's community health care system is designed to give people, especially those living in underserved and rural regions, easy access to high-quality health care at a reasonable cost. A combination of public and private sector providers, as well as interventions from NGOs and international entities, are involved in the organization and delivery of community health care services. Active community engagement produces a workforce that can manage procedures, maintain openness, build connections and provide both qualitative and quantitative data to support the integration, coordination, adoption and responsiveness of health services. Community-based care services are crucial for improving health care access, promoting health equity and strengthening health care systems. For example, the Integrated Community Case Management programme, community-based health education, community-based rehabilitation programmes and community-based health insurance have all improved life-saving interventions, empowered individuals with disabilities and improved MCH services.

Community-based care reforms

Over the last 10 years, Nigeria has seen several major changes in the delivery of community-based care. Reflecting the government's commitment to improving health and well-being, Nigeria's PHC system has undergone continuous change and reforms to address service delivery challenges (Chinonso, 2023). Efforts have also been made to strengthen PHC and improve health financing and governance. These reforms have been successfully adopted. In addition, community-based health insurance has been promoted as an effective health-financing option for providing access to care for individuals in the informal sector and contributing to attaining UHC.

Implementation of reforms

However, the existence of the structures described above has not translated into the scaled-up delivery of services, and quality assurance reports are not readily available. There are regional variations in the availability of community health services. Family planning services are inconsistent across the country's six regions, with better access in urban areas than in rural areas, and the strongest provision in the north-west. All regions face issues with stock-outs of contraceptives, and postnatal care (PNC) provision also appears uneven, although evidence is sparse on its spatial distribution across regions. Uptake of PNC is higher in the south than in the north, and intraregional variations are also significant, with higher PNC use in Yobe and Bauchi in north-eastern Nigeria than in other states within the region (Ononokpono et al., 2020). Current challenges include addressing diverse disease burdens and inadequate investment in the social determinants of health. Reform plans focus on health investment for prosperity, balancing prevention and care and leveraging human resources (Abubakar et al., 2022).

Community health worker cadres, management and coordination

Cadres

Nigeria has four community health provider cadres that serve as entry points for communities into the PHC system and provide ward minimum health care

package (WMHCP) services. Community health officers (CHOs) are based at health facilities and provide a broad range of PHC services. CHOs oversee CHEWs and junior community health extension workers (JCHEWs), who work at health facilities and in communities. All three cadres are employed by the FMOH (Egan et al., 2017). A fourth cadre, known as community resource persons (CORPs), also operates at the community level. CORP is a broad term that refers to a variety of informal providers, including traditional birth attendants and village health workers, who are often supported by NGOs. While CORPs are not officially part of the government-run PHC system, they refer clients to government health facilities and are typically supervised by JCHEWs. For these reasons, health policies provide basic guidance on CORP roles, supervision and involvement in the health management information system. Ward development committees (WDCs) are the primary management body at the ward level and serve as liaison with the community, identifying health needs and mobilizing the resources needed (see Chapter 2, Section 2.1). They also provide administrative oversight for CHOs, CHEWs, CORPs and JCHEWs. All community health programmes in Nigeria are integrated into the PHC system.

Management and coordination

Health system governance structures at all levels are set out in full in Chapter 2, Section 2.1, but described here in relation to PHC service delivery.

- The FMOH sets policy and supports capacity-building at the state level, while the NPHCDA leads system implementation through advocacy, resource mobilization, partnership development and capacity-building.
- The SMoH provides planning, training, programming, and financial and operational support at the state level. The LGA PHC management committee provides overall direction and manages PHC system services.
- Community-level service delivery is managed and coordinated across the national, state, LGA and ward/village levels. Each level has a distinct role in supporting policy and programme efforts. NGOs provide support and resources at all levels of the health system. They often focus on specific health issues such as HIV/AIDS, malaria, TB or malnutrition, providing resources, training and technical assistance.

- WDCs implement the PHC system at the ward level. Wards with larger populations are divided into villages, each of which has a village development committee (VDC). VDCs/WDCs coordinate and link communities with ward- and village-level health facilities: health posts, primary health clinics and primary health centres. VDCs/WDCs identify health needs and available resources, supervise PHC workplan implementation and monitor progress, mobilize communities to use PHC services, and supervise CHEWs, CHOs, CORPs and JCHEWs. The role and composition of each WDC/VDC can be customized to the local context, but they are generally led by an elected chairperson and include members from religious groups, women's groups/associations, occupational/professional groups, NGOs, community health providers, youth groups, traditional healers and medicine shop owners. WDCs also have a representative from each VDC in the ward.
- CHEWs, CHOs and JCHEWs are salaried providers at the lowest level of service delivery in the PHC system. They work from health posts, primary health clinics and primary health centres, and provide WMHCP services. Of the three, CHOs receive the highest level of training. They are based at health facilities and provide a range of health services, including services related to MCH, family planning, malaria and HIV/AIDS. They also oversee health facility management, including CHEW and JCHEW supervision and oversight. CHEWs provide similar services to CHOs but are more focused on preventive care and health education. They spend 40% of their time working in the community and 60% at the health facility. JCHEWs receive less training than CHEWs and provide a narrower scope of services. They spend 90% of their time in communities and 10% at the health facility. CHEWs supervise JCHEWs.

Community health providers

Roles and responsibilities

Table 7.4.a Community health providers

	CHEW	CHO	CORP	JCHEW
Number in country	<ul style="list-style-type: none"> • 117 568 CHEWs, CHOs and JCHEWs combined 	<ul style="list-style-type: none"> • 117 568 CHEWs, CHOs and JCHEWs combined 	<ul style="list-style-type: none"> • Information not available 	<ul style="list-style-type: none"> • 117 568 CHEWs, CHOs and JCHEWs combined
Target number	Information not available	7 740	Information not available	Information not available
Coverage ratios and areas	<ul style="list-style-type: none"> • 3 CHEWs : 1 primary health centre (10 000–30 000 people) • 2 CHEWs : 1 primary health clinic (2 000–5 000 people) • Operate in urban, rural and peri-urban areas 	<ul style="list-style-type: none"> • 1 CHO : 1 primary health centre (10 000–30 000 people) • Operate in urban, rural and peri-urban areas 	<ul style="list-style-type: none"> • Information not available • Operate in urban, rural and peri-urban areas 	<ul style="list-style-type: none"> • 6 JCHEWs: 1 primary health centre (10 000–30 000 people) • 4 JCHEWs: 1 primary health clinic (2 000–5 000 people) • 1 JCHEW: 1 health post (500 people) • Operate in urban, rural and peri-urban areas
Health system linkage	CHEWs are government employees who are connected to government health facilities and provide WMHCP services	CHOs are government employees who work at government health facilities and provide WMHCP services	CORPs are supported by NGOs but serve as a link between health facilities and the community by referring clients	JCHEWs are government employees who are connected to government health facilities and provide WMHCP services
Supervision	CHEWs are supervised by CHOs, with administrative oversight from VDCs/WDCs	CHOs report to the LGA PHC Management Committee and the medical officer at the health facility. They also receive feedback on their performance from the WDC/VDC	CORPs are supervised by the NGOs they work for and JCHEWs, with administrative oversight from VDCs/WDCs	JCHEWs are supervised by CHEWs, with administrative oversight from VDCs/WDCs

Table 7.4.a Continued

	CHEW	CHO	CORP	JCHEW
Accessing clients	<ul style="list-style-type: none"> • On foot, bicycle and public transport • Clients travel to them 	<ul style="list-style-type: none"> • Clients travel to them 	<ul style="list-style-type: none"> • On foot and bicycle 	<ul style="list-style-type: none"> • On foot, bicycle and public transport • Clients travel to them
Selection criteria	Selection criteria are not stated in policy, but they must undergo training and therefore be literate	Selection criteria are not stated in policy, but they must undergo training and therefore be literate	Some CORPs are required to be nominated by his/her community, and must be a resident there and have a source of livelihood. Selection criteria differ based on the supporting NGO and the needs of the community	Selection criteria are not stated in policy, but they must undergo training and therefore be literate

Source: Egan et al., 2017

Note: Information reflects data as at 2017.

Table 7.4.a outlines the roles and responsibilities of various community-based health care workers in Nigeria, namely CHEWs, CHOs, CORPs and JCHEWs, and related organizational structures. Key takeaways are outlined below:

- CHEWs and CHOs operate in urban, rural and peri-urban areas, with varying ratios of workers to population sizes for different health care facilities. CHEWs, CHOs and JCHEWs are government employees connected to government health facilities, while CORPs are supported by NGOs and serve as a link between health facilities and the community.
- The data show that Nigeria has 117 568 CHWs (CHEWs, CHOs and JCHEWs combined), but no specific data on the distribution of CHWs among the various categories are available. In 2007, Nigeria had a CHW density of 0.1 per 1000 people, with urban centres having better access to health care and facilities, and rural and remote regions facing challenges due to infrastructure, transport and resource constraints. The north-west and north-east regions have lower CHW densities due to insecurity, poverty and limited infrastructure, while the south-west and south-east regions have

better community health care infrastructure. State-level variations exist within geopolitical zones, with south-west states such as Lagos, Ogun and Oyo having robust CHW programmes, and north-east states such as Borno and Yobe facing challenges. If we assume similar targets proportionately for CHEWs and JCHEWs, 117 568 might still be insufficient given Nigeria’s large and growing population (over 200 million people). Effective distribution should prioritize rural areas. The ratios provided suggest a framework for this trend, but evaluating real-world deployment versus need is essential. Rural areas typically suffer from understaffing more than urban centres.

- There are no universal benchmarks for CHW density, but comparisons can be made with countries with successful PHC models. For example, Rwanda maintains a workforce of nearly 45 000 CHWs, which translates to approximately three CHWs per village of about 50 to 150 households. This relatively high CHW density has been recognized as a key driver of Rwanda’s early achievement of the Millennium Development Goals (Napier et al., 2020).

Interventions and services

Table 7.4.b Selected MCH interventions, products and services provided by CHWs

Subtopic	Interventions, products and/or services	Information, education and/or counselling	Administration and/or provision	Referral	Follow-up
Family planning	Condoms	CHEW, CHO, CORP, JCHEW	CHEW, CHO, CORP, JCHEW	CHEW, CHO, CORP, JCHEW	CHEW, CHO, CORP, JCHEW
	Implants	CHEW, CHO, JCHEW	CHEW, CHO	CHEW, CHO, CORP, JCHEW	CHEW, CHO, CORP, JCHEW
	Injectable contraceptives	CHEW, CHO, JCHEW	CHEW, CHO	CHEW, CHO, CORP, JCHEW	CHEW, CHO, CORP, JCHEW
	Intrauterine devices	CHEW, CHO, JCHEW	CHEW, CHO	CHEW, CHO, CORP, JCHEW	CHEW, CHO, CORP, JCHEW
	Oral contraceptive pills	CHEW, CHO, JCHEW	CHEW, CHO, JCHEW	CHEW, CHO, CORP, JCHEW	CHEW, CHO, CORP, JCHEW

Table 7.4.b Continued

Subtopic	Interventions, products and/or services	Information, education and/or counselling	Administration and/or provision	Referral	Follow-up
Maternal health	Birth preparedness plans	Unspecified	Unspecified	Unspecified	Unspecified
	Iron/folate for pregnant women	CHEW, CHO, CORP, JCHEW	CHEW, CHO, JCHEW	CHEW, CHO, CORP, JCHEW	Unspecified
	Nutrition/dietary practices during pregnancy	CHEW, CHO, CORP, JCHEW		CHEW, CHO, CORP, JCHEW	CHEW, CHO, CORP, JCHEW
	Recognition of danger signs during and post pregnancy	CHEW, CHO, CORP, JCHEW	CHEW, CHO, CORP, JCHEW	CHEW, CHO, CORP, JCHEW	CHEW, CHO, CORP, JCHEW
Newborn care	Care seeking based on signs of illness	CHEW, CHO, CORP, JCHEW			CHEW, CHO, CORP, JCHEW
	Chlorhexidine use	Unspecified	Unspecified	Unspecified	Unspecified
	PNC	CHEW, CHO, JCHEW	CHEW, CHO, JCHEW	CHEW, CHO, JCHEW	CHEW, CHO, JCHEW
Child health and nutrition	Community integrated management of childhood illness	CHEW, CHO, JCHEW	CHEW, CHO, JCHEW	CHEW, CHO, JCHEW	CHEW, CHO, JCHEW
	Exclusive breastfeeding for first 6 months	CHEW, CHO, CORP, JCHEW		CHEW, CHO, CORP, JCHEW	CHEW, CHO, CORP, JCHEW
	Immunization of children	CHEW, CHO, CORP, JCHEW	CHEW, CHO, CORP, JCHEW	CHEW, CHO, CORP, JCHEW	CHEW, CHO, CORP, JCHEW

Source: Egan et al., 2017

Table 7.4.c Selected programme interventions, products and services provided by CHWs

Subtopic	Interventions, products and/or services	Information, education and/or counselling	Administration and/or provision	Referral	Follow-up
Malaria	Artemisinin combination therapy	CHEW, CHO, CORP, JCHEW	CHEW, CHO, JCHEW	CHEW, CHO, CORP, JCHEW	Unspecified
	Long-lasting insecticide-treated nets	CHEW, CHO, CORP, JCHEW	CHEW, CHO, CORP, JCHEW	CHEW, CHO, CORP, JCHEW	CHEW, CHO, CORP, JCHEW
	Rapid diagnostic testing for malaria	CHEW, CHO, CORP, JCHEW	CHEW, CHO	CHEW, CHO, CORP, JCHEW	Unspecified
HIV and TB	Community treatment adherence support, including directly observed treatment short-course therapy	CHEW, CHO, CORP, JCHEW	CHEW, CHO, CORP, JCHEW	CHEW, CHO, CORP, JCHEW	CHEW, CHO, CORP, JCHEW
	Contact tracing of people suspected of being exposed to TB	CHEW, CHO, CORP, JCHEW	CHEW, CHO, CORP, JCHEW	CHEW, CHO, CORP, JCHEW	CHEW, CHO, CORP, JCHEW
	HIV testing and treatment support	CHEW, CHO, CORP, JCHEW	CHEW, CHO	CHEW, CHO, CORP, JCHEW	CHEW, CHO
WASH	Community-led total sanitation	CHEW, CHO, CORP, JCHEW	CHEW, CHO, CORP, JCHEW		
	Hand washing with soap	CHEW, CHO, CORP, JCHEW			
	Oral rehydration salts	CHEW, CHO, CORP, JCHEW	CHEW, CHO, CORP, JCHEW	CHEW, CHO, CORP, JCHEW	CHEW, CHO, CORP, JCHEW

Source: Egan et al., 2017

Tables 7.4.b and 7.4.c provide details about selected interventions delivered by CHEWs, CHOs, CORPs and JCHEWs across a range of health areas. The data in these tables serve as a valuable resource for guiding activities to enhance health care delivery at the grass-roots level. Key takeaways are outlined below:

- The data suggest that training in clinical procedures, diagnostic tools, community mobilization, health education and referral

processes is needed. JCHEWs should be equipped with clinical support and community health promotion skills. Resource allocation should be optimized by providing essential medical provisions and instructional materials.

- Service delivery can be improved by integrating services across various health domains, and allowing for education, treatment and follow-up. This approach reduces the workload on larger health facilities. Effective communication strategies can be taught to all CHWs. Well-defined supervision structures can be established, with CHEWs supervising JCHEWs, and CHOs supervising CHEWs. Regular feedback and digital tools can monitor health worker activities and assess outcomes.

Additional programmes and related providers are described below.

The Community Health Influencers, Promoters and Services programme

The Community Health Influencers, Promoters and Services (CHIPS) programme was launched by the NPHCDA in 2018. The CHIPS programme aims to expand maternal, child and reproductive health interventions at the community level and strengthen the health service delivery system. The strategy is to harmonize existing community-based programmes, such as the Integrated Community Case Management of Childhood Illnesses, Volunteer Community Mobilizer and Village Health Worker programmes, into the CHIPS programme. This process provides a coordinating platform with one training curriculum, one monitoring and evaluation framework, and one category of community-based health workers, that is, the CHIPS personnel – CHIPS agents and community engagement focal persons.

The CHIPS programme harmonized all training materials and resources of all categories of CHWs, providing a better definition of their roles and coordination. All health workers at the community level – except CHEWs – are now trained for 14 days using nationally approved tools, with supervision from community-empowered personnel and persons in charge of the primary health centres. The government pays monthly stipends to CHIPS agents and their supervisors. Each implementing agency/partner at the community level is expected to upgrade the status of their CHWs to CHIPS agents. At the same time, states and LGAs are encouraged to participate in the programme.

Patent and proprietary medicine vendors and community pharmacists

Patent and proprietary medicine vendors (PPMVs) are medicine shop owners without formal pharmacy training, selling orthodox pharmaceutical products on a retail basis for profit. PPMVs act as the first point of care for many Nigerian populations by providing diarrhoea, pneumonia, malaria and family planning services for all ages. PPMV practice is primarily regulated by the Pharmacy Council of Nigeria. PPMVs are a notable private sector player and are the primary source of medicine for acute conditions (Agha et al., 2022).

Community pharmacists are formally trained, having completed an undergraduate degree in pharmacy from an approved faculty/school of pharmacy in Nigeria or overseas. In 2005, the number of PPMVs in Nigeria was estimated to be 200 000, roughly 100 times greater than the number of registered pharmacists, and nearly four times the number of physicians (Barnes et al., 2008). However, ratios vary geographically: in Lagos state, the ratio of community pharmacists to PPMVs is 1 : 2, while, in Kaduna state, the ratio is 1 : 17 (IntegratE, 2021).

Ward development committee or ward health committee/village health committee

Nigeria adopted the WDC structure in 2000 to facilitate community participation in health care delivery. The National Health Policy 2004 established ward health committees, WDCs and village health committees (VHCs). Every ward in an LGA has a ward health committee whose role is to organize, plan, make budgets and monitor all PHC services that concern residents. In every village, a VHC has been established to prepare the community for health action, find available resources within the community and distribute them appropriately for health development. The VHC also plans for the health and welfare of the community, relates the plans at the health facility level and supervises the implementation of the health plans developed.

Home-based care providers for the home management of HIV/AIDS

Home-based care programmes for HIV patients were initiated to assist family caregivers in providing HIV/AIDS-related care because public health services at the peak of the HIV epidemic could not cope with the increased demand

for treatment and care. Some of these home-based care services focus on providing social and psychological support, with some also providing nutritional support and basic nursing care. Others also dispense antiretrovirals and treat opportunistic infections. These services, whether provided through NGOs, government health clinics or community groups, are essential in supporting people living with HIV and AIDS, as well as people who provide care and support within families. This use of this approach is widespread and primarily operated by community-based organizations (Akeju et al., 2021).

Community-based tuberculosis programmes

Community-based TB activities encompass a wide range of activities aimed at prevention, diagnosis and improving adherence to treatment and care that affect the outcomes of drug-sensitive, drug-resistant and HIV-associated TB. These community-based activities for TB are conducted within community-based structures (e.g. schools, places of worship and congregations) and homesteads, and not in health care facilities. They are known to be a more cost-effective approach associated with better compliance to treatment and better patient satisfaction than the health facility-based approach.

Community involvement in TB is part of the Stop TB Partnership Nigeria, a strategy launched in 2006 to enhance the expansion of directly observed treatment short-course (DOTS) therapy programmes and reduce the global burden of TB. Implementation of community TB care in Nigeria commenced in 2007. As of 2012, community TB care was established in 27 out of 36 states, plus the Federal Capital Territory (FCT) (Adejumo et al., 2016). In addition to referral of presumptive TB cases to the DOTS centres, in some models community workers also serve as treatment supporters and help track those lost to follow-up.

The Bamako Initiative

In 1988, Nigeria adopted the Bamako Initiative to strengthen PHC at the community and local government levels. Community participation, the upgrading and reorganization of health centres, the provision of essential drugs, community financing through user fees, and enhanced management were the five main components of the Nigerian initiative (Uzochukwu and Onwujekwe, 2004).

Community engagement strategy for strengthening routine immunization in northern Nigeria

Traditional community architectures in northern Nigeria have been harnessed to coordinate and mobilize local communities. The Global Polio Eradication Initiative has successfully utilized this community architecture in its polio eradication efforts, and the Expanded Programme on Immunization is using this architecture in the form of WDCs and VDCs and the development of micro plans for both routine and supplemental immunization activities. Some northern states have also developed state-specific community engagement strategies, which the leadership of the Northern Traditional Rulers' Council, the Sultanate and some Emirate councils are working to harmonize within a coordinated framework. The routine immunization strategy builds on these models to provide a harmonized approach for increasing community participation in routine immunization.

Community-based health insurance

The community-based health insurance scheme is an initiative aimed at increasing access to high-quality and affordable health care services at the community level (see Chapter 3, Section 3.6). It ensures the availability of drugs, access to certified medical professionals and high-quality MCH care.

Although there is no information on the quality assurance package for community-based health care nationally, looking at a state-level package that is in place in Akwa Ibom state reveals important elements for quality assurance, such as (i) the philosophy, namely that care should be at minimal risk to the client and to the benefit of the client and that clients should demonstrate a moral sense of duty, among other things; (ii) objectives, namely giving consumers adequate information, continuously looking for ways to provide innovative services and safeguarding consumer satisfaction; and (iii) measures for quality assurance, namely providing continuous education for health workers, licensing all health care providers, ensuring close supervision, minimizing unjustified geographical variation in care and reducing access barriers. This package has been recommended for adoption for health care administration at the national level.

Service distribution

Details of the distribution of community-based health care services are set out in Tables 6.2.b and 6.2.c in Chapter 6.

Implementation challenges

Factors that hinder community health service delivery include poor health-seeking behaviour, preference for traditional medicine providers, male dominance in communities, superstitious beliefs, poor attitudes among health facility workers and inadequate financial support. Enabling factors include community members' participation and compassionate attitudes among informal providers. Enhancing factors include synergies between formal and informal providers, support from community-based organizations and government support. Integrating community health service delivery into programme implementation and working with the community health system can improve the overall health system and community health (Ozor et al., 2024).

7.5 Primary health care

Primary care physicians are often a patient's first point of contact with the health care system. For most Nigerians, a PHC facility is the first point of contact, at which point any short-term, uncomplicated health issues should be resolved. It is also the level at which health promotion and education efforts are undertaken, and where patients in need of more specialized services are connected with secondary care. Primary health centres are located at the grass-roots level in the ward health system, with a primary health centre being located in each political ward (of 9560 wards) and run by the local government authority. The NPHCDA provides support for the implementation of the National Health Policy where it relates to PHC. Within the 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" (Akwaowo et al., 2020). The government's four basic approaches to PHC are to (i) promote community participation in planning, management, monitoring and evaluation; (ii) improve intersectoral collaboration in PHC delivery; (iii) enhance functional integration

at all levels of the health system; and (iv) strengthen managerial processes for health development at all levels.

Primary health care infrastructure: facilities and equipment

PHC facilities have been referred to by various terms, including dispensaries, health clinics, health centres, primary health centres, maternities, health posts and comprehensive health centres. However, the ward health system and NPHCDA manual of minimum standards for PHC recognize three facility types: (i) health post, (ii) primary health clinic and (iii) PHC centre. Table 7.5.a aligns the previous facility nomenclature with these three formally recognized terms.

Table 7.5.a Types of health facilities, management and expected coverage

Previous health facility nomenclature	New health facility nomenclature	Level of management	Current number of facilities
Comprehensive health centre, model PHC centre	Primary health centre	Local government	One per ward, with an average of 10 wards per LGA Total of 7740 is estimated to exist currently
Maternity centre, basic health centre	Primary health clinic	Local government and WDC	One per group of villages/ neighbourhoods of about 2000–5000 persons
Dispensary	Health post	VDC/community development committee	One per village or neighbourhood of about 500 persons

Source: Authors' compilation

These facilities are owned by the government or private for-profit or not-for-profit organizations. Private health facilities are classified according to their structure and the services they provide. The majority are clinics and maternity homes and hospitals, owned by individual professionals or faith-based and other civil society organizations. They provide PHC services, but are not categorized in line with public facilities.

Health posts

Service delivery is primarily at the settlement, neighbourhood and/or village levels. The estimated population coverage is 500 persons. Health posts are headed by at least one JCHEW, who supervises CORPs working within the community. CORPs partner with skilled providers by encouraging women to enrol for essential antenatal care (ANC) and PNC, act as community educators to lend support for accurate maternal and neonatal health messages, identify pregnant women in the community who might need maternity services, distribute commodities/drugs to pregnant women in the community and treat minor ailments. It is expected that 40% of JCHEWs' time will be spent at the health post and 60% in the community (according to the WMHCP)(NPHCDA, 2007). Only outpatient care is offered here.

Primary health clinics

Primary health clinics deliver services to a group of settlements/neighbourhoods, villages or communities. The estimated population coverage is 2000 to 5000. Each facility should provide a 24-hour service. JCHEWs spend 60% of their working time in the health facility and 40% in the community, while CHEWs spend 80% of their working time in the facility and 20% in the community. Only outpatient care is offered at primary health clinics. Health personnel are allocated as shown in Table 7.5.b.

Table 7.5.b Standard staffing for primary health clinics

Standard staffing	Number
<i>Health care staff</i>	
Midwife or nurse midwife	2
CHEW (must follow specific instructions for supporting patient care in emergency situations)	2
JCHEW	4
<i>Support staff</i>	
Health attendant/assistant	2
Security personnel	2

Source: NPHCDA, 2010

Primary health centres

These centres deliver services to the political ward, with an estimated population coverage of 10 000 to 20 000. Centres are open 24 hours a day. Health personnel are allocated as shown in Table 7.5.c.

Table 7.5.c Standard staffing for primary health centres

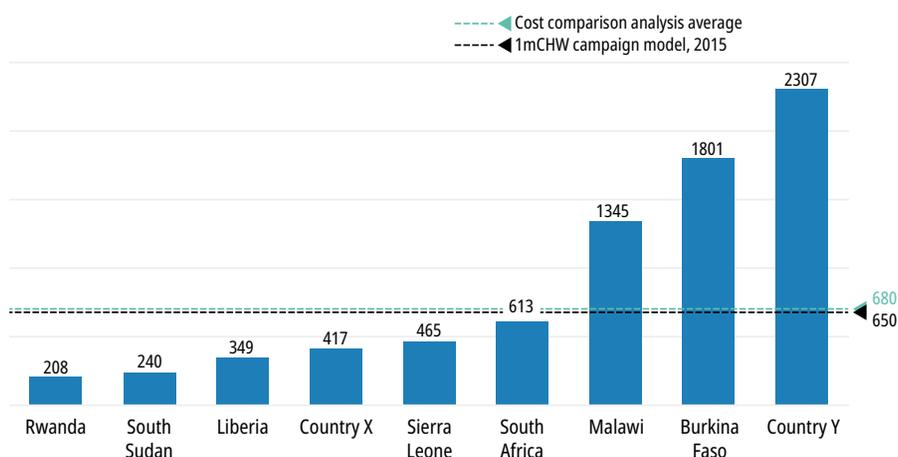
Standard staffing	Number
<i>Health care staff</i>	
Medical officer if available	1
CHO (must follow specific instructions for supporting patient care in emergency situations)	1
Nurse/midwife	4
CHEW (must follow specific instructions for supporting patient care in emergency situations)	3
Pharmacy technician	1
JCHEW (must follow specific instructions for supporting patient care in emergency situations)	6
Environmental officer	1
Medical records officer	1
Laboratory technician	1
<i>Support staff</i>	
Health attendant/assistant	2
Security personnel	2
General maintenance staff	1

Source: NPHCDA, 2010

Both inpatient and outpatient care are offered at this level, especially MCH care services. Of the 30 098 primary health centres nationally, 21 808 are public and 8290 are private. Of both categories, less than 25% are functional (Ibeh, 2023). There are 42 938 senior CHEWs, with the ratio of senior CHEWs to total population being 1 : 28 256, and 28 548 JCHEWs, with the ratio of JCHEWs to total population being 1 : 5914 (FMOH, 2018b). As a comparison, although data for senior CHEWs and JCHEWs are not available for the African region overall,

the average CHW-to-population ratio in sub-Saharan Africa was reported to be 1 : 680 in 2013, and varied widely from 1 : 200 to 1 : 2400 (McCord et al., 2013). In 2014, Kenya recorded about 64 000 CHWs (this number includes CHEWs), and Niger had a total of 7500 CHWs as at 2020 (Stodel et al., 2020). Fig. 7.5.a shows the average CHW-to-population ratio in nine additional countries in sub-Saharan Africa. Table 7.5.d shows the geographical distribution of primary health facilities in Nigeria. See also Chapter 6, Table 6.2.b.

Figure 7.5.a Average CHW-to-population ratios in nine countries in sub-Saharan Africa



Source: Gichaga et al., 2021

Notes: Countries X and Y are masked, awaiting formal government approval to share the data;
1mCHW = One Million Community Health Workers.

Table 7.5.d Distribution of primary health facilities per 100 000 population in Nigeria

Region	Primary health facilities
North-central	23.3
North-east	17.9
North-west	14.0
South-east	17.9
South-south	11.8
South-west	16.9

Source: Makinde et al., 2018

Key challenges at the primary health care level

- The north-central region has the largest number of primary health facilities per capita, followed by the north-east, south-east and south-west regions, respectively.
- At the PHC level, the minimum guidelines also provide for additional services, including mental health in PHC, primary oral/dental health, primary care of the elderly (in geriatric units), care of people with disabilities in PHC, and control of noncommunicable diseases. However, the functionality of these services is not documented.
- The majority of PHC facilities are in a non-functional condition. Structural and infrastructural issues are widely documented, including in a recent review of PHC facilities in five states and the FCT (FMOH, 2018b), and many facilities do not have the required equipment or pharmaceutical products.
- The quality of care provided in primary health centres is not well documented. Individual studies have documented a high proportion of patients being satisfied with various aspects of care at health centres, but others have noted variances in the availability of basic medical equipment and its functionality and gaps in basic drug availability, which compromise service provision and suggest that the majority of facilities surveyed could not meet the minimum standard for PHC service delivery (Oyekale, 2017).

Polices and agencies/committees aimed at improving PHC delivery have been developed, including:

- the NPHCDA and equivalent agencies at the state level (i.e. state PHC development agencies);
- the NHA, which aims to achieve UHC through an efficient PHC system and provides for a BMPHS through the establishment of the BHCPF;
- the National Strategic Health Development Plan II (2018–2022) (NSHDP II);
- the Primary Health Care Under One Roof initiative, which aims to integrate PHC activities;
- WDCs and health facility committees, which aim to create an enabling environment for the participation of communities in PHC;

- through a PHC summit held in 2022 with the theme “Re-imagining Primary Health Care in Nigeria”.

See Chapter 2, Section 2.5, for further information on the organization of the health care system and a list of recent reforms.

7.6 Secondary health care

SHC is delivered in both general and private hospitals. General hospitals are run by state governments, with each hospital covering several LGAs. SMOHs are responsible for SHC.

Service provision

The secondary level of care involves preventing, treating and managing a small range of minimally complex cases. SHC facilities include general hospitals, comprehensive health centres, district hospitals and specialist hospitals, which are run by both public and private providers. General hospitals offer both inpatient and outpatient care, provide accident and emergency services, and have diagnostic units. SHC acts as a link between primary care and highly specialized tertiary health care services.

- In addition to offering inpatient and outpatient services, some of the more established secondary care facilities, for example the Lagos Island General Hospital, offer additional services, including general medicine, surgical services, ophthalmology, orthopaedics, physiotherapy, maternal care and ANC, emergency services, pathology, blood bank services, radiology, dental care, chest clinics, medical rehabilitation and pharmaceutical services. Extra services such as ophthalmology, orthopaedics and physiotherapy are not routinely offered in the less well-established secondary care facilities.
- Comprehensive health centres offer fundamental medical services, such as preventive care, regular check-ups, immunizations, basic diagnostic testing and treatment for common illnesses and minor accidents. In addition, they provide maternity and child health services and family planning services.

- District hospitals, however, are located in rural or suburban areas and provide intermediate care, that is, between specialized care and primary care. They serve the health care needs of a specific district or LGA even though they may not offer services of the same level of specialization or have the same state-of-the-art medical equipment as general hospitals. They offer a broader range of services than comprehensive health centres.

Public versus private ownership

The 2019 Nigeria Health Facility Register, produced by the FMOH, put the total number of health facilities in Nigeria at 40 621. SHC facilities make up 14.2% of health care facilities (5780 out of 40 621 facilities). Of these, 78.7% are privately owned (including by faith-based organizations) and 21.3% are publicly owned. The large number of secondary private health facilities may point to specialists' preferences for working in private practice over government employment, or to the lack of positions in government-owned SHC facilities.

Regional distribution

Secondary health facilities are unequally distributed across the country, resulting in notable regional differences in the availability and standard of care provided. Secondary facilities are concentrated more in urban centres and in more economically developed regions such as the south-east, where there are 5.4 facilities per 100 000 population. At the other end of the spectrum, more rural areas in the north, such as Sokoto, Zamfara and Yobe, lack the same quantity or calibre of facilities (Ademiluyi and Aluko-Arowolo, 2009); for example, the north-west region has just 0.45 facilities per 100 000 population (Makinde et al., 2018). The disparities in SHC accessibility between urban and rural areas are primarily due to differences in resource distribution and infrastructure investment. Urban areas attract more resources, leading to better-equipped institutions and a larger pool of health care experts. Rural areas often lack adequate roads and transit networks, which affects service availability and quality (Ajala et al., 2005).

Health workers who work in public health care facilities are directly employed by the government, while those who work in private health care facilities are either contracted or own the facilities. Table 7.6.a shows the distribution of health workers by category and their density.

Table 7.6.a Health worker distribution and densities

Health worker category	Number	Health worker-to-population ratio	Ratio required to meet population needs
Doctors	24 600	1 : 8 836	1 : 600
Dentists	1 400	1 : 155 267	1 : 5 000
Nurses	249 566	1 : 1 677	1 : 5

Source: FMOH, 2018b

Service quality

Various studies on patient satisfaction with service quality in secondary health facilities in Nigeria have found that reliability and assurance are the most important elements influencing the satisfaction of users. Patients are generally happy with the quality of care they receive when empathy is exhibited. Private facilities are considered more convenient by patients and to have more empathetic health workers than public facilities. These findings suggest that patients value certain components of care more than others, and that public and private health facilities may differ in these components.

Hospital indicators

Data on hospital indicators for secondary care are very limited. As shown in Table 7.6.1, data on the average length of stay and occupancy rates for hospitals are limited to 2010 and 2021, respectively. The numbers of discharges and admissions have increased, suggesting that access to health care services has improved, which in turn suggests that infrastructure and outreach efforts have improved. Hospital mortality has also increased, however, possibly due to the COVID-19 pandemic. These data are crucial for understanding the efficiency and capacity of secondary hospital care services. Data on these indicators also offer crucial insights into Nigeria's secondary hospital system's performance and the challenges it faces, thus enabling informed decision-making by policymakers and health care providers to enhance public health outcomes.

Table 7.6.1 Hospital indicators related to secondary care (selected years)

	2010	2015	2020	Latest available year	Source
Average length of stay	5 days	NA	NA	NA	Puozaa, 2013
Occupancy rate	NA	NA	NA	53% (2021)	<i>Punch</i> , 2019
Total number of hospital discharges	NA	2 078 189	NA	3 215 083 (2023)	DHIS2, 2024 (as at June 2024)
Admission rate per 1 000 population	NA	13%	18.9%	21% (2023)	DHIS2, 2024 (as at June 2024)
Hospital mortality	NA	0.06%	6.86%	0.07% (2023)	DHIS2, 2024 (as at June 2024)

Notes: DHIS2 = District Health Information System 2; NA = data not available.

Role of digital services

Nigerian secondary care is embracing digital services to enhance health care provision. Electronic health records are being used to digitize patient health information. The introduction of digital services has encountered challenges, including inadequate information and communications technology (ICT) equipment, privacy risks, poor internet availability, information overload, low computer proficiency and budget constraints. However, there have also been notable successes. Secondary health facilities in Ondo, Lagos and Yobe states are implementing telemedicine platforms to provide remote health care services, such as teleconsultations, telephone triage and telemonitoring, which have significantly reduced maternal and infant mortality (Egenti et al., 2022). In addition, the use of ICT has had a major impact on the provision of high-quality health care services in Kogi state's SHC facilities; in particular, ICT use has improved patient safety by simplifying medical information when providing online treatment. The administration of SHC institutions should give priority to improving the integration of ICT into their operations (Nafiu et al., 2024).

Implementation challenges

Public secondary health services face several challenges. These include unequal distribution across the country, resulting in notable regional differences in

the availability and standard of care; shifts from clinical service delivery to population-based services; reduced budgets; difficulty in recruiting and retaining staff; and a lack of awareness about the professional training and roles of health educators. In addition, there are challenges related to system fragmentation, limited resources and ineffective delivery of mental health services for young adults (SciSpace, undated).

7.7 Tertiary care

Organization

Tertiary health care is organized and provided via varied settings, organizations and health care providers. Facilities include teaching hospitals, FMCs and specialized medical institutions. Health care providers include doctors, specialists, nurses, pharmacists and laboratory technicians. Support staff contribute to the smooth functioning of facilities. The distribution and composition of the different types of facility are influenced by their roles, functions and specialization areas.

- **Teaching hospitals**, often affiliated with medical schools and universities, consist of a mix of academic staff who are also medical practitioners, nurses or allied health professionals. These hospitals also have specialized departments for various areas of medical practice. Due to their role in medical education and research, teaching hospitals often have a higher concentration of academic and research-oriented staff than other medical institutions.
- **FMCs** offer patients specialized medical services, such as diagnosis and treatment. The workforce is usually composed of physicians, nurses, pharmacists, radiographers, laboratory scientists and administrative personnel as in teaching hospitals, but in smaller numbers. FMCs primarily focus on offering specialized health care services to the general public. The staffing structure in FMCs may vary depending on their size, location and areas of specialization.
- **Specialized medical institutions** focus on specific medical specialties or areas of health care, such as orthopaedic, psychiatric, eye, and ear, nose and throat specialties. These facilities often employ a multidisciplinary team of nurses, technicians, medical specialists and support personnel.

The variety of diagnostic tests available at tertiary hospitals is restricted by a shortage of equipment, supplies and skills.

Service provision

Tertiary facilities offer outpatient care, inpatient care, specialized care, teaching and research. Outpatient care includes consultations, diagnostic testing, minor procedures and the prescription of drugs. Inpatient care includes surgery, observation and rehabilitation. Specialized treatments include advanced surgery, cancer treatment and intricate diagnostic procedures. Medical students, interns, residents and nurses are often trained in these facilities.

Tertiary hospitals are run by the federal government and offer tertiary care and health workforce training in teaching hospitals and FMCs. Nigeria's private tertiary care sector, which is also under the regulation of the FMOH, includes hospitals, clinics and other facilities, and offers specialized consultative health care, including cardiology, cancer, neurology, orthopaedics and other cutting-edge procedures. These facilities have state-of-the-art machinery and skilled medical staff and offer specialty therapies. There is at least one tertiary health institution, in the form of a public teaching hospital or FMC, in each state and in the FCT. The regional distribution of tertiary health care facilities in Nigeria is uneven, with these facilities being more concentrated in major urban centres and more developed regions than in rural and less developed areas. For example, the north-west and north-east regions have the lowest concentration of tertiary health facilities, while the south-west and south-south regions have the highest concentrations (Makinde et al., 2018).

Service quality

The quality of services rendered in these facilities varies from one facility to another. Studies have recorded relatively high levels of patient satisfaction with services in the south-eastern region (Nwoke et al., 2021), while, in other regions, such as the south-south region, patients were dissatisfied (Etim et al., 2023). A long waiting time to be seen on admission, an unfriendly hospital environment, the inability to get all the prescribed drugs from the facility and the poor attitude of health care professionals were reasons cited for dissatisfaction, whereas cleanliness of the hospital environment, friendly

health workers, level of privacy given and cost of treatment were reasons cited for being satisfied.

Nigeria's tertiary hospitals have faced public criticism over substandard services and poor infrastructure (see Table 7.7.1 which sets out hospital indicators related to tertiary care). Challenges include the lack of vital equipment needed for emergency care of acute asthma and obstetric haemorrhage, inadequate electricity supply from the national grid, insufficient government funding and bureaucratic bottlenecks undermining staff recruitment and training. This situation differs from many countries that adopt global best practices for tertiary health care. For example, Egypt, Ghana, Kenya and South Africa have advanced health care systems, with specialized tertiary hospitals and modern facilities. These countries invest in medical infrastructure, research and professional training to enhance their health care systems. Kenya is working to improve infrastructure and expand access to tertiary services. In 2023, South Africa had the highest Health Care Index score, of 63.5 points, in Africa, followed by Kenya with 61.5 points, while Nigeria trails behind with 48 points (Cowling, 2024). The Health Care Index takes into account factors such as the overall quality of the health care system, equipment, cost and number of health care professionals, staff and doctors. The National Tertiary Health Institutions Standards Committee, established by the NHA 2014, is charged with maintaining tertiary hospital standards in line with global best practices. As such, they issue certificates of standards or penalties to substandard hospitals, which may include closure and the criminal prosecution of indicted officials. However, the committee is not functioning optimally and hence the standards are not enforced.

There are national policies and programmes to improve tertiary facility standards and hence quality of care. These include SERVICOM, which was launched in 2004 (SERVICOM, 2019), and the Patients' Bill of Rights of the Consumer Protection Council, launched in 2018 (CPC, 2018). The impact of these policies is not yet clear, but reports suggest that hospitals have not met desired standards (*Punch*, 2019).

Palliative care

Palliative care is relatively new in Nigeria and still at a developmental stage, although specific facilities do exist, for example the Centre for Palliative Care, Nigeria, at University College Hospital Ibadan, established in 2003, and the

Pain and Palliative Care Unit at the Oncology Centre of the University of Nigeria Teaching Hospital Enugu, set up in 2008. Palliative care has yet to be included as an area of specialization for health professionals and integrated into the health care system, contrary to the recommendations of the WHO (Chukwunyer, 2019).

In line with secondary care provision more generally, palliative care provision is unevenly spread. Many cancer treatment centres are located in urban areas, while rural areas have poor access because of distance and poverty. In the facilities that do exist, infrastructure and workforce challenges affect care. Radiotherapy centres lack functional machines and an adequate workforce. Hospitals and cancer care facilities lack physicians to prescribe controlled drugs such as morphine for pain relief (Chukwunyer, 2019).

Table 7.7.1 Hospital indicators related to tertiary care (selected years)

	2010	2015	2020	Latest available year	Source
Average length of stay	10.07 days	9.42 days	8.15 days	16.8 days (range 4–33 days) (2022)	Aloh et al., 2020; Medugu et al., 2022
Occupancy rate	43.16%	28.74%	42.14%	42.14% (2020)	Aloh et al., 2020
Total number of hospital discharges	NA	NA	NA	DAMA 32.3% (2021)	Madubueze et al., 2022
Admission rate per 1 000 population	NA	NA	NA	NA	NA
Hospital mortality	6.5%	4.2%	46.7%	34.1% (2022)	Eya et al., 2022; IB et al., 2022

Notes: DAMA = discharge against medical advice; NA = data not available.

Role of digital services

Tertiary health care institutions are implementing electronic health records to digitize patient health information in the country (Sawyer-George and Friday, 2023). Digital health record preservation is crucial in health care facilities, especially in tertiary hospitals, given that it allows quick access to patient health records for future reference. It is also important because tertiary hospitals in Nigeria generate a significant volume of health records daily, thus requiring substantial storage space, which can be challenging to find.

Nigeria has implemented an electronic health information management system in a few university teaching hospitals that supports patient, clinical, ancillary and financial information management, and enhances the digitalization of medical records. However, federally funded tertiary facilities have a significant way to go to reach telemedicine maturity. Policymakers need to increase health equity and ensure continuity and progress towards statewide deployment. The federal government has also increased e-health services in some teaching hospitals through Galaxy Backbone Ltd, a private enterprise that aims to provide efficient health care, reduce hospital stays and provide quick access to patient records in emergencies (Abari, 2023). Several potential obstacles could prevent tertiary facilities from fully implementing e-health. They include infrastructure issues, and a lack of workforce compliance.

Implementation challenges

Inadequate funding is one of the greatest challenges in tertiary health facilities, especially as these facilities handle complex health problems requiring highly skilled personnel and advanced technology, both of which are capital-intensive. Other challenges include the inadequate condition of medical equipment, inadequate staff training, delayed diagnostics and treatment procedures, and long waiting times for patients.

7.8 Traditional medical practices

Overview

Traditional medicine practitioners are those recognized by the community as competent to provide health care using methods based on practices and beliefs prevalent in that community (WHO, 1996). Traditional medicine in Nigeria comprises herbal medicine, bone setting, circumcision, maternity care, spiritual therapies, psychiatric care, music therapy, homeopathy and aromatherapy, among many other practices.

Nigeria has a long history and culture of traditional medicine, which contribute to the broad appeal of traditional medical practices. The majority of Nigerians (67–82% of adults) utilize traditional medicines, which are generally perceived to be natural with no side-effects (Niggemann and Grüber, 2003).

The first line of treatment for 60% of children with high fever resulting from malaria is the use of herbal medicine (WHO, 2000), and a significant number of hypertensive patients receiving conventional treatment at the tertiary health facility in Lagos have used complementary and alternative medicine therapies (Amira and Okubadejo, 2007). In addition, effective medicinal plants in the management of various diseases have been documented, including those used for the treatment of opportunistic infections associated with HIV/AIDS (Enwereji, 2008).

Widespread acceptability and usage, particularly in rural areas, is based on traditional medicine's perceived efficacy, availability, low cost, accessibility and conformity with patients' culture and religion, safety and dissatisfaction with orthodox health care services, which are considered expensive.

Implementation challenges

In practice, Nigeria runs a dual health care delivery system: the orthodox system and the traditional system. However, Nigerians are exposed to potential hazards from the parallel use of traditional and orthodox medicines, hence the need for regulation. Some orthodox medical practitioners object to traditional medicine practitioners because of the lack of standardization of dosage regimens and treatment failures, mainly due to poor training. NAFDAC grants approval for the public use of traditional medicines, especially those packaged as tablets, capsules and syrups, following laboratory tests. The practice of traditional medicine and traditional medicine practitioners are controlled by designated boards and committees at the state and local government levels, while the National Traditional Medicines Council (NTMC), at the federal level, develops guidelines (NAFDAC, 2012).

7.9 Emergency care

Overview

An estimated 10–15% of Nigeria's 1.6 million annual deaths take place in emergency departments (Adewole et al., 2012), and 75% of Nigerians have experienced a medical emergency in the last five years (Coker, 2019). The emergency medical services (EMS) system aims to provide safe medical care for

various emergencies, including medical and surgical interventions, obstetrics, paediatrics, accidents and disasters. The system includes components at every health system level, from bystander responses to tertiary interventions. The objective is to reach those in need of urgent medical care and treat those presenting conditions from the scene to the point of definitive care, typically in a hospital's emergency department. The system includes a continuum of prehospital, hospital and rehabilitative care, involving emergency personnel, communication systems, infrastructure, ambulance services, equipment and a functional trauma system in the receiving facility. In terms of linkages to existing primary, secondary and tertiary provision, bystanders refer patients outside hospitals to primary health centres for follow-up care for non-urgent cases. Patients are then transferred to secondary facilities if primary health centres are not able to cope, where EMS will provide emergency interventions. From secondary facilities, patients with severe injuries are transferred to tertiary centres, which manage complex medical problems, perform advanced surgery and administer specialized treatments.

EMS in Nigeria vary depending on the location, with urban areas having better accessibility due to better infrastructure, transport networks and proximity to health care institutions. Urban hospitals have the resources to manage various medical diseases, while rural areas face challenges such as inadequate roads, challenging terrain and limited numbers of ambulances and medical supplies. The federal government has implemented initiatives such as the Rural Ambulance and Maternal Transport initiative to reduce maternal mortality in remote areas by offering prehospital services and EMS. In terms of regional variations, insurgency and conflict affect emergency responses in northern Nigeria, with access to well-equipped hospitals being limited, while the south has a more developed infrastructure and better access to health care facilities.

In 2022, in a bid to boost emergency response, the FMOH launched the National Emergency Medical Service and Ambulance System (NEMSAS) to provide urgent health services to Nigerians at the point of distress, with no cost at the point of care, within the first 48 hours. However, there have been no subsequent reports regarding the initiative's activities or progress.

Organization and governance

The Federal Road Safety Commission (FRSC), National Emergency Management Agency (NEMA) and state medical emergency response team oversee emergency care provision. Until recently, however, services were fragmented, and there was no national coordination or governance structure. There was also no effective national three-digit medical emergency number, nor any shared facilities between states or nationwide data.

However, in 2022, the FMOH implemented NEMSAS, which establishes multisectoral partnerships to support the collaborative rolling out of efficient and effective emergency medical provision nationally. Partner organizations include:

- the Nigerian Road Safety Corps, which is an NGO focused on road safety advocacy, education and awareness that works alongside government agencies such as the FRSC but is not a government entity;
- the National Health Insurance Scheme;
- the Association of Nigerian Private Medical Practitioners;
- the Guild of Medical Directors.

The pilot implementation of the programme is ongoing in the FCT. NEMSAS is expected to reduce mortality by 50%. NEMSAS will coordinate all ambulance services and emergency treatment centres in the country. In partnership with the states, NEMSAS will share guidelines, establish state emergency treatment medical committees and set up state EMS and ambulance systems. NEMSAS and state committees will map existing state-level emergency provision and then provide infrastructure, equipment and personnel for the operation of a medical emergency response centre. A functional state social health insurance agency will support claim management. States will contribute 25% as co-funding.

Key emergency medical services stakeholders

Federal Road Safety Commission

Established in 1988, the FRSC is the country's number one agency on road safety administration and management. The agency has a presence in all states of the federation. Its functions include making the highways safe for motorists

and other road users, checking the road worthiness of vehicles, recommending works and infrastructure to minimize accidents on the highways, and educating motorists and members of the public on the importance of road discipline on the highways (Mac et al., 2019). The FRSC has vehicle ambulances equipped with medical gadgets and devices and a call centre with a unique toll-free number.

National Emergency Management Agency

Established in 1999, NEMA manages medical emergencies, including fire outbreaks, disease epidemics, flood disasters and road traffic accidents (Mac et al., 2019). Like the FRSC, it has a presence in all states. It is equipped with helicopter, vehicle and boat ambulances. It has a call centre with a national toll-free emergency number. The agency has beacon services that use tracking transmitters triggered during an emergency to help rescuers find survivors within the first 24 hours of an emergency (Mac et al., 2019).

State medical emergency response services

The EMS evolved from the use of ambulances for moving corpses pre-1990 to the introduction of a Tokaro EMS in Lagos in 1990 and a Niger Delta EMS in 1995 to aid rescue operations for oil company staff. The first statewide EMS system was established in 2001, namely the Lagos State Ambulance Service, but many of the ambulances were non-functional and the road traffic system at the time limited their capacity to reach emergencies (Cannoodt et al., 2012). Lagos and Rivers states made further attempts at running EMS by acquiring well-equipped ambulances in 2001 and 2002, respectively (Jasper et al., 2019). Other states, such as Oyo, Delta and the FCT, have implemented their own EMS with varying standards and levels of oversight (Oyedokun et al., 2023).

Maitama Hospital, Abuja

Located in Maitama District, Abuja, this federal government-owned medical centre is responsible for providing general medicine and specialized services. The hospital has a well-functioning accident and emergency care unit with vehicle ambulances, medical equipment and first aid devices. The accident and emergency unit call centre – known as the “Compound Unit” – operates a 24-hour service. The emergency call number differs from that of other institutions in the country (Mac et al., 2019). Emergency services are free of

charge, but relatives or victims pay for consumables and blood. The cost is between approximately US\$ 161 and US\$ 428 depending on the nature of the emergency and the organization involved in the rescue mission (Mac et al., 2019).

Private emergency medical services provision

Because of the government's slow pace in initiating nationwide EMS in the country, the private sector has begun to fill the gap.

Critical Rescue International

In 2001, Critical Rescue International (CRI) became the first formal private organization to provide EMS after a botched attempt by Tokaro EMS to do this in 1992. CRI aims to adhere to international standards and ensure that their ambulance personnel's knowledge is always kept up to date at emergency response services training facilities. CRI employs the services of experienced foreign paramedics to teach Nigerian paramedics.

Emergency Response Africa

Emergency Response Africa (ERA) was launched in 2021 to provide comprehensive prehospital care in Nigeria (Chinonso, 2023). It connects patients to a network of medical first responders, emergency vehicles and verified emergency-ready hospitals. A 24-hour command centre coordinates requests from the ERA toll-free number and mobile application. When a case is submitted, a medical first responder or ambulance is dispatched for immediate medical attention and transport to a health facility. ERA first responders are trained paramedics who stabilize patients and then transport them to an emergency-ready hospital. The network includes 82 verified hospitals in Abuja, Lagos state, Ibadan, Port Harcourt, Warri and Enugu. ERA also employs a motorcycle medic unit for faster first aid and emergency response. ERA offers an annual subscription plan for 35 000 Nigerian naira (approximately US \$25) per person, and provides access to emergency services, ambulances and an accident insurance product for additional financial protection.

Implementation challenges

Variation in provision and satisfaction levels

- Each ambulance from the FRSC and NEMA has a nurse and three paramedics when on an emergency rescue mission. The Maitama Hospital has a team of one doctor, three nurses and two paramedics (Mac et al., 2019). The (transport) delay time from the point of call to arrival is 15–30 minutes for Maitama Hospital and NEMA, and 35 minutes for the FRSC (Mac et al., 2019).
- The satisfaction levels with the EMS provided were reported as 24% for FRSC, 36% for Maitama and 70% for NEMA services (Mac et al., 2019). Causes of dissatisfaction included time delays before the arrival of the rescue team; lack of supplies and medications; and, despite FRSC and NEMA services being free, individuals being charged for services rendered by Maitama Hospital (Mac et al., 2019).

Poor sustainability

- In addition to the absence of qualified personnel and relevant ambulance equipment, sustainability is an issue. Most government ambulance services collapsed soon after being established when the government could not continue to inject funds into a system that generated no revenue, which has resulted in significant apathy and distrust for EMS nationally. Evidence suggests that only 3% of Nigerians call an ambulance service to get help during an emergency, despite the fact that the government has approved 112 as Nigeria's toll-free emergency number with national reach for fielding and dispatching distress calls. The vast majority (78%) of Nigerians call family and/or friends or otherwise source their own transport to hospital. On reaching a hospital, a significant proportion (44%) of emergency patients are rejected, have treatment delayed or are referred to other facilities without treatment. Dissatisfaction with emergency treatment is therefore high, with 64% of Nigerians indicating significant dissatisfaction (Coker, 2019).

Low levels of public awareness

- Efforts to sensitize and mobilize the general public around EMS have been limited, contributing to public apathy. Even where government-owned EMS exist, surveys suggest that the majority of the public do not know the emergency number to call, what information to relay or the actions they can take to sustain a patient's life while waiting for EMS to arrive.

Possible reforms

- Commentaries published by health care professionals have characterized deficiencies in the Nigerian emergency care system and offered potential solutions. For example, Nigeria needs to revamp and improve education in EMS, including by providing for functional ambulances, specialists and consumables. Promoting unique call numbers and reducing call times can reduce deaths and disabilities. The benefits of prehospital emergency care can be maximized by training community volunteers in vital interventions such as keeping a patient's airways open, controlling external bleeding and immobilizing fractures using local materials and resources.

7.10 Specialized services

Overview

The public and private sectors provide specialized services in Nigeria. Almost all specialized care services are available in urban areas only. Specialized hospitals in the public sector include national neuropsychiatric hospitals, national orthopaedic hospitals, national eye hospitals and national ear, nose and throat hospitals. In addition, specialized health care services are provided by teaching and specialized hospitals owned by federal and various state governments. These specialized services include but are not limited to cancer diagnosis and care (oncology) (see Section 7.6 for further detail on specialist palliative care provision), cardiology, nephrology and assisted reproduction,

among others. In addition, specialized health services such as dentistry and eye care are also provided in both public and private settings.

Mental health services

Mental illness, including depression, anxiety and schizophrenia, affects 20% of Nigerians (Idoko, 2023). However, stigma and limited workforce capacity or expertise to cater to mental disorders at the PHC level hinder seeking help. The scarcity of psychiatrists, with only 250 for a population of 200 million, highlights the urgent need for attention to mental health in the country. Nigeria is addressing mental health discrimination and stigma through advocacy, education and policy change. Public campaigns, educational initiatives, community engagement programmes and school-based programmes aim to raise awareness and reduce stigma. A holistic approach involving cross-disciplinary collaboration, robust mental health education and community-based awareness-raising initiatives is also being implemented.

Dentistry services

Public dentistry services are typically provided by government-run health centres, community health clinics and hospitals, with dentists, dental assistants and dental hygienists providing care. Private dental clinics, often located in state capitals and commercial districts, are independently run and owned by dentists; they offer services similar to public settings but with individualized attention and cosmetic dentistry options. As at 2012, a total of 446 dental clinics and hospitals provided oral health care services across the country (Adeniyi et al., 2012). More than half of the facilities are located in the southern part of the country. About 50% of providers in the southern zones belong to the private sector, and about 50% of private providers are based in Lagos State alone. The majority of skilled personnel for dental care are located in the southern zones of the country, particularly in cosmopolitan cities such as Lagos and Port Harcourt. The management of these facilities is influenced by their funding lines, which may derive from government (federal or state), private, corporate or faith-based bodies. Most dental facilities are in urban areas.

Eye care services

Nigeria has a potential pool of 550 general ophthalmologists, 1500 optometrists and 170 ophthalmic nurses for specialist training in child eye health. However, there is a shortage of anaesthetists, pathologists and plastic surgeons for child eye health orientation. The Nigerian Paediatric Ophthalmology and Strabismus Society has established a one-year modular fellowship programme, accredited by six centres and taught by existing paediatric ophthalmologists. The programme supports faith-based facilities and short courses for other team members. School eye health is virtually synonymous with sporadic school screening, mainly for refractive errors and prescription of glasses, supported by NGOs, including optometric associations (IAPB, 2015). There is marked maldistribution of the specialized eye health workforce between geopolitical zones, which is highest in the south-west and lowest in the north-east. Even within states, there is rural/urban inequity.

Organization of services

NSHDP II provides direction for implementing these specialized services. Other policies relevant to the delivery of specialist care include:

- the National Eye Health Strategic Plan (2014–2019)
- the NPHCDA's Minimum Standards for PHC in Nigeria (2015)
- the Primary Health Care Under One Roof (2016)
- the National Eye Health Policy (2019)
- the National Eye Health Strategic Development Plan (2024–2028)
- the National Oral Health Policy.

There is no official programme to promote oral health in schools and the promotion of dental health is limited.

Non-state provision

Several NGOs have collaborated with many state governments (e.g. Cross River, Kaduna, Kwara and Sokoto states) to establish eye care programmes aiming for eye care services that are accountable, affordable, equitable, integrated and sustainable (Muhammad et al., 2019). In addition, FHI 360's Integrated Health for

Refugees and Vulnerable Populations in Nigeria project offers gender-sensitive health services to refugees in Cross River State. It also provides capacity-building and emergency preparedness training for people with disabilities.

Referral system

The connection between primary, secondary and tertiary care and specialized health services is made easier by defined referral protocols and pathways. A health worker in a health centre will refer a patient to a secondary care facility for additional assessment, diagnostic testing or treatment by specialists if the patient has a condition that cannot be treated at the primary health centre. Giving the patient a two-way referral letter or form that includes pertinent medical information and the purpose for the referral is one step in the referral process. Although patients may occasionally be referred straight from the health centre if their condition needs rapid specialized attention, secondary care facilities are the usual source of referrals to specialized centres (see Section 7.3 for further details).

Implementation challenges

Challenges of implementing specialized health services such as mental health services, dentistry services and eye care services include the lack of understanding of the root causes of mental illness, lack of financial support to get mental health treatment, lack of social support (family, friends, neighbours), the fear of stigmatization, and the lack of integration of eye and dental care into PHC. In addition, implementation is held back by a communication gap between health facilities that make and receive referrals, a lack of specialist care capacity, challenges convincing patients of the reasons for referrals, and a lack of ambulances and of bed spaces to accommodate patients and caregivers in health facilities receiving referrals.

7.11 Recent reforms

Nigeria's health care system has undergone significant changes and reforms, which aim to improve service delivery, enhance health outcomes, make health care more accessible and address structural issues, as outlined below

(see Chapter 2 for further details on all health-related policies and health system governance more broadly). The reforms introduced aim to address critical aspects of Nigeria's health care system, but challenges such as funding limitations, infrastructure constraints, cultural barriers and logistical difficulties have impacted their full realization. National and international actors play crucial roles in policy development, implementation and support, yet sustained success requires overcoming these obstacles for effective health care delivery nationwide.

National Health Act 2014

The National Health Act 2014 provides a legal framework for the regulation, development and management of Nigeria's health care system. It established the BHCPF to enhance the financing of PHC, health care access and quality of care. The BHCPF reforms provide many operational challenges, bureaucratic roadblocks and insufficient funding. National government agencies, policymakers, health care institutions and international organizations have supported its implementation. The act was intended to reduce medical tourism in Nigeria since illnesses that could be treated in Nigeria would no longer be referred outside the country. Inadequate financial support, bureaucratic hurdles and challenges in coordinating stakeholders have hindered the full realization of its objectives.

National Health Insurance Authority Act 2022

In 2022, the National Health Insurance Scheme Act of 2004 was repealed by the NHIA Act. Through the promotion, regulation and integration of health insurance systems, the act seeks to achieve UHC for all. The act gives the 36 states of Nigeria and the FCT the authority to create and oversee their own contributory plans and health insurance policies, while ensuring that all of their citizens have access to medical care. There is also a provision for enrolment into complementary private health insurance schemes. The NHIA will, in conjunction with the states of the federation, provide a basic minimum health care package to all Nigerians. This act also provides for establishing the Vulnerable Group Fund to subsidize health care services for vulnerable groups (defined as children aged under 5 years, pregnant women, people

aged over 60 years, the physically and mentally challenged, and the poor) (FGN, 2022c). NHIA accredits health maintenance organizations, mutual health associations and third-party administrators, and performs functions defined in the act, including collecting and promptly remitting contributions. The NHIA has developed strategies, roadmaps and operational guidelines to ensure the proper implementation of the act. Advocacy for financing the Vulnerable Group Fund has also been carried out.

Primary Health Care Under One Roof (2016)

To streamline the management and coordination of PHC services for efficiency, Primary Health Care Under One Roof aims at integrating PHC services under one authority at the state level. States have had varying success in integrating services, and there are still issues with consistent implementation, bureaucratic resistance and funding issues.

Nigeria's Health Sector Renewal Investment Initiative (2023)

The Nigeria's Health Sector Renewal Investment Initiative was presented by the federal government as part of its attempts to attain UHC by 2030. To enhance health outcomes, the initiative will use the BHCPF in conjunction with state governments and development partners to implement a sector-wide approach (SWAp) strategy. It is anticipated that the BHCPF, which represents 1% or more of the Consolidated Revenue Fund, will receive a minimum of US\$ 2.5 billion in pooled and non-pooled financing between 2024 and 2026 to enhance the country's primary health system. The plans also include significant investments in health infrastructure and equipment for hospitals, the provision of essential commodities, the expansion of health insurance and heightened attention to the welfare of the health workforce. This includes initiatives to provide at least 17 000 operational PHC clinics throughout all 36 states and the FCT, and these PHC clinics will be linked to a comprehensive emergency care system.

To ensure transparent reporting, the federal government will make resource allocation, releases and results transparent to all stakeholders, including government bodies, nongovernmental partners, civil society organizations and citizens. To address the rising prices of pharmaceuticals, the federal government plans to establish a mechanism for the pooled procurement

of critical pharmaceuticals in 2024. This initiative aims to lower costs and guarantee quality, while making life-saving medications more affordable for the poorest Nigerians.

In the medium term, the President's initiative to unlock the health care value chain will see Nigeria manufacturing an increasing share of its generic drugs, medical devices and associated content, such as vaccines, over time. This will reduce the dependency on external suppliers. The comprehensive strategy outlined involves assessing existing facilities, improving infrastructure, ensuring a sufficient health workforce and actively engaging local communities for feedback. A strategy to actualize this initiative was signed in Abuja by governments at all levels and development partners to commemorate the 2023 Universal Health Coverage Day.

Implementation challenges

Political and institutional challenges hindered implementation. Institutionally, horizontal and vertical fragmentation of authority within the sector impeded coordination. Politically, electoral cycles led to frequent turnover of sectoral leadership, while senior politicians did not intervene to support fundamental institutional reforms. Lack of implementation of some of the reforms at the state and local levels limits the formal powers of coordinating bodies such as the National Council on Health and the Governors' Forum. Nigeria's Constitution does not give the FMOH control over SMOHs or LGAs, limiting top-down accountability for health service delivery (Croke and Ogbuoji, 2024).

Chapter summary

Chapter 7 describes and analyses how and where essential health services are organized, delivered and managed in both the public and private sectors. Nigeria's health system is categorized into primary, secondary and tertiary health care. PHC is overseen by local government councils, while state governments and health ministries are responsible for delivering SHC. Tertiary health care is structured into teaching hospitals, FMCs and specialized medical institutions, but the distribution of tertiary health facilities is uneven.

The PHC level is the weakest level of health care delivery. However, facilities that can deliver essential health services are lacking at the primary, secondary

and tertiary levels. Specialist and emergency services exist but are insufficient. Specialized services are confined primarily to urban areas and their provision is often dictated by funding sources. Referral systems are suboptimal, and many patients bypass lower levels of care to access higher levels of care. Emergency medical care exists, but many communities lack ambulance services and prehospital care, and hospital units are ill-equipped to resuscitate critically ill patients. Palliative care is new in Nigeria, with poor access in rural areas and infrastructure challenges indicative of the larger difficulties in ensuring the fair and equal distribution of health care services. Despite the existence of quality assurance mechanisms, they are not being effectively used.

Strong community-level structures exist to provide health care services to people who lack access, utilizing a mix of public and private sector providers. However, these structures have not yet translated into the scaled-up delivery of essential health services at the PHC level. This discrepancy constrains progress towards achieving UHC and the health-related Sustainable Development Goals, especially in relation to MCH and communicable and noncommunicable diseases.

Traditional medicine services are popular due to their perceived efficacy, availability and cultural compatibility. However, the coexistence of traditional and contemporary medicine poses possible risks, emphasizing the need to regulate and incorporate traditional medicine practices into the health system, to guarantee patient safety and advocate for evidence-based health care practices.

Service delivery reforms will improve basic package provision and thus progress towards achieving UHC, but implementation challenges remain. Recent reforms to allocate at least 1% of the Consolidated Revenue Fund to the BHCPF will improve service delivery, by providing one functional PHC centre per ward and one general hospital per LGA. In addition, it is hoped that recent FMOH policy reforms using the SWAp strategy and the gateways of the BHCPF, especially the NPHCDA and emergency transport gateways, will revitalize service delivery and decrease health burdens. The financial autonomy that was recently granted to LGAs should also enable them to offer better support at the PHC level for better service delivery.

Health information and information systems

By **Chinyere Mbachu, Chinazom Ekwueme, Ifeyinwa Arize and Nkiru Ukor**

Chapter 8 key messages

- Nigeria has a well-crafted National Health Management Information System (NHMIS) policy, and most states have equivalent state-level policies. However, aspirational policy provisions are not reflected in practice, and there is no standardized mechanism for the real-time use of routinely collected data for decision-making.
- The implementation of NHMIS policies is constrained by underfunding, inadequate information and communications technology infrastructure, a limited capacity to collect data and a weak culture of using data. There are few dedicated health records officers, coordination is poor and clarity is lacking on health information system roles and activities.
- The NHMIS deploys District Health Information System 2 (DHIS2) software to effectively capture routine health data. However, the level of adoption of DHIS2 remains low at the health facility level. The achievement of objectives set out in the NHMIS policy is constrained by poor data integration, incomplete data from public facilities and private sector underreporting.
- Health information system governance structures at the subnational level need strengthening, to monitor and enforce data reporting from all sectors. The level of data reporting by the private sector could be increased by stipulating that data reporting requirements must be met for annual operating licences to be renewed. Scaling up the DHIS2 mobile phone client to include all primary health centres and private hospitals could help address data completeness and underreporting.
- Data use in decision-making could be strengthened by raising awareness of available Federal Ministry of Health information products, such as the monthly bulletin.

8.1 Governance and organization of health information

Health information system policies and strategic plans

Nigeria's National Health Management Information System (NHMIS) evolved from the Federal Ministry of Health's (FMOH's) medical statistics system of the 1960s and the first National Health Policy of 1988, which called for the establishment of health information systems (HISs) at all levels of government. The NHMIS became operational in 1999.

The policies and guidelines governing HISs in Nigeria are set out in Table 8.1.a. See Chapter 2 for further information on policies and guidelines governing the health system more broadly.

Table 8.1.a Policies and guidelines governing HISs in Nigeria

Policy	Date introduced	Objectives	Implementation challenges
National Health Management Information System policy (FMOH, 2020c)	2020	To enable data coordination, data security, data availability and data use	Persistent fragmentation and duplication
National Health Management Information System Strategic Plan (FMOH, 2022f)	2021–2025	To provide operational guidelines for the National Health Management Information System Policy	Weak HIS capacity at the subnational level
National Health Policy (FMOH, 2016b)	2016	To establish HISs at all levels of government	
National Strategic Health Development Plan II (NSHDP II) (FMOH, 2018c)	2018–2025	To strengthen NHMIS capacity at all levels; data integration; data repository and sharing	
National standard operating procedure (SOP) for the collection and management of integrated routine health data in Nigeria (FMOH, 2022f)	NA	To promote timeliness and set out responsibilities in relation to data management procedures	Adherence to the SOP is suboptimal and linked to resource constraints
National Health Act (NHA) 2014 (Part IV, Section 5, Subsections 1, 2 and 3) (FGN, 2014)	2014	To ensure data privacy and clarify under what circumstances data can be shared	NA
Standard operating procedure for Community Health Management Information System (FMOH, 2022f)	2022	To ensure an efficient monitoring and evaluation system for data collection and management within community health structures (FMOH, 2022f)	Not yet implemented

Note: NA = data not available.

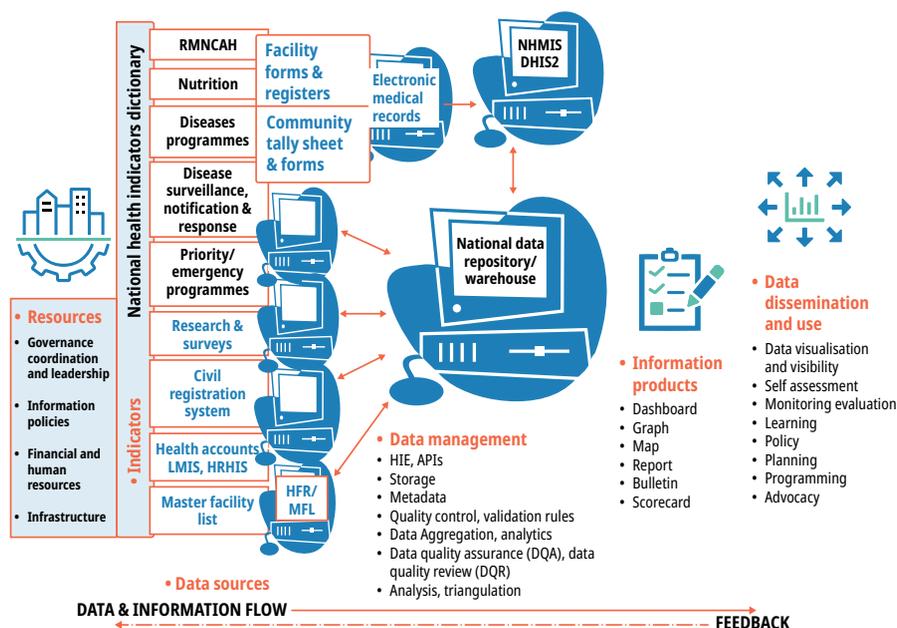
Health information system governance structure

Nigeria's HIS is summarized in Figure 8.1.a. The HIS governance structure provides direction on investments in HISs. It promotes the use of data for decision-making at the federal, state and local government area (LGA) levels, and includes the Health Sector Technical Working Group on Monitoring and Evaluation (M&E) and HIS coordination platforms, namely (i) the Health Data Governance Council (HDGC), (ii) the Health Data Consultative Committee (HDCC) and (iii) the Inter-ministerial Governing Body for Information and Communications Technology (ICT) for Health. The roles of these coordinating bodies are outlined below:

- The **Health Sector Technical Working Group on M&E** strengthens partnerships and collaboration among stakeholders involved in health sector M&E activities; provides technical guidance and oversight for the development and implementation of M&E components of strategic plans (such as the National Strategic Health Development Plan) and annual workplans; identifies and proffers solutions to M&E challenges; and makes recommendations to the Health Data Governance Council.
- The national **HDGC** is replicated at the state level. At the federal level, it is chaired by the Coordinating Minister of Health and provides oversight and governance for health data in Nigeria. The HDGC coordinates the different stakeholders at all tiers of government in the implementation of the HIS policy. At the state level, it is chaired by the Commissioner for Health (FMOH, 2020c).
- The HDGC is supported by the **HDCC** at the federal and state levels. The HDCC is a multisectoral technical advisory group to the HDGC and comprises experts from various departments, agencies and parastatals within the FMOH; HIS technical staff from the National Bureau of Statistics (NBS) and National Population Commission (NPC); and partners from multilateral and bilateral organizations (FMOH, 2020c).
- The **Inter-ministerial Governing Body for ICT for Health** operates nationally to ensure sustained partnership and linkages between all stakeholders. The body has representation from all health system levels and provides the sustained strategic alignment of health ICT activities for all stakeholders (FMOH, 2020c). It

maintains a list of stakeholders and publishes quarterly briefs on progress to foster communication among partners. However, there are no clear guidelines for engaging stakeholders and integrating data collection (FMOH, 2020c).

Figure 8.1.a The Nigerian health information system



Source: FMOH, 2020c

Notes: API = application programming interface; DHIS2 = District Health Information System 2; HFR = health facility registry; HIE = health information exchange; HRHIS = human resources for health information system; LMIS = logistics management information system; MFL = master facility list; RMNCAH = reproductive, maternal, newborn, child and adolescent health.

Although the current governance structure is designed to ensure that vertical disease control and health programmes contribute to the overall strengthening of the HIS, in practice the roles and responsibilities of stakeholders overlap, which signals poor coordination (FMOH, 2018c). Prior to the advent of disease-specific programmes in the 1990s, Nigeria had a functional medical statistics system, with data on mortality, morbidity, the labour force and hospital activities being routinely collected and published on a quarterly and an annual basis. The emergence of vertical disease programmes (e.g. on polio, malaria control and sentinel surveillance, an expanded programme on immunization and the

United States President's Emergency Plan for AIDS Relief) and the creation of health parastatals such as the National Primary Health Care Development Agency (NPHCDA) and the National Agency for the Control of AIDS (NACA) have severely weakened the overall HIS. Each of these structures has established their own separate information systems, with varying success.

Relevant actors and institutions in health information systems

The roles played by various federal ministries, departments and agencies are summarized in Table 8.1.b. The FMOH is the primary actor in health data governance, supported by its agencies and parastatals: the NPHCDA, NACA, the National Agency for Food and Drug Administration and Control (NAFDAC), the National Health Insurance Authority and the Nigeria Centre for Disease Control and Prevention. The M&E division of the FMOH's Department of Health Planning, Research and Statistics (DHPRS) synthesizes and validates health data.

The major contributors to health data include disease (malaria, tuberculosis (TB) and HIV) control programmes; the maternal, neonatal and child health (MNCH) programme; and family planning programmes. These programmes collate data from health facilities nationwide. Other government players outside the health sector include the Federal Ministry of Communications, Innovation and Digital Economy, the NBS, the National Institute for Pharmaceutical Research and Development, and the NPC, all of which collate data on vital statistics.

Health information architecture and data systems

The national health information architecture comprises a collection of digital tools and processes that cut across the three tiers of the Nigerian health system (FMOH, 2016b). As shown in Fig. 8.1.1, the national digital or e-health architecture, while still aspirational, aims to identify several capabilities of a digitally enabled health system, including the ability to capture and exchange patient-level health care information; exchange and report on aggregate health care information; enrol and pay for health insurance and verify coverage; send appointment and care reminders to patients and health workers; and support health care provision using telemedicine consultations and diagnostics.

Table 8.1.b Summary of key roles of federal ministries, departments and agencies within the context of ICT for health

Government agencies and departments	Key role
Department of Health Planning, Research and Statistics (DHPRS)	<ul style="list-style-type: none"> • Provides leadership for national HISs • Responsible for coordinating policies in conjunction with the Department of e-Government • Involved in reviewing and updating master plans and roadmaps in the ICT sector
National Primary Health Care Development Agency (NPHCDA)	<ul style="list-style-type: none"> • Provides oversight for primary health care policy and the Midwives Services Scheme; has its own M&E and ICT units
National Information Technology Development Agency (NITDA)	<ul style="list-style-type: none"> • Oversees the National ICT Policy and provides services through the NITDA Act (2007) • Tasked with entering into strategic alliances with the private sector and international organizations
National Agency for Food and Drug Administration and Control (NAFDAC)	<ul style="list-style-type: none"> • Provides oversight for food and drugs • Is mandated to provide the national Mobile Authentication Service • Oversees the drug and medicines database
Department of e-Government	<ul style="list-style-type: none"> • Leads the formulation and supervises the implementation of the national ICT policy • Coordinates and supervises ICT programmes across all ministries

Source: FMOH, 2020b

Health data in Nigeria are aggregated and managed using various systems and platforms including District Health Information System 2 (DHIS2), the National Malaria Data Repository (NMDR), HIV electronic medical records (EMRs) and the National Data Repository, the National Electronic TB Information Management System (including e-TB manager and GX-Alert) and the Stop Transmission of Polio Data Management system (Benke et al., 2017; Global Fund, 2022).

DHIS2 is the government-approved and government-adopted web-based platform for reporting aggregate health data from health facilities. DHIS2 is compliant with the digital enterprise architecture and allows for the import of patient-level data from EMRs (FMOH, 2016b). Aggregated data are transmitted electronically from LGAs to the state and federal levels using a

web-based platform. However, transmission from health facilities to LGAs is still largely paper based. Some health facilities have begun to adopt EMRs for patient-level data. However, only a few EMRs are interoperable with DHIS2 (eHealth4everyone, 2017).

To ensure the capture of health data at the community level, DHIS2 is supported by the Community Health Management Information System (CHMIS). The CHMIS compiles data on 218 indicators across the areas of maternal, newborn and child health care; communicable and noncommunicable diseases; strategic behaviour change communication activities; violence against health care workers; deaths; health commodity distribution and availability; and ward development committee (WDC) activities. The system relies on the voluntary service of community members, termed “ward focal persons”. The CHMIS is being piloted in 11 states across the country. Although the pilot is ongoing, early data from implementation show that three states (Enugu, Cross River and Nasarawa) have had reporting rates of 100% over seven months. This success is attributed to the participation of community health influencers and promoters who facilitate data collection and/or reporting (FMOH&SW, 2023a).

The NMDR is mostly integrated into the DHIS2, while the integration and harmonization of HIV indicators from EMRs into the national DHIS2 is incomplete. Similarly, integration of the e-TB manager is incomplete (Global Fund, 2022).

Financial and human resources for health information systems

Significant infrastructure and human resource investments have been made by the government and donors to strengthen health data management and DHIS2 integration. In the 2020–2022 funding cycle of the Global Fund’s new funding model for resilient and sustainable systems for health, grants of over US\$ 20 million were allocated to strengthening HIS management and DHIS2 integration (Global Fund, 2022) (see Table 8.2.a). A total of 198 million Nigerian naira (US\$ 436 880), approximately 0.05% of the Nigerian Capital Development Fund for the FMOH, was allocated for health data infrastructure in the 2023 Appropriation Bill (FGN, 2023).

The NHMIS policy (2020) recommends that at least 2% and 1% of the annual budgets of health and health-related institutions at all levels be allocated to HISs and HIS data governance, respectively. This objective has not been

achieved, thus contributing to Nigeria’s huge dependence on donor funds for HIS activities.

Nigeria’s health workforce has limited digital management skills and there are inadequate numbers of health records officers and statisticians (Adeleke et al., 2015b). As of 2022, there were 9512 licensed health information management officers, translating to 4 per 100 000 population, and there were 35 808 health information management technicians, translating to 15 per 100 000 population (FMOH, 2022d). The rates of staff turnover and attrition of these cadres of health workers are high at all levels of government.

Although some financial investments aimed at improving HISs have been used to train health records officers on using DHIS2, data analysis, and software and database maintenance, this has not translated into the optimal availability of human resources for health information systems (HRHISs) (FMOH, 2015b).

Figure 8.1.1 National digital or e-health architecture



Source: FMOH, 2016b

Notes: HRH = human resources for health; NHIS = National Health Insurance Scheme; NIMC = National Identity Management Commission.

8.2 Infrastructure and consolidation of systems

Policies on ICT development and connectivity

In addition to the policies listed in Section 8.1, health ICT development and use is governed by the National Health ICT Strategic Framework (2015–2020) that was developed in 2014 to fulfil the need for a coordinated ICT strategy. The framework aimed to build a digitized and integrated HIS infrastructure and contribute to achieving universal health coverage by 2030 through the establishment of a workable strategy for installing and maintaining ICT equipment (FMOH, 2016b). However, end-term evaluation of the framework indicated weak implementation due to challenges in the national digital health environment – including challenges pertaining to legislation, standards, infrastructure and architecture (FMOH, 2021a).

The current National Digital Health Policy (2021) and the National Digital Health Strategy (2021–2025) aim to roll out solutions to strengthen the digital health environment (FMOH, 2021c,d). A 20-member implementation committee, headed by the Minister of State for Health and Social Welfare, was inaugurated in March 2024, with a mandate to “midwife data policy, regulation, repository management and serve as an ombudsman to establish a national digital health environment that will support the scale-up of digital health interventions” (Anyanwu, 2024).

Governance of health ICT activities

The national HIS policy stipulates that the DHPRS of the FMOH is responsible for planning, coordinating, reviewing and updating the master plan and roadmaps for digital health (FMOH, 2014a). In addition, the National Health ICT Strategic Framework (2015–2020) clearly outlines the governance structures for health ICT (digital health) (FMOH, 2016b). The governance structures include (i) the National Council on Health (NCH), (ii) the National Digital Health Steering Committee, (iii) the Digital Health Technical Working Group, (iv) the Digital Health Project Management Team and (v) the National M&E Advisory Group.

The country's vision for digital health is owned by the NCH – the apex health policy-making body – the same body that also approves periodic updates from the National Digital Health Steering Committee (FMOH, 2016b).

The DHPRS of the FMOH chairs the steering committee, which comprises representatives from other departments, agencies and programmes. The steering committee oversees digital health planning, implementation and evaluation, and ensures that investments and activities align with the country's health system priorities (FMOH, 2016b).

The technical working group provides technical and operational guidance to the steering committee and the project management team. The M&E advisory group ensures that the M&E of health ICT activities are linked to the NHMIS (FMOH, 2016b). Poor functionality of both the steering and technical committees means that these structures have not matured as planned and have achieved limited advances in health ICT to date.

Standards and norms for ICT equipment and connectivity

National policies and plans recognize the need to set and enforce standards and interoperability (FMOH, 2020b,c). The Nigeria e-Government Interoperability Framework specifies tools and guidelines for supporting the interoperability of information systems. It aims to promote strategic alliances with the private sector and cross-collaboration of stakeholders in digital health (NITDA, 2019). A national implementation committee was set up in 2022 to govern and advise on digitization processes across ministries, departments and agencies (MDAs), and a 488-member technical working group was inaugurated comprising representatives from various MDAs.

Availability and distribution of ICT equipment and connectivity

Deploying basic ICT equipment and infrastructure in all states, LGAs and health facilities is a national priority that is routinely provided for in annual health budgets. The health sector has benefited from the procurement and deployment of computers, mobile phones, printers, modems and generators for state and LGA health information offices. The 2023 Appropriation Bill provides for more computers in phases across states (see Table 8.2.a).

Table 8.2.a Health data infrastructure provided for in the 2023 Appropriation Bill

Budget line	Amount appropriated (Nigerian naira)	Amount appropriated (US dollars)
Strengthen DHPRS at national and subnational levels to support the development of a responsive national health system	12 003 316	26 436.11
Scale up the use of telemedicine kiosks and other activities in the Federal Capital Territory	52 667 069	115 993.99
Strengthen the NHMIS (through improvements in DHIS2) to improve data quality and data use	10 002 763	22 030.09
Support the national health data governing structures at all levels	42 309 422	93 182.30
Support the production of annual health reports and state of the health of Nigerians as provided in the National Health Act (NHA)	12 397 327	27 303.88
Strengthen the national e-health management information system	4 732 375	10 422.59
Coordinate national surveys including the periodic HIS survey	30 985 615	68 242.74
Strengthen the routine health management information system including the architecture, enterprise and security system	38 000 000	83 691.22
Total	230 097 887	447 402.92
Nigerian Capital Development Fund	404 075 205 746	889 935 482.32
Multilateral aid and grants	2 501 350 000	5 508 974.78
Retained independent revenue	62 658 710 827	137 999 583.37

Source: FGN, 2022a

The most recent country-wide assessment of the availability of ICT infrastructure at all levels showed that, although basic ICT infrastructure was available at the federal, state and LGA levels, availability at the health facility level varied (FMOH, 2015b). Tertiary and secondary hospitals had basic ICT infrastructure, but most primary health care facilities lacked ICT infrastructure, including access to reliable electricity (FMOH, 2015b). As at 2018, only 6.45% of health facilities had internet connectivity (FMOH, 2015b).

Table 8.2.1 shows the trends in the availability of digital infrastructure for health across four indicators. The number of active mobile band subscriptions

increased from 6 subscriptions per 1000 population in 2010 to 417 in 2020, with a concomitant increase in mobile network coverage from 900 per 1000 in 2010 to 930 in 2021 (Gillwald et al., 2018). Data on the use of ICT show that, in urban areas, 51% of households have access to the internet, while 20.1% have access to the internet in the rural areas (NBS and UNICEF, 2021).

To fill the gap in ICT infrastructure at the primary health care (PHC) level, the DHIS2 mobile phone client, an application containing the harmonized NHMIS reporting form, was adopted and piloted in PHC facilities for HIV data reporting and contraceptive uptake monitoring. Although the mobile application was reported to be user-friendly, there were delays in data reporting due to lack of clarity of roles and responsibilities (NACA and FMOH, 2014).

Support for ICT equipment maintenance and repairs is lacking across the health system except at the federal level, where ICT staff within the FMOH and external consultants perform this function (FMOH, 2015b).

Availability and level of use of digital health

DHIS2 availability at the health facility level is extremely limited. Lack of adequate network coverage, unreliable power supply and high costs have a significant impact on the use of digital health data management across health facilities (FMOH, 2015b). The limited deployment of DHIS2 at the health facility level has necessitated the continued use of paper-based tools and the physical transmission of data from facilities to LGAs, which is not cost effective. Beyond data management, mobile health messaging is now commonly used in health facilities for communication with patients, providing reminders about facility visits and health promotion (Olajubu et al., 2020). The 2014 country-wide assessment of health ICT infrastructure showed that about 81% of health facilities reported using mobile health messaging to communicate with patients and communities (FMOH, 2015b). Digital tools are also utilized in logistics and supply chain management. The Nigeria Health Logistics Management Information System (NHLMIS) is an offline-capable, cloud-based application that collects, tracks and analyses logistics data in the pharmaceutical supply chain and supports decision-making management for public health programmes (Omo-Emmanuel et al., 2017). The NHLMIS is widely used for most donor-funded public health programmes. However, it is not utilized for routine patient care (Omo-Emmanuel et al., 2017).

Table 8.2.1 Indicators of digital infrastructure, selected years

Indicator	2010	2015	Latest available year	Source	African Region average
Active mobile broadband subscriptions per 1000 population	6	212.3	480(2023)	ITU,2023	407 (2021)
Population covered by a mobile network per 1000 population	900	927.1	930 (2023)	ITU,2023	896 (2021)
Proportion of facilities with a computer (%)	NA	NA	6.4 (2018)	ITU,2018	NA
Proportion of facilities that have internet connectivity (%)	NA	NA	7.5 (2017)	ITU, 2021	22.7 (2021)

Note: NA = data not available.

8.3 Data generation

Nigeria generates health data from various sources. Institution-based sources include public, private and faith-based health facilities at the federal, state and LGA levels, as well as government agencies and development partners involved in health programmes. Population-based sources include censuses, vital statistics and national surveys. Other health data sources include the National Health Accounts, HRHISs, logistics management information systems (LMISs) and the CHMIS.

8.3.1 Routine data sources and systems

Routine data from primary health facilities and private hospitals are summarized and submitted to the LGA at the end of the month using standardized tools. The data from the LGA are transmitted electronically to the state and the FMOH by the 15th day of the following month. Some secondary and tertiary facilities report data directly to the DHIS2 platform. However, data reporting from private hospitals, which account for 70% of health facilities in the country, and tertiary hospitals is incomplete (FMOH, 2018c). The 2023 Nigeria health system assessment shows that the proportion of public and private health facilities reporting on the DHIS2 is 93% and 47% respectively (FMOH&SW, 2023a). The NHMIS reporting rate was 87.4% in 2022 and 92.3% in 2023, while the on-time

reporting rate was 77.2% in 2022 and 84.8% in 2023 (DHIS2, 2024). Although the National Health Act (NHA) (2014) and NHMIS policy (2020) mandate private health facilities to report data, sanctions for defaulting are not enforced. This accounts for the persistence of incomplete reporting of health data by the private sector.

Although the FMOH has adopted DHIS2 software for health data management, the application has yet to be fully centralized as a data-collection tool. Health data are generated and stored in various repositories. Data from institution-based sources reside in the DHIS2 of the FMOH and the platforms of disease-specific programmes. Population-based data sources reside in various data archives and repositories of government and nongovernmental agencies. Efforts to warehouse these data sources and improve access to data for decision-making have not been successful (FMOH, 2020c).

Data from disease programmes are at various stages of integration into the NHMIS (see Section 8.1). Data for the malaria programme are reported on DHIS2. Moreover, data for reproductive health, maternal health, nutritional health and child health are also reported on DHIS2. However, indicators for mental health and epidemic-prone diseases (surveillance data) are not fully integrated into DHIS2.

8.3.2 Surveys and census data

Nigeria conducts census surveys, demographic and health surveys (DHSs), multiple indicator cluster surveys (MICSs) and several disease-specific or health programme-specific surveys. Verbal social autopsies have also been conducted to document neonatal and under-5 mortalities.

The last population census in Nigeria was carried out in 2006, and the NPC planned to conduct another census in 2023 (NPC, 2022) but post-election legalities prevented this. DHSs were conducted in 1990 and 1999 and have been every five years since 2003. MICSs, which collect data on MNCH indicators, have been conducted every four to five years since 1995, apart from an eight-year interval between 1999 and 2007, which was probably due to the election year 2003. Other health surveys are carried out irregularly.

In the past 10 years, Nigeria has conducted two DHSs (2018, 2023); two MICSs (2016, 2021); two verbal autopsy studies (2014, 2019); a malaria indicator survey (2021); three national nutrition and health surveys (2014, 2015, 2018);

and the Nigeria HIV/AIDS indicator and impact survey (2018). The FMOH and World Health Organization (WHO) are currently collaborating on a STEPwise survey to determine the country's prevalence and risk of noncommunicable diseases. All health surveys are coordinated by the FMOH through the Health Survey Coordination Branch of the DHPRS, and in collaboration with the NBS and NPC.

8.3.3 Vital statistics (birth, death and cause of death)

The NPC is mandated by law to collect vital statistics (on births, deaths, marriages and divorces) on Nigerians, non-citizens and refugees residing in the country, conduct censuses and establish vital registration systems nationwide. However, penalties for defaulting are not enforced.

The Civil Registration Act makes the registration of a child's birth within 60 days mandatory. The registration of a death should be done within 48 hours. The NPC works with the FMOH to ensure that all health facilities record vital events and report the data to the nearest local registration office of the NPC (FMOH, 2020b).

Local registration centres of the NPC are found across the 774 LGAs, with at least five per LGA. These report to the relevant state office and the national office. At local registration offices, the registration of births and deaths is done on paper and transmitted to the national electronic database from the state office. Death reporting typically emanates from health facilities, where a medical certificate of death is issued to the deceased's relatives to aid death registration at the nearest/local NPC registration centre. The cause of death is coded according to the International Statistical Classification of Diseases and Related Health Problems (ICD-10). A cross-sectional study in 2015 reported a national compliance rate of 88.2% (Adeleke et al., 2015a).

Birth registration rates stand at 43% (World Bank, 2022a). There are no data on the death registration rate in Nigeria on the World Bank database (World Bank, 2022b). However, a systematic review puts the death registration coverage in Nigeria at 10% in 2017 (Makinde et al., 2020). Nigeria depends on estimates for the determination of death rates, which sometimes leads to confusion, as estimates across several groups vary (Feyi-Waboso, 2016).

Most deaths occurring at the community level are not registered. However, plans are under way to scale up verbal autopsy to document probable causes

of deaths in the CHMIS. This will also entail adapting maternal and perinatal death surveillance and response to a community-based system that will capture maternal and perinatal deaths outside health facilities (Zewoldi, 2019).

8.3.4 Surveillance systems

Nigeria uses the Integrated Disease Surveillance and Response (IDSR) strategy prescribed by the WHO. Diseases under surveillance were selected based on morbidity and mortality, potential for outbreak, international listing, availability of simple case definition and control measures. These diseases are classified into epidemic-prone diseases, diseases targeted for eradication and elimination, and other diseases of public health importance (Isere et al., 2015). The epidemic-prone diseases and diseases targeted for eradication and elimination are immediately reported if a case is found.

The health facility is the basic operational unit of surveillance. However, surveillance occurs across the community, health facility (public and private), LGA, state and federal levels. Clinicians identify a notifiable disease using surveillance case definition, immediately notify the facility's surveillance focal person and fill in the IDSR forms. The LGA disease surveillance and notification officer (DSNO) promptly notifies the state epidemiologist and state DSNO, who relay the information to the FMOH. At the state level, data are entered electronically into the Surveillance Outbreak Response Management and Analysis System (SORMAS) and transmitted to the FMOH. SORMAS is a mobile and web-based software package for managing epidemic-prone diseases.

The LGA DSNO collects data weekly on cases and deaths resulting from notifiable diseases, and monthly for all other priority diseases. The scope of work of the DSNO extends to informal providers such as patent medicine vendors and traditional birth attendants. Routine reporting is accomplished through the abstraction of data from patient registers. The electronic mobile strengthening emergency and response system is used to transmit weekly reports to the state. However, because the transfer of information from the health facility to the LGA is paper based, the manual abstraction and physical transmission of data affects data quality, completeness and timeliness, causing possible delays in outbreak detection and response (FMOH, 2013b; Ibrahim et al., 2020).

8.3.5 Health systems and policy research and evidence-informed decision-making

Various policies, plans and structures support health systems and policy research, and evidence-informed decision-making. These include the NHA (2014), National Health Research Policy and Priorities (2014), National Health Policy (2016), National Malaria Operations Research Agenda (2015–2020) and the National Health Insurance Research Agenda (2021). The FMOH has developed a list of national health research priorities across all health programmes (FMOH, 2022b).

The NHA established the National Health Research Committee to promote health research in public and private institutions, ensuring that resources and the research agenda are directed at priority health issues (NIMR, 2022). The committee, which was inaugurated in 2020, comprises experts from various universities and research institutions nationwide. They are expected to “collate the research from the respective institutions and translate it to evidence-based health interventions” (Oyetomi, 2020).

The Nigerian Institute of Medical Research (NIMR) is a federal government institution mandated to generate research evidence for national health and development. The institute is structured into core research groups that reflect the research priorities of the country: malaria; HIV/TB; reproductive and population health; child and adolescent health; noncommunicable and metabolic diseases; neglected tropical diseases; communicable diseases; health system and policy; clinical trials; emergency preparedness and response; immunology and vaccinology; and traditional, complementary and alternative medicine (NIMR, 2022).

Apart from the NIMR, the FMOH and its health agencies play a role in health policy and systems research. The research and policy division of the DHPRS of the FMOH and supporting agencies are responsible for synthesizing research evidence from various sources and institutions and using it to inform policy and programme decisions or making it available to policy-makers at the subnational level. The DHPRS also uses state-level health data for evidence synthesis and use at the subnational level, and collaborates with academics, research institutions and non-state actors in research.

Most research in Nigeria is self-funded by the researchers and from external grants. The federal government funds researchers via the National Research Fund, managed by the Tertiary Education Trust Fund and accessible to researchers in tertiary institutions. Despite reviewing the National Health

Information System Policy to address collaboration and partnerships, including with academia, these areas still need to be improved for the effective implementation of NHMIS (Meribole et al., 2018).

8.4 Data validation and analysis

Opportunities abound for strengthening health data quality at the critical points of data generation (at the health facility level) and collation (at the LGA level). These include monthly supportive supervision of health facilities, monthly data validation meetings at the LGA level, quarterly data quality assessment (DQA) and integrated supportive supervision (ISS) conducted by state programme officers. Furthermore, there are plans for ward-level data validation, whereby data from facilities will be clustered at the ward level for validation purposes. Although data validation meetings and supportive supervision are being implemented across programmes integrated into DHIS2, they can be cumbersome for staff and cover only public health facilities.

In PHC facilities, the facility data management team (led by the facility manager) meets regularly to review health data before they are submitted to the LGA level. Control rooms are also operational at the state primary health care development agency level to improve data quality. These checks may need to be more consistent to be effective, even if they exist on paper.

Overall, poor data quality persists at all levels. Capacity for data analysis and use and feedback mechanisms could be stronger at all levels, and ISS remains suboptimal.

8.5 Dissemination and use of evidence

Although decision support tools have been embedded in DHIS2 software, NHMIS data are not systematically analysed and feedback is not provided to health institutions, limiting the use of NHMIS data for health planning and decision-making (Meribole et al., 2018). However, evidence from research and health programme reports is disseminated and does inform decision-making.

Various platforms exist for the dissemination and use of evidence for decision-making: (i) the FMOH website, where a monthly bulletin is published on NHMIS information; (ii) the prominent NCH, where policy decisions for the Nigerian health sector are made and reviewed annually following extensive

evidence-based deliberations; (iii) government advisory and technical working groups that meet regularly to synthesize evidence from the DHPRS and other sources and make recommendations to policy-makers; (iv) the convening of academic alliances, such as the Nigerian Academy of Science, which facilitates the formulation of evidence-based recommendations for policy-makers; and (v) consortia of disease-specific advisory groups, such as the Nigeria COVID-19 Research Coalition, which make recommendations to policy-makers based on syntheses and interpretations of research evidence (Onwujekwe et al., 2022).

8.6 Recent reforms

Nigeria adopted DHIS2 in 2010. Available evidence shows that the full-scale adoption of DHIS2 for HIV and TB control programmes in participating health facilities has improved the quality of health data reporting in relation to HIV/AIDS and TB in the country (Management Sciences for Health Nigeria, 2017). For these health programmes, the web-based software has helped promote data use for decision-making, by enabling access to electronic health data at all levels and through the provision of a dashboard display of summarized health information that can be customized to the specific needs of decision-makers (Shuaib et al., 2020).

The NHMIS policy (2020) provides the framework for integrated health data governance and sustainability, data architecture, indicators and data use, data security and guidance on how policy is to be implemented at the subnational level, including the CHMIS and M&E (FMOH, 2020b,c). External partners have contributed to establishing robust health data management tools and systems such as DHIS2, M&E frameworks and LMISs for MNCH and family planning. The United Nations Population Fund supported the FMOH in developing the NHMIS policy to improve health data management. Support has also increased from external partners for strengthening LMISs to provide supply and consumption data on health commodities.

The Nigeria Health Sector Renewal Initiative, formerly the Nigeria Health Sector Investment Programme (2023), envisages a digitized health system in which decision-making is backed by data (FMOH&SW, 2023b). However, the initiative has yet to be implemented.

Chapter summary

Chapter 8 describes the HISs that Nigeria has in place to collect and share data in order to guide policies, programme management and practice. Nigeria has an established NHMIS policy and most states have equivalent state-level policies. The NHMIS deploys DHIS2 software to capture routine health data effectively. DHIS2 harvests routine health facility data from 38 500 private and public primary and secondary facilities, excluding the informal private sector. However, the level of adoption of DHIS2 remains low, and the usefulness of NHMIS is constrained by poor integration of data, incomplete data from public facilities and persistent underreporting from the private sector. The average reporting rate through DHIS2 in 2023 was 92.3%, but timeliness was just 84.8%. Collecting complete data is also a challenge with significantly fewer data being reported at the health facility level than are collected from national sources.

The implementation of national HIS policies is constrained by chronic underfunding; inadequate basic ICT infrastructure; a weak culture of using data and limited capacity to collect and utilize health data; a lack of dedicated health records officers; and poor coordination of and lack of clarity on HIS roles and activities. The country's HISs are fragmented, with vertical disease-specific programmes, which are mostly donor driven, running parallel HISs. Despite significant past investments in improving the nation's HISs, subsector coordination remains challenging due to the diversity of data-collection tools used and the lack of harmonized data-reporting tools.

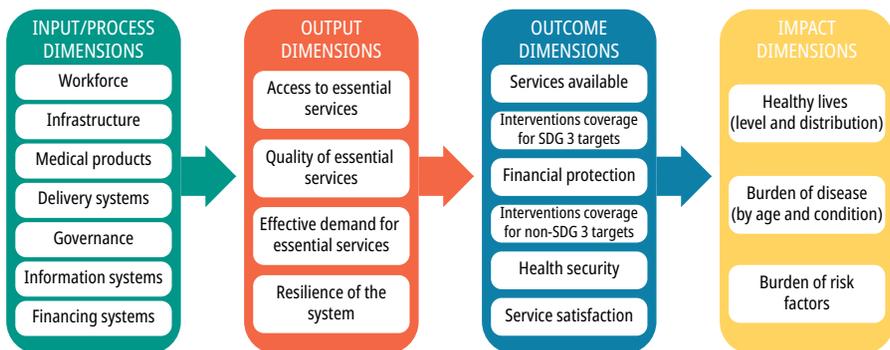
Although the 2020 HIS policy and accompanying strategic plan ignited and set the pace for improving health information management in the country, the need for better coordination and data governance remains. Intersectoral collaboration and data fragmentation must be addressed, to ensure better health outcomes. Ongoing structural reforms could strengthen national capacity in HISs and improve the quality of health data and their use in decision-making.

Preface – Part B

Chapters 1–8 of this profile focus on health system building blocks or inputs/ investments (following the results chain of the World Health Organization (WHO) African Region’s Framework of Actions (WHO African Region, 2017a). The second part of the profile focusses on the analytical aspects of outputs (Chapter 9) and outcomes (Chapter 10). Health outputs (Chapter 9) represent the system performance elements that are needed for the effective delivery of essential health and health-related interventions and services (see Fig. A). The analysis of outputs and health system performance is related to four dimensions outlined in the Framework of Actions: access to essential services, quality of care in care provision; demand for essential services and resilience to disruptive shock events (WHO African Region, 2017b). In addition, efficiency of the health system is also analysed. Health outcomes (Chapter 10) refer to the population coverage targets for the various health and health-related services that are important for populations. Health outcomes are analysed across four dimensions: availability of essential health services, coverage of essential services financial risk protection and health security (WHO African Region, 2017b).

The outputs and outcomes are measured using composite indices that represent country achievement for the given dimension, based on WHO Regional Office for Africa figures taken from country specific and publicly available data.

Figure A Dimensions analysed and their interrelationships



Source: WHO African Region, 2018

Note: SDG = Sustainable Development Goal.

Performance of the health system – outputs

By **Enyi Etiaba, Adanma Ekenna** and **Ugenyi Iloabachie**

Chapter 9 key messages

- Nigeria's health system still faces challenges in delivering optimal outputs and attaining universal health coverage.
- Performance in the dimensions of access, quality and demand for health services is still suboptimal, at 41%, 40% and 42%, respectively. Moreover, Nigeria's health system performance overall, at 45%, is below the World Health Organization African Region average of 52.9%.
- Performance in terms of sociocultural access has improved, with more women in education and employment than before, which could in turn improve access to health services if financial risk protection and functional health facilities are put in place.
- The quality of services is suboptimal, resulting in low demand for services, especially in the public sector.
- For health system resilience, Nigeria scores 56%, higher than the regional average of 51.9%. Two recent external shocks have tested Nigeria's health system – the Ebola epidemic in 2014 and the COVID-19 pandemic in 2020 – and it scores well for detection (58%). However, performance in other aspects of health system resilience, including preparedness and response, remains suboptimal and needs to be strengthened.
- Both allocative and technical efficiencies are poor due to suboptimal budgetary allocations and use. Identified drivers of technical inefficiency, such as weak governance and leadership, weak public finance management, corruption and poor accountability, need to be addressed urgently.

Introduction

The prefaces to Parts A and B of this profile set out details of its two-part structure, with Part A (Chapters 1-8) describing the context and individual health system building blocks and Part B (Chapters 9 and 10) focusing on the analytical aspects of outputs and outcomes.

This chapter reports on the performance and outputs of the health system building blocks that are described individually in Chapters 1–8. The health system outputs are analysed based on the dimensions of access, quality, demand and resilience (Fig. 9.1.a). The dimensions of equity and effectiveness, which are equally important in assessing performance, are discussed in Sections 9.4 and 9.5.

Figure 9.1.a Dimensions of health systems performance



Source: WHO African Region, 2017b

The World Health Organization (WHO) Regional Office for Africa operationalizes the functionality of a health system by measuring performance in the dimensions of access, demand, quality and resilience; the average of these, that is, overall functionality, gives an indication of overall health system performance. Performance is measured by triangulating international data, national/domestic data and scientific literature that satisfy some or all established criteria. Data sets are drawn from global and WHO African Region-wide data but also include national-level and internationally standardized data sets, such as demographic and health surveys and service availability and

readiness assessment (SARA) surveys. Reported limitations of this methodology include using old data sets where current data are unavailable and the poor capacity of health management information systems across several countries. Composite figures reported are based on consolidated data from various data sets (WHO African Region, 2022b).

Based on this approach, Nigeria's overall health system performance was recently assessed to be 45% of what it feasibly could achieve, and the average performance of the WHO African Region was assessed to be 52.9% (WHO African Region, 2022a).

9.1 Access to essential services

Access to health services in Nigeria is assessed as being at 41% of what is feasible (WHO African Region, 2022a), based on consolidated data from across three dimensions or vital signs of access: physical, financial and sociocultural access to essential health services. Table 9.1.1 summarizes the available data. Poor performance on indicators of physical and financial access suggests that these two dimensions or vital signs are driving the low score reported for access overall (see Chapter 3, Sections 3.1, 3.4 and 3.6, and Chapter 4, Section 4.3).

Physical access

The availability of human resources (see Fig. 9.1.1) and health infrastructure, despite improving over the years, remains limited and inequitable (FMOH, 2018b). Disaggregated reports from surveys show persistent north–south and urban–rural divides and socioeconomic disparities (Alliance for HPSR, 2016). Poor access to health care services is most common in the northern zones of the country, in rural areas, among people of lower educational status and among the lowest wealth quintiles (NPC and ICF Macro, 2014, 2019; FMOH, 2018b).

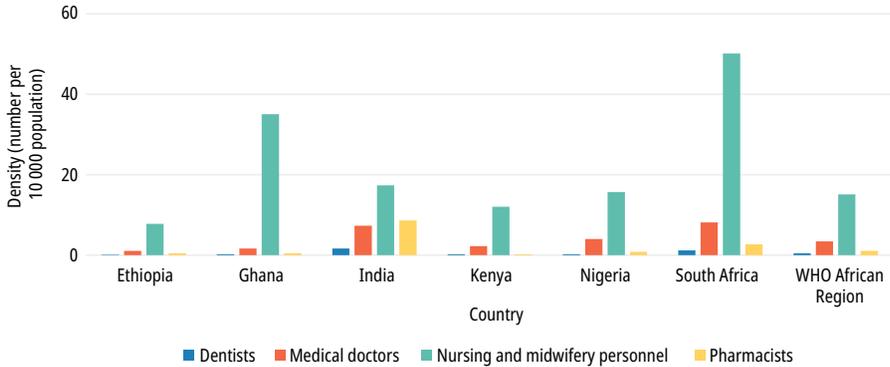
The unmet need for family planning decreased from 22% in 1990 to 16% in 2013, before rising again to 19% in 2018, with regional and urban–rural differences (NPC and ICF Macro, 2019). However, there is evidence of variation in unmet needs data across various surveys, and models suggest a flat trend and a uniformly low rate across states and regions in the country (Solanke et al., 2022). Fear of side effects is the most common reason for the low uptake of contraceptives (Uthman et al., 2022).

Table 9.1.1 Proxy indicators for each vital sign for access to essential services

Dimension	Indicator	Value	Latest available value (year)	Source
Physical access (accessibility)	Number of doctors per 10 000 population	2.3 (2022)	2.3 (2022)	Nigerian Health Workforce Profile, 2022
	Number of nurses and midwives per 10 000 population	7 (2022)	7 (2022)	Nigerian Health Workforce Profile, 2022
	Number of public health facilities per ward (10 000–30 000 population)	NA	NA	NA
	Hospital beds per 10 000 population	5 (2004)	< 10 (2004–2017)	WHO, 2021; WHO African Region, 2022a
	Domestic general government health expenditure as % of current total health expenditure	14.9 (2018)	14.97 (2020)	WHO, 2021
	Domestic general government health expenditure as % of government general expenditure	4.44 (2018)	4.22 (2020)	WHO, 2021
Financial access (affordability)	OOP expenditure as % of total current health expenditure	23.6 (2018)	74.68 (2020)	WHO, 2021
	OOP expenditure per capita (US\$)	0.7 (2018)	52.1 (2020)	WHO, 2021
	Incidence of household expenditure (%) at 10% of total household income or expenditure	15.05 (2015)	15.8 (2018)	WHO, 2021
	Percentage of girls completing primary school	69 (2010)	77.1 (2020)	Statista, 2021
	Percentage of girls completing secondary school	42 (2018)	42 (2018)	Statista, 2021
Sociocultural access (social determinants of health)	Percentage of women participating in the labour force	49 (2019)	52.1 (2020)	World Bank Group, 2022
	Percentage of women and girls aged 15–49 years reporting intimate partner violence	13.2 (2018)	24 (2019)	World Bank Group, 2022

Note: NA = data not available; OOP = out-of-pocket.

Figure 9.1.1 Number of medical workers per 10 000 population, selected countries and WHO African Region average, 2020

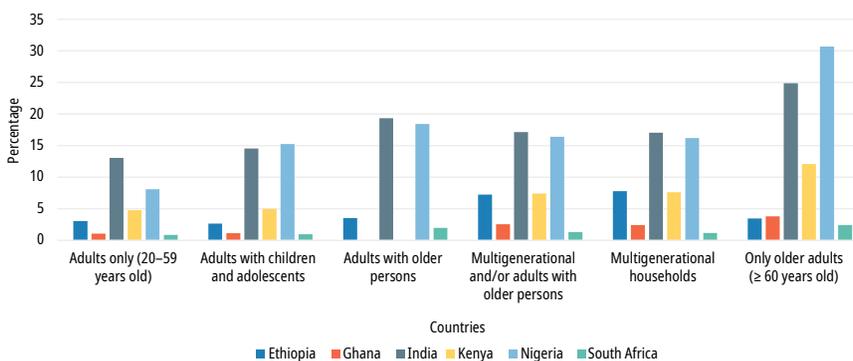


Source: WHO, 2021

Financial access

The persistently high out-of-pocket (OOP) expenditure on health by households and inadequate government expenditure on health have constrained efforts to achieve universal health coverage (UHC) (see Fig. 9.1.2). Current health financing reforms (see Chapter 3, Section 3.1), including the Basic Health Care Provision Fund and the National Health Insurance Authority Act (2004), which signs into law mandatory health insurance, must be optimally implemented to address these shortcomings.

Figure 9.1.2 Incidence of household expenditure (%) at 10% of total household income or expenditure, 1990–2018



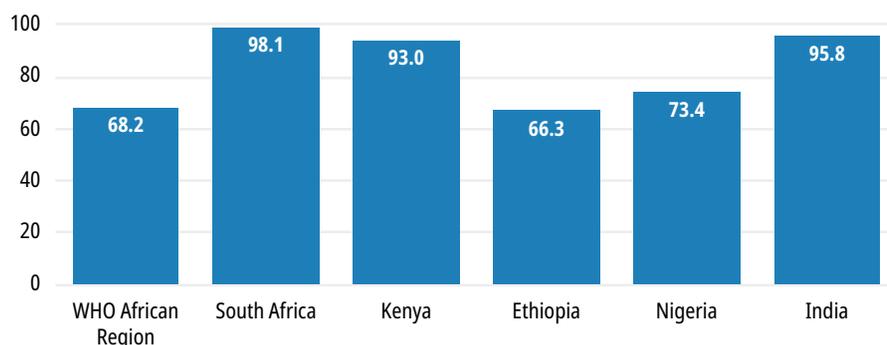
Source: WHO, 2021

Sociocultural access

Increasing women's access to education and rates of employment will have a positive impact on performance in the dimension of sociocultural access to health services (NPC and ICF Macro, 2019). However, performance in the sociocultural access dimension remains lower than desirable (see Fig. 9.1.3 and Table 9.1.1).

Reasons for significant differences in access include both supply-side factors (related to accessibility, availability, quality and comprehensiveness of health services) and demand-side factors (related to health care costs, transport and the perceived quality of services) (Okoli et al., 2020). Limited coverage of prepayment mechanisms (NPHCDA et al., 2020), nomadic lifestyles and poor enrolment of women in education due to sociocultural factors, including early marriage (NPC and ICF Macro, 2019), contribute to poor access to services and poor health-seeking behaviour.

Figure 9.1.3 Percentage of girls completing primary school in selected countries and the African Region, latest available year



Source: UNSTATS, 2021

Note: Latest available year = 2021, with the exception of Kenya where latest available year = 2022

9.2 Quality of care in the provision of essential services

Quality of services is estimated to be 40%, compared with the WHO African Region average of 62.3%, of what is feasible (WHO African Region, 2022a). Although there are structures for regulating quality of services in Nigeria,

performance evaluation gaps exist (see Chapter 6, Section 6.4) and accountability mechanisms are weak and poorly implemented (see Chapter 4, Section 2.4).

Table 9.2.1 describes the proxy indicators used to assess the quality of care. These are user experiences, patient safety and the effectiveness of care.

Table 9.2.1 Proxy indicators for each vital sign for quality of care

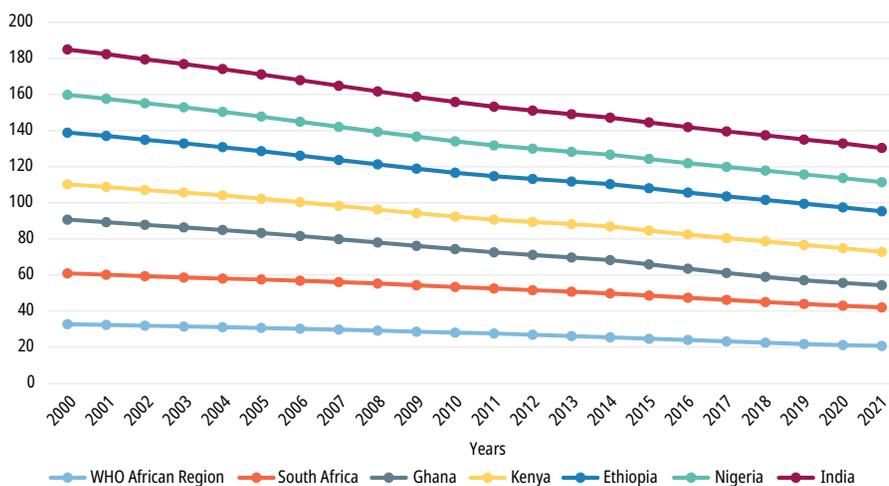
Dimension	Indicator	Latest available value (year)	Source
User experiences	Percentage of clinical conditions diagnosed accurately	43.1 (2017)	FMOH, 2017b
	Percentage of users adhering to clinical protocols	38.6 (2017)	FMOH, 2017b
	Health worker's knowledge of key integrated management of childhood illnesses danger signs(Percentage)	45.9 (2017)	FMOH, 2017b
	Health workers' knowledge of assessment and treatment of malaria (Percentage)	71.8 (2017)	FMOH, 2017b
	Percentage of the general services readiness score (SARA score)	NA	WHO, 2017
	Percentage of users reporting satisfaction with essential health services provision	0.94 (2020)	Akinyinka et al., 2020
Patient safety	Percentage of standard precautions for infection prevention and control (SARA score)	NA	WHO, 2017
	Percentage of facilities with hand washing capacity	78.8 (2017)	FMOH, 2017b
	Percentage of facilities that practised safe disposal of sharps waste	32.4 (2017)	FMOH, 2017b
	Stillbirths per 1000 population	22.25 (2019)	UNICEF and NBS, 2022
Effectiveness of care	Tuberculosis treatment success rate (percentage of new cases)	88 (2019)	FMOH, 2021g
	Mortality rates from cardiovascular disease, cancers, diabetes, mellitus, or chronic respiratory diseases for 30–70-year-olds	16.9 (2019)	FMOH, 2013a
	Age-standardized suicide rates per 100 000 population	6.9 (2017)	FMOH, 2017b

Note: NA = data not available.

A health facility readiness assessment was conducted in 2016 before implementing the Saving One Million Lives Programme, using multiple indicators, some of which are outlined in Table 9.2.1. The assessment was based on the SARA methodology promoted by WHO, now called the harmonized health facility assessment.

The quality of care differs between regions, between urban and rural areas, and between private and public health facilities. Almost all indicators varied widely across states and regions, with some being lower and others being higher than the national average. The northern regions predominantly recorded lower scores than other regions for various indicators (FMOH, 2017b). Variations align with socioeconomic and health system contexts, with less favourable outcomes and lower overall national averages being found in more deprived areas with poor access to health services. Perceptions of poor service quality and patient safety contribute significantly to Nigeria’s low overall quality of services observed (Ephraim-Emmanuel et al., 2018).

Figure 9.2.1 Stillbirths per 1000 population in Nigeria, comparator countries and the WHO African Region average, 2000–2021



Source: WHO, 2021

Stillbirth rates as a proxy indicator for service quality are shown in Fig. 9.2.1 for Nigeria, the WHO African Region and other comparator countries. Although there has been a consistent decline in stillbirth rates in the last two decades, Nigeria still has the highest stillbirth rate across the comparator countries selected.

9.3 Demand for essential services

Demand for essential services is currently assessed as being 42%, compared with a regional average of 52.8%, of what is feasible (WHO African Region, 2022a). Table 9.3.1 outlines two key dimensions (health-seeking behaviours and individual health actions) and proxy indicators used to assess demand.

Table 9.3.1 Proxy indicators for each vital sign for demand of essential services

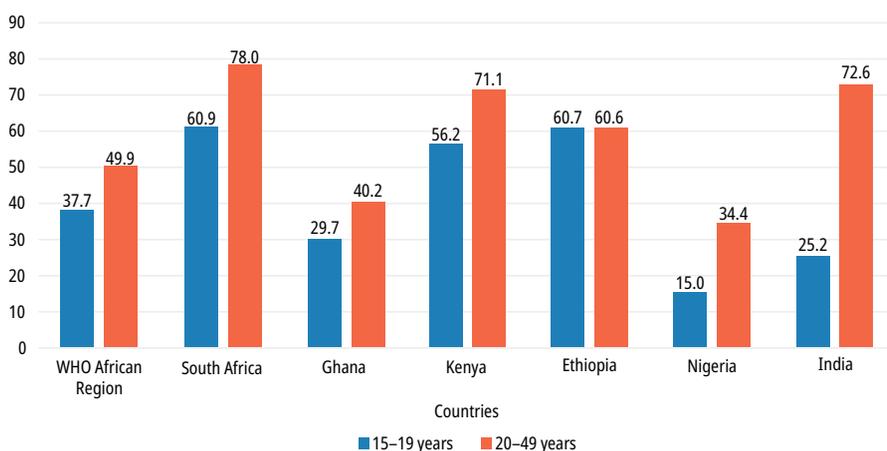
Dimension	Indicator (percentage)	Latest available value (year)	Source
Health-seeking behaviours	ANC1–ANC4 drop-out rate	10 (2018)	UNICEF and NBS, 2022
	ANC – at least one visit (skilled provider)	69.6 (2021)	UNICEF and NBS, 2022
	ANC – at least four visits (any provider)	60.4 (2021)	
	Skilled attendance at birth	50.7 (2021)	
	Institutional delivery	49.0 (2021)	
	Postnatal care for mother < 2 days	61.4 (2021)	
	Postnatal care for newborn < 2 days	62.4 (2021)	
	DTP1–DTP3 drop-out	8 (2020)	UNICEF and NBS, 2022
	DTP3–MCV drop-out	3 (2020)	UNICEF and NBS, 2022
	Drop-out between Penta 1 and Penta 3	21 (2021)	UNICEF and NBS, 2022
	Percentage demand for modern contraceptives satisfied	36 (2018)	UNICEF and NBS, 2022
	Percentage demand for modern contraceptives satisfied	39.9 (2021)	UNICEF and NBS, 2022
	Percentage use of modern methods of contraception among married/in-union women	18.2 (2021)	UNICEF and NBS, 2022
	Percentage use of any method of contraception among married/in-union women	21.7 (2021)	UNICEF and NBS, 2022
Percentage of infants with pneumonia seeking care	40 (2018)	UNICEF and NBS, 2022	

Table 9.3.1 Continued

Dimension	Indicator (percentage)	Latest available value (year)	Source
Individual health actions	ANC coverage (percentage receiving for or more visits)	60.4 (2021)	UNICEF and NBS, 2022
	CHWs per 1000 population	0.58 (2019)	WHO, 2021
	Total alcohol consumption per capita among persons aged 15+ years (SDG 3.5.2)	6.19 (2019)	UNSTATS
	Smoking prevalence among persons aged 15+ years (SDG 3.A.1)	4.8 (2018)	UNSTATS

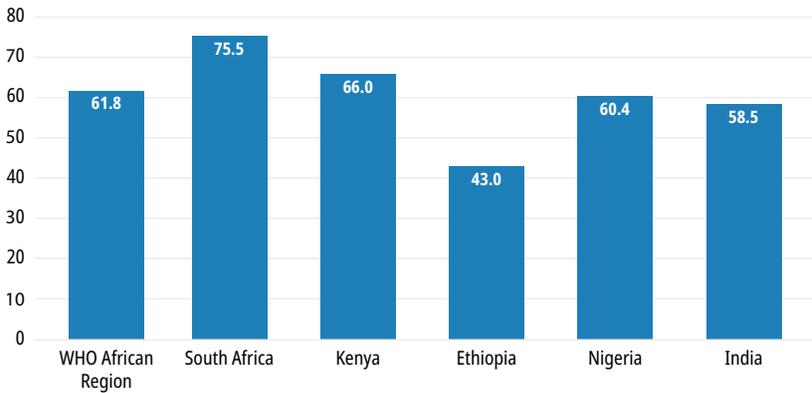
Notes: ANC = antenatal care; CHW = community health worker; DTP = diphtheria, tetanus and pertussis; MCV = meningococcal conjugate vaccine; SDG, Sustainable Development Goal.

In addition to factors related to human resources, supply-side factors, including infrastructure, equipment and health facility security, commonly influence health care demand (Okoli et al., 2016; Osakede, 2019; Etiaba et al., 2020). Demand-side factors are predominantly determined by level of access (physical and financial), perception of quality and trust in the health system (Ezumah et al., 2022). These factors affect health-seeking behaviours and therefore the demand for services (see Fig.9.3.1 and Fig. 9.3.2).

Figure 9.3.1 Percentage demand met for modern contraceptives, selected countries and WHO African Region, 1993–2019

Source: WHO, 2021

Figure 9.3.2 Antenatal coverage (% of pregnant women receiving four or more antenatal visits) in selected countries and WHO African Region average, 2022



Source: WHO, 2021

There are also north–south and urban–rural disparities, with a positive skew of demand for and utilization of public health sector services in both the south and urban areas (see Chapters 3 and 10) (Alliance for HPSR, 2016; Atobatele et al., 2022; UNICEF and NBS, 2022). Nigeria’s 2018 national demographic and health survey also revealed that risky behaviour patterns vary across regions, occurring more in the south than in the north (NPC and ICF Macro, 2018).

9.4 Resilience of the health system to sustain the provision of essential services

Health system resilience was recently estimated at 56% of what is feasible, higher than the regional average of 51.9% (WHO African Region, 2022a). This section uses International Health Regulations (IHR) core capacity and inherent health system resilience data to assess health system resilience (WHO and PAHO, 2005).

Nigeria has suffered two external shocks in the last decade that tested its health system: the Ebola epidemic in 2014 and the COVID-19 pandemic in 2020. Table 9.4.1 shows that Nigeria excels in IHR core capacity indices for detection but fails in preparedness and response indices. Learning from past pandemics has both exposed gaps and fostered innovation. The COVID-19 pandemic revealed weaknesses in the system in terms of capacity to maintain access to essential services. It also demonstrated the benefits of a prompt

first response centrally led by the presidency and the value of coordinated multisectoral action. But the failure to institutionalize this innovation and the need to embed subnational-level engagement into decision-making processes have limited longer-term system strengthening (Okeke et al., 2022).

Table 9.4.1 Proxy indicators for each vital sign related to the resilience of the health system

Dimension	Indicator	Latest available value (year)	Source
IHR core capacity	IHR core capacity indices for preparedness	50% (2022)	WHO African Region, 2022a
	IHR core capacity indices for detection	58% (2022)	WHO African Region, 2022a
	IHR core capacity indices for response	51% (2023)	WHO African Region, 2022a
Inherent system resilience	Inherent system resilience	62.1% (2020)	WHO African Region, 2022a

International Health Regulations core capacity indices

The International Health Regulations State Party Self-Assessment Annual Report scores are obtained from annual country self-reporting on the ability of attributes created from 13 components of the IHR Monitoring and Evaluation Framework. Nigeria scored an average of 63 across the 13 IHR core capacity indices in the WHO African Region, while the highest score was 77 for Algeria and the regional average score was 47.6 (WHO African Region, 2022b). These recent scores show an improvement, although overall resilience is still not optimal.

Inherent system resilience

Existing weaknesses in the health system which impact inherent resilience include:

- delays in IHR compliance;
- weak surveillance system/early warning signs;

- poor subnational capacity for preparedness and response planning and implementation;
- poorly developed surge capacity of health facilities to respond to public health emergencies;
- weak network and capacity of public health laboratories (FMOH, 2018b).

Most of these weaknesses strained the health system during the peak of the COVID-19 pandemic, resulting in the significant crowding out of essential health services (Okeke et al., 2022).

In this context, the National Health Policy proposed reducing the burden on public health emergencies through:

- developing and implementing health emergency and disaster preparedness plans and risk-specific contingency plans, including pre-positioned emergency medical stocks and supplies;
- strengthening the capacity of surveillance and response systems in line with the IHR.

To achieve these policy goals, the National Strategic Health Development Plan II (2018–2022) (NSHDP II) included proposals for some of the following strategies, which have now been implemented:

- establishing relevant and functional institutions such as the Nigeria Centre for Disease Control and Emergency Operations Centres, the National Emergency Management Agency of Nigeria (NEMA) and the State Emergency Management Agency (SEMA) (Oyebanji et al., 2021);
- increasing the pool of trained field epidemiologists (NCDC, 2021);
- increasing the availability of policies, strategic plans, guidelines and tools for integrated disease surveillance and response (Adesanya, 2020).

Post COVID-19 pandemic, NEMA and SEMA in affected states are actively using the agency platforms to address internally displaced persons and other emergencies.

9.5 Health system efficiency

Allocative efficiency

Allocative efficiency indicates the extent to which limited funds are directed towards purchasing an appropriate mix of health services or interventions that maximize health improvements. Nigeria is a signatory to the Abuja Declaration, which commits the country to allocating 15% of its annual budget to health. In addition, the Basic Health Care Provision Fund (BHCPF) is funded by at least 1% of the consolidated revenue, and contributions from other sources. Despite these initiatives, Nigeria's health budget falls below expectations. With an average annual health budget of 4.6% of the total budget, Nigeria struggles to attain the required mix of health services and interventions necessary to achieve UHC (see Chapter 3).

Poor utilization of allocated funds and poor budgeting result in the return of funds to the treasury accounts at the end of the fiscal year (Devex Partnerships, 2021). The government spends heavily on human resources and overhead costs, hence recurrent expenditure increased by a staggering 2822% from 2001 to 2021, while capital expenditure increased by only 400% (Devex Partnerships, 2021). With poor accountability mechanisms and hidden administrative costs, health system wastage and inefficiencies persist. Sources of inefficiencies in releasing funds could include ineffective bidding, internal disputes between stakeholders and conflicts of interest.

Efficiency of service provision

The health system has a wide range of health services in the minimum service package (MSP), with increasing but slow inclusion of noncommunicable diseases (see Chapter 7). A good example of how the scope of services can be widened is the Maternal and Child Health Programme 2007, which was broadened to cover the reproductive, maternal, newborn, child, adolescent and elderly health plus nutrition spectrum in 2020 (Ehanire, 2020).

By addressing the sustainability of the health system, the nation sets its health priorities in NSHDP II in line with a situation analysis of the health system. However, there is limited evidence of effectiveness and cost-effectiveness in setting priorities in NSHDP II (WHO, 2010a).

Technical efficiency

Technical efficiency refers to using minimum inputs to produce maximum outputs. Gross inefficiencies exist across sub-Saharan Africa (Babalola and Moodley, 2020). Nigeria's efficiency score of 77% was below the WHO African Region average of 79.3%, and by 2015 it was in the bottom 10% of African countries based on technical efficiency scores (Asbu et al., 2022). Within-country analyses over time report a wide variation in efficiency in Nigerian hospitals and that most hospitals are not operating efficiently (Ichoku et al., 2011; Sede and Ohemeng, 2012; Adejoh and Ismail, 2022). Sources of inefficiencies are predominantly human resources and the insufficient use of technology to optimize services (Sede and Ohemeng, 2012). Other sources are outlined in Table 9.5.1. Key drivers of these inefficiencies are weak leadership and management, leakage and corruption, weaknesses in the health system, suboptimal utilization of health services, health facility factors, socioeconomic development and macroeconomic characteristics (WHO African Region, 2023).

Health sector corruption, which commonly manifests as absenteeism, diversion of patients from the public to the private sector, inappropriate prescribing, informal payments and bribery, and the theft of drugs and supplies, is sustained by weak or absent accountability mechanisms (Onwujekwe et al., 2018, 2019a).

Table 9.5.1 Sources of technical inefficiency

Source of inefficiency	Possible reasons for inefficiency
Medicines: underuse of generic medicines and overpricing of medicines	Inadequate cost controls on prescribers; lower perceived efficacy/safety of generic drugs; historical prescribing patterns
Medicines: use of substandard or counterfeit medicines	Weak drug regulatory structures; weak procurement mechanisms
Medicines: inappropriate and ineffective use	Factors related to consumer demand/expectations; limited knowledge about lack of therapeutic effect; inadequate regulatory frameworks
Health care products and services: overuse or supply of equipment, investigations and procedures	Supplier-induced demand; fee for service; fear of litigation (defensive medicine); inadequate guidelines/review

Table 9.5.1 Continued

Source of inefficiency	Possible reasons for inefficiency
Health care workers: inappropriate or costly staff mix, unmotivated workers	Conformity with predetermined human resources policies and procedures; resistance by the medical profession; fixed/inflexible contracts
Health care services: inappropriate hospital admissions or lengths of stay	Lack of alternative care arrangements; insufficient incentives to discharge patients; limited knowledge of best practice
Health care services: inappropriate hospital size (low level of infrastructure use)	Uneven historical development of hospitals; inadequate planning, coordination and control
Health care services: medical errors and suboptimal quality of care	Insufficient/outdated guidelines, standards or protocols; poor coordination; inadequate supervision
Health system leakages: corruption and fraud	Corruption; unclear resource allocation guidance; poor accountability mechanisms
Administrative complexity: inefficient or misguided rules	Lack of standardized forms; hidden administrative costs
Health interventions: inefficient mix/inappropriate level of strategies	Funding high-cost, low-effect interventions when low-cost, high-impact options are unfunded; inappropriate balance between levels of care and/or between prevention, promotion and treatment

Source: Adapted from Chisholm and Evans 2010; Berwick and Hackbarth, 2012

The weaknesses in the performance of the Nigerian health system outlined above are currently being addressed through the sector-wide approach of the National Health Sector Renewal and Investment Programme (NHSRIP) (see Chapter 2, Section 2.5). In addition, some recommendations by the *Lancet* Nigeria Commission, addressing various health system building blocks, if implemented, will enhance health system performance. Key recommendations include (i) implementing a Health-in-All-Policies approach, to be achieved through a whole-of-society approach, prioritizing health investments to address social determinants of health; (ii) addressing population growth through improving access to modern contraceptives at all health care levels; and (iii) prioritizing education for women and girls (Abubakar et al., 2022). These recommendations are captured in the NHSRIP and are currently being implemented but the impact of this implementation has yet to be evaluated.

Chapter summary

Chapter 9 brings together the descriptive analysis of Nigeria's health system provided in Chapters 1–8 under a performance framework devised by WHO Regional Office for Africa. Nigeria's performance outputs have improved in the last decade but remain inadequate, thus preventing the country from attaining UHC. While performance in the dimension or vital sign of sociocultural access has improved, because more women than before have received an education and are in employment, this is almost cancelled out by persistently poor performance in the dimension of financial access, due to high OOP expenditure, and an inadequate health workforce.

The quality of services remains suboptimal, resulting in low demand for services, especially in the public sector. Access to, the quality of and demand for health services vary significantly across regions, states, urban–rural areas and socioeconomic statuses, in both the public and private health sectors. Disaggregated data are needed to address these discrepancies and facilitate effective UHC planning. Effective implementation of the BHCPF and the National Health Insurance Authority is expected to help narrow the wide gaps in performance in these dimensions.

Both allocative and technical efficiencies are poor, due to suboptimal budgetary allocations and use. Identified drivers of technical inefficiencies, such as weak governance and leadership, weak public finance management, corruption and poor accountability, need to be addressed. Suboptimal health budgets and poor utilization of allocated funds diminish allocative efficiency, while corruption plagues technical efficiency.

Nigeria has improved its scores in relation to detecting external shocks, especially communicable disease outbreaks. However, scores for inherent health system resilience, including preparedness and response, remain poor, and resilience needs to be strengthened.

By **Chinyere Mbachu** and **Chioma Onyedina**

Chapter 10 key messages

- Poor performance in essential service coverage in Nigeria is largely due to poor service capacity and access, particularly poor infrastructure and inadequate human resource capacity. This leads to gaps in the availability of essential health services.
- Nigeria's Universal Health Coverage Social Coverage Index score, which measures universal health coverage, is low (38.4%), primarily due to poor health infrastructure and inadequate human resource capacity.
- Nigeria lags far behind its regional and global peers in terms of health insurance coverage, and the most vulnerable populations lack access to financial risk protection. Out-of-pocket payments as a proportion of total health expenditure are extremely high (75%), and 15.8% of multigenerational households experience catastrophic health expenditure over the 10% threshold, significantly higher than the World Health Organization African Region average (9.4%).
- Preparedness for public health emergencies is poor, as indicated by the low Global Health Security Index score of 38.0 in 2021 and the downwards trend in the country's International Health Regulations core capacity score since 2022. Critical capacities to monitor and detect zoonotic diseases and dispense medical countermeasures for national use during public health emergencies need to be expanded and sustained.
- No nationally representative data are available on user satisfaction with essential health services, and a national survey is needed to inform future service provision.

Introduction

Building on the World Health Organization (WHO) Regional Office for Africa Framework of Actions described in the preface to Part B of this country profile, this chapter focuses on the outcomes of the health systems along five dimensions: availability, coverage, financial risk protection, service satisfaction and health security. Health targets that are not included in Sustainable Development Goal 3 are not covered. This chapter aims to synthesize some of the lessons learned described in previous chapters alongside information relating to the Universal Health Coverage (UHC) Service Coverage Index and other indicators under the WHO Regional Office for Africa framework. See the preface to Part B for further details of the composite indices used.

10.1 Availability of essential services

This section defines and identifies critical services and gaps in the coverage of health services. The critical services for each life cohort (pregnancy and newborn, childhood, adolescence, adulthood and elderly services) are set out in Table 10.1.1.

Pregnancy and newborn health services

Four life cohort indicators are used for maternal and newborn health services: antenatal care (ANC), skilled birth attendance, comprehensive emergency obstetric care and early breastfeeding initiation.

On average, 79.9% of public health facilities in the country offer ANC services. Primary health facilities provide 79.4% of ANC services, while secondary health facilities provide 86.2%. The south-south zone has the highest mean percentage provision, at 88.9%, while the lowest provision was in the north-west, at 67.9% (FMOH, 2024). Overall, 50.7% of deliveries were assisted by skilled birth attendants according to Nigeria's 2021 multiple indicator cluster survey (MICS) (NBS and UNICEF, 2022).

Poor availability and uptake of services is most likely driven by a range of factors (see Chapter 7, Section 7.1.2). The 20.1% of facilities not offering ANC services could be facilities that are not equipped or required to provide ANC services or facilities that do not have an adequate health workforce. Cultural

norms could deter women from opting for facility-based delivery or delivery assisted by a skilled birth attendant at home; inaccessibility of facilities and delays in seeking health services could also be factors. These factors contribute to high maternal mortality in Nigeria (NPC and ICF Macro, 2019).

According to the 2021 MICS, 23.1% of neonates were breastfed within 24 hours of birth, which is nearly 50% lower than the figure from Nigeria's 2018 demographic and health survey (NPC and ICF Macro, 2019), and significantly lower than the WHO African Region average of 53% (UNICEF, 2021). This contributes to a high infant mortality of 67 deaths per 1000 live births.

Child health services

Data presented in Table 10.1.1 show that coverage of routine immunization (RI) and second-dose vitamin A supplementation in Nigeria is relatively high. The national immunization programme leverages traditional community structures to deploy vaccines and increase demand for vaccination in communities (see Chapter 2, Section 2.3, and Chapter 7, Section 7.4). The National Primary Health Care Development Agency set out to address low immunization rates with the introduction of Optimized Integrated Routine Immunization Sessions in 2018 in 18 priority states with notably low immunization coverage. Before the intervention, about 29% of urban primary health centres in those states offered RI (WHO African Region, 2019). One year post intervention, 83% of urban primary health centres had started offering RI sessions. This then translated into increased RI coverage nationally, from 33% in 2016 to 54% in 2019 (WHO African Region, 2019). Fig. 10.1.1 shows that Nigeria's second-dose vitamin A supplementation coverage is higher than the WHO African Region average (WHO, 2022d). This could be attributed to the inclusion of vitamin A in the intensive campaigns that resulted in polio eradication. Kenya's significantly higher coverage has been attributed to community sensitization and house-to-house visits by community health workers/volunteers (Exemplars News, 2023).

Table 10.1.1 Tracer essential services for each life cohort

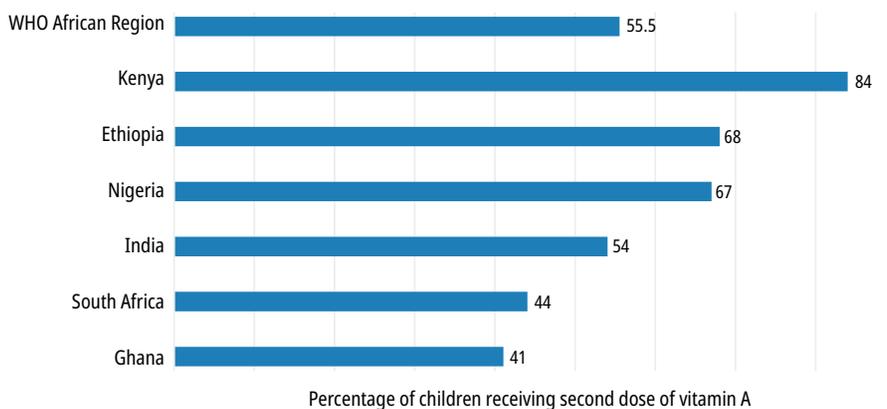
Dimensions (birth cohort)	Indicators	Latest available value % (year)	Source
Pregnancy and newborn	ANC1–ANC4 drop-out rate	62.2 (2023)	FMOH, 2024
ANC services	Percentage of facilities offering ANC services	79.7	FMOH, 2024
Perinatal care services	Skilled attendant personnel at births	59.4 (2023)	FMOH, 2024
Care for the newborn	Percentage of facilities offering basic emergency obstetric care	67.5 (2023)	FMOH, 2024
Postnatal care services	Breastfeeding early initiation	23.1 (2021)	UNICEF, 2021
<i>Childhood</i>			
Childhood immunization	Percentage of facilities offering routine immunization services	About 83% of the 18 priority states (2019)	WHO African Region, 2019
Child nutrition (under and over)	Percentage of children who received a second dose of vitamin A supplementation	82.0 (2023)	FMOH, 2024
Integrated childhood services	Percentage of facilities offering preventive and curative care for children under five	NA	NA
Primary school health services	NA	NA	NA
Promotion of childhood healthy lifestyles	Percentage of primary schools providing life skills-based HIV and sexuality education	NA	NA
<i>Adolescence</i>			
Adolescent sexual and reproductive health services	HIV testing among adolescents and young people aged 15–24	20.8 of young men 25.4 of young women	NBS and UNICEF, 2018
Adolescent/youth-friendly health services	Percentage of facilities offering adolescent health services	69.6 (2023)	FMOH, 2024
	Percentage of facilities with special location for providing adolescent health services	29.2 (2023)	FMOH, 2024

Table 10.1.1 Continued

Dimensions (birth cohort)	Indicators	Latest available value % (year)	Source
<i>Secondary school health services</i>			
Harm-reduction services for the prevention of drug and alcohol use	Treatment coverage for alcohol and drug dependence	NA	NA
Promotion of adolescent healthy lifestyles	Percentage of secondary schools providing life skills-based HIV and comprehensive sexuality education	NA	NA
<i>Adulthood</i>			
Screening for common communicable conditions	Percentage of facilities offering HIV diagnostic capacity	NA	NA
Screening for common noncommunicable conditions and risk factors	Percentage of facilities offering diabetes diagnosis and management	13.9 (2023)	FMOH, 2024
Reproductive health services, including family planning	Percentage of facilities offering family planning services	NA	NA
Promotion of adulthood healthy lifestyles	Age-standardized prevalence of insufficiently physically active persons aged 18+ years	Male – 25 (2022) Female – 30 (2022)	WHO, 2022c
Adult nutrition services	NA	NA	NA
Clinical and rehabilitative health services	NA	NA	NA
<i>Elderly</i>			
Annual screening and medical exams	Percentage of facilities offering cardiovascular disease diagnosis and management	NA	NA
	Percentage of facilities offering hypertensive disease diagnosis and management	12.1 (2023)	FMOH, 2024
Older adult's social support services	NA	NA	NA
Clinical and rehabilitative services	Functional disability in the population aged 60 and older	32.8 (2018)	NPC and ICF Macro, 2019

Note: DHIS2 = District Health Information System 2; NA = data not available; NBS = National Bureau of Statistics; UNICEF = United Nations Children's Fund.

Figure 10.1.1 Vitamin A supplementation in Nigeria, selected countries and the WHO African Region average, 2022



Source: WHO, 2022d

Adolescent health services

One of the global targets of the Joint United Nations Programme on HIV/AIDS is that, by 2025, 95% of people living with HIV will know their status. This will be achieved only if people at risk get tested. Only 14.4% of HIV-positive young people, aged 15–24, in Nigeria reported knowing their status in the last Nigeria HIV/AIDS Indicator and Impact Survey (FMOH, 2019c). Self-reported HIV testing was 13% among young men and 21.4% among young women (FMOH, 2019c). These figures are consistent with figures from the 2016–2017 MICS survey of 20.8% of young men and 25.4% of young women (NBS and UNICEF, 2018). The national screening programme for HIV/AIDS has been reported as being inadequate (see Chapter 7, Section 7.2). Lack of adolescent-friendly services means that the country still has a long way to go in achieving the global target.

Adult health services

Table 10.1.1 shows that, as of 2016, 25% of men and 30% of women aged 18 and older attained less than 150 minutes of moderate-intensity physical activity per week, or less than 75 minutes of vigorous physical activity per week, or equivalent (WHO, 2022c). These rates are higher than the WHO African Region (WHO, 2022b). This high prevalence of physical inactivity is an indication of

increased risk for noncommunicable diseases, which places additional burdens on the health system.

Elderly health services

Data from the Nigeria Demographic and Health Survey 2018 show that 32.8% of the population aged 60 or older had some difficulty in at least one functional domain (seeing, hearing, communication, cognition, walking and self-care), while 9% had considerable difficulty in at least one domain or could not function at all, compared with 1% of people below the age of 40 (NPC and ICF Macro, 2019). These figures are comparable to those of countries in the WHO African Region, including Ethiopia, with 34.5%, and Ghana, with 35.8% (Agyekum et al., 2024; Takele et al., 2024). Functional disability in the older population is largely driven by multimorbidity and high levels of physical inactivity (Takele et al., 2024). Physical disability among the elderly places a huge burden on health care services and social services.

10.2 Coverage of essential interventions

This section describes the UHC Service Coverage Index, deriving critical conclusions from the data in Table 10.2.1. The UHC Service Coverage Index for essential services is based on four domains: reproductive, maternal, newborn and child health; infectious disease control; noncommunicable diseases; and service capacity and access (WHO, 2019). The index score is reported on a scale of 0–100, calculated as the average of 14 service coverage indicators (Boerma et al., 2014). Nigeria’s scores, along with the WHO African Region average scores, for each of these four domains and 14 indicators are summarized in Table 10.2.1.

The values reported for most of the indicators in the table are below the global average (less than 50). Nigeria’s scores are broadly in line with the WHO African Region average across the four domains. However, Nigeria’s overall UHC Service Coverage Indicator score is lower than the WHO African region average and those of most of the comparator countries, as shown in Fig. 10.2.1 (WHO and iAHO, 2021). The country’s low performance in terms of essential services coverage is largely due to suboptimal service capacity and access to facilities, particularly in the area of infrastructure and human resource capacity amid the “brain drain” (Table 10.2.1). As described in Chapter 6, the poor state

of Nigeria's health infrastructure has been attributed to underfunding of the health system, weak management and accountability for available funds, and poor maintenance of physical structures, hospital amenities and equipment. The inadequate human resource capacity results from insufficient production of human resources for health (HRH), the geographical maldistribution of the available human resources and high level of brain drain (see Chapter 4).

The implementation of policies and interventions to address these HRH issues, including the National Health Act (2014), National Human Resources for Health Policy (2020), National Human Resources for Health Strategic Plan (2021), Task-shifting and Task-sharing Policy for Essential Health Care Services in Nigeria (2020) and Nigeria Health Workforce Registry (2018), has been suboptimal, as discussed in Chapter 4, Section 4.1. Regarding infrastructure, although the Nigerian Sovereign Investment Authority (2016) and other reforms (see Section 6.5) have tried to address the challenge of health infrastructure, the absence of an overarching national policy on health infrastructure has constrained successful implementation of interventions.

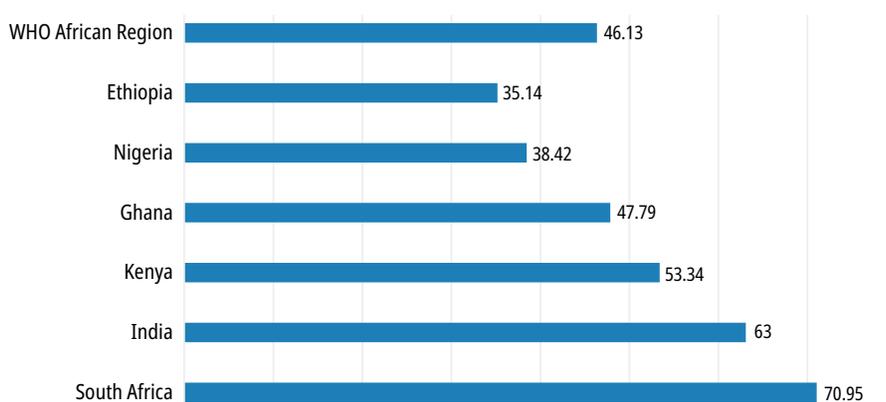
Table 10.2.1 The UHC Service Coverage Index

Dimension	Indicator	Value (latest available year)	Source	WHO African Region average
Reproductive, maternal, newborn and child health	Family planning	35.6 (2018)	WHO, 2024a	57.5 (2022)
	ANC 4+ visits	60.4 (2021)	WHO, 2024a	48.8 (2019)
	Child immunization	48.0 (2021)	WHO, 2024a	50 (2021)
	Care seeking (pneumonia)	40.1 (2018)	WHO, 2024a	46.1 (2014–2020)
	RMNCH score	45.1 (2021)	WHO and iAHO, 2021	50.43 (2021)
Infectious disease control	TB effective treatment	80.0 (2019)	WHO, 2024a	71 (2019)
	HIV treatment	86.0 (2020)	WHO, 2024a	82 (2022)
	Insecticide-treated nets (ITN)	51.01 (2021)	WHO, 2024a	56.7 (2021)
	Basic sanitation	79.6 (2022)	WHO, 2024a	36.4 (2022)
	Infectious score	72.7 (2021)	WHO and iAHO, 2021	58.88 (2021)

Table 10.2.1 Continued

Dimension	Indicator	Value (latest available year)	Source	WHO African Region average
Noncommunicable diseases	Normal blood pressure	76.1 (2015)	WHO, 2024a	72.6 (2015)
	Mean fasting plasma glucose	5.3 (2014)	WHO, 2024a	5.23 (2014)
	Tobacco nonsmoking	95.2 (2018)	WHO, 2024a	87.6 (2018)
	NCD score	33.8 (2021)	WHO and iAHO, 2021	32.16 (2021)
Service capacity and access	Hospital bed density (per 100 000 population)	5.0 (2004)	WHO, 2024a	12.1 (2016)
	Health worker density (per 100 000 population)	20.6 (2020)	WHO, 2024a	5.09 (2019)
	IHR core capacity index	56.0 (2022)	WHO, 2024a	52 (2022)
	Capacity score	17.9 (2021)	WHO and iAHO, 2021	14.74 (2021)
UHC Service Coverage Index		38.4 (2021)	WHO and iAHO, 2021	46.1 (2021)

Note: IHR = International Health Regulations; NCD = noncommunicable disease; RMNCH = reproductive, maternal, newborn and child health; TB = tuberculosis.

Figure 10.2.1 UHC Service Coverage Index for Nigeria, selected countries and WHO African Region average, 2021

Source: WHO and iAHO, 2021

10.3 Financial risk protection

Financial risk protection is a core component of UHC that seeks to improve access to essential health services by reducing the financial burden of health care expenditure on households and individuals. As of 2018, only 3% of people aged 15-49 in Nigeria had any form of health insurance coverage which was far below the recommended target of 90% (FMOH, 2017c). By 2022, about 5% of the population had health insurance coverage (Ezenduka et al., 2022; FGN, 2022c).

The WHO African Region indicator for monitoring financial risk protection is catastrophic health expenditure. This is defined as the proportion of the population with high household expenditure on health as a share of total household expenditure, based on the specified thresholds of 10% and 25%. This section describes and analyses the trends, drivers and coping mechanisms for catastrophic health expenditure.

Table 10.3.1 Incidence of catastrophic health expenditure

Threshold	2010	2015	2022	WHO African Region average (2015)	WHO African Region average (2019)
10%	14.51%	15.05%	15.80%	7.30%	8.60%
25%	3.98%	4.06%	4.10%	1.81%	2.60%

Source: WHO African Region, 2022a

Between 2010 and 2022, the incidence of catastrophic health expenditure increased by 1.29 percentage points for the 10% threshold and 0.12 percentage points for the 25% threshold (Table 10.3.1). Compared with the WHO African Region average, Nigeria had two to three times the incidence of catastrophic health expenditure for both thresholds in both 2010 and 2022. Moreover, a higher proportion of Nigeria's population spends more than 10% of the total household budget on health than Ethiopia, Ghana, Kenya or South Africa (Chapter 3, Table 3.2.1).

As shown in Chapter 3, Section 3.5, out-of-pocket (OOP) expenditure as a proportion of total health expenditure is extremely high in Nigeria (75%) compared with Ghana (30.8%) and South Africa (5.4%), in the WHO African Region, and India (50.6%).

Economic status and geopolitical location affect catastrophic health expenditure in Nigeria (Okedo-Alex et al., 2019; Edeh, 2022). Catastrophic

health expenditure is less common in households in the higher economic quintile than in those in the lower quintile, and households in the southern geopolitical zone are more likely to incur catastrophic health expenditure than those in the northern zone (Edeh, 2022).

10.4 Health security

Health security encompasses the “activities required to minimize the danger and impact of acute public health events that endanger the collective health of populations living across geographical regions and international boundaries” (GPMB, 2019). It is the responsibility of governments globally to protect the health of their populations, and the Nigeria Centre for Disease Control and Prevention and tripartite sectors are taking concrete steps towards implementing the One Health Strategic Plan for health security (see Chapter 7, Section 7.2).

The Global Health Security (GHS) Index assesses countries’ capabilities to prevent, detect and respond to biological threats and public health emergencies. The GHS Index is organized into six categories or pillars: health security prevention, detection and reporting, response, health system, commitment to financing and global norms, and risk environment. Nigeria’s overall GHS Index score in 2021 was 38.0, ranking it 86th out of 195 countries (Bell and Nuzzo, 2021).

Nigeria conducted a midterm joint external evaluation in 2019 to assess the country’s compliance with the core capacities of the International Health Regulations (IHR), namely to prevent, detect and respond to public health emergencies. The results showed an increase in the IHR core capacity score from 39% in 2017 to 46% in 2019 (NCDC, 2020). Since then, Nigeria’s IHR core capacity score has increased further, reaching 63% in 2022, before decreasing again to 56% in 2023 (WHO, 2023a).

Nigeria scored zero for some of the eight GHS Index indicators across four of the six pillars of health security: prevention (biosafety, dual use of research and zoonotic diseases), detection and reporting (case-based investigation and laboratory supply chain), rapid response (linking public health and security) and health system (medical countermeasures and personnel deployment, infection control practices and communication with health workers during emergency). This was due to the lack of evidence of continued capabilities in the areas covered by these pillars/indicators beyond addressing needs specific to the COVID-19 response (Bell and Nuzzo, 2021).

10.5 User satisfaction

This section assesses how satisfied patients, termed “clients”, are with the health services provided. A vital measure of the quality of health care provided is client satisfaction. It gives an insight into the provider’s success in meeting the client’s needs (Xesfingi and Vozikis, 2016). There are different measures of satisfaction based on the services provided. In this context, satisfaction refers to overall satisfaction and is discussed based on the essential services provided. Nigeria does not regularly collect information on user satisfaction. Still, information from state-level research on satisfaction with essential services provides some insights.

Levels of satisfaction with the ANC service provision are high in all regions, particularly the south-east, where satisfaction rates are above 95% (Ezeoke et al., 2021; Sufiyan et al., 2021). Similarly, data on family planning services, diabetes treatment and HIV services show high satisfaction rates (Akinola, 2019; Anosike et al., 2019; Oranu and Oppah, 2020). Data on satisfaction levels for immunization services are more mixed, with satisfaction rates ranging from 19% in the south to 99% in the north (Uwaibi and Omozuwa, 2021).

The studies show that more than half of the clients accessing services are satisfied with the services provided. Given their limited reach, these studies may not represent true levels of client satisfaction. Alternatively, the health reforms described in Chapter 7, Section 7.11, may have had a positive impact service delivery and led to marked improvements in client satisfaction. Regardless, a more comprehensive and nationally representative user satisfaction survey is needed.

Chapter summary

Chapter 10 draws on the WHO Regional Office for Africa’s Framework of Actions to assess health system outcomes in Nigeria across five dimensions: availability, coverage, financial risk protection, service satisfaction and health security. Despite progress for a subset of indicators, Nigeria’s absolute level of coverage of essential services is relatively low at 38.4% and below the WHO African Region average. The National Health Act sets out policies and plans to strengthen health service delivery and various essential services. However, there is a need for regular subnational benchmarking and continuous monitoring to track success and health system performance and promptly address challenges as they arise.

Nigeria lags behind its global peers in terms of health insurance coverage, and the most vulnerable populations lack access to financial risk protection. OOP payments as a proportion of total health expenditure are extremely high at 75%, exposing the predominantly poor population to catastrophic health expenditure: 15.8% of multigenerational households experience catastrophic health expenditure over the 10% threshold, almost twice the WHO African Region average of 8.6%.

Preparedness for public health emergencies is poor, as indicated by the low GHS Index score of 38.0 in 2021 and a downwards trend in the country's IHR core capacity score since 2022. Greater focus is needed on effective government collaboration and commitment to reignite, expand and sustain the capacities developed during the COVID-19 pandemic.

No nationally representative data are available on user satisfaction with essential health services. Available data suggest variations in client satisfaction by type of health service and by region. Further data collection is needed to inform future service provision.

Conclusions and key considerations

By **Obinna Onwujekwe** and **Enyi Etiaba**

Nigeria has consistently tried to reform its health system over the last 60 years, but significant functionality issues remain. Given the baseline context of a large and growing population, high triple disease burden (communicable diseases, noncommunicable diseases, and injuries and violence), low life expectancy (compared with the regional average) and consistently inadequate spending on health, most reforms have remained aspirational. In the last 25 years, a fairly stable democracy has strengthened global and national interests, increasing capacity to translate these aspirations into actions. However, the federal structure of government, with which health system governance is aligned, is plagued by insufficient collaboration and overlapping responsibilities, leading to inefficient use of limited resources.

Available evidence highlights inherent weaknesses across the World Health Organization health system building blocks and the two additional building blocks – community participation and partnerships and research – recognized by the Nigerian Government (Chapters 1–8).

Mandatory health insurance is being implemented progressively but not rapidly enough, and Nigeria is still far behind its regional and global peers in achieving its health insurance targets. Out-of-pocket expenditure remains high, exposing the predominantly low-income population to catastrophic health expenditure in the absence of an established and sustainable financial risk protection mechanism.

The COVID-19 pandemic tested the resilience of the already weak health system, which coped by crowding out essential health services with attendant consequences. Although Nigeria scores highly in detecting external shocks, especially communicable disease outbreaks, inherent health system resilience remains poor, and preparedness and response capacity are weak. Capacity developed during the regional Ebola epidemic and built on during the COVID-19 pandemic has not been sustained; more effective government collaboration and commitment is needed to reignite, expand and sustain efforts.

While health system performance outputs – access to, demand for and quality of services – have improved over the last decade, they are still insufficient for attaining universal health coverage (UHC). Poor health system performance is attributable to poor policy implementation (Chapter 9).

Inadequate health budgets, poor utilization of allocated funds and corruption diminish allocative efficiency. Weak governance, poor accountability and health sector corruption affect all health system functions and inhibit technical efficiency.

Core health system outcomes – coverage of health services, health security, patient satisfaction and financial risk protection – are all suboptimal (Chapter 10). Performance outputs and system outcomes show wide regional variation that needs further consideration in future legislation.

International agencies and the private sector continue to play important roles in supporting resource generation, capacity-building and some health reforms, but they require stronger coordination and regulation.

Successfully implementing existing reforms is now essential to achieving UHC and making progress towards the health-related Sustainable Development Goals. Implementation will facilitate efforts to increase investment in the health sector, bolster health care infrastructure, improve the quality of care, reinforce regulatory frameworks and ensure fair and equal access to health care services throughout the country.

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African Health Observatory Platform on Health Systems and Policies (AHOP)

The African Health Observatory Platform on Health Systems and Policies (AHOP) is a regional partnership that promotes evidence-informed policymaking. AHOP is hosted by the World Health Organization Regional Office for Africa through the integrated African Health Observatory (iAHO) and is a network of centres of excellence from across the region, leveraging existing national and regional collaborations.

Country Health Systems and Services Profiles

The Profiles are comprehensive reviews of African countries' health systems and services. Each Profile provides an in-depth examination of the organisation, financing, and delivery of a country's health services. It also looks at healthcare reforms, assesses health system performance, and highlights the challenges that face a health system in Africa. Using the latest data from national, regional, and international sources, as well as existing reports and literature, the Profiles support policymakers and analysts working on the development of health systems.

The WHO Regional Office for Africa

The World Health Organization (WHO) is a specialized agency of the United Nations created in 1948 with the primary responsibility for international health matters and public health. The WHO Regional Office for Africa is one of the six regional offices throughout the world, each with its own programme geared to the particular health conditions of the countries it serves.

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