REPORT DOCUMENTATION

Rivers State Health Labour Market Analysis 2026

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Excel · Python · Node.js · Word · HTML

183	23	28	66
pages in six parts and fifteen chapters	Local Government Areas	policy questions	cadres in the registry

This is a government report for the Rivers State Ministry of Health. This document explains how the report was produced. It does not reproduce the findings or figures in it. The full report is available on request where the Government allows it.

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01 THE STORY BEHIND THE REPORT

> *Imagine a commissioner of health is asked a plain question: how many health workers does Rivers have, where are they, and how many more does the State need? Each office answers differently. The nominal roll gives one number, the establishment list another, the hospital board a third.*
>
> *A Health Labour Market Analysis is the attempt to answer the question properly. It puts the records side by side, decides which count to trust and says why, and then follows the workforce through training, hiring, posting, pay and exit.*

The Rivers State Health Labour Market Analysis 2026 is the State's first look at its health workforce as a labour market. It runs to 183 pages and follows the WHO framework, prepared for the Rivers State Ministry of Health with the analytical framework of the Federal Ministry of Health and Social Welfare, support from the Clinton Health Access Initiative (CHAI), and technical implementation by the Innovative Hub for Research in Africa (IHfRA).

It covers the public and private health workforce of Rivers State, the institutions that train it, the money that pays for it, and workforce performance, gender and safety. It is the longest report of the national programme. The analysis is complete and was prepared for submission to the State.

02 MY ROLE

- Carried out the analysis and prepared the report.

- Built an analysis workbook with one data-collection sheet and one analysis sheet for each of the twenty-eight questions, recomputing every result from source.
- Kept a data-quality register of every issue found, including those corrected in the source before submission.
- Wrote up the performance and productivity and gender analyses from the facility returns.

03 WORDS USED IN THIS DOCUMENT

Word	What it means
HLMA	Health Labour Market Analysis. It treats the health workforce as the product of two markets, one that educates people and one that employs them.
Pillar	One of the four parts of the WHO framework: supply, economic demand, population health need and financial space.
Thematic area	A chapter group of the report. The questions are sorted into five: population health need, economic demand, education and production, supply and distribution, and financing.
Policy question	A question the State asked the analysis to answer, for example "are staff posted where the people are?".
Clinical workforce	Doctors, nurses and midwives, community health cadres, pharmacy, laboratory, radiography and dental cadres. Densities use these cadres only.
Density	Clinical workers for every 10,000 people. It lets a small area and a large area be compared fairly.
WHO threshold	44.5 doctors, nurses and midwives per 10,000 people, the level the WHO links to the health goals of the SDGs.
Staff Availability Ratio	Workers the State has, divided by workers the threshold says it needs. A ratio of 1 means the need is met.
Register	A list kept by one office, such as a nominal roll, an establishment list or a training return.
Release	The money actually paid out against an approved budget. Approval is a promise; release is the cash.
Pace	A stated yearly growth in the clinical workforce used in a projection. It is a policy scenario, not a forecast.
Void	A register that exists but is empty. In this work a void is recorded as a finding and is never filled with a guess.

04 THE QUESTIONS THE STATE ASKED

The State's technical working group adapted a matrix of policy questions and kept twenty-eight, each with a stated method, indicators, sources, stakeholders and the decision it informs. Each question was assigned to one module so that every piece of evidence is analysed once and cross-referenced elsewhere.

Module	Policy questions
Political economy	5 Government capacity to absorb required workers · 18 Macro-fiscal space for HRH investment · 19 Evidence-based HRH budgeting
Population health need	1 Workforce requirement from population and disease burden · 2 Geographic and riverine equity · 3 Maternal, newborn and emergency-care need · 4 Utilisation-driven need
Economic demand	6 Facility-level staffing demand · 7 Incentives for difficult postings · 20 A costed incentive and retention package · 8 Private-sector absorption
Supply	9 Stock and distribution · 10 Unequal distribution of cadres · 11 Attrition, migration and retirement risk · 12 Skill mix and scope of practice

Module	Policy questions
Education and production	13 Training quota and pipeline · 14 Accreditation bottlenecks · 15 Faculty and preceptor capacity · 16 Curriculum relevance · 17 Internship and transition · 21 Financing specialist training
Performance and productivity (enabler)	23 Output against staffing · 24 System constraints · 25 Task sharing · 26 Absenteeism and morale · 27 Digital workflow · 28 Workplace safety · 22 Capital investment
Gender (cross-cutting)	Sex composition, occupational hierarchy, leadership, posting and safety, drawing on questions 9, 10, 20 and 28

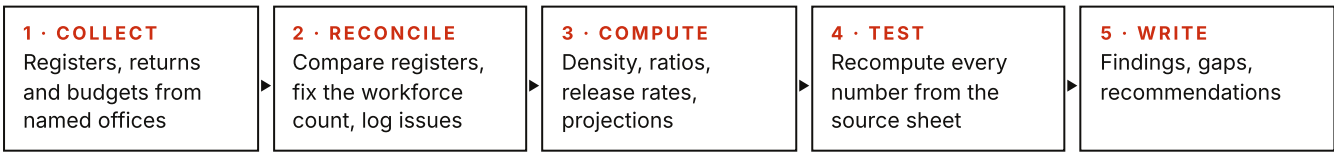
Two allocations needed a decision. The budget series and the fiscal-space scenarios, collected under both demand and financing, are analysed once in the political economy module. The two incentive questions describe the same eleven schemes and their records disagree, so they are analysed together.

05 WHERE THE EVIDENCE CAME FROM

The cadre registry was compiled from the nominal rolls of the Primary Health Care Management Board, the Hospitals Management Board and the teaching hospital, with primary data on the private sector.

Source	What it supplied	Feeds
Workforce registers	Nominal rolls, cadre and skill-mix registers, establishment (approved, filled, vacant posts).	Supply
Service statistics	DHIS2 returns: outpatient visits, antenatal care, deliveries, disease counts, by Local Government Area.	Need, supply
Budget records	Approved budgets, releases, spending and wage-bill lines, several years.	Demand, financing
Training returns	Admissions, enrolment, graduation, licensing, accreditation, faculty and internship, by institution.	Education
Surveys and national data	Population projections, household surveys, insurance enrolment, WHO and national benchmarks.	Need, financing
Facility managers	Returns on system constraints, task sharing, absenteeism, digital tools and safety.	Performance
Secondary budget sources	2025 and 2026 budgets entered from secondary sources, flagged for confirmation against the Appropriation Laws.	Financing

06 HOW THE ANALYSIS WAS BUILT



The nine-step HLMA process

The State followed the nine-step process of the WHO guidebook.

1. Engage policymakers.
2. Form a technical working group.
3. Hold a methodology workshop to prioritise policy questions.
4. Identify data and indicators.

5. Collect data.
6. Analyse by policy question.
7. Validate the findings with stakeholders.
8. Publish the report and policy briefs.
9. Prepare a strategic investment case and an HRH strategic plan.

The report and a deck of findings and recommendations are written. Publication, the policy briefs and the investment case come next.

Five modules, an enabler and a cross-cutting theme

The WHO framework is applied through five core modules: political economy, population health need, economic demand, supply, and education and production. Performance and productivity is treated as an enabler, because it decides how much service the workforce produces but does not define the size of the market. Gender runs through supply, distribution, leadership and safety, so it is analysed as a cross-cutting theme.

Clinical workers only

The WHO threshold was written for doctors, nurses and midwives. Applying it to all 66 cadres would mix categories and overstate the position. So every density counts clinical workers only, using the classification shared with the other state reports. Annex B lists the cadres in each group, and the narrower doctor, nurse and midwife figure is given separately where it is needed.

One population

A single population projection is used throughout, so every density shares the same denominator.

Three conventions are applied throughout and stated in the method chapter of each report.

1. Where two registers disagree, show both, say which is used and why. Never choose silently.
2. Where a source table is empty, record the void as a finding and name the document that would fill it. Never substitute an estimate.
3. Where a figure is a lower bound because its source says it is incomplete, label it as a lower bound wherever it appears.

07 HOW THE KEY NUMBERS ARE WORKED OUT

Clinical density

Density is the first number every chapter leans on. It is simple, but it is easy to get wrong, so the rules are fixed before any table is built.

THE FORMULA

```
density  =  clinical workers  ÷  population  ×  10,000

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

HOW IT WORKS, STEP BY STEP

1. Count only the cadres on the clinical list. Health information, environmental health and lay community workers are set aside.
2. Use one population figure, from one year, for every row, so that every density shares a denominator.
3. Divide the workers by the population, then multiply by 10,000.

4. Compare with the 44.5 threshold, and say which cadres the threshold was written for.

> **An everyday example.** A district with 1,200 clinical workers and 400,000 people has 1,200 ÷ 400,000 × 10,000 = 30 workers per 10,000. That is two thirds of the threshold.

Staff Availability Ratio and shortfall

THE FORMULA

```
requirement  =  population ÷ 10,000 × 44.5
ratio        =  workers available ÷ requirement
shortfall    =  requirement − workers available
```

> **An everyday example.** A State of 500,000 people needs 500,000 ÷ 10,000 × 44.5 = 2,225 workers. If it has 1,000, the ratio is 0.45 and the shortfall is 1,225.

Builds on: Clinical density. The same workers and the same population feed both.

Projection to the end year, by pace

A forecast needs a long history of the workforce. The States do not have one, so I did not fit a trend. I built scenarios, each with a stated yearly growth in clinical workers, and showed what each one does to density and to the gap.

THE FORMULA

```
workforce(year+1)   =  workforce(year)   × (1 + pace)
population(year+1)  =  population(year)  × (1 + growth)
density(year)       =  workforce(year) ÷ population(year) × 10,000
```

HOW IT WORKS, STEP BY STEP

1. Take the clinical workforce and the population in the base year.
2. Choose the paces: replacement only (no growth), the current pace, and an accelerated pace.
3. Grow the workforce by the pace and the population by the stated growth rate, year by year.
4. Read off density and the shortfall against the threshold for the end year.

> **An everyday example.** Start with 1,000 workers and 400,000 people. At a pace of 10% for five years, the workforce is $1{,}000 \times 1.1^5 = 1{,}611$. With population growing 3% a year it is 463,710. Density is 1,611 ÷ 463,710 × 10,000 = 34.7.

Population growth is a stated assumption in every report. Where the State's own series contained a one-off rebasing step, I did not fit the growth rate across it, because that would have overstated future growth.

Release rate

THE FORMULA

```
release rate  =  amount released  ÷  amount approved
```

> **An everyday example.** If 100 million naira is approved and 25 million is released, the release rate is 25%. The other 75 million was appropriated and never paid.

Testing a relationship

Where the question is whether staffing follows population or patient volume, I used a correlation coefficient and gave the p-value, so the reader can judge. With 11 to 25 areas the sample is always small, so the result is reported as indicative, not as proof.

08 PROBLEMS FOUND IN THE RECORDS AND WHAT I DID

Annex D of the report is a data-quality register. It lists every issue found when the workbook recomputed each question from its source sheet, and how each was handled. The kinds of problem are worth setting out because they show the work.

Issue	What I did	Why
Placeholder norms entered for most cadres	Marked required numbers for those cadres as not meaningful	A placeholder is not a norm
A formula referring to a deleted cell (#REF!)	Corrected the formula in the source before submission	One broken row hid a cadre
Formulas in a block of rows pointing one row up	Corrected the block and checked each result	A shifted reference gives another cadre's number
A summary cell adding only the public column	Changed it to add total stock	It understated the whole workforce
A threshold typed into a formula instead of read from the input cell	Pointed the formula at the input cell	A typed number will not follow a change
Status typed as free text with many spellings	Grouped by keyword	Different spellings count as different statuses
Ratios typed as text such as 1:x, and "NIL" in several spellings	Parsed to numbers and read NIL as zero	Text cannot be averaged
Empty tables, such as disease burden by Area and physical access	Recorded what cannot be estimated and used density as the only access measure	A void is a finding
Summary cells that return zero because their inputs are text	Computed from the table instead	The panel looked finished but was not

09 WHAT IS IN THE REPORT

Part	Chapters
I	1 Introduction · 2 Methodology
II	3 Political economy and macro-fiscal context · 4 Population health need · 5 Economic demand · 6 Supply · 7 Education and production
III	8 Workforce performance and productivity · 9 Gender and the health workforce
IV	10 Projections to 2035 · 11 Needs-based requirement and staff availability · 12 Financial feasibility
V	13 Synthesis of findings
VI	14 Recommendations · 15 Implementation and monitoring
Annexes	A The twenty-eight questions and findings · B Clinical cadre classification · C Local Government Area profiles · D Data-quality register

10 CHAPTER BY CHAPTER

The table follows the contents page of the Rivers State report. Page numbers are those printed in the report. A section starts on the page shown and runs to the start of the next one.

Section	Title	Page	The question it answers
1	Introduction	21	Why the report exists and what it covers
2	Methodology	24	How the analysis was done
3	Political Economy and Macro-Fiscal Context	30	The policy and fiscal setting
4	Population Health Need	41	Need: how many workers the population requires
5	Economic Demand	74	Demand: what the State can afford to employ
6	Health Workforce Supply	85	Supply: who works where, and who stays
7	Health Workforce Education and Production	102	Education: who is trained and how many qualify
8	Workforce Performance and Productivity	119	Who the workforce is and how it works
9	Gender and the Health Workforce	134	Who the workforce is and how it works
10	Workforce Projections to 2035	141	Where the workforce is heading
11	Needs-Based Requirement and Staff Availability	146	How far supply meets need
12	Financial Feasibility	149	What closing the gap would cost
13	Synthesis of Findings	151	How the findings fit together
14	Recommendations	155	What to do about it
15	Implementation and Monitoring	165	How to carry it out and track it

11 HOW TO READ IT IN TWENTY MINUTES

A READING ORDER FOR A BUSY READER

1. Read the executive summary first. It gives the main findings, and the report is organised around five analytical pillars: need, demand, education, supply and finance.
2. Turn to Section 13, Synthesis of Findings (page 151), to see how the findings connect.
3. Go back to the pillar that matters most to your decision and read that section in full.

12 LIMITATIONS STATED IN THE REPORT

Several of the twenty-eight questions rest on returns that are empty or incomplete, and the report records each as a finding with the data action it implies. The 2025 and 2026 budgets were entered from secondary sources and should be confirmed against the Appropriation Laws. Exits by cadre are not recorded, so attrition is estimated, not measured. The wording of module names should be checked against the methodology document the State's working group adopts.

13 OUTPUTS AND HOW THEY WERE USED

A written analysis the State can act on, with every finding traced to a named register, each gap in the evidence recorded as a finding, and prioritised recommendations built on the State's own data.

An analytical workbook that recomputes every figure in the report from the source sheets, so a reviewer can follow any number back to the office that supplied it.

Input to the consolidated six-state report, which sets the findings beside those of the other five States.

A deck of high-level findings and recommendations for the State's leadership, built from the report.

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