REPORT DOCUMENTATION

Abia State Health Labour Market Analysis 2026

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Excel · Python · Node.js · Word · HTML

87	17	20	6
pages in four parts and twelve chapters	Local Government Areas	policy questions	years of budget and release records

> This is a government report for the Abia 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 Abia 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 Abia State Health Labour Market Analysis 2026 is the State's first look at its health workforce as a labour market. It runs to 87 pages and follows the WHO framework, prepared for the Abia State Ministry of Health with the analytical framework of the Federal Ministry of Health and Social Welfare, technical and financial support from UNICEF Nigeria, and technical implementation by the Innovative Hub for Research in Africa (IHfRA).

It covers the public health workforce across all seventeen Local Government Areas, the institutions that train it and the public money that pays for it. It uses secondary and administrative sources only: no field survey was run in this round.

02 MY ROLE

- Led the analysis and wrote the report.

- Worked the national question matrix into the Abia analysis workbook.
- Reconciled the State's five workforce counts and fixed the denominator every density uses.
- Recomputed budget, release and service figures from the audited accounts and the State's own 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

Twenty policy questions were prioritised with the State. Each carries a reference letter for its area (N need, D demand, S supply, E education, F financing). The last column records whether the records held could answer it.

Ref	Policy question	Status
N1	Current and projected population health needs	**Answerable**
N2	Integration of epidemiological data into planning	**Answerable**
D1	Post-probation salary confirmation delays	**Not answerable**
D2	Time taken to release approved health funds	**Answerable**
D3	Proportion of the health budget executed	**Answerable**
S1	Critically understaffed specialist cadres	**Answerable**
S2	Distribution of health workers across Areas	**Answerable**
S3	Skill mix and qualification match	**Answerable**
S4	Pay, allowances and attrition	**Answerable**

Ref	Policy question	Status
S5	Workforce capacity against service utilisation	Answerable
S6	Supply chain and commodity availability	Answerable
E1	Accreditation status and enrolment capacity	Answerable
E2	Training infrastructure and educator capacity	Answerable
E3	Allied health training pipeline	Answerable
E4	Career guidance in secondary schools	Not answerable
E5	Socio-cultural factors in career choice	Not answerable
F1	Out-of-pocket expenditure and financial protection	Partly answerable
F2	Inflation impact on budgets and pay	Partly answerable
F3	Continuing professional development financing	Answerable
F4	Public financial management bottlenecks	Not answerable

Status is the analyst verdict on whether the secondary records can answer the question.

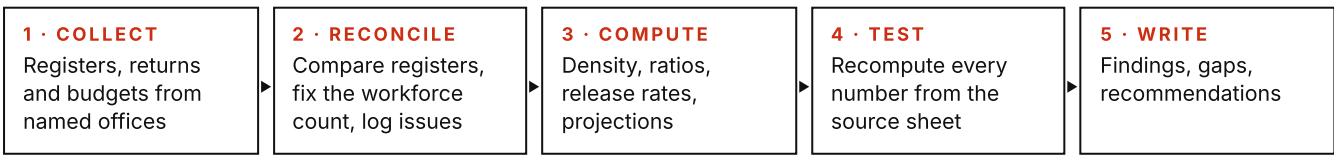
05 WHERE THE EVIDENCE CAME FROM

Every figure traces to a named office. The workbook that accompanies the report lists the source of each one.

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
Audited accounts	Auditor General statements for six years, and the State's own unaudited report for the latest year.	Demand, financing
Insurance agency	Health insurance enrolment by channel.	Financing

Two sources carry a warning that I stated in the method chapter, not in a footnote: the hospital board report says on every row that it does not cover the whole workforce, and the household protection surveys are older than the pandemic and the fuel subsidy removal.

06 HOW THE ANALYSIS WAS BUILT



The workforce denominator

The single biggest decision in the report was which workforce count to use. The State's evidence held five counts of the same workforce, and they differed by a factor of more than twenty. Three of them had no breakdown by cadre, so they could not give a density. I compared the five side by side, recorded what each one covers, and chose the register that records cadre. The choice is stated in the method chapter because every density and projection depends on it.

Budget and release

The six-year record sets approval against release, and the reasons recorded for money not being spent. I tested whether the release rate moves with the size of the approved budget, and whether spending is measured separately from release.

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 × 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

Each of these was found while recomputing the report from its source sheets. None was corrected silently.

Issue	What I did	Why
Five workforce counts that do not agree	Compared them in one table, adopted the register that records cadre, labelled the others	A density needs a count with a cadre breakdown

Issue	What I did	Why
Service volumes labelled monthly that are really annual	Recomputed the productivity classification, which was inverted in the source	A wrong label turns a busy facility into an idle one
Area populations that add up to more than the State estimate	Reported Area figures as indicative and stated the gap	Per-capita figures look more precise than they are
One Area recorded ten times larger in one table than in another	Flagged it and used the table that matches the facility returns	One bad row distorts a ranking
No price index anywhere in the evidence	Said real-terms pay cannot be measured	Inventing an index would give false precision
Four policy questions with no usable evidence	Marked them not answerable and named the document that would answer them	A void is a finding, not a blank

09 WHAT IS IN THE REPORT

Part	What it does
Part I	Context, framework, data sources, methods and the fiscal setting.
Part II	The five thematic areas in turn, each ending with the findings carried forward.
Part III	The workforce arithmetic: projections, the needs-based requirement and the cost of the additions.
Part IV	The evidence base: which questions the records answer and which they cannot.
Part V	Recommendations, with who leads, when, and how progress is monitored.

Chapter	What it answers
1 Introduction and policy context	Why the State commissioned it, and the national instruments behind it.
2 Framework, sources and methods	The pillars, the sources, the workforce denominator and the limits.
3 Political economy and the fiscal setting	Allocation against release, and where decisions are taken.
4 Population health need	The workload the disease burden and services place on the workforce.
5 Economic demand	What the State funds and employs, and how it exits.
6 Education and production	Enrolment against quota, inspection, applications, output.
7 Supply, distribution, retention	Counts, distribution, skill mix, vacancies, pay, working conditions.
8 Financing and household burden	Budget against cash, household spending, insurance, training money.
9 to 11 Projections, requirement, wage cost	Three paces to 2030, the Staff Availability Ratio and what additions cost.
12 The evidence base	What the records can and cannot answer.

10 CHAPTER BY CHAPTER

The table follows the contents page of the Abia 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 and policy context	13	The policy and fiscal setting
2	Analytical framework, data sources and methods	15	How the analysis was done

Section	Title	Page	The question it answers
3	Political economy and the macro-fiscal environment	18	The policy and fiscal setting
4	Population health need and the workforce it implies	24	Need: how many workers the population requires
5	Economic demand for health workers	32	Demand: what the State can afford to employ
6	Education, production and the training pipeline	36	Education: who is trained and how many qualify
7	Supply, distribution and retention	43	Supply: who works where, and who stays
8	Financing, financial protection and the household burden	54	What closing the gap would cost
9	Workforce projections to 2030	62	Where the workforce is heading
10	The needs-based requirement and the Staff Availability Ratio	66	How far supply meets need
11	Wage cost of the projected additions	70	What closing the gap would cost
12	The evidence base and what it cannot yet answer	75	What the records cannot yet answer

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. Read Section 12, The evidence base and what it cannot yet answer (page 75), to see which policy questions the records could not answer and which document would answer them.
3. Go back to the pillar that matters most to your decision and read that section in full.

12 LIMITATIONS STATED IN THE REPORT

No field survey was run, so the views of workers, students, managers and patients are absent. Area-level per-capita figures carry wider error than their precision suggests. No price index was available, so the erosion of pay cannot be measured. The household protection evidence pre-dates the pandemic. Four of the twenty questions have no usable evidence.

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.

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