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# QUALITY OF CARE IN PERFORMANCE-BASED INCENTIVES PROGRAMS

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## NIGERIA CASE STUDY



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April 2016

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# ACRONYMS

CCT	Conditional Cash Transfer
DFF	Decentralized Facility Financing
DHS	Demographic and Health Surveys
GoN	Government of Nigeria
HIV/TB	Human Immunodeficiency Virus/Tuberculosis
LGA	Local Government Authority
MNCH	Maternal, Newborn, and Child Health
MOH	Ministry of Health
NPC	National Population Commission
P4P	Pay for Performance
PBF	Performance-based Financing
PBI	Performance-based Incentives
PFMU	Project Financial Management Unit
RBF	Results-based Financing
SMOF	State Ministry of Finance
SMOH	State Ministry of Health
SPA	Service Provision Assessment
SPHCDA	State Primary Health Care Development Agency
TRAction	Translating Research into Action
TTL	Task Team Leader
USAID	U.S. Agency for International Development

# BACKGROUND

Performance-based incentives (PBI) schemes are a financing approach used by health systems around the world to improve health system performance, and are increasingly used in low- and middle-income countries. PBI programs provide payments to facilities or health providers for achieving predetermined performance targets. Facilities and providers are assessed using checklists to determine their performance score, and payments are calculated based on quantity and quality scores. PBI differs from traditional health-financing approaches, which tend to pay for inputs into the health system rather than for outputs.

PBI programs set performance targets related to the health objectives prioritized by national, regional, and local governments. For example, these programs could target maternal and child health, HIV, or tuberculosis outcomes, among many others. PBI programs aim to increase demand for and use of health services, and to improve both the quantity and quality of health services provided. PBI is a relatively new health-financing approach, and much can be learned from the rollout and scale-up of PBI in low- and middle-income countries over the past decade. Initially, the programs focused on increasing the utilization rates for health services, with less attention paid to incentivizing improved quality of care or understanding the unintended consequences of these programs on the quality of other services. PBI programs with a quality component often do assess structural indicators of quality, yet few programs focus on process or outcome indicators, which are a more robust measure of quality of care (see box on page 5 for more details on quality indicators). More recently, however, countries have recognized the need to include better quality-of-care performance targets within PBI programs.

As part of a global review of quality of care in PBI programs, the USAID|Translating Research into Action (TRAction) Project and ThinkWell have produced a series

## ALTERNATE TERMS FOR PBI<sup>1</sup>

Alternate terms are used to describe variations of this financing concept, including:

- Results-based financing (RBF)
- Performance-based financing (PBF)
- Pay for performance (P4P)
- Conditional cash transfer (CCT).

These terms are often used interchangeably, though there are (in some cases slight) differences in their definitions.<sup>2</sup>

As Nigeria's program is named a PBF intervention, the term PBF will be employed throughout this case study.

of four case studies examining how and to what extent quality has been incentivized within PBI programs in the Democratic Republic of the Congo, Mozambique, Nigeria, and Senegal.

The subject of this case study is a World Bank-funded performance-based financing (PBF) program implemented by the Government of Nigeria (GoN), called the Nigeria States Health Investment Project. Nigeria provides an interesting case, as the most populous country in Africa continues to face staggering maternal and child mortality rates. The World Bank team is conducting an impact evolution of the PBF program that compares outcomes achieved at PBF facilities to those achieved at facilities with simple cash inputs. The GoN has prioritized making adjustments based on outcomes of the evaluation to push facilities to continually improve. Data for this case study were gathered through document reviews and in-depth interviews with project leaders.

1 USAID Health Systems Strengthening Program. Performance-Based Incentives: A Primer for USAID Missions. 2010. Available at: [http://pdf.usaid.gov/pdf\\_docs/Pnadx747.pdf](http://pdf.usaid.gov/pdf_docs/Pnadx747.pdf)

2 Musgrove, Philip. The World Bank. Financial and other rewards for good performance of results: a guided tour of concepts and terms and a short glossary. 2011. Available at: [https://www.rbfhealth.org/sites/rbf/files/RBFglossarylongrevised\\_0.pdf](https://www.rbfhealth.org/sites/rbf/files/RBFglossarylongrevised_0.pdf)



# COUNTRY SNAPSHOT

## QUALITY OF CARE IN NIGERIA

With a population of 177.5 million and growing, Nigeria boasts the largest population in Africa.<sup>3</sup> The country's health sector faces many challenges in providing high quality care to the rising population. While human resources are relatively plentiful in the region, they are concentrated in urban hospitals.<sup>4</sup> In addition, access to services in rural areas, where over half of the population lives, is difficult and utilization of healthcare facilities remains low. On average, fewer than 1.5 patients per day visit a healthcare facility, which has resulted in a high level of absenteeism among healthcare staff.<sup>5</sup> In addition, centralization of drug distribution has created an atmosphere of chronic stock-outs, equipment is lacking, sanitation practices are poor, and care is often mismanaged.

For example, in 2013, more than 80% of maternal complications were reportedly "mismanaged."<sup>5</sup> The national rate of facility-based delivery is 36%, though there is significant variation across the country. In Ondo, Nasarawa, and Adamawa states (which are enrolled in the World Bank PBF program), the rates of facility-based delivery are 56%, 40%, and 33%, respectively.<sup>6</sup> Furthermore, an assessment of the quality of antenatal services in northern Nigeria found wide variability in the application of technical and counseling actions taken by clinical staff across 10 primary healthcare facilities.<sup>7</sup>

The current healthcare system is divided into three tiers: national, state, and local. Each has its own responsibilities, but overlaps in the system create confusion and result in a lack of oversight and accountability.<sup>8</sup> These persisting issues have led the Ministry of Health (MOH) to look for a new solution.

## KEY TAKEAWAYS ON QUALITY OF CARE FROM NIGERIA'S PBF PROGRAM

1. As resources are procured and structural assets are in place, quality measurements should evolve from structural to process indicators
2. Results in facilities with a low starting point, in terms of services provided and quality care, have shown dramatic improvement
3. The variability in quality scores within LGAs can be significant, raising the question about how to ensure that high-scoring facilities continue to improve.

## INTRODUCTION OF PERFORMANCE-BASED FINANCING

With the goal of increased access to quality health services, the MOH partnered with the World Bank and the Health Results Innovation Trust Fund in 2011 to create a \$170 million PBF program with the goal of improving Maternal, Newborn, and Child Health (MNCH) outcomes. The program was pre-piloted in one Local Government Authority (LGA) of three different states: Adamawa, Nasarawa, and Ondo. These three states are spread across Nigeria and are representative of the range of health performance and outcomes within the country. The pre-pilot covered 53 health centers and three hospitals. After operational methods and tools were aligned with the local context and capacity was built in the necessary oversight bodies, the program was

3 World Bank. "Databank" (2014). Accessed February 8, 2016. <http://databank.worldbank.org/data/reports.aspx?source=2&country=NGA&series=&period=>

4 World Health Organization. "Nigeria" (2015). Accessed January 18, 2016. <http://www.who.int/workforcealliance/countries/nga/en/>

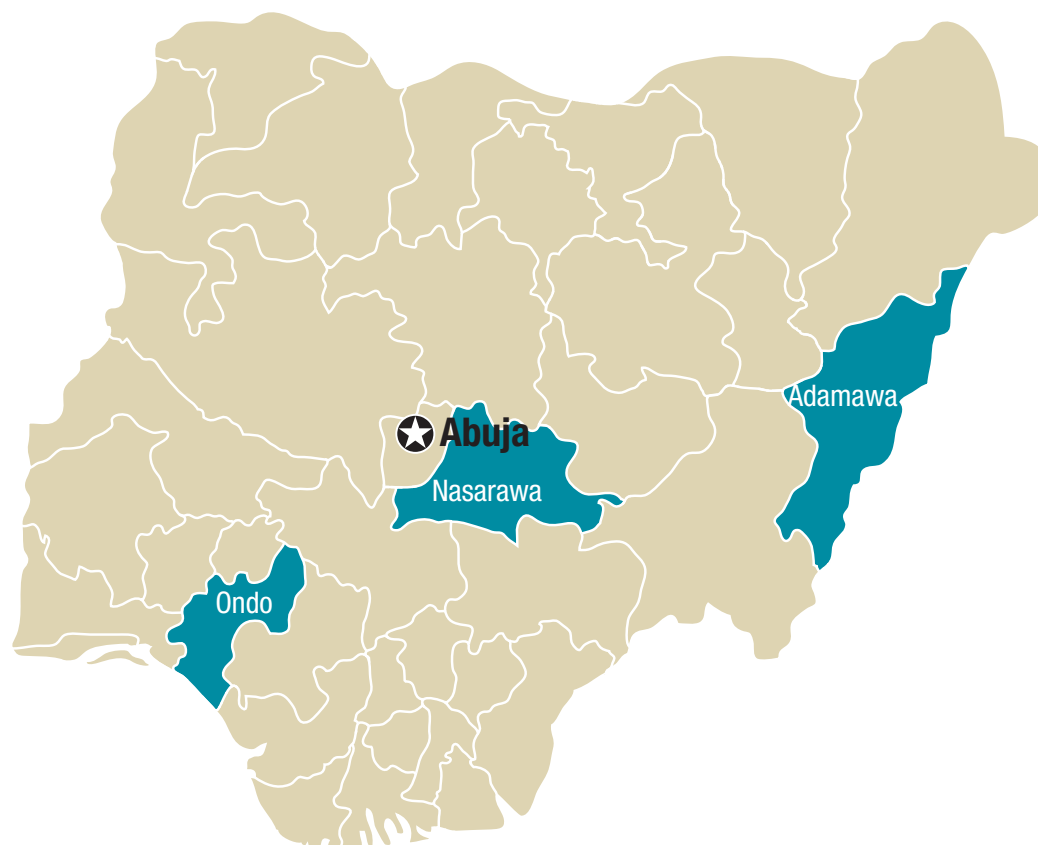
5 Dauda Belel, Abdullahi & Mabuchi, Shun. "The Adamawa Primary Health Care System." World Bank. April 2014.

6 National Population Commission (NPC) [Nigeria] and ICF International. *Nigeria Demographic and Health Survey 2013*. Abuja, Nigeria, and Rockville, Maryland, USA: NPC and ICF International. 2014.

7 McNabb, Marion, et al., Pathfinder International. *Assessment of the Quality of Antenatal Care Services Provided by Health Workers using a Mobile Phone Decision Support Application in Northern Nigeria: A Pre/Post-intervention Study*. 2014. <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0123940>

8 World Health Organization. "Nigeria Plan" (2004). Accessed January 18, 2016. <http://www.who.int/pmnch/countries/nigeria-plan-chapter-3.pdf>

FIGURE 1. Locations of Performance-based Financing and Decentralized Facility Financing Pilot Programs



gradually scaled up until January, 2015, when it reached its current coverage of 439 health centers and 27 hospitals. One unique aspect of the design of the pilot is an additional control element to test the effect of PBF payments. A PBF approach has been applied in half of all LGAs in each state. The other half of each state’s LGAs receive Decentralized Facility Financing (DFF) (see Figure 1). These facilities receive a lump sum of cash each quarter, based on the number of people living in the catchment area. On average, DFF facilities will receive about half of the funds that PBF facilities do, and cannot use them for staff bonuses.

The conclusion of this pilot program should yield useful information on PBF’s ability to increase service provision and increase quality compared to results achieved through a DFF approach. The engagement at this point is still considered a “pilot project,” as it is being monitored for possible national application. Under the GoN/World Bank PBF program, Oxford Policy Management (a UK consultancy firm) has been contracted by the State Primary Health Care Development Agency (SPHCDA) to act as the purchaser of

services from the providers—in this case, health facilities. Both private and public facilities are involved in the program and can sub-contract between each other for services as well. Under this arrangement, both sectors work together to ensure that patients get the care and medicines they need, despite any resource shortages that may occur. The State Ministry of Health (SMOH) regulates payments that are made to the facilities. The LGA Primary Health Care Department is responsible for verifying quality, and the SPHCDA carries out regular counter-verifications and client satisfaction surveys. Additionally, the government, through the State Ministry of Finance/Project Financial Management Unit (SMOF/PFMU), holds the funds to maintain a purchaser-provider split.

In addition to the GoN/World Bank PBF program that is the subject of this case study, a second PBF program had been implemented by the Partnership for Reviving Routine Immunization in Northern Nigeria from 2011 to 2014. The program aimed to improve MNCH service provision in the states of Zamfara, Yobe, Jigawa, and Katsina, and yielded generally positive results.



# PERFORMANCE-BASED FINANCING QUALITY ASSESSMENT APPROACH

## ASSESSING QUALITY WITHIN PERFORMANCE-BASED FINANCING

The Nigerian PBF program covers a range of services provided both in health centers (primary facilities) and in hospitals (secondary facilities). Health centers provide 20 minimum services, including maternal and child care, family planning, HIV services, and vaccination. Hospitals provide 22 complementary services. Therefore, the program developed separate checklists to assess service provision in the two distinct types of facilities.

The program developed the primary and secondary care checklists in 2011 and revised them in 2013. There are currently 182 indicators in the quality checklist for primary facilities, and 228 for secondary facilities (Figure 2).

In health clinics, checklist assessments are carried out by a trained verifier from the LGA's Primary Health Care Department, while peer reviews are executed by other hospitals. This peer-review mechanism allows doctors, pharmacists, nurses, and others from the MOH's hospital management board to evaluate hospital quality rooted in their knowledge as practitioners.

Facilities earn quantity payments based on a specified price per unit of delivered services. In this program, service utilization levels are measured monthly. Quantity levels and quality of services are then verified quarterly. Facilities that score 50% or above on the quality checklist are eligible for a quality bonus. The quality bonus for both

## CATEGORIES OF QUALITY INDICATORS

**Structural:** Assesses the characteristics of a care setting, including facilities, personnel, and policies related to running the facility and care delivery.

**Process:** Determines if the services provided to patients are consistent with routine clinical care and current guidelines.

**Output:** Evaluates patient health, prescription rates, and/or patient satisfaction as a result of the care received.

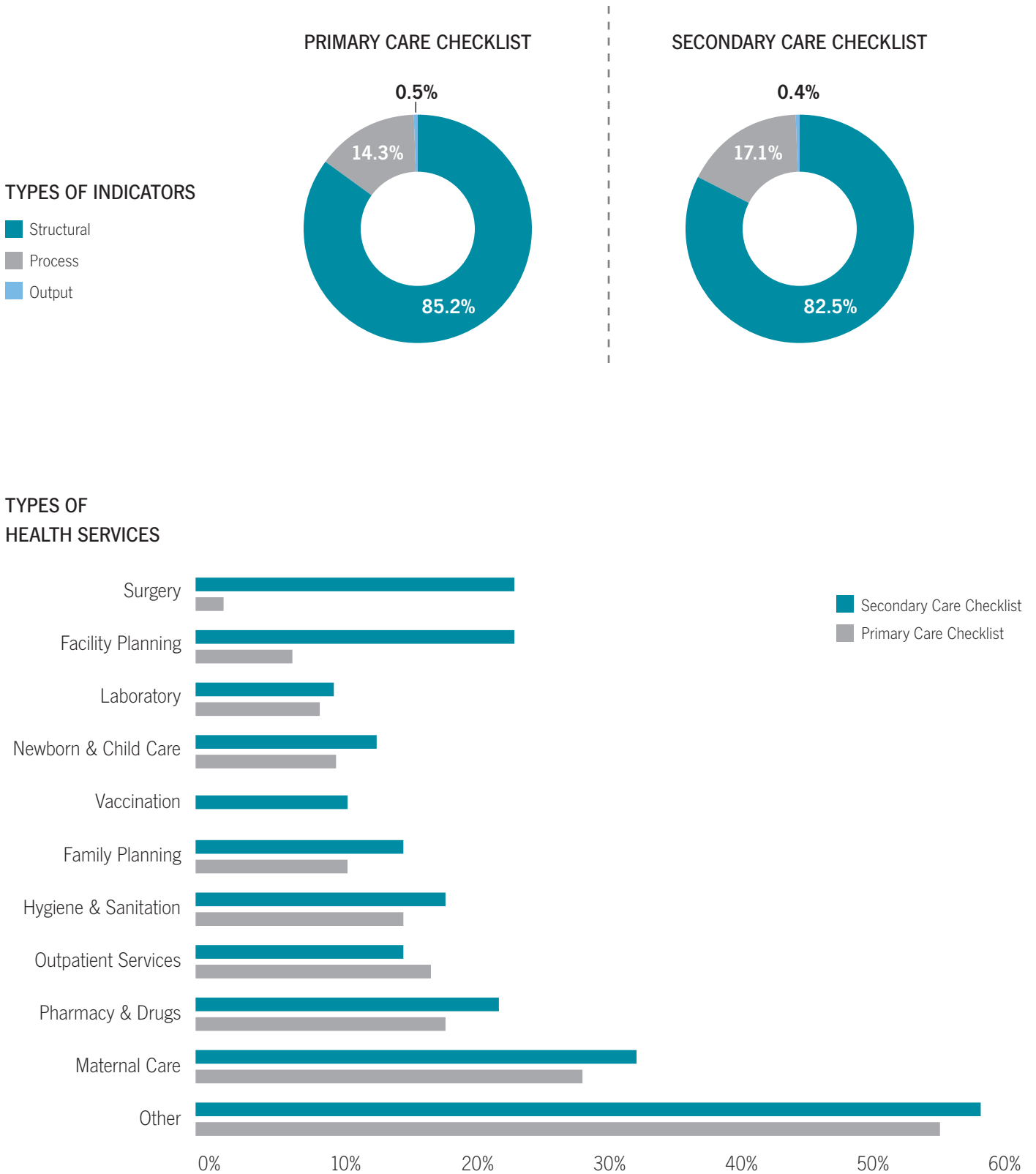
checklists is expressed as 25% of the quantity payment (Table 1). The larger the quantity payment, the larger the quality bonus. Payments are made to facilities every quarter after verification. Half of the total funds earned must go directly back into the facility for the purchase of equipment or infrastructure maintenance. The other half can be distributed to staff as monthly performance bonuses based on individual assessments.

The Task Team Leader (TTL) puts much emphasis on the ability of the verification process to produce clear results from assessments and limit their margin of error. After initially obtaining discrepancies between reported scores and counter-verifications, all verifiers must now undergo training for accreditation and are compensated for their efforts. As currently designed, an assessment takes about 5 hours per facility, and includes a variety of verification sources including register reviews, patient file reviews,

**TABLE 1. Calculation of the Final Performance-Based Financing Bonus for Health Facilities**

Quantity payment	= Sum (Price × Quantity of services)
Quality bonus (if facility scores ≥ 50%)	+ (25% × Quantity payment)
<b>Total payment</b>	<b>= Sum (Quantity payment + Quality bonus)</b>

FIGURE 2. Composition of quality-of-care checklists



Note: The checklists are comprised of structural, process, and outcome indicators of quality (see box on page 5).

questioning staff on knowledge of symptoms, and direct observation of the facility, its resources, and patient-clinician interactions. Despite the amount of time required for verification, a central function of verification is ensuring that supervisors visit health facilities: The benefit to governance and supervision should not be undervalued. An independent counter-verifier conducts an additional assessment with random visits to facilities. Discrepancies (either fraud or error) are followed with punitive action that can include withholding up to 50% of the next month's funds or cancelling the facility's contract.

Each quarter, the SPHCDA also carries out client satisfaction surveys. These surveys are usually administered during visits to the facilities, but Nasarawa state has been testing a text message service to receive feedback from patients. Results of client surveys are used to verify the existence of patients from the register and to gather information on drug prices and stock-outs, but the results do not affect quality bonus payments to facilities.

## CHECKLIST DESIGN

The two checklists for the pilot program were designed in three phases. The design team, comprising a World Bank Senior Health Specialist, the TTL on the project and his staff, a few Nigerian government officials, and three Rwandan consultants, drew much content from the Rwandan PBF model. They first translated the current Rwandan mechanism from French into English, then aligned it with the Nigerian context and standards. They referenced a national minimum package for primary healthcare, which

the MOH quality team produces to address necessary infrastructure and equipment for health facilities, as well as National Primary Health Care Treatment Guidelines. This process yielded the original draft checklists.

A consultant field-tested the checklists in two different states. The consultant, along with the Directors of the Primary Health Care Departments for the districts, selected facilities to pilot-test an assessment. Her findings, which included an 8-hour completion time and misunderstandings of language and instructions, were incorporated into a final draft which was slightly leaner and easier to understand.

The first checklists were published in 2011. In 2012, the program team conducted a 2-month survey to evaluate how the program was being implemented and to examine which aspects of quality of care were missing from the checklists. In 2013, the checklists were revised by the Senior Health Specialist, the TTL, and a consultant in Abuja. Their goals for the revised checklist were to update language where needed to make it more understandable and to include more quality of care indicators.

Two structural indicators were removed and nine process indicators were added to both the primary and secondary checklists. Seven of the nine new process indicators involved direct observations of clinical interactions for children under five, to ascertain fever or diarrhea. For the primary checklist, the seven new process indicators comprised less than 4% of total indicators, yet the weight assigned to them was nearly 13%. Due to the addition of new indicators, as well as through the modification of weights, the checklist has evolved to boost the weight of

TABLE 2. Weights applied to indicator types in the quality of care checklists

CHECKLIST VERSION	STRUCTURAL	PROCESS	OUTPUT	CHANGE
Nigeria 2011 Primary	88%	11%	0%	Process receives a 16% boost and outputs are weighted higher
Nigeria 2013 Primary	72%	27%	1%	
Nigeria 2011 Secondary	84%	16%	0%	Process receives a 24% boost and outputs are weighted higher
Nigeria 2013 Secondary	59%	40%	1%	

Note: Note: Nigeria's PBF program assesses facilities on three categories of quality indicators: structural, process, and output (see box on page 5).

process indicators in the primary and secondary checklists by 16% and 24% respectively (see Table 2). Given that only a small number of new indicators were added however, the time to verify was only minimally changed.

Nearly all structural indicators are verified via direct observation or document review (business plans, financial reports, etc.) and a binary yes/no response indicated on the quality checklist. The 26 primary-level and 39 secondary-level process indicators on the Nigeria quality checklists are verified either through patient register review (nine for primary, eight for secondary), patient chart review (six for primary, 20 for secondary), knowledge testing of providers (one in each checklist), or direct clinical interaction observation (seven in both cases, added in the revision of the checklist).

Due to Nigeria's poor performance on maternal and child health indicators, the PBF program most heavily weights MNCH services in the current versions of both checklists. For example, maternal, newborn, and child care indicators comprise 25% of the current health center checklist, and 30% of the hospital checklist.

# IMPACT OF PAYING FOR QUALITY

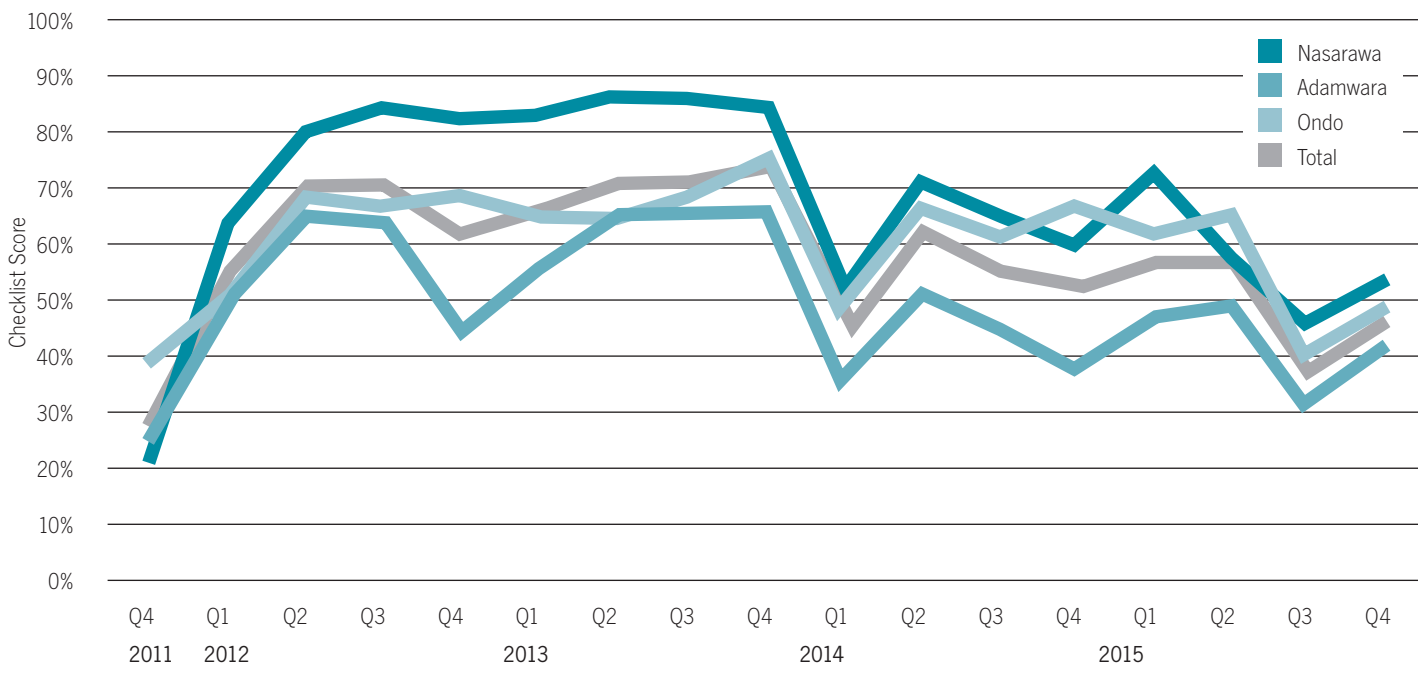
Since implementation of Nigeria’s PBF program began in 2011, promising quality improvement has been achieved across all three states. There were some early issues around delays of payments to health facilities, which could take up to nine months during the pre-pilot phase. A bottleneck analysis conducted by the GoN and the World Bank determined that the best way to improve speed of payment to facilities was to have states make payments to facilities, rather than initiating payments from Abuja. According to the team, the timing of payments has significantly improved since this change.

Figures 3 and 4 show the evolution of quality scores over time in primary and secondary facilities, respectively. Quality scores in primary care facilities improved in the first four quarters after the introduction of the PBF program. Scores then leveled out until Q1 of 2014, when the overall number of PBF facilities increased from 33 to 77 and a new checklist was introduced. These changes resulted in a dip in scores

in Q1 2014 as facilities became accustomed to the new checklist and training on its implementation was carried out. The number of facilities increased again in Q3 of 2014 to 137, in Q4 of 2014 to 292, and finally in 2015 to 425. Additionally, verification training was held in early 2015 for LGA-based verifiers, leading to stricter assessments at all facilities. The relatively consistent average scores from Q2 2014 onwards reflect the final phase of the program’s scale-up and the need to continue capacity building for all the new actors involved in PBF, so that the checklist and the verification process are understood and quality can continue to rise.

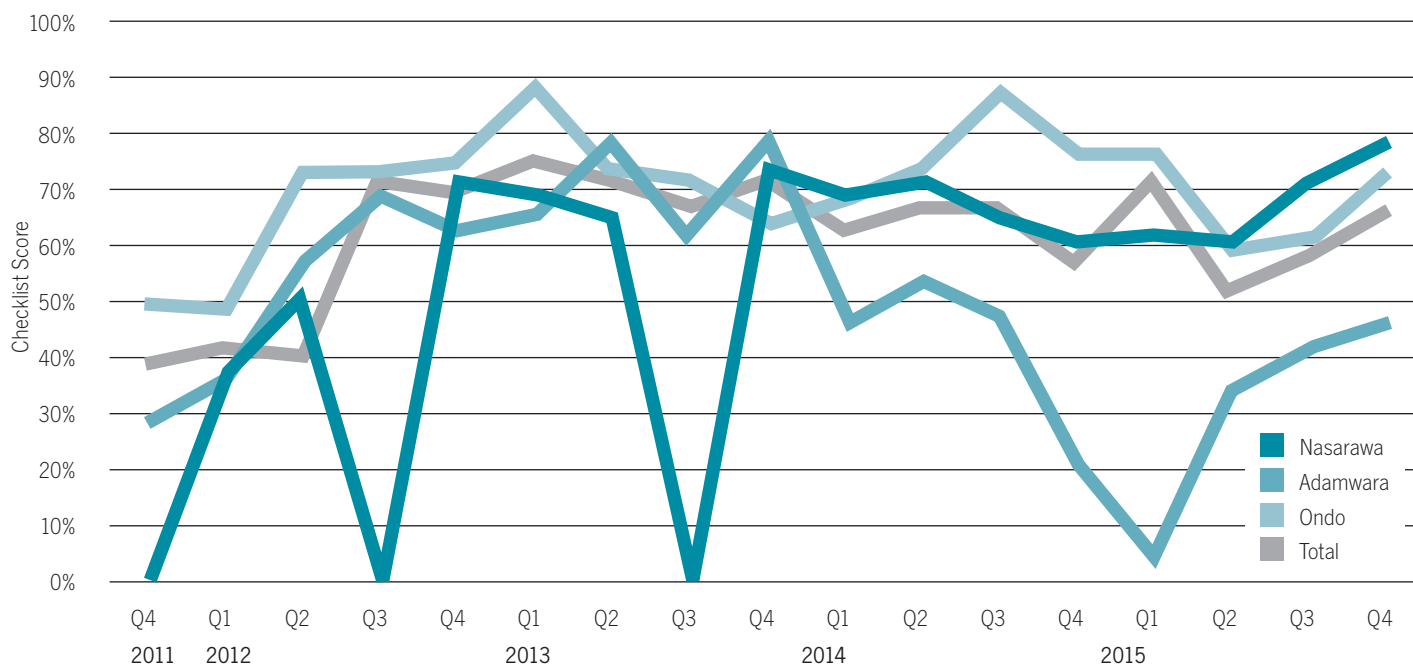
While scores on the quality of care checklists have shown gradual improvement in many facilities, the quality scores for health clinics from the fourth quarter of 2015 varied greatly—from 5% to 90%.<sup>9</sup> In some cases, scores are correlated with the length of time the facility has been enrolled in the PBF program. However, scores vary widely within many LGAs regardless of how many quarters facilities

FIGURE 3. Quality scores over time in health clinics (primary care facilities)



9 National Primary Health Care Development Agency. “Quality Benchmarking.” Accessed April 11, 2016. <http://nphcda.thenewtechs.com/data/benchmark/1/>

FIGURE 4. Quality scores over time in hospitals (secondary care facilities)



have been enrolled in the program. For example, in Demsa LGA within Adamawa state, the lowest-scoring facility achieved 37% while the highest-scoring facility achieved 90%. Both of these facilities have been enrolled in the PBF program for the same length of time – four quarters. This is not an isolated case, and might suggest that changing checklists sooner for higher-scoring facilities might push them to continue to improve, while the low-scoring facilities catch up. However, this task could become administratively more complicated for the regulator, purchaser, and verifiers.

The World Bank team is considering reducing to 25% the minimum quality score required for a facility to receive part of the quality bonus (down from the current 50% score requirement). Almost all of the lowest-scoring facilities in each LGA score below 50% and thus, under the current system, are ineligible to receive any of the quality bonus. This approach effectively penalizes low-performing facilities and prevents them from accessing additional funds that would help them improve quality of care.

The data show that Maternal Care and Antenatal Care indicators perform well at both primary and secondary levels, and are also the most heavily weighted services in

the checklists. However, at both primary and secondary levels, indicators relating to the Indigent Committee perform very poorly. Two indicators comprise the Indigent Committee category on both the primary and secondary checklists: one requires that facilities provide curative consultations to indigent clients, while the other requires that an Indigent Committee meets at the health facility each month. The average scores of 10% in primary facilities and 21% in secondary facilities indicate that health facilities are not focusing on these relatively straightforward but important tasks, which are entirely within their control.

Interviews with key informants also revealed that positive changes are evident in the state of the facilities, in the attitudes of the providers, and among communities. Improvements in cleanliness can be observed, and patients have commented on an improved demeanor of the staff. However, facilities often focus attention on the more lucrative services when it comes to provision of care. As the pilot program concludes and an impact evaluation is completed, more data will become available on how the PBF program has affected health outcomes and service quality.

# CHALLENGES AND LESSONS LEARNED

**Limited information:** To design an effective PBF program and incentivize low-performing areas, program planners need information on baseline levels of utilization and quality of care. While some countries may have this information readily available through Demographic and Health Surveys (DHS), Service Provision Assessments (SPA), and other national surveys, the World Bank project team encountered a lack of useful information from Nigeria. In order to establish targets and monitor progress of any health systems reforms, countries should routinely be collecting monitoring data on utilization and quality of care, as well as on health systems processes such as procurement, supply chain management, and human resources for health.

**Updating checklists:** Regular updates to the checklists would allow the program to continually apply internal lessons learned and improve the content of the checklists and the scoring and verification processes. Annual updates to the checklists would allow the project team to incorporate new and more robust measures of quality of care into the program, remove confusing indicators, and enable the development of different checklists for lower-scoring versus higher-scoring facilities. Having different checklists could push higher-scoring facilities to continue to improve, while not penalizing lower-scoring facilities for failing to achieve targets that might be out of their control. Nevertheless, annual revisions to the PBF program, while useful, may require resources that are simply unavailable. In addition, the development of multiple checklists for low-scoring versus high-scoring facilities may be too complex to introduce at this early stage of national health system reform.

**Length of time to complete assessments:** Key informants would like to reduce the time needed to verify scores from the current five hours per facility. This reduction would allow verifiers, who work in the LGA's Primary Health Care Departments, to visit more than one facility per day. At the current rate, an LGA with 26 health centers would take 130 hours or over 16 working days of time to assess. The fact that each assessment is completed during one visit means that 26 days—nearly a full month—is needed to visit all the centers. However, completion of the checklists is an effective strategy to get supervisors to spend more time on

the ground in the facilities. This highlights the wider role of PBF as a mechanism for systems reform and governance improvement, and not simply a purchasing mechanism.

**Timing of payments:** In some cases during the pre-pilot phase, payments to facilities were up to nine months late. Quality scores took a hit when facilities were attempting to stock up on their supplies or equipment and had no resources to procure necessities. In response, the project team worked with the MOH to decentralize payments; and now that payments are made from the states rather than Abuja, facilities are receiving their money before the end of each quarter.

**Services for the poor:** The PBF team has identified issues with the “indigent care” indicators, mainly due to the lack of a universal definition or local registers. The project team is currently working with communities to develop a definition of “indigent” to clarify which community members qualify as poor. Establishing local registers will aid in future service provision.

**Uniformity of application:** An early observation noted that the checklists were understood differently by different people and thus were being applied in different ways. This lack of uniformity was a problem in the counter-verification and payment processes. In 2015, trainings were conducted for verifiers to address this problem and to ensure more uniform application of the checklists. The decrease in quality scores in 2015 has been attributed to these trainings, because verifiers are now applying stricter interpretations of each indicator.

**Access to information:** The data portal for this PBF program is publically available at: <http://nphcda.thenewtechs.com/data.html>. Nigeria's PBF data portal is among the most complete globally, both in terms of data availability and timeliness. Accurate, timely, complete, and available data are important for purposes of transparency and accountability of any PBF program. The portal allows the public, peer health facilities, and civil society to assess improvement in the quality of service provision, and to make choices (when possible) regarding where to access care, or to apply pressure to district and health facility authorities to improve where necessary.



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