TECHNICAL DOCUMENTATION

Nigeria Health Workforce Profile 2024

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Excel · Power Query · Power BI · Word · PowerPoint

240	13	15	3
pages in seven sections	statutory regulatory bodies	cadre groups profiled	editions compared: 2018, 2022, 2024

This is government work for the Federal Ministry of Health. This document explains how the profile was produced. It does not reproduce the figures in it. A full walkthrough is available on request.

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01 THE STORY BEHIND THE PROJECT

> *Imagine the Minister of Health asks a simple question: how many nurses does the country have, and where are they? Thirteen councils each hold part of the answer. Each keeps its own register, in its own format, on its own timetable.*
>
> *A national picture of the workforce has to be assembled from all of them, and the pieces rarely fit on the first attempt. That assembly is the whole job.*

The National Health Workforce Profile is that national picture. It tells planners how many health workers the country has in each cadre, where they are, how many are being trained, how many are being recruited and how many are leaving. Earlier editions were produced in 2018 and 2022. The 2024 edition was produced by the Federal Ministry of Health with support from the Clinton Health Access Initiative (CHAI).

02 MY ROLE

- Reviewed the earlier editions for inconsistencies in definitions, cadre groupings and presentation, so the 2024 edition would correct them and stay comparable over time.
- Harmonised the submissions from the regulatory bodies into one national dataset.
- Ran the analysis, built the gender-disaggregated, multi-year Power BI dashboards and led the writing of the report.
- Trained the ministry's HRH unit to carry the work forward.

03 WORDS USED IN THIS DOCUMENT

Word	What it means
Cadre	A type of health worker, for example medical doctor, nurse or pharmacist.
Regulatory body	A statutory council or board that registers and licenses one or more cadres.
Registered	On a regulator's register. Licensed means registered and currently allowed to practise.
Density	Health workers per 10,000 or 100,000 people, the usual way of comparing places of different size.
YoY growth	Year-on-year growth: how much a number grew compared with the year before.
Gender gap	The difference between the share of men and the share of women in a cadre or a state.
Attrition	Workers leaving the workforce: migration, death, resignation and retirement.
HRH	Human Resources for Health, the planning field that deals with the health workforce.
NHWR	The Nigeria Health Workforce Registry, the national register of health workers.

04 THE QUESTIONS THE PROFILE ANSWERS

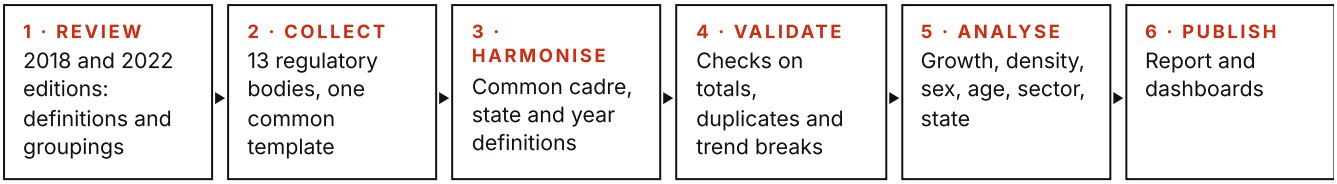
1. How many health workers does each cadre have, how fast is that number growing, and who are they by sex and age?
2. How many work in the public and in the private sector, and in which states, urban and rural?
3. How does density in each state compare with other states and with global averages?
4. How many are being trained, and are the training institutions accredited?
5. How many are employed, recruited and deployed?
6. How many leave, through migration, death, resignation and retirement, and where do emigrants go?
7. Who governs and regulates the workforce, and what policies and technical groups exist?

05 HOW THE PROFILE IS ORGANISED

Section	What it covers
1 Country context	Geography and demography, economy, politics and health status.
2 Country health system	Governance, service provision, financing and the health information system.
3 Availability and distribution	Fifteen cadre groups, each with growth, sex, age, public and private, state, urban and rural.
4 Training institutions	Accreditation status of the institutions that train each cadre.
5 Recruitment and deployment	Employment status by cadre and sex, and recruitment.
6 Attrition	Migration and destination countries, death, resignation and retirement.
7 Governance and regulation	Focal persons, technical working groups, partners, policies and plans, reporting entities and professional regulations.

Every cadre chapter in Section 3 follows the same template, so a reader can move from doctors to pharmacists and find the same tables in the same order. That consistency was one of the corrections I carried over from the review of earlier editions.

06 HOW THE PROFILE WAS BUILT



Reviewing the earlier editions

Before touching any 2024 data I read the 2018 and 2022 profiles for definitions, cadre groupings and presentation that differed. Where they differed I chose one rule, wrote it down, and applied it to all three years so the series could be compared.

Collecting from thirteen bodies

Each regulatory body submitted its records in its own way. I collapsed them into one national dataset with common cadre names, state names and year definitions. The same state spelled three ways becomes one state; the same cadre under two titles becomes one cadre.

Validating every submission

- Totals that did not add up across tables were returned to the body.
- Duplicated rows were found and removed.
- Values that broke sharply from the previous years' trend were queried before they were used.
- Every figure in the report was reconciled back to the harmonised dataset.

07 HOW THE KEY CALCULATIONS ARE WORKED OUT

Year-on-year growth

Growth is the change in the number of registered workers compared with the year before. The profile lists the states with the highest and lowest growth for each cadre and a regional growth rate.

THE FORMULA

```
growth  =  (this year − last year) ÷ last year

Excel:   =(C2 - B2) / B2
```

> **An everyday example.** A council registered 2,000 pharmacists last year and 2,300 this year. Growth is (2,300 − 2,000) ÷ 2,000 = 0.15, or 15%.

Density

THE FORMULA

```
density  =  licensed workers in a state  ÷  state population  ×  10,000

Excel:   =ROUND( B2 / C2 * 10000 , 1 )
```

HOW IT WORKS, STEP BY STEP

1. Take the number of licensed workers in the cadre, by state of practice.
2. Divide by the state population projection.

3. Multiply by 10,000, or by 100,000 for rarer cadres so the number is readable.
4. Compare each state with the national figure and with the global average for that cadre.

> **An everyday example.** A state with 500 licensed pharmacists and 2,000,000 people has 500 ÷ 2,000,000 × 10,000 = 2.5 pharmacists per 10,000.

Builds on: Registered and licensed counts, by state of practice.

Gender gap

THE FORMULA

```
gap  =  share of men  −  share of women   (in percentage points)
```

> **An everyday example.** If 70% of a cadre are men and 30% are women, the gap is 40 percentage points.

Urban and rural distribution

Each state's licensed workers are split into urban and rural by the location of practice, so the profile can show how far a cadre is concentrated in towns.

08 PROBLEMS FOUND IN THE RECORDS AND WHAT I DID

These are the kinds of problem found in the submissions. Each one was handled the same way: say what it was, fix it where the record allowed, and report it where it did not.

Issue	What I did	Why
The same state or cadre spelled in different ways	Mapped every variant to one standard name	Otherwise one state appears as three and its totals split
Totals that did not add up across tables	Returned them to the regulatory body for correction	A national total built on a wrong total is wrong
Duplicated rows	Found and removed them	Counting a person twice inflates density
Values that broke from the previous years' trend	Queried them before use	A sudden jump is often a keying error, not a real change
Different cadre groupings across the 2018 and 2022 editions	Applied one grouping to all years	A series is only comparable when the groups do not change
Different ways of counting registered and licensed workers	Used licensed workers for density and said so	Density should count people allowed to practise

09 REGISTRY BOTTLENECK ANALYSIS

Alongside the profile I designed and ran a mixed-methods bottleneck analysis of the Nigeria Health Workforce Registry. The quantitative part traced where records were incomplete or delayed. The qualitative part asked the people who submit and manage the data why. The findings were written up as a report and presentation for government and partners.

10 OUTPUTS

- The full 2024 profile report, with executive summary, workforce size summary and density comparisons against global averages.
- Gender-disaggregated, multi-year Power BI dashboards for ministry leadership and partners.
- A training programme for the ministry's HRH unit, so the next edition does not depend on outside consultants.
- The registry bottleneck report and presentation.

11 LIMITATIONS

The profile is built from regulatory body records. It counts registered and licensed workers, and each part of it is only as complete as the submission behind it. Workers who are registered but have left practice, and workers who practise without registration, are not visible to it.

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