

**SERVICE
DELIVERY**
INDICATORS

Education | Health

**Education and Health Services in
NIGERIA**

Data for Results and Accountability

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THE WORLD BANK



AFRICAN ECONOMIC RESEARCH CONSORTIUM
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Service Delivery Indicators: Data for Results and Accountability

The Service Delivery Indicators provide a set of metrics for benchmarking service delivery performance in education and health in Africa. The overall objective of the indicators is to gauge the quality of service delivery in primary education and basic health services. The indicators enable governments and service providers to identify gaps and to track progress within and across countries over time. It is envisaged that the broad availability, high public awareness and a persistent focus on the indicators will mobilize policymakers, citizens, service providers, donors and other stakeholders into action. The ultimate goal is to sharply increase accountability for improved quality of services to the ultimate end of improving human development outcomes, along the lines proposed by *World Development Report 2004: Making Services Work for Poor People*.

The Service Delivery Indicators initiative is an Africa-wide program that collects facility-based data from schools and health facilities every 2-3 years. The perspective it adopts is that of citizens accessing a service. The indicators can thus be viewed as a service delivery report card on education and health care. Instead of using citizens' perceptions to assess performance, however, the indicators assemble objective and quantitative information from a survey of schools and health facilities.

The SDI initiative is a partnership of World Bank, the African Economic Research Consortium and African Development Bank to develop and institutionalize the collection of a set of robust measures of service delivery. The measurement of these indicators is based on survey instruments underpinned by rigorous research and embraces the latest innovations in measuring provider competence and effort. The survey instruments were piloted in Tanzania and Senegal. The SDI is being rolled out, using a standardized methodology, but with adaptation to each country's context. It has already been implemented in Kenya and Uganda. The countries where implementation is currently happening are: Mozambique, Niger and Togo.

More information on the SDI survey instruments and data, and more generally on the SDI initiative can be found at: www.SDIndicators.org and www.worldbank.org/SDI, or by contacting sdi@worldbank.org.

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Education and Health Services in NIGERIA¹

SDI: Data for Results and Accountability

Introduction

In its Vision 20:2020 National Plan, Nigeria aims to rank among the top 20 global economies by 2020.

However, despite decent annual GDP growth of at least 6 percent in recent years, two fundamental questions have to be asked concerning the country's economic aspirations. Does Nigeria have the required human resources to become one of the top 20 economies in the world and if not, has the country been investing in human development to produce workers capable of competing in the global economy and meeting the demands of a vibrant private sector? These are pertinent questions because increased human capital has been a major contributing factor to the economic development of countries Nigeria seeks to compete.² Adult literacy rates in four of the five BRICS countries in 2010 for example, was at least 90 percent. Human capital in Nigeria's potential competitors is indeed very high.

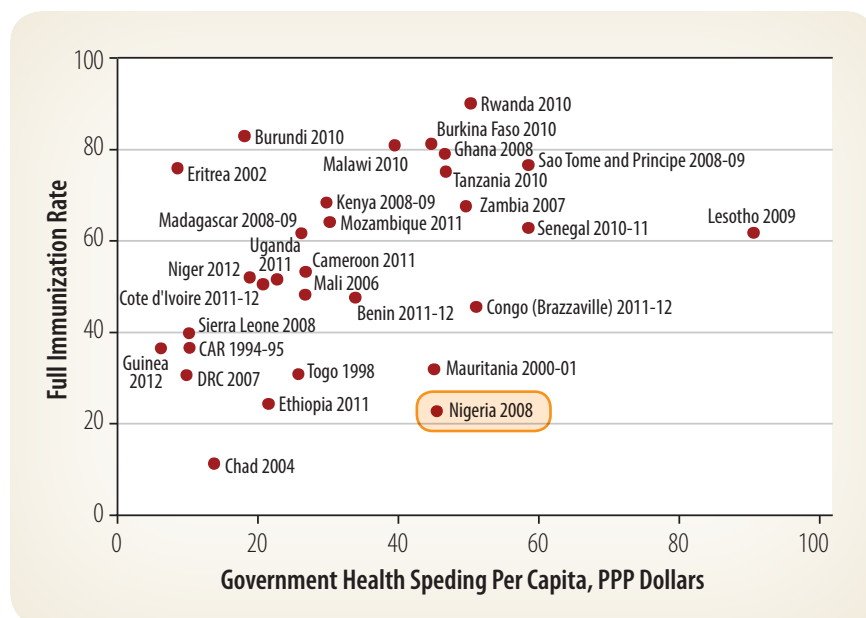
The frontline service delivery centres (schools and health facilities), have the responsibility to transform a significant share of public spending in education and health in into better schooling and health outcomes. Adult literacy in Nigeria was estimated at 61 percent in 2010. Prospects for improvement in this area remain weak, as only 61 percent of grade three pupils tested in 2010/11 could read and write³ while gross enrollment in secondary education was just 44 percent.⁴ At 124 deaths per 1,000 live births, Nigeria's under-five mortality rate is the 12th-highest in the world.⁵

Weak human development outcomes in Nigeria partly reflect a weak link between public expenditure and outcomes. More could be achieved with existing resources. Nigeria spent an average of 45

PPP, dollars per capita on health in 2008—just as much as Ghana—but its immunization rate was 22 percent compared to Ghana's 79 percent (Figure 1). There have been significant increases in funding for education in Nigeria, boosted by the creation of the Universal Basic Education Intervention Fund in 2005 and the Virtual Poverty Fund in 2006, but as the household surveys show, learning outcomes remain low. Increased funding by itself is not a panacea. What is needed is a sharper focus on results and accountability in spending in the education and health sectors in particular, and service provision sectors in general. Without improved efficiency in service delivery, Nigeria will be hamstrung in its efforts to achieve its long term economic aspirations.

The frontline service delivery centres (schools and health facilities), have the responsibility to transform a significant share of public spending in education and health in into better schooling and health outcomes. Understanding what takes place at the frontline is key to establishing where the relationship between public expenditure and outcomes is weak. However, reliable and complete information is generally lacking.

FIGURE 1: Cross country comparison of health expenditure and service delivery outcomes in Sub-Saharan Africa



1 Selected Nigerian States

2 Commission on Growth and Development, 2008; Wang and Yao 2013.

3 Nigeria Bureau of Statistics, 2012

4 World Development Indicators, 2012

5 UNICEF, 2012

Service Delivery Indicators for Nigeria – Highlights

This study presents an assessment of the state of service delivery in the education and health sectors in selected states in Nigeria. It is based on a survey of 760 primary schools and 1240 health facilities in Anambra, Bauchi, Ekiti and Niger States for education and, additionally, Cross-River and Kebbi States for Health. The results indicate there is an adequate number of teachers and health professionals to serve the population's needs, but they lack the necessary skills and are poorly managed. Significant gaps in input availability are revealed too. This suggests that a focus on management, incentives and accountability to address gaps in provider knowledge and effort is required along with efforts to increase the amount of inputs available at facilities.

What providers know

Teachers and health workers are adequately available but they possess low skills.

- The pupil teacher ratio averaged 20 pupils per teacher, well within expected standards, while the outpatient caseload (including immunization, antenatal care visits and other preventative care) averaged 1.5 patients per day per health worker.
- However, the workers had low skills. The average score on a Math and English assessment among Math and English teachers was 45 percent with only 4 percent of the teachers managing to obtain a score of at least 80 percent in the Math and English assessment. A considerable proportion (45 percent) of health professionals managed to correctly diagnose either just one or none of the five cases presented to them.

What providers do

Poor management permits teachers and health professionals to put in low effort and misallocate time.

- About 22 percent of teachers at a school did not show up in class. Most of this absence is explained by the 14 percent of teachers who did not show up at school. The remainder comes from teachers who were at school, but not in the classroom. On average, teachers spent about 15 percent of the time while at school doing non-teaching activities during times they were scheduled to be teaching in class. When these leakages were put together, teachers spent less than three quarters of scheduled teaching time on actual teaching activities. In

health, 29 percent of the health professionals who were supposed to be at work did not come to the health facility. In both sectors, over 86 percent of teachers and health professionals did so with management approval, indicating a sub-optimal allocation of paid staff time.

What providers have to work with

Significant gaps existed in the availability of inputs at the frontline in both health and education sectors.

- Only 17 percent of schools and 18 percent of health facilities had the minimum infrastructure. Most striking was the absence of functional, improved and accessible toilets. Only 19 percent of all primary schools and 28 percent of all primary and secondary health facilities surveyed had functional and accessible improved toilets.
- Less than half (49 percent) of the schools had the minimum teaching materials while only 38 percent of the pupils had a Math or English textbook. In the health sector, only 18 percent of health facilities had all the basic medical equipment (such as thermometers, weighing scales and blood pressure machines) and only 45 percent of the essential drugs tracked were available at the facilities. Lower level facilities (health posts and dispensaries), had the least input availability (only 7 percent had minimum infrastructure available for example).

Variation across states

There was a large variation across the states. Those from the southern parts of Nigeria performed better in the education sector but marginally worse in the health sector than states in northern Nigeria.

- With the exception of infrastructure, Anambra and Ekiti (both in the South) performed well on teacher effort (absence from class of 11 percent or less) and availability of education inputs (at least 73 percent availability of teaching equipment for example). In contrast absence from class was 41 percent in Bauchi and 21 percent in Niger while less than 25 percent of schools had minimum teaching equipment.
- The reverse was seen in the health sector. Absence from facility was higher in Anambra and Ekiti (37 percent) and lower in Bauchi (31 percent), Kebbi (27 percent) and Niger (21 percent). Health worker knowledge was also generally poor across all states, but Bauchi and Kebbi did better than Anambra, Cross-River and Ekiti.

The Service Delivery Indicators (SDI) initiative seeks to address gaps in the knowledge base about frontline service delivery using a survey-based diagnostic tool to analyze the quality of service provision at schools and health facilities (see Box 1).

Central to the SDI methodology is the notion that quality of service provision at the frontline level depends on what providers know, what providers do, as well as what they have to work with. The SDI methodology assesses three aspects of the quality of service delivery covering i) teacher and health worker competence (what they know), ii) provider effort (what they do) and iii) resource availability at the schools and health facilities (what providers have to work with). The core indicators for each sector are highlighted below and a detailed description of how they are measured is provided in Annex 1.

These indicators are all collected through a survey administered at the facility level to give a comprehensive and complete picture of the state of service provision at the school or health facility.

This is an advantage over other types of surveys because it shows the complete state of service provision at any particular point in time, emphasizing the complementarity between people management and resource availability in achieving high quality of service provision. The indicators are standardized and consistently measured using survey instruments and methodology underpinned by rigorous research and using the latest innovations⁶. The underpinning methodology has been rigorously tested in pilots in Senegal and Tanzania.

⁶ For more information about the methodology and the SDI in general visit www.SDIndicators.org or www.worldbank.org/SDI

THE INDICATORS

The SDI indicators are grouped into three categories:

- (i) **What providers know** (knowledge and ability). Teachers need to have at least a minimum level of knowledge of the subjects they are teaching and skills to transform their knowledge into meaningful teaching. Similarly, health providers need to be skilled and competent to manage the conditions they are presented with.
- (ii) **What providers do** (provider effort). A minimum requirement for service delivery, for example, is that teachers and health providers are present in the facility and working.
- (iii) **What providers have to work with** (availability of key inputs). These indicators deal with the service delivery environment, including the availability of teaching and medical equipment and supplies and school and health facility infrastructure.

Annex 1 provides a detailed description of the indicators.

SDI in Nigeria: Implementation and Scope

The SDI methodology was used in Nigeria to provide insights on challenges facing frontline service provision in the country. Nigeria is now the third country in Africa (after Kenya and Uganda in 2013) to use this methodology to assess the quality of service delivery. The survey implementation was preceded by consultations with stakeholders in Nigeria to adapt instruments to the country context while maintaining comparability across countries. The implementation was done with close collaboration with the Federal Ministry of Health and the National Primary Health Care Development Agency in the health sector and

the Universal Basic Education Commission in education sector, and in close coordination with the relevant state authorities, i.e. State Ministries of Health and Education, the State Universal Education Boards and State Primary Health Care Development Agencies where they existed.

The SDI surveys collected data from primary schools in four states and health facilities in six states using personal interviews and provider assessments. Anambra, Bauchi, Ekiti and Niger are the four states where both primary schools and health facilities were surveyed while Cross River and Kebbi are the two additional states where the health facilities

survey was implemented⁷. A total of 760 randomly selected public and private schools (190 per state) were surveyed, with 2,435 and 5,754 teachers assessed for knowledge and effort respectively. The health survey covered 1,038 randomly selected primary health facilities and all secondary hospitals (i.e. 134 in total) in the six states⁸, in the process assessing over 2,734

and 6,040 health professionals for knowledge and effort respectively. The sample was selected to make the survey representative at the State level, allowing for disaggregation by provider type (private/public in education and level of care in health) and location (rural/urban). While the selected states cover the entire spectrum of performance on socioeconomic indicators and provide a geopolitical balance, the survey and hence results presented in this report, are not meant to be representative of Nigeria as a whole.

7 These States were selected from each of the 6 geopolitical zones of Nigeria: Anambra - South East, Bauchi - North East, Cross-River - South-South, Ekiti - South West, Kebbi - North West, Niger from North Central.

8 About 64 SURE-P facilities were additionally included in the sample to provide a baseline for the SURE-P impact evaluation. These were not randomly selected and are excluded from the analysis in this report.

Summary of findings

TABLE 1: Service Delivery Indicators at a Glance^a

HEALTH								EDUCATION					
Indicator	All ^c	Anambra	Bauchi	Cross-River	Ekiti	Kebbi	Niger	Indicator	All ^b	Anambra	Bauchi	Ekiti	Niger
What providers know (ability)													
Diagnostic accuracy	36%	30%	40%	35%	35%	50%	33%	Minimum knowledge - At least 80% in Math & English	4%	7%	2%	8%	2%
Adherence to clinical guidelines	32%	26%	27%	33%	28%	37%	36%	Test score (Math, English & Pedagogy)	34%	47%	28%	47%	25%
Management of maternal/newborn complications	17%	18%	13%	17%	12%	24%	19%						
What providers do (effort)													
Caseload	1.4	0.7	2.5	0.5	1.0	1.7	1.3	School absence rate	14%	6%	22%	7%	17%
Absence from facility	29%	37%	30%	35%	38%	27%	20%	Classroom absence rate	22%	8%	42%	11%	21%
								Time spent teaching per day	3h44m	4h49m	2h14m	4h35m	3h26m
What providers have to work with (availability of inputs)													
Drugs availability	45%	64%	42%	52%	48%	17%	46%	Share of students with textbooks	38%	65%	12%	75%	26%
Equipment availability	18%	36%	12%	24%	42%	13%	9%	Equipment availability	49%	75%	22%	72%	44%
Infrastructure availability	18%	36%	18%	19%	31%	10%	11%	Infrastructure availability	17%	33%	5%	28%	11%

Notes: a) All results presented in the table and the rest of the report are weighted averages. Disaggregation by State is provided in Annex 2 and detailed results are available on the SDI website (www.SDIndicators.org); b) Results are for the combined samples for Anambra, Bauchi, Ekiti and Niger c) Results are for the combined sample for Anambra, Bauchi, Cross-River, Ekiti, Kebbi and Niger.

What do teachers and health workers know?

Providers must at least have minimum knowledge in order to make a meaningful impact on learning and health outcomes. Pupils cannot learn more from their teachers than what the teachers know, while health outcomes cannot significantly improve if health professionals lack the skills to diagnose and manage conditions they are confronted with. To test their competency, Math and English teachers were given Math and English assessments covering primary school level curriculum on one hand and teaching skills on the other (see Box 1 in Annex 1). The knowledge of health professionals who regularly perform consultations was tested using medical vignettes⁹ (case simulations) where they were presented with five tracer cases (acute diarrhea with severe dehydration, pneumonia, diabetes type II, pulmonary tuberculosis and malaria with anemia) and two cases covering maternal and newborn complications (Post-partum hemorrhage and neonatal asphyxia). They were then assessed on their ability to reach a correct diagnosis for the five tracer cases, the number of procedures in the guidelines which they followed when diagnosing the five tracer cases and the procedures they followed for managing the two maternal and newborn complication cases. The results presented here only include teachers currently teaching the particular subject and only cadre types expected to perform consultations in health facilities.

The assessments reveal a general lack of minimum knowledge among teachers and health professionals alike in all states. English and Math teachers obtained an average score of only 45 percent in the English and Math assessments. To put this into context, only 4 percent of the English and Math teachers tested scored at least 80 percent on the assessment of the subjects they teach. Similarly, health professionals could only correctly diagnose 36 percent (i.e. just under 2 in 5) of the tracer cases presented to them. Only 13 percent of the health providers assessed were able to correctly diagnose 4 or all of the 5 tracer cases presented to them (see Figure 2).

⁹ Clinical vignettes are a widely used teaching method used primarily to measure clinicians (or trainee clinicians) knowledge and clinical reasoning. A vignette can be designed to measure knowledge about a specific diagnosis or clinical situation at the same time as it measures trainees' skills in performing the tasks necessary to diagnose and care for a patient. According to this methodology, one of the fieldworkers acts as a case study patient and he/she presents to the clinician specific symptoms from a carefully constructed script while another acts as an enumerator. The clinician, who is informed of the case simulation, is asked to proceed as if the fieldworker is a real patient. For each facility, the case simulations are presented to up to ten randomly selected health workers who conduct outpatient consultations. If there are fewer than ten health workers who provide clinical care, all the providers are interviewed. For more information on the methodology, see www.SDIndicators.org.

FIGURE 2: Diagnostic accuracy and adherence to clinical guidelines

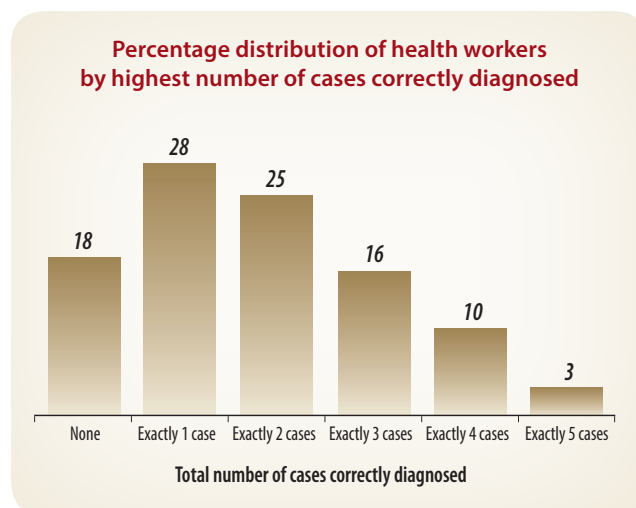
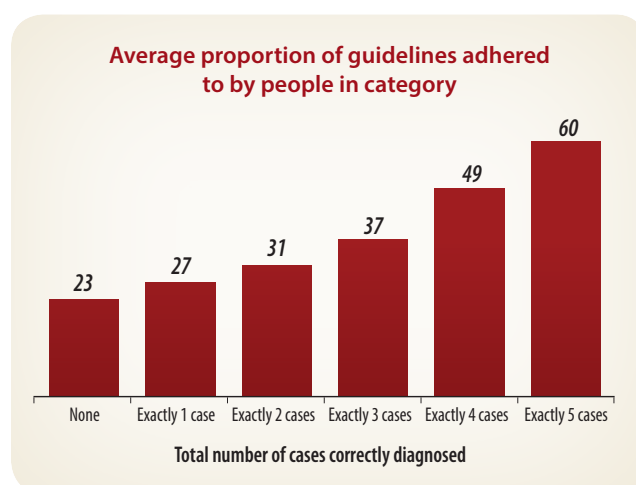


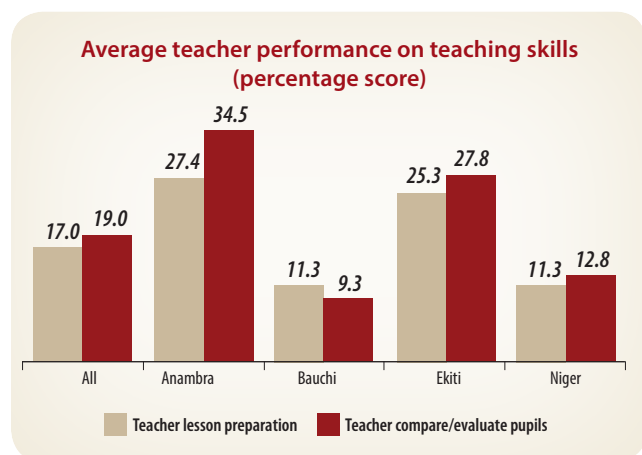
FIGURE 3: Adherence to clinical guidelines by number of cases correctly diagnosed



Staff competencies were slightly better in states in the North (Bauchi, Kebbi and Niger) in the health sector but worse in the education sector when compared to states in the South (Anambra, Cross-River and Ekiti). The average rates of diagnostic accuracy among health professionals in Kebbi (50 percent) and Bauchi (40 percent) were slightly higher than those in Ekiti (35 percent), Cross River (35 percent), and Anambra (30 percent). The reverse is however observed in the education sector, where the overall teacher assessments scores were higher in Anambra (47 percent) and Ekiti (47 percent) than in Bauchi (27.7 percent) and Niger (25 percent). The states in the North thus performed better in the quality of the software in the health sector, but worse on this dimension in the Education sector when compared to states in the South.

In addition, providers performed poorly on measures of “process quality”. For example, teachers performed poorly on basic teaching skills like lesson preparation and evaluating pupil performance (see Figure 4). The lack of process skills was common among teachers and health professionals in all states.

FIGURE 4: Performance on teaching skills



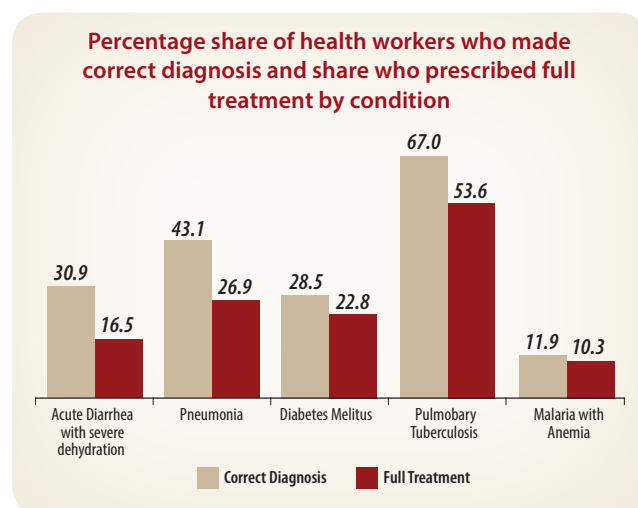
Good process skills are positively associated with other aspects of provider ability. As Figure 3 shows, adherence to clinical guidelines is closely linked to the ability to reach correct diagnosis. Those who correctly diagnosed four or all of the five tracer cases on average asked and followed twice as many key history questions and physical examination procedures when compared to those who only managed to correctly diagnose just one case or none. Weak diagnostic ability could be partly attributable to weak adherence to clinical guidelines.

Poor diagnostic skills may also be an outcome of unintended consequences of well-meaning but narrowly focused policies. A case in point is malaria with anemia that 70 percent of health professionals managed to identify the presence of malaria (for which the guidelines for diagnosis had been heavily drilled in) but did not make additional inquiries to identify any other complication once malaria had been identified. Management of post-partum hemorrhage was also a case where most of the lower-level health professionals failed to arrive at a preliminary diagnosis because the guidelines instruct them to immediately refer all

cases with bleeding. These two examples suggest the particular emphasis of guidelines related to these cases might be disempowering lower-level health professionals thereby inhibiting their knowledge to respond to emergencies.

There was a considerable gap between health providers’ ability to reach correct diagnosis and prescription of full treatment in some cases (Figure 5). Close to 31 percent of health professionals correctly diagnosed acute diarrhea with severe dehydration yet only 17 percent prescribed full treatment for the condition. The differences between the ability to reach correct diagnosis and prescription of full treatment are also observed in the other conditions with the exception of malaria with anemia and diabetes type II.

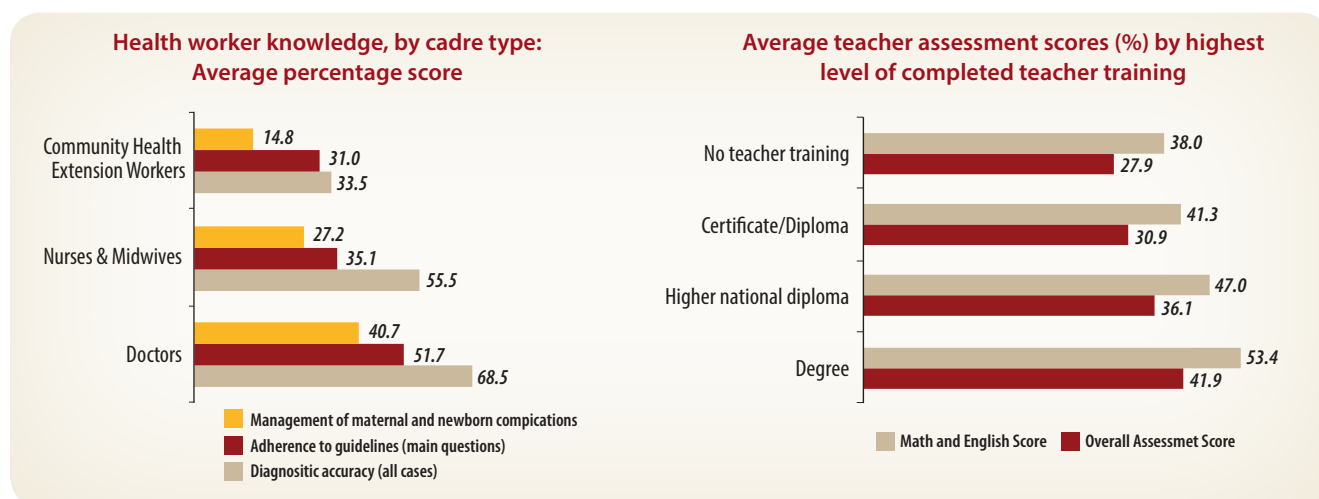
FIGURE 5: Divergence between correct diagnosis and full treatment



Higher trained cadres in both sectors performed better in knowledge as expected, but their performance largely failed to meet expectations (Figure 6). Doctors performed the best across all knowledge indicators and community health extension workers¹⁰ perform the worst. Among teachers, those with post-secondary education had higher average scores than those with complete secondary education only. Nonetheless, even doctors only adhere to 52 percent of the guidelines, while the average overall assessment scores among teachers with a degree or better is 54 percent. In both cases, the performance of the most educated is below par.

¹⁰ Also known as CHEWS in Nigeria.

FIGURE 6: Provider competency by provider type and level of education



What do providers do?

In both sectors, providers were not optimally managed resulting in low levels of effort either in the form of high absence or misallocation of time at work. Key measures of provider effort tracked in the survey were absence from health facilities among health professionals and absence from school and absence from class among teachers. These were based on unannounced visits to the facilities.¹¹

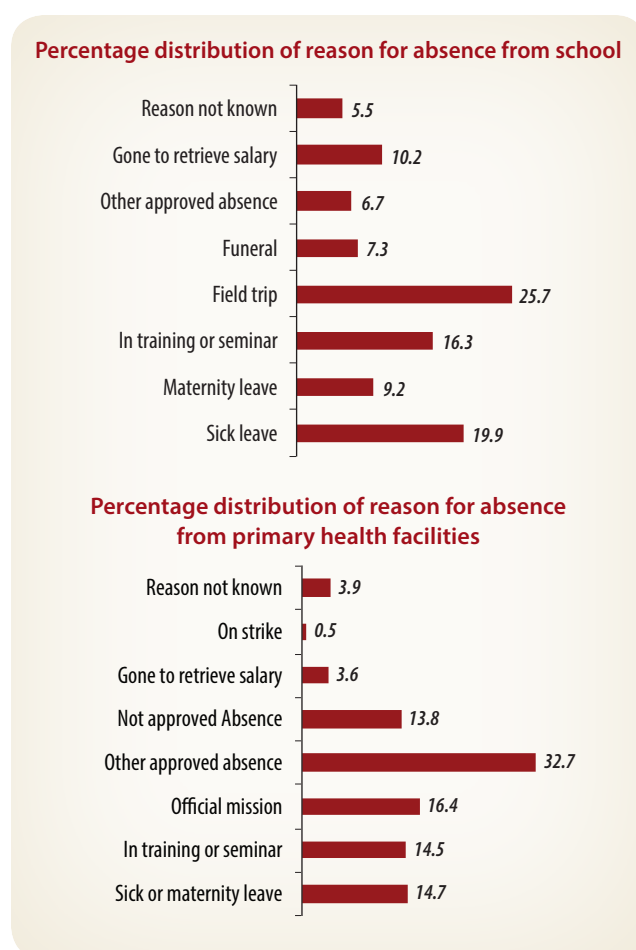
Provider effort was low in the health sector in all states. Absence from health facilities ranged from close to 40 percent in Anambra and Ekiti, to about 20 percent in Niger which had the lowest absence rates. The pattern was reversed in education where absence was high in Bauchi and Niger, but low in Anambra and Ekiti. The total absence rate from class in Bauchi was 42 percent and in Niger was 21 percent. In contrast, absence from class was low in Anambra and Ekiti (8 and 11 percent respectively).

More than 86 percent of the absence was management-approved in both sectors, bringing into question how well the time of providers was being used. Absence at the discretion of management was the most common form of absence in both sectors. In education, field trips, training and retrieving salaries accounted for half of the absence, while training, official missions, retrieving salaries and other forms of approved absence accounted for more than two-thirds of the absence in the health sector (Figure 7). This implies that a large amount of staff time is lost but still paid for, due to the inefficient management of staff time.

Results for other measures of effort suggest that poor supervision in the education sector, and a general misallocation of human resources in the health sector, could be contributing to low provider effort. A significant

share of time (15 percent) was lost due to teachers who were present in class but doing non-teaching activities during the time they should have been teaching—just as much as time lost from teachers not showing up at school at all. In Bauchi where this problem was most

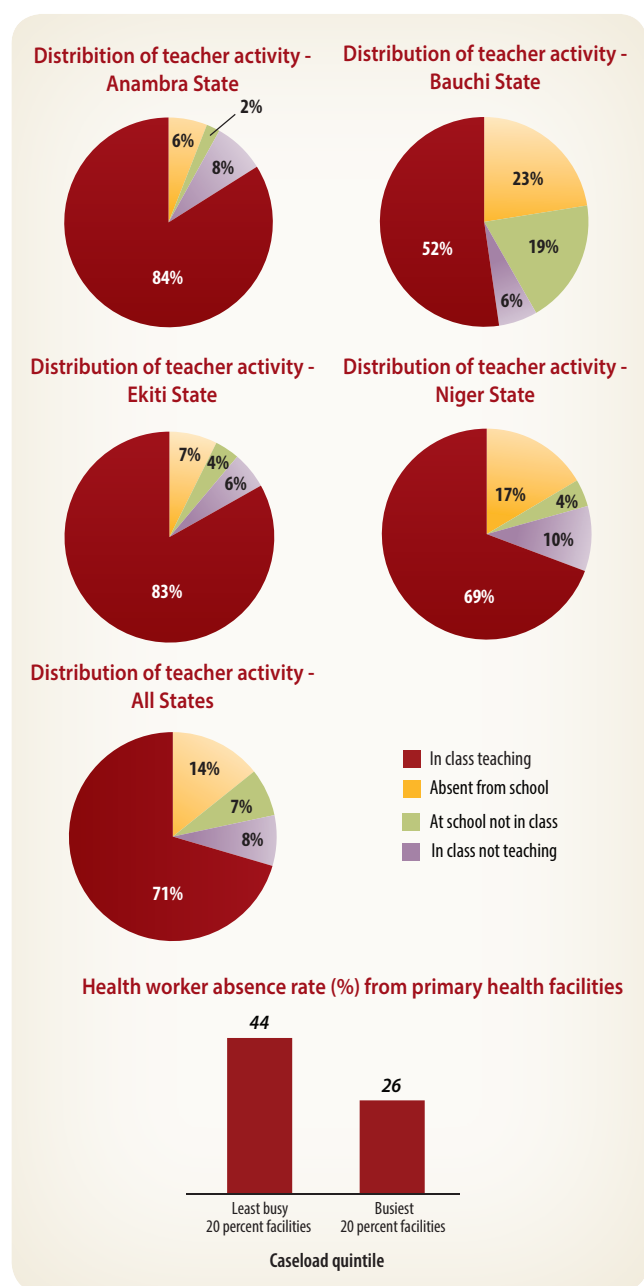
FIGURE 7: Reasons for absenteeism



¹¹ To measure absenteeism, up to 10 teachers or health providers were pre-selected at each school or health facility and their presence tracked during an unannounced visit. Absence from class was assessed only at times when the teacher was scheduled to be teaching while off-duty health professionals are excluded from measurement of absenteeism. Health professionals on outreach activities are counted as present just as teachers conducting outdoor activities with pupils are counted as present in class.

prevalent, teachers ended up teaching only for 2 hours 14 minutes out of the expected average of 3 hours 53 minutes of scheduled teaching time per day. In the health sector, absence of health workers among primary facilities in the lowest caseload quintile was nearly 60 percent higher than absence among facilities with the highest caseload quintile (Figure 8). This pattern could reflect a general misallocation of human resources whereby a higher number of staff were deployed in comparison to the utilization rates at some facilities. In both education and health, human resources could be managed better in order to raise the amount of time that teachers and health professionals devote to teaching pupils and providing care.

FIGURE 8: Provider effort



What do providers have to work with?

To deliver high quality care, providers need adequate inputs to work with. The survey measured if teachers had the minimum teaching equipment (e.g. chalk and a board to write on), whether pupils had a pencil and textbooks for subjects they are being taught and whether the schools had the minimum infrastructure (classrooms with adequate visibility and functional and accessible toilets) for learning to take place. Similarly, it measured whether health facilities had essential drugs, basic equipment, and minimum infrastructure amenities like toilets, clean water and electricity. All these are basic but essential inputs that providers need in order to deliver services of high quality.

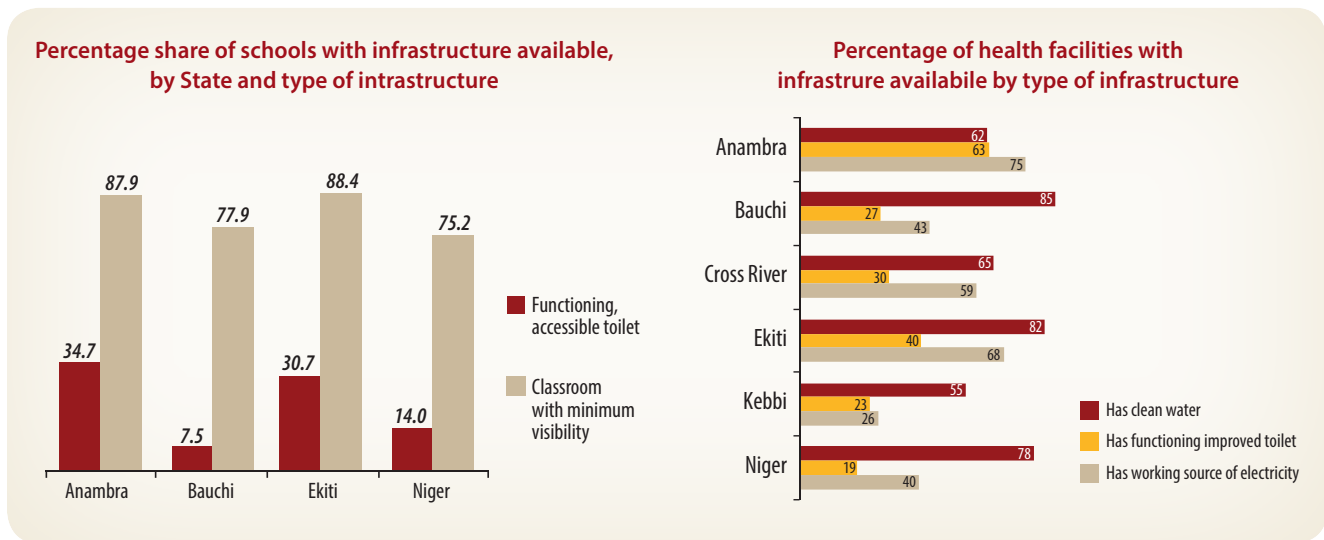
Significant gaps remain in the availability of inputs in both education and health in the states surveyed. Infrastructure availability was a key challenge, especially the availability of improved toilets. Among primary schools, only 17 percent had the minimum infrastructure, with only 20 percent having functional toilets accessible to pupils. Similarly, just 18 percent of health facilities had the minimum infrastructure with the availability of toilets being a major constraint too.

The lack of minimum infrastructure was a common problem across all states. Only roughly a third of health facilities in Anambra and Ekiti respectively had the minimum infrastructure, although this was better than infrastructure availability in Niger (10 percent) and Kebbi (11 percent). As shown in Figure 9, the lack of toilets was the major problem in all states.

Other key inputs were lacking too. The average share of students with a Math or English textbook among the classes observed was 38 percent while health facilities on average had 45 percent of the essential drugs tracked available at time of the survey. Only 18 percent of health facilities had all the minimum medical equipment (a thermometer, any weighing scale, sphygmomanometer, stethoscope for health posts and additionally sterilizing equipment and a refrigerator for health centers and hospitals). The availability of minimum equipment was low in all states, with Ekiti being the highest at 42 percent.

The lack of other inputs was a particular problem in states in northern Nigeria. For example, about three quarters of schools in both Anambra and Ekiti had the minimum teaching equipment, compared to only 44 percent of schools in Niger and 22 percent in Bauchi. Input availability in the health sector was also better in Anambra and Ekiti than in Cross-River and Niger in the middle and Bauchi and Kebbi at the lower end. Drug availability was highest in Anambra where facilities had 64 percent of the essential

FIGURE 9: Comparison of infrastructure availability across States



drugs available followed by Cross-River (52 percent), Ekiti (48 percent), Niger (46 percent), Bauchi (42 percent) and lastly Kebbi (17 percent). Availability of minimum medical equipment was also generally low. Unlike in education, input availability in the health sector was relatively low even among the better performing states.

Human resource availability was not the key constraint. Based on classroom observations, the average pupil per teacher ratio was only 20 and within acceptable standards. This was similar across all states except for Ekiti which had a lower ratio of 14 pupils per teacher. The average outpatient

caseload per health worker per day was only 1.4 and ranges from 2.5 in Bauchi to 0.5 in Cross-River. This implies that even in states where the caseload was highest, a typical health worker consults with five patients in two days. Both the pupil per teacher ratio and the caseload per worker show that providers were not overburdened as would be expected when provider shortages exist. While the number of providers is not a binding constraint, quality concerns arise from the low productivity of these workers because their work effort is low and they lack the appropriate skills.

Comparison of findings

TABLE 2: Service Delivery Indicators by provider type and location^a

HEALTH							EDUCATION					
Indicator	All	Rural	Urban	Health Posts	Health Centres	Secondary Hospitals	Indicator	All	Private	Public	Public Urban	Public Rural
<i>What providers know (ability)</i>												
Diagnostic accuracy	36%	36%	37%	33%	35%	65%	Minimum knowledge - At least 80% in Math & English	4%	8%	3%	5%	2%
Adherence to clinical guidelines	32%	34%	30%	28%	32%	48%	Test score (Math, English & Pedagogy)	34%	42%	32%	38%	30%
Management of maternal/newborn complications	17%	18%	17%	13%	17%	38%						
<i>What providers do (effort)</i>												
Caseload	1.4	1.5	1.3	1.7	1.2	3.3	School absence rate	14%	6%	16%	17%	16%
Absence from facility	29%	25%	37%	27%	30%	33%	Classroom absence rate	22%	11%	25%	23%	25%
							Time spent teaching per day	3h44m	4h39m	3h28m	3h37m	3h25m
<i>What providers have to work with (availability of inputs)</i>												
Drugs availability	45%	43%	51%	44%	45%	63%	Share of students with textbooks	38%	55%	34%	53%	28%
Equipment availability	18%	13%	29%	21%	14%	47%	Equipment availability	49%	66%	45%	48%	44%
Infrastructure availability	18%	13%	30%	7%	22%	61%	Infrastructure availability	17%	35%	12%	20%	10%

Notes: a) All results presented in the table and the rest of the report are weighted averages; b) Results are for the combined samples for Anambra, Bauchi, Ekiti and Niger in education. c) Results are for the combined sample for Anambra, Bauchi, Cross-River, Ekiti, Kebbi and Niger in Health

A comparison of public and private schools

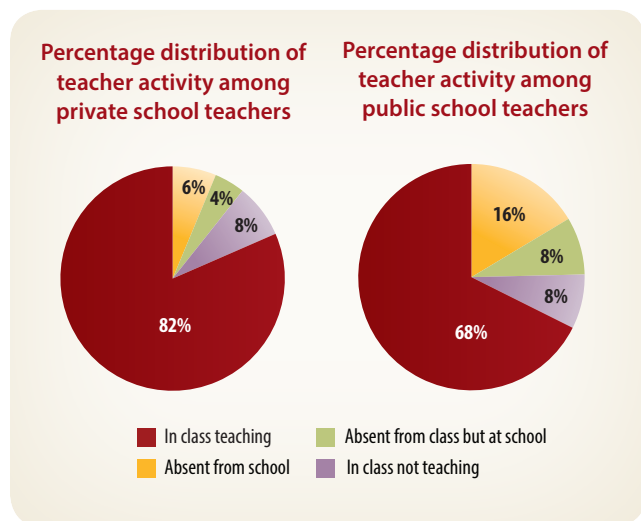
Private schools consistently performed better than public schools across all indicators. A notable distinction was in their management of human resources. Absence from school in public schools was more than double the absence rate among private schools teachers: 16 versus 6 percent. Private school teachers were also more likely to be in class and thus spent more of their time in class on teaching activities than public school teachers did: 25 versus 11 percent (Figure 10). Additionally, private schools have a longer scheduled teaching time per day than public schools. All this implies that on a typical day,

pupils in private schools learned 1 hour 10 minutes more than pupils in public schools. Over a period of a school term, this translates to 22 additional days of learning in a private school compared to public schools.

While the performance of private schools was better than public schools on input availability and competency, it also generally poor. Availability of infrastructure was three times higher in private schools. Still, only 35 percent of private schools had the minimum combination of infrastructure. The same applied to teacher competency, where the average assessment score was 11 percentage points higher in private schools, yet it was only a disappointing 42 percent. Availability of teaching equipment, which averaged 66 percent in private schools

compared to 45 percent in public schools, was the only case where private schools were both relatively better than public schools and marginally satisfactory in absolute terms. Both public and private schools performed equally well on the pupil teacher ratio. These results suggest that major issues affecting the quality of primary education in these states (i.e. inputs availability and low teacher competency) cut across both the private and public sectors, although private schools did seem to be able to elicit greater effort on the part of teachers.

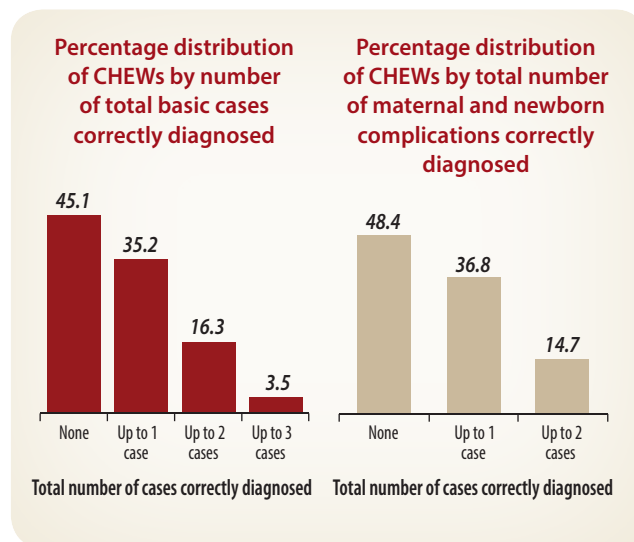
FIGURE 10: Comparison of teacher effort by school ownership type



A comparison of primary and secondary health facilities

Primary health facilities were staffed with cadre types found to possess the lowest competency levels. The diagnostic accuracy among health professionals in primary facilities was 35 percent, nearly half the accuracy rate for health professionals in secondary hospitals (65 percent). Health posts were typically manned by community health extension workers whose curriculum was fairly narrow and restricted. About 45 percent of the community health extension workers could not correctly diagnose any of the common child illness conditions (acute diarrhea with severe dehydration, pneumonia and malaria with anemia) during the case simulations and a slightly higher proportion could not diagnose the cases of post-partum hemorrhage and neonatal asphyxia (Figure 11). Yet in practice, they frequently encountered and managed such cases. The limitations of the community health extension workers' curriculum severely limit their knowledge and reduce the effectiveness of primary health facilities as the first point of care in a referral system.

FIGURE 11: Ability to reach correct diagnosis among Community Health Extension Workers

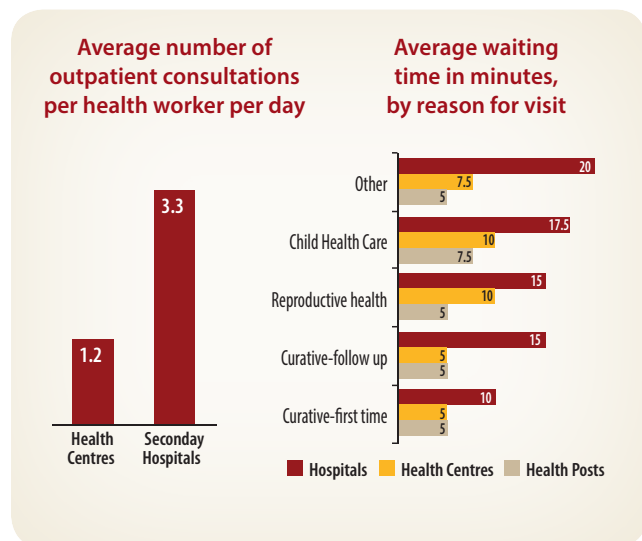


Notes: a) This based on case simulations for Acute diarrhea with severe dehydration, Pneumonia and Malaria with anemia; b) Based on case simulations for Post-partum hemorrhage and Neonatal asphyxia.

There are significant inadequacies at the lowest level of health care. The performance of health facilities in the primary tier, especially health posts, is poor. As a result, secondary referral hospitals consistently outperform primary health facilities despite a lower benchmark being applied for primary health facilities to be consistent with the level of care they are expected to provide. The essential drugs list for health posts is shorter than that of secondary hospitals, yet drug availability among health posts is only 44 percent compared to 63 percent in secondary referral hospitals. The availability of basic infrastructure (clean water, improved functional toilets and a source of electricity), is only 7 percent among health posts and 61 percent among hospitals. Thus even the very basic infrastructure at primary facilities is lacking. Indeed, primary facilities had the poorest scores in each of the three dimensions of quality assessed.

Poor quality at the lowest level of care encouraged bypass of the referral system. Consistent with this, the outpatient caseload among secondary referral hospitals was more than double that of health professionals in health posts. This was corroborated in exit interviews as reported waiting times were consistently higher among respondents at secondary referral hospitals (Figure 12). Exit interviews also showed that a significant share of patients visited a secondary referral hospital for reasons that should have been managed at lower levels of care. Half of the outpatients interviewed at secondary hospitals had come for a first time

FIGURE 12: Caseload and perceived waiting time by facility type



curative visit for malaria, diarrhea and fever treatment or for immunization and antenatal care. The referral system bypass shows that access without quality is as good as no access, as patients' bypass relatively easily accessible facilities in favor of those where the quality of care is higher. Indeed, multivariate analysis shows that caseload per worker is significantly lower among facilities with high rates of absenteeism and likely to be higher among facilities with high staff competency even after controlling for facility type and location.

How does Nigeria fare relative to other countries?

The same methodology used in Nigeria has been recently applied to Kenya and Uganda in a consistent and comparable manner. It was also implemented in Senegal and Tanzania in 2010. A comparison of states surveyed in Nigeria with these countries is presented in Table 3. It shows that surveyed states in Nigeria performed particularly poorly on input availability (minimum teaching equipment, drug availability and minimum infrastructure) relative to the other countries. The states performed poorly on the competency of providers when compared to Kenya, Uganda and Tanzania, but they performed just as poorly as Senegal. Surveyed states in Nigeria however performed better on absence from class than the other countries, but only better than Uganda on health worker absence. In a nutshell, the survey results were only better than other countries on the effort indicators in education.

What does all this mean for Nigeria?

The problems of health and education service provision quality are not a result of unavailability of personnel, but more about the low productivity of the available workers. This is due to low provider knowledge in both sectors and low provider effort in all states in the health sector and northern states in the education sector. Results suggest that poor management of human resources is possibly a contributing factor to this low productivity. A lot of learning time is lost in primary schools because even teachers who are at the school spend a significant amount of time either outside of the classroom or on other non-teaching activities. In health, the low skills among lower level cadre health professionals who run the lowest level of primary care can perhaps be attributed to the disconnect between the training they receive (which limits their curriculum) and the role they end up playing in the referral system. All these are aspects that can be improved through better management of human resources in the areas of supervision and allocation of staff time.

Basic infrastructure and equipment are generally lacking at the frontlines of service provision. Without good quality services, proximity and presence of structures does not translate into improved access. This is demonstrated by how people bypass the primary health care facilities, which are close but severely lacking in all dimensions of quality, to visit secondary referral hospitals where the quality is relatively better.

The results of the survey show significant variation by State across various dimensions of the quality of service provision. States in northern Nigeria perform relatively better in the health sector than they do in education, but on the whole, resource availability at health facilities and primary schools in these states is poor. Anambra and Ekiti on the other hand, performed well on some school inputs availability and teacher effort—they nevertheless did poorly on health worker effort.

The low level of provider knowledge in both sectors and high absence rates especially in the health sector suggest that a focus on management, incentives and accountability should be an important aspect of any package to improve service delivery. Increasing the amount of inputs at the facilities, without addressing gaps in provider knowledge or increasing the effort provided, is unlikely to yield the impact hoped for. Thus more attention should be paid to all aspects of quality at schools and health facilities rather than just physical access because access without quality is no access.

TABLE 4: Comparison of SDI results for surveyed States in Nigeria and other countries

HEALTH						EDUCATION					
Indicator	Nigeria ^a	Kenya	Senegal	Tanzania	Uganda	Indicator	Nigeria ^a	Kenya	Senegal	Tanzania	Uganda
What providers know (ability)											
Diagnostic accuracy	36%	74%	34%	57%	58%	Minimum knowledge - At least 80% in Math & English	4%	39%	-	-	20%
Adherence to clinical guidelines	32%	43%	22%	35%	35%	Test score (Math, English & Pedagogy)	35%	57%	-	-	45%
Management of maternal/newborn complications	17%	44%	--	--	20%						
What providers do (effort)											
Caseload	1.4	8.7	--	--	10.0	School absence rate	16%	16%	18%	23%	27%
Absence from facility	29%	29%	20%	21%	47%	Classroom absence rate	25%	47%	29%	53%	57%
						Time spent teaching per day	3h 44m	2h19m	3h15m	2h 04m	2h 58m
What providers have to work with (availability of inputs)											
Drugs availability	45%	52%	78%	76%	40%	Share of students with textbooks	38%	45%	--	--	5%
Equipment availability	17%	77%	53%	78%	18%	Equipment availability	49%	95%	--	--	94%
Infrastructure availability	18%	39%	39%	19%	47%	Infrastructure availability	17%	49%	17%	3%	59%

Notes: a) The figures are only for the states covered in the survey and not nationally representative; b) There are only four out of five common case simulations for Tanzania and Senegal and the other countries. Pelvic inflammatory disease was included among the five case simulations during the pilot surveys in Tanzania and Senegal, and this was later substituted with Diabetes Type II.

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Annex 1. The Service Delivery Indicators defined

BOX 1: Assessment of knowledge of teachers and health professionals

Assessing provider knowledge

Assessing teachers

Teachers were assessed for both their mastering of the primary school level Math and English curricula on one hand and teaching skills on the other. To test for teacher knowledge in the Math and English, teachers were asked to mark standardized tasks done by a pupil and suggest a correct answer whenever they indicated the pupil got the answer wrong. Thus they were assessed on their ability to identify or suggest a correct answer. The pupil tasks teachers were asked to mark covered various topics in which teachers were meant to be tested, giving a complete picture of the assessed teachers' mastery of the curriculum.

The test of teaching skills asked teachers to perform tasks they are expected to do to enhance pupil learning, like preparing a lesson plan, evaluating pupils and tracking progress in pupil performance. For example, teachers were presented with a short story about accidents and asked to prepare a lesson to make pupils aware of the reasons road accidents happen and the consequences. Among other things, they were then asked to i) specify the learning objectives of the lesson, ii) suggest questions they would ask to determine that pupils understood the lesson and that they can apply what they have learnt and iii) write points of argument for group activities. To test their ability to compare and evaluate pupil performance, teachers were presented with compositions written by a well performing pupil and the other by a poorly performing pupil and then asked to identify the strength and weakness of each pupil.

Assessing health professionals

Clinical vignettes are a widely used teaching method used primarily to measure clinicians (or trainee clinicians) knowledge and clinical reasoning. A vignette can be designed to measure knowledge about a specific diagnosis or clinical situation at the same time as it measures trainees' skills in performing the tasks necessary to diagnose and care for a patient. According to this methodology, one of the fieldworkers acts as a case study patient and he/she presents to the clinician specific symptoms from a carefully constructed script while another acts as an enumerator. The clinician, who is informed of the case simulation, is asked to proceed as if the fieldworker is a real patient. For each facility, the case simulations are presented to up to ten randomly selected health workers who conduct outpatient consultations. If there are fewer than ten health workers who provide clinical care, all the providers are interviewed. For more information on the methodology, see www.SDIndicators.org

Definition of Indicators

School absence rate	
Share of a maximum of 10 randomly selected teachers absent from school during an unannounced visit.	During the first announced visit, a maximum of ten teachers are randomly selected from the list of all teachers who are on the school roster. The whereabouts of these ten teachers are then verified in the second, unannounced, visit. Teachers found anywhere on the school premises are marked as present.
Classroom absence rate	
Share of teachers who are present in the classroom out of those teachers present at school during scheduled teaching hours as observed during an unannounced visit.	The indicator is constructed in the same way as School Absence Rate indicator, with the exception that the numerator now is the number of teachers who are both at school and in the classroom. The denominator is the number of teachers who are present at the school. A small number of teachers are found teaching outside, and these are marked as present for the purposes of the indicator.
Classroom teaching time (also referred to as Time on Task)	
Amount of time a teacher spends teaching during a school day.	<p>This indicator combines data from the Staff Roster Module (used to measure absence rate), the Classroom Observation Module, and reported teaching hours. The teaching time is adjusted for the time teachers are absent from the classroom, on average, and for the time the teacher remains in classrooms based on classroom observations recorded every minute in a teaching lesson.</p> <p>A distinction is made between teaching and non-teaching activities based on classroom observation done inside the classroom. Teaching is defined very broadly, including actively interacting with students, correcting or grading student's work, asking questions, testing, using the blackboard or having students working on a specific task, drilling or memorization, and maintaining discipline in class. Non-teaching activities is defined as work that is not related to teaching, including working on private matters, doing nothing and thus leaving students not paying attention, or leaving the classroom altogether.</p>
Teacher knowledge	
Test score (Maths, English and Pedagogy) Minimum Knowledge	<p>This is an average calculated from i) the score of teachers who teach English Language on the English Language tasks of the assessment and ii) the score of teachers who teach Mathematics on the Mathematics task of the assessment. This assessment was applied to all teachers currently teaching Mathematics and/or English Language in Primary 4, those who taught Mathematics and/or English Language at Primary 3 in the previous academic year, and up to 3 randomly selected upper primary Mathematics and English teachers.</p> <p>This is an average calculated from i) the score of teachers who teach English Language on the English Language tasks of the assessment and these teachers' score on the pedagogy tasks and ii) the score of teachers who teach Mathematics on the Mathematics task of the assessment and these teachers score on the pedagogy task.</p> <p>Proportion of assessed Teachers who obtained at least 80 percent in the Math and English assessments based on observed grade 4 classroom</p>
Textbooks per pupils	
Share of pupils with textbooks-	The indicator is measured as the number of students in observed grade 4 classes who had a mathematics or language textbook in their possession divided by the number of students present in the class. The data was collected as part of the classroom observation schedule.
Equipment availability	
Unweighted average of the proportion of schools with the following available: functioning blackboard with chalk, pencils and notebooks.	<p>Minimum teaching resources is assigned 0-1 capturing availability of (i) whether a grade 4 classroom has a functioning blackboard and chalk, (ii) the share of students with pens, and (iii) the share of students with notebooks, giving equal weight to each of the three components.</p> <p>Functioning blackboard and chalk: The enumerator assesses if there was a functioning blackboard in the classroom, measured as whether a text written on the blackboard could be read at the front and back of the classroom, and whether there was chalk available to write on the blackboard.</p> <p>Pencils and notebooks: The enumerator counts the number of students with pencils and notebooks, respectively, and by dividing each count by the number of students in the classroom one can then estimate the share of students with pencils and the share of students with notebooks.</p>

Infrastructure availability

Unweighted average of the proportion of schools with the following available: functioning electricity and sanitation.

Minimum infrastructure resources is assigned 0-1 capturing availability of: (i) functioning toilets operationalized as being clean, private, and accessible; and (ii) sufficient light to read the blackboard from the back of the classroom.

Functioning toilets: Whether the toilets were functioning was verified by the enumerators as being accessible, clean and private (enclosed and with gender separation).

Electricity: Functional availability of electricity is assessed by checking whether the light in the classroom works gives minimum light quality. The enumerator places a printout on the board and checks (assisted by a mobile light meter) whether it was possible to read the printout from the back of the classroom given the slight source.

Caseload per health provider

Number of outpatient visits per clinician per day.

The number of outpatient visits recorded in outpatient records in the three months prior to the survey, divided by the number of days the facility was open during the three month period and the number of health professionals who conduct patient consultations (i.e. excluding cadre-types such as public health nurses and out-reach workers).

Absence rate

Share of a maximum of 10 randomly selected providers absent from the facility during an unannounced visit.

Number of health professionals that are not off duty who are absent from the facility on an unannounced visit as a share of ten randomly sampled workers. Health professionals doing fieldwork (mainly community and public health professionals) were counted as present. The absence indicator was not estimated for hospitals because of the complex arrangements of off duty, interdepartmental shifts etc.

Adherence to clinical guidelines

Unweighted average of the share of relevant history taking questions, the share of relevant examinations performed.

For each of the following five case study patients: (i) malaria with anemia; (ii) acute diarrhea with severe dehydration; (iii) pneumonia; (iv) pulmonary tuberculosis; and (v) diabetes mellitus.

History Taking Questions: Assign a score of one if a relevant history taking question is asked. The number of relevant history taking questions asked by the clinician during consultation is expressed as a percentage of the number of important history questions to be asked based of the guidelines for management of the case (IMIC and Kenya National guidelines).

Relevant Examination Questions: Assign a score of one if a relevant examination question is asked. The number of relevant examination taking questions asked by the clinician during consultation is expressed as a percentage of the total number of relevant examination questions included in the questionnaire.

For each case study patient: Unweighted average of the: relevant history questions asked, and the percentage of physical examination questions asked. The history and examination questions considered are based on the National Clinical Guidelines and the guidelines for Integrated Management of Childhood Illnesses (IMCI).

Management of maternal and neonatal complications

Share of relevant treatment actions proposed by the clinician.

For each of the following two case study patients: (i) post-partum hemorrhage; and (ii) neonatal asphyxia. Assign a score of one if a relevant action is proposed. The number of relevant treatment actions proposed by the clinician during consultation is expressed as a percentage of the total number of relevant treatment actions included in the questionnaire.

Diagnostic accuracy

Average share of correct diagnoses provided in the five case studies.

For each of the following five case study patients: (i) malaria with anemia; (ii) acute diarrhea with severe dehydration; (iii) pneumonia; (iv) pulmonary tuberculosis; (v) diabetes mellitus.

For each case study patient, assign a score of one as correct diagnosis for each case study patient if case is mentioned as diagnosis. Sum the total number of correct diagnoses identified. Divide by the total number of case study patients. Where multiple diagnoses were provided by the clinician, the diagnosis is coded as correct as long as it is mentioned, irrespective of what other alternative diagnoses were given.

Drug availability

Share of basic drugs which at the time of the survey were available at the facility health facilities.

Priority medicines for mothers: Assign score of one if facility reports and enumerator confirms/observes the facility has the drug available and non-expired on the day of visit for the following medicines: Oxytocin (injectable), misoprostol (cap/tab), sodium chloride (saline solution) (injectable solution), azithromycin (cap/tab or oral liquid), calcium gluconate (injectable), magnesium sulfate (injectable), benzathinebenzylpenicillin powder (for injection), ampicillin powder (for injection), betamethasone or dexamethasone (injectable), gentamicin (injectable) nifedipine (cap/tab), metronidazole (injectable), medroxyprogesterone acetate (Depo-Provera) (injectable), iron supplements (cap/tab) and folic acid supplements (cap/tab).

Priority medicines for children: Assign score of one if facility reports and enumerator confirms after observing that the facility has the drug available and non-expired on the day of visit for the following medicines: Amoxicillin (syrup/suspension), oral rehydration salts (ORS sachets), zinc (tablets), ceftriaxone (powder for injection), artemisinin combination therapy (ACT), artusunate (rectal or injectable), benzylpenicillin (powder for injection), vitamin A (capsules)

We take out of analysis of the child tracer medicines two medicines (Gentamicin and ampicillin powder) that are included in the mother and in the child tracer medicine list to avoid double counting.

The aggregate is adjusted by facility type to exclude drugs that are expected to be available at level of care as provided for the Essential Medicine List, 2010 fifth revision.

Equipment availability

Share of facilities with thermometer, stethoscope and weighing scale refrigerator and sterilization equipment.

Medical Equipment aggregate: Assign score of one if enumerator confirms the facility has one or more functioning of each of the following: thermometers, stethoscopes, sphygmometers and a weighing scale (adult or child or infant weighing scale) as defined below. Health centers and first level hospitals are expected to include two additional pieces of equipment: a refrigerator and sterilization device/equipment.

Thermometer: Assign score of one if facility reports and enumerator observes facility has one or more functioning thermometers.

Stethoscope: Assign score of one if facility reports and enumerator confirms facility has one or more functioning stethoscopes.

Sphygmometer: Assign score of one if facility reports and enumerator confirms facility has one or more functioning sphygmometers.

Weighing Scale: Assign score of one if facility reports and enumerator confirms facility has one or more functioning Adult, or Child or Infant weighing scale.

Refrigerator: Assign score of one if facility reports and enumerator confirms facility has one or more functioning refrigerator.

Sterilization equipment: Assign score of one if facility reports and enumerator confirms facility has one or more functioning Sterilization device/equipment.

Infrastructure availability

Share of facilities with electricity, clean water and improved sanitation.

Infrastructure aggregate: Assign score of one if facility reports and enumerator confirms facility has electricity and water and sanitation as defined.

Electricity: Assign score of one if facility reports having the electric power grid, a fuel operated generator, a battery operated generator or a solar powered system as their main source of electricity.

Water: Assign score of one if facility reports their main source of water is piped into the facility, piped onto facility grounds or comes from a public tap/standpipe, tubewell/borehole, a protected dug well, a protected spring, bottled water or a tanker truck.

Sanitation: Assign score of one if facility reports and enumerator confirms facility has one or more functioning flush toilets or VIP latrines, or covered pit latrine (with slab).

Annex 2. State Level indicators

TABLE 5: Anambra State SDI results at a glance

HEALTH							EDUCATION					
Indicator	All	Rural	Urban	Health Posts	Health Centres	Seconday Hospitals	Indicator	All	Private	Public	Public Urban	Public Rural
<i>What providers know (ability)</i>												
Diagnostic accuracy	30%	29%	31%	20%	30%	51%	Minimum knowledge - At least 80% in Math & English	7%	10%	5%	5%	5%
Adherence to clinical guidelines	26%	25%	26%	22%	25%	37%	Test score (Math, English & Pedagogy)	47%	48%	46%	46%	47%
Management of maternal/newborn complications	18%	18%	18%	13%	18%	28%						
<i>What providers do (effort)</i>												
Caseload	0.7	0.5	0.8	1.0	0.6	0.6	School absence rate	6%	3%	8%	6%	9%
Absence from facility	37%	41%	35%	33%	39%	49%	Classroom absence rate	8%	5%	10%	8%	11%
							Time spent teaching per day	4h49m	5h29m	4h23m	4h25m	4h22m
<i>What providers have to work with (availability of inputs)</i>												
Drugs availability	64%	64%	65%	65%	65%	52%	Share of students with textbooks	65%	57%	70%	81%	64%
Equipment availability	36%	27%	40%	41%	35%	22%	Equipment availability	75%	79%	72%	69%	73%
Infrastructure availability	36%	23%	42%	15%	44%	28%	Infrastructure availability	33%	37%	30%	35%	28%

TABLE 6: Bauchi State SDI results at a glance

HEALTH							EDUCATION					
Indicator	All	Rural	Urban	Health Posts	Health Centres	Secondary Hospitals	Indicator	All	Private	Public	Public Urban	Public Rural
What providers know (ability)												
Diagnostic accuracy	40%	39%	43%	36%	41%	62%	Minimum knowledge - At least 80% in Math & English	2%	2%	2%	0%	2%
Adherence to clinical guidelines	27%	27%	27%	24%	29%	32%	Test score (Math, English & Pedagogy)	28%	30%	27%	26%	28%
Management of maternal/newborn complications	13%	12%	15%	8%	16%	17%						
What providers do (effort)												
Caseload	2.5	2.5	2.6	2.7	2.3	3.2	School absence rate	22%	16%	23%	37%	21%
Absence from facility	30%	25%	45%	25%	37%	35%	Classroom absence rate	42%	33%	43%	61%	40%
							Time spent teaching per day	2h14m	2h22m	2h13m	1h30m	2h20m
What providers have to work with (availability of inputs)												
Drugs availability	42%	40%	46%	39%	44%	60%	Share of students with textbooks	12%	31%	9%	20%	8%
Equipment availability	12%	12%	10%	8%	16%	36%	Equipment availability	22%	32%	20%	17%	21%
Infrastructure availability	18%	15%	28%	4%	34%	77%	Infrastructure availability	5%	19%	3%	2%	4%

TABLE 7: Ekiti State SDI results at a glance

HEALTH							EDUCATION					
Indicator	All	Rural	Urban	Health Posts	Health Centres	Seconday Hospitals	Indicator	All	Private	Public	Public Urban	Public Rural
<i>What providers know (ability)</i>												
Diagnostic accuracy	35%	45%	35%	29%	33%	71%	Minimum knowledge - At least 80% in Math & English	8%	5%	9%	11%	6%
Adherence to clinical guidelines	28%	31%	28%	23%	27%	52%	Test score (Math, English & Pedagogy)	47%	43%	48%	50%	46%
Management of maternal/newborn complications	12%	9%	13%	8%	12%	33%						
<i>What providers do (effort)</i>												
Caseload	1.0	1.0	1.0	0.5	0.8	3.9	School absence rate	7%	9%	7%	6%	7%
Absence from facility	38%	42%	38%	37%	38%	29%	Classroom absence rate	11%	12%	11%	10%	11%
							Time spent teaching per day	4h35m	4h55m	4h28m	4h25m	4h31m
<i>What providers have to work with (availability of inputs)</i>												
Drugs availability	48%	44%	48%	43%	48%	76%	Share of students with textbooks	75%	58%	80%	85%	76%
Equipment availability	42%	44%	42%	48%	37%	60%	Equipment availability	72%	69%	73%	72%	75%
Infrastructure availability	31%	11%	32%	18%	34%	40%	Infrastructure availability	28%	26%	29%	30%	27%

TABLE 8: Niger State SDI results at a glance

HEALTH							EDUCATION					
Indicator	All	Rural	Urban	Health Posts	Health Centres	Secondary Hospitals	Indicator	All	Private	Public	Public Urban	Public Rural
What providers know (ability)												
Diagnostic accuracy	33%	32%	34%	32%	31%	65%	Minimum knowledge - At least 80% in Math & English	2%	11%	0%	2%	0%
Adherence to clinical guidelines	36%	37%	34%	33%	36%	60%	Test score (Math, English & Pedagogy)	25%	37%	24%	27%	23%
Management of maternal/newborn complications	19%	20%	18%	17%	18%	53%						
What providers do (effort)												
Caseload	1.3	1.3	1.5	0.8	1.4	5.7	School absence rate	17%	6%	18%	23%	17%
Absence from facility	20%	18%	34%	16%	21%	27%	Classroom absence rate	21%	9%	23%	25%	22%
							Time spent teaching per day	3h26m	4h03m	3h20m	3h07m	3h23m
What providers have to work with (availability of inputs)												
Drugs availability	46%	46%	49%	58%	43%	79%	Share of students with textbooks	26%	66%	20%	18%	20%
Equipment availability	9%	6%	25%	30%	4%	71%	Equipment availability	44%	58%	42%	27%	45%
Infrastructure availability	11%	9%	18%	3%	11%	71%	Infrastructure availability	11%	46%	5%	7%	5%

TABLE 9: Cross-River State and Kebbi State health SDI results at a glance

CROSS-RIVER STATE							KEBBI STATE					
Indicator	All	Rural	Urban	Health Posts	Health Centres	Seconday Hospitals	All	Rural	Urban	Health Posts	Health Centres	Seconday Hospitals
<i>What providers know (ability)</i>												
Diagnostic accuracy	35%	33%	40%	28%	37%	64%	50%	50%	50%	47%	47%	72%
Adherence to clinical guidelines	33%	34%	31%	33%	33%	52%	37%	37%	38%	34%	36%	53%
Management of maternal/newborn complications	17%	17%	18%	15%	18%	43%	24%	23%	25%	18%	20%	50%
<i>What providers do (effort)</i>												
Caseload	0.5	0.5	0.5	0.4	0.3	4.3	1.7	1.8	1.3	2.0	1.2	2.8
Absence from facility	35%	35%	39%	33%	38%	35%	27%	28%	21%	30%	24%	21%
<i>What providers have to work with (availability of inputs)</i>												
Drugs availability	52%	54%	48%	61%	46%	53%	17%	13%	32%	10%	20%	64%
Equipment availability	24%	24%	22%	35%	15%	35%	13%	12%	19%	11%	10%	67%
Infrastructure availability	19%	17%	27%	14%	20%	69%	10%	7%	23%	2%	12%	80%



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