Chapter

4 Health workforce

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Abbreviations

CHEW ..... community health extension worker
CHO ..... community health officer
CHW ..... community health worker
DHPRS ..... Department of Health Planning, Research and Statistics
FCT ..... Federal Capital Territory
FMOH ..... Federal Ministry of Health
HRH ..... human resources for health
JCHEW ..... junior community health extension worker
MCH ..... maternal and child health
MDCN ..... Medical and Dental Council of Nigeria
MSS ..... Midwives Service Scheme
NANTMP ..... National Association of Nigerian Traditional Medicine Practitioners
NHA ..... National Health Act
NHP ..... National Health Policy
NHRHP ..... National Human Resources for Health Policy
NHRHSP ..... National Human Resources for Health Strategic Plan
NHWR ..... National Health Workforce Registry
NMCN ..... Nursing and Midwifery Council of Nigeria
NPHCDA ..... National Primary Health Care Development Agency
NRTB ..... National Residency Training Board
NSHDP II ..... National Strategic Health Development Plan II (2018–2022)
NUC ..... National University Commission
PCN ..... Pharmacy Council of Nigeria
PHC ..... primary health care
SMoH ..... state ministry of health
SURE-P ..... Subsidy Reinvestment and Empowerment Programme
TSTSP ..... Task-shifting and Task-sharing Policy for Essential Health Care Services in Nigeria
UHC ..... universal health coverage
WHO ..... World Health Organization

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	• Two midwives or nurse midwives • Two CHEWs • Four JCHEWs	• 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	• Two health attendants/assistants • Two security personnel	• 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; [a]only dentists; [b]only 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		Source
	2018	2022	
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		Source
	2018	2022	
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

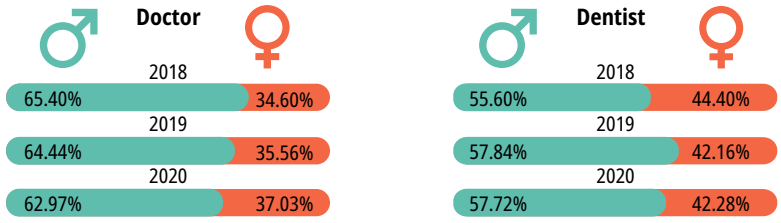
private sector (FMOH, 2020g). However, the quality of the data sets on the health workforce in the public and private sectors is uncertain.

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

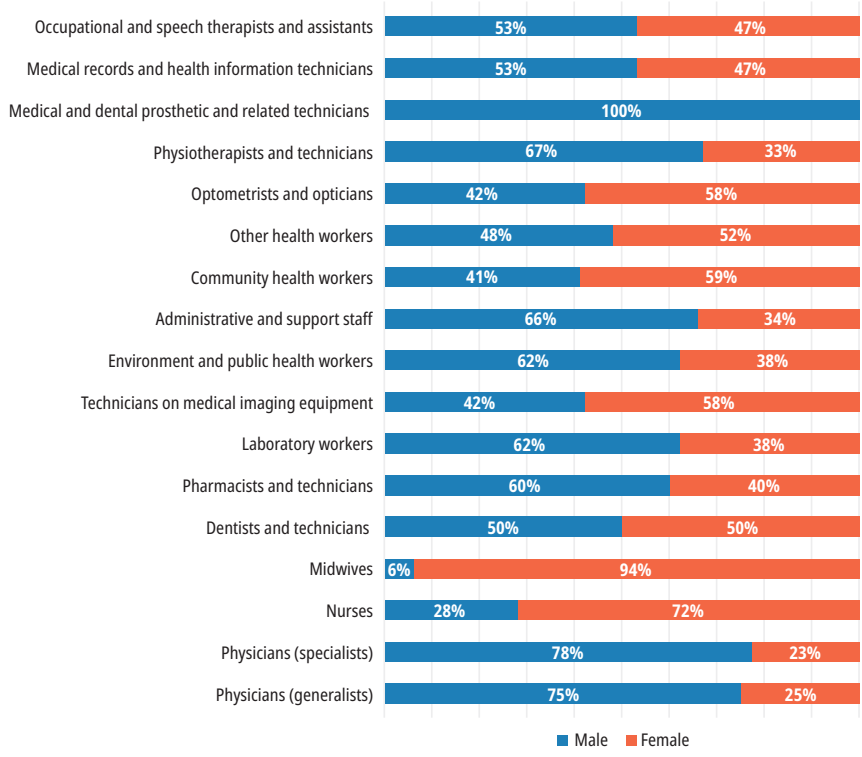


Source: Adapted from NBS (2022a) using data from the Medical and Dental Council of Nigeria.

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

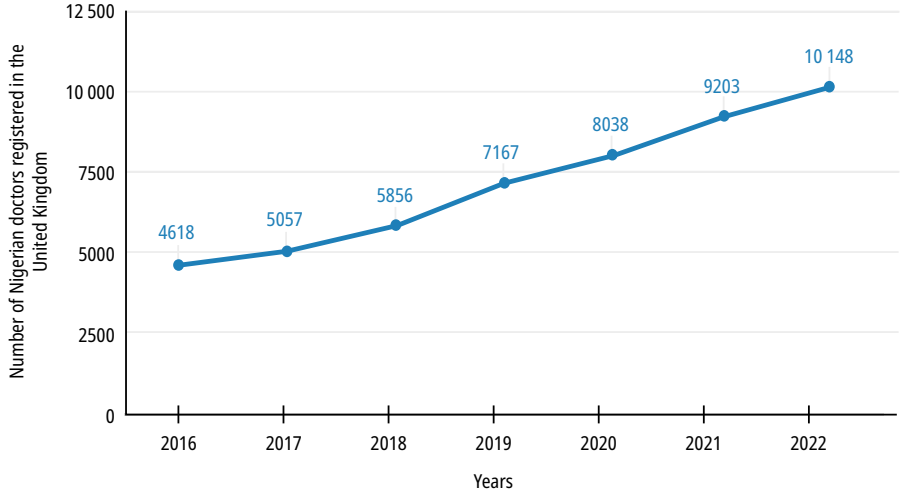
Retaining health workers is a significant challenge, without standardized mechanisms for motivating and retaining staff. This is especially evident in rural areas where incentives to attract workers are limited and most health care facilities do not have up-to-date equipment to work with. Security and

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"

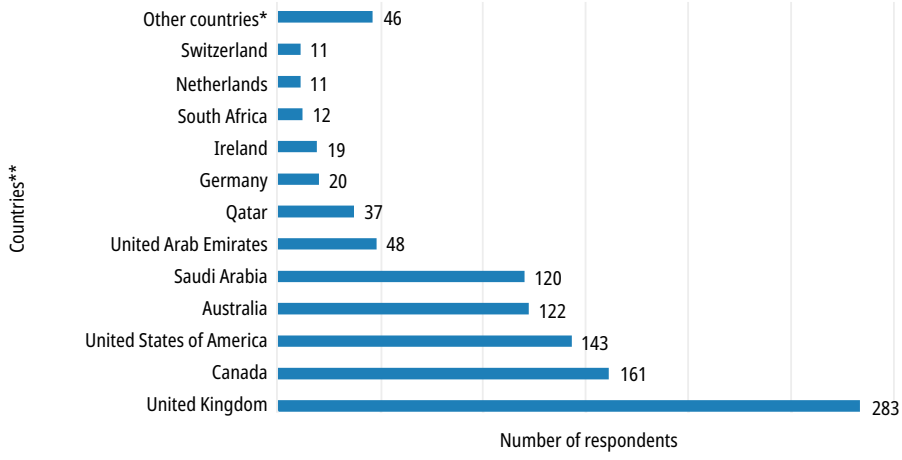
Health workforce migration within and emigration outside the country pose significant challenges. Within the country, registered or qualified health professionals move out of the health sector for more attractive remuneration packages or move from rural to urban areas, attracted by higher remuneration, 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

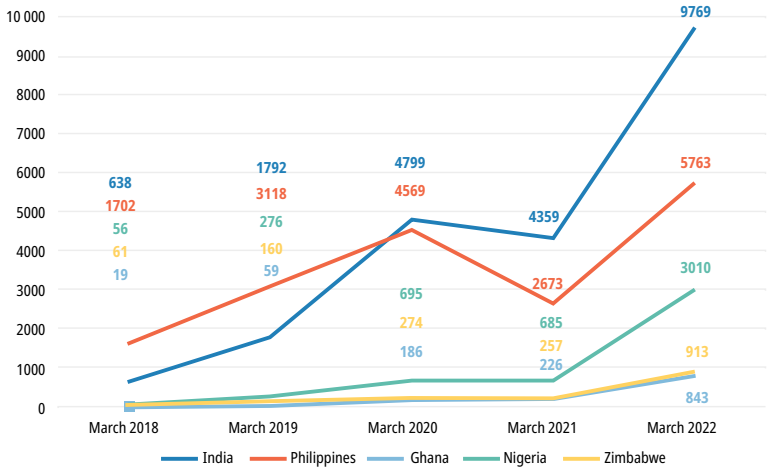
Figure 4.5.b Emigration destinations for Nigerian doctors, 2023



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	• 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	• 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	• Poor implementation of the policy due to poor oversight by the FMOH • Poor awareness and inappropriately trained staff to implement policy at subnational levels	• 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)	• Poor implementation of costed plan for health workforce strategies • Poor funding of the strategic plan • Poor data quality and availability	• 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	• 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	• 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	• 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	• 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	• Poorly trained staff, especially at the subnational level and the various agencies • Poor accountability mechanisms for managing funds	• 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	• 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	• 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.

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