



1. Project Data

Project ID P130865	Project Name NG-Polio Eradication Support (FY13)		
Country Nigeria	Practice Area(Lead) Health, Nutrition & Population		
L/C/TF Number(s) IDA-51330,IDA-56180,IDA-58530,IDA-62890	Closing Date (Original) 31-Jul-2015	Total Project Cost (USD) 555,548,394.49	
Bank Approval Date 12-Jul-2012	Closing Date (Actual) 30-Apr-2021		
	IBRD/IDA (USD)	Grants (USD)	
Original Commitment	95,000,000.00	0.00	
Revised Commitment	569,942,027.09	0.00	
Actual	555,548,394.49	0.00	
Prepared by Salim J. Habayeb	Reviewed by Judyth L. Twigg	ICR Review Coordinator Eduardo Fernandez Maldonado	Group IEGHC (Unit 2)

2. Project Objectives and Components

a. Objectives

The stated objective of the project was to assist the Recipient, as part of a global polio eradication effort, to achieve and sustain at least 80 percent coverage with oral polio vaccine immunization in every state in the Recipient's territory (Financing Agreement of April 16, 2013, p. 5).



The First Additional Financing (AF) in 2015 added another objective to include support for routine immunization, stated as follows: "and sustain national routine immunization coverage" (Financing Agreement of May 22, 2015, p. 5).

The Third AF of 2018 revised the objective statement from "sustaining" routine immunization coverage to "improving" routine immunization coverage as follows: "and improve national routine immunization coverage" (Financing Agreement, October 23, 2018, p. 4).

This ICR Review will not apply a split evaluation because the project expanded its scope, commitments, and ambition by adding routine immunization. There were no downward revisions in associated outcome targets. Therefore, this ICR Review will validate the achievement of objectives by assessing the entire project based on all intended outcomes.

b. Were the project objectives/key associated outcome targets revised during implementation?

Yes

Did the Board approve the revised objectives/key associated outcome targets?

Yes

Date of Board Approval

22-May-2015

c. Will a split evaluation be undertaken?

No

d. Components

I. Provision of Oral Polio Vaccine (Appraisal: US\$95 million, AF1: US\$90 million, AF2: US\$60 million, AF3: US\$65 million; Actual cost: US\$320 million). The original project design had only one component (Provision of Oral Polio Vaccine, PAD, p. 9) consisting of the supply of oral polio vaccine to national strategic cold stores in Abuja. About 655 million doses of oral polio vaccine (OPV) would be purchased under the Credit over a two-year period to immunize children under the age of five. More immunization rounds would be conducted in the Northern states. The Borrower's ICR stated that the vaccine would be used for polio mass vaccination campaigns over a two-year period (ICR, p. 51). The First AF of April 2015 added operational support to vaccine supply, and **the component was subsequently named Polio Eradication Support.**

The First AF of April 2015 added the following second component:



II. Routine Immunization Support (AF1: US\$110 million, AF2: US\$65 million, AF3: US\$69 million; Actual cost: US\$242 million), covering the procurement of vaccines for routine childhood immunization.

The Third AF of June 2018 added a third component:

III. Routine Immunization Systems Strengthening (AF3: US\$16 million; Actual cost: US\$8 million), aiming at system strengthening with a focus on the cold chain for vaccines, logistics, and improvement of program management at national and subnational levels in twelve states.

e. Comments on Project Cost, Financing, Borrower Contribution, and Dates

Cost and financing. The original cost was estimated at US\$95 million to be financed by an IDA Credit. Financing included a provision for retroactive financing up to US\$19 million for vaccine procurement. No direct financing from the Borrower was planned. Vaccines were to be procured through single source contract from UNICEF based on an agreement signed between the Federal Government of Nigeria and the United Nations Children's Fund (UNICEF) with Bank clearance. Credit proceeds would be disbursed by the Bank directly to UNICEF. There were three AFs aggregating at US\$475 million (see details below). The total estimated revised cost was about US\$570 million and the total actual cost was US\$556 million, indicating a total disbursement of 97.5%.

Dates. The project was approved on July 12, 2012 and became effective on June 5, 2013. A Mid-term Review was undertaken on May 12, 2017. The original closing date was planned for July 31, 2015, but with three AFs and project extension (see details below), the project closed on April 30, 2021.

AFs/Restructurings:

- The First AF of US\$200 million in April 2015 (Financial Agreement dated May 22, 2015) revised the PDO to add the sustenance of routine immunization (see Section 2a) in recognition of the key role of routine immunization in interrupting polio transmission (ICR, p. 15), as routine immunization constitutes the first pillar of polio eradication initiatives (ICR, p. 6); and in recognition of macroeconomic constraints resulting from declining oil revenues, jeopardizing the financing of vaccines; and because of the need to adopt a more holistic approach to the control of vaccine-preventable childhood illnesses (Borrower's ICR, p. 52). The AF also added operational support to polio immunization and extended the closing date to July 31, 2017.

- The Second AF of US\$125 million in June 2016 (Financial Agreement dated August 7, 2016) extended the closing date to December 31, 2018.



- The Third AF of US\$150 million in June 2018 (Financial Agreement dated October 23, 2018) revised the PDO from sustaining routine immunization to improving it (see Section 2a), added a third component on routine immunization system strengthening (see Section 2d), and revised the results framework. Hence, in addition to the supply of routine immunization vaccines, support was provided for strengthening the cold chain, strengthening supply systems and logistics for vaccines, and improving management at the national and subnational levels in twelve states. According to the Borrower's ICR (p. 52), AF1 and AF2 also included support to demand-generation activities.

In addition: (i) a Level 2 restructuring on March 27, 2019 reallocated funds between disbursement categories; (ii) a Level 2 restructuring on July 19, 2019 provided a retroactive extension of the closing date to December 31, 2020; and (iii) a final Level 2 restructuring on December 23, 2020 made reallocations between disbursement categories and extended the project closing date to April 30, 2021.

Other support provided to polio eradication efforts in Nigeria, including through partnerships. The ICR (p. 3) reported that polio eradication efforts in the country benefited from several key global partnerships, including with the Global Alliance for Vaccines and Immunizations (GAVI), Bill & Melinda Gates Foundation, World Health Organization (WHO), United States Centers for Disease Control and Prevention (CDC), UNICEF, Japanese International Cooperation Agency, and Rotary International. In addition to development partners, civil society organizations, universities, and local and international NGOs provided support to public agencies at the federal, state, and Local Government Area (LGA) levels. Project implementation benefited from the existing partnership between the Federal Government and two key stakeholders: UNICEF and WHO. Most of the financing was disbursed through these two agencies, who provided support to the main focal point for implementation, the National Primary Health Care Development Agency.

The National Primary Health Care Development Agency declared a state of public health emergency on routine immunization on June 17, 2017, following poor coverage results for routine immunization reported by the 2016 Multi-Indicators Cluster Survey and the National Immunization Coverage Survey. The National Emergency Routine Immunization Coordination Center was inaugurated on July 4, 2017 to work with states and partners to rapidly scale up routine immunization coverage. Using survey results, the coordination center identified 18 states that needed urgent interventions geared at strengthening existing management structures for routine immunization.

According to the Borrower's ICR (p. 53): (i) the project supported 12 of the lagging 18 states for routine immunization: Adamawa, Bayelsa, Gombe, Jigawa, Katsina, Kebbi, Kogi, Nasarawa, Niger, Plateau, Taraba, and Zamfara; and (ii) GAVI supported the remaining six states: Borno, Yobe, Bauchi, Kano, Kaduna, and Sokoto.



3. Relevance of Objectives

Rationale

At appraisal, the project was responsive to Nigeria's polio vaccination needs and to the Global Polio Eradication Initiative (GPEI) mission, whereby polio eradication was and continues to be considered a global public good that prevents a debilitating disease in children, and whose benefits would accrue to both developing and developed countries in perpetuity (PAD, p. 6). Nigeria was one of the three remaining countries in the world with endemic wild polio transmission, along with Pakistan and Afghanistan. By the end of 2011, 62 cases of polio were registered in eight endemic states in Nigeria (ICR, p. 2). Since GPEI was started in 1988, 2.5 billion children have been immunized against polio through the cooperation of numerous countries, supported by national and international financing, and by the mobilization of 20 million volunteers worldwide.

The project was meant to meet a financing gap to ensure constant supply of OPV until the end of 2014 (ICR, p. 32). The project was a follow-on operation to the Partnership for Polio Eradication Project (P080295) that closed on April 30, 2012, and that was adequately implemented with a satisfactory outcome, according to the PAD (p. 7)

To spearhead the final push toward eradication, a Presidential Task Force on Polio Eradication was officially inaugurated on March 1, 2012 (ICR, p. 2). The task force had the objective of providing leadership support for Nigeria's efforts to accelerate the interruption of poliovirus transmission by the end of 2012. The Task Force was chaired by the Minister of State for Health. Its membership was drawn from the National Assembly, Nigeria Governors Forum, National Primary Health Care Development Agency, Federal Ministry of Health, polio high-risk states and polio-free states, the Northern Traditional Leaders Committee on Primary Health Care, Nigeria Inter-Faith Group, and GPEI Partners.

At project closing, both the original and revised PDO, encompassing polio and routine immunizations for children, remained fully relevant to country and Bank strategies, as they aimed at contributing to polio eradication efforts and to the reduction of childhood morbidity and mortality. The objectives remained closely aligned with the World Bank Group Country Partnership Strategy (CPS) for the Federal Republic of Nigeria for the period FY21-FY25, specifically under the CPF Pillar on Investing in Human Capital and Harnessing Nigeria's Demographic Dividend, and CPF Objective 3 to improve primary healthcare. The CPF noted that Bank support will focus on consolidating the main financing platforms to provide programmatic support to help reduce under-five mortality, improve the quality and coverage of public health services, and promote sustainable financing for basic health services. Vaccination of children (pentavalent vaccine) was the CPF indicator for its Objective 3 under the human capital pillar.

Rating



High

4. Achievement of Objectives (Efficacy)

OBJECTIVE 1

Objective

Assist the Recipient, as part of a global polio eradication effort, to achieve and sustain at least 80 percent coverage with oral polio vaccine immunization in every state in the Recipient's territory

Rationale

This ICR Review considers achievement and sustenance of polio immunization coverage as being encompassed under one objective, as they are closely related in this case, and the same indicators and performance trends are applicable to their assessment.

Theory of change

It was reasonably expected that procurement of OPV and its storage would increase OPV availability; that planning, training, transport, logistics, and supervision would improve Immunization Plus days; and that support to demand creation and social mobilization would increase acceptance of immunization. These outputs would plausibly result in children being vaccinated with OPV, thus contributing to increased OPV coverage and its sustenance.

Importantly, coverage was expected to be bolstered by ongoing immunizations provided under routine immunization operations. The project provided support to routine immunization in 2015 under the first AF. As a long-term outcome, increased coverage of OPV would plausibly contribute to polio eradication in the country and to the global goal of wild polio virus eradication.

Outputs and intermediate results

Procurement of OPV through UNICEF with predictable funding ensured a constant supply throughout the project period. Project support for polio operations was provided through WHO and UNICEF, and included technical assistance, vaccination campaigns, outbreak investigation, and last mile vaccination at the periphery. WHO supported the government throughout the implementation period in training and planning immunization days and supplementary immunization activities. Through WHO, the project ensured quality supervision, M&E, and provision of allowances to vaccination personnel. UNICEF supported the government in undertaking demand generation and social mobilization for polio immunization, including engagement with



traditional and religious leaders. Both UN agencies worked closely with the National Primary Health Care Development Agency and with state governments in planning and delivering immunization. The percentage of campaigns where vaccines were available on time was 100% throughout the project period.

Nigeria's polio eradication efforts included both routine immunization and campaigns. Routine immunization covered children under the age of five at health facilities and through outreach services. Routine polio immunization was supplemented through immunization campaigns: (i) National Immunization Plus Days; (ii) sub-national Immunization Plus Days; (iii) Local Immunization Days; (iv) mop-up activities; (v) Maternal, Neonatal and Child Health weeks; and (vi) Short Interval Additional Doses used in locations not adequately covered by the above activities.

The project adapted its operations in certain parts of the North East and in security-compromised areas characterized by fragility, conflict, and violence (FCV), as populations were not fully accessible due to the Boko Haram insurgency (ICR, p. 27). The devised strategies included:

1. Partnership with Nigeria's military forces, including for security support and escort;
2. Hit and Run strategies for quick deployment of vaccination teams;
3. Use of the services of local community members as permanent polio team members;
4. Provision of vaccinations in the camps of internally displaced people through a complementary health post set up in each camp;
5. Setting up of "firewalls" in highly insecure areas that do not have any form of access: this consisted of setting up vaccination posts close to a given borderline area to vaccinate those going into the restricted area or those escaping from such an area; and
6. Addition of activities that were considered "attractive pluses" to immunization, such as multi-vitamin supplementation, malaria diagnosis, and provision of biscuits to children through health camps.

Outcomes

The target for national coverage of OPV in the country was achieved and sustained. At project closing in 2021, OPV coverage was 82%, exceeding the target of 80%. This level was noteworthy considering significant disruptions to the provision of essential health services caused by the COVID-19 pandemic. The target of 80% was set lower than the baseline of 91.8% in 2012 for two main reasons: (i) the baseline was a national average based on administrative data reported during OPV campaigns. It compared the number of children immunized to a population target. The project used data from Lot Quality Assurance Sampling (LQAS, see explanation below), a more robust and objective methodology; and (ii) attaining herd immunity to the polio virus was known to be achieved with at least 80% OPV coverage.

- Explanatory note on Lot Quality Assurance Sampling or LQAS: this survey method was derived from production-line industries. In immunization monitoring, the method consists of a rapid survey using



small sample sizes to assess vaccination coverage in pre-defined areas known as "lots," such as districts or sub-districts. It can quickly identify areas of weak coverage with reasonable reliability.

The target for immunization coverage of OPV in each state was achieved and sustained. The indicator measured the average immunization coverage of OPV in eight high-risk states (polio was not an issue in the other states). As of December 2012, the eight high-risk states included Kano, Jigawa, Sokoto, Zamfara, Katsina, Kaduna, Bauchi, and Niger, all of which had an average coverage of 86% (range: 84-95%) based on administrative data. The end target of 80% (explained above) was measured through LQAS, and was achieved and surpassed, as the average immunization coverage of OPV as of April 2021 was 86%. A minimum of 80% was achieved from 2013 and was sustained throughout the life of the project (ICR, p. 13).

Importantly, WHO certified Nigeria as being free of wild polio virus on August 25, 2020 after marking three consecutive years since the last case of wild polio was identified. According to the ICR, polio-free certification constituted a further testament to the achievement of the project and effective partnerships. The ICR (p. 14) noted that the journey to eradication was a tortuous one. In the recent past, 1,122 cases were reported in 2006, declining to 122 cases around appraisal. Nigeria was on the verge of eradicating wild polio virus after more than two years of interrupting transmission when four new cases were reported in August 2016 in Borno State – a security-compromised area with difficult population accessibility. Sustained project activities and operational adaptation in FCV areas, along with improved routine immunization and strengthened logistics, contributed to the final push that led to the "polio-free certification of the country"; by extension, the Africa region was also declared polio-free, as Nigeria was the last polio endemic country in the region.

Rating

High

OBJECTIVE 2

Objective

Improve national routine immunization coverage

Rationale

Theory of change

Improving routine immunization for children is based on the premise that strong routine immunization coverage is a key strategy for polio eradication and for reducing mortality and morbidity arising from communicable diseases. It was reasonably expected that procurement of vaccines for routine immunization, strengthening the supply chain and logistics, strengthening management at national and subnational levels, and demand generation activities would result in increased availability of vaccines, improved management of



routine immunization, and increased quality and timeliness of LQAS surveys. These outputs would plausibly result in improved coverage with more children being vaccinated.

Outputs and intermediate results

Main outputs were related to vaccine supply and routine immunization operations. The percentage of health facilities in the project area with functioning management committees having community representation reached 83% in 2021, exceeding the target of 30%.

The number of LQAS conducted in lagging states reached 9 in 2021, exceeding the target of 5 LQAS. The percentage of teams with viable vaccines, according to the Vaccine Vial Monitor, reached 100%, exceeding the target of 30%.

The ICR (p. 19) summarized main interventions that contributed to routine immunization progress: (a) adequate procurement and availability of vaccines; (b) national and state-level immunization campaigns and days; (c) strengthening of supply chain and logistics systems; (d) strengthened immunization management at national and subnational levels; (e) demand creation and community mobilization activities using volunteer community mobilizers as well as traditional and religious leaders. The project also supported the creation of emergency routine immunization committee at the national, state and LGA levels. Quarterly LQAS surveys that provided data for monitoring and planning were supported. Performance bonuses were introduced for competitively recruited state program managers and deputy program managers from the public service. Two routine immunization focal persons were competitively recruited from the public service for each LGA and were incentivized through performance-based bonuses. In addition, individual consultants were recruited to support the states.

Outcomes

The number of LGAs with Pentavalent 3 coverage under 25% among children under 12 months in the 12 lagging states was effectively decreased to 6 LGAs in 2021 from a baseline of 71 LGAs in 2017, exceeding the target of 24 LGAs. (Explanatory note: Pentavalent vaccine, also known as a 5-in-1 vaccine, is a combination vaccine against diphtheria, pertussis, tetanus, Hepatitis B, and Haemophilus Influenza B.)



The number of LGAs with Pentavalent 3 coverage under 50% among children under 12 months in the 12 lagging states was effectively reduced to 10 LGAs in 2021 from a baseline of 123 LGAs in 2017, exceeding the target of 41 LGAs.

The number of children receiving routine immunization reached 69 million in 2021, exceeding the target of 60.6 million children, out of whom 42.8 million children under the age of one year received Pentavalent 3 vaccine, exceeding the target of 30.5 million.

Pentavalent 3 coverage reached 57% in 2021 compared to a baseline of 52% in 2014, exceeding the target that was maintained at 52%. (The target was set in 2015 to sustain national routine immunization coverage given the decline in routine immunization at that time, and maintaining it at 52% was considered ambitious, as explained by the ICR, p. 17). Pentavalent 3 coverage among children under 12 months in 12 lagging states was also achieved and surpassed. From a baseline of pentavalent 3 coverage of 23.3% in 2017, coverage increased to 40% in September 2019 against a target of 33%.

Rating
High

OVERALL EFFICACY

Rationale

Both objectives to achieve and sustain at least 80 percent coverage with oral polio vaccine immunization in every state in the Recipient's territory, and to improve national routine immunization coverage, were fully achieved. The project's contribution to the observed outcomes was significant. In addition, Nigeria attained "polio-free certification" in 2020. The aggregation of achievements for both objectives is consistent with a High rating for overall efficacy.

Overall Efficacy Rating

High

5. Efficiency

The PAD provided generic arguments on the economics of global polio eradication under GPEI, a description of immunization budgets in Nigeria, and the extent of potential funding gaps. The economic benefits of GPEI were estimated in 2010 at US\$40-50 billion globally, based on activities from 1988 through 2035 (assuming that global eradication of wild polioviruses would occur in 2012). In 2007, a study by Tebbens et al. concluded that



eradication was a better investment than polio control in low-income countries, from both a humanitarian and economic perspective, and argued that if the goal of polio eradication efforts were abandoned, the outcome would be worse and that a high level of investment would have to be continuously maintained to keep polio incidence at low levels (PAD, p. 39).

The ICR referred to a 2016 GPEI report on the economic case for eradicating polio, where it was indicated that eradicating polio and strengthening routine immunization in Nigeria could prevent 30,000 to 35,000 deaths between 2014 and 2018 and would result in an economic benefit of about US\$4 billion based on averted productivity loss in the country. At the global level, an updated economic analysis of GPEI conducted in 2019 by K. Thompson and D. Kalkowska estimated incremental net benefits at US\$28 billion, with the assumption that eradication would be achieved in 2023. Delays in achieving polio eradication combined with the need for widescale introduction of relatively expensive inactivated poliovirus vaccine would increase the costs of GPEI, making the initiative less cost-effective.

In terms of routine immunization, worldwide literature encompassing various studies in different settings and with different assumptions has consistently found routine immunization to be among the most cost-effective interventions in public health. Data from the United States on the economic impact of the 2009 routine US childhood immunization showed that routine immunization prevented about 42,000 early deaths and 20 million cases of illness, with net savings of US\$13.5 billion in direct costs and US\$68.8 billion in total societal costs, respectively. The high cost-effectiveness of childhood immunization (including tuberculosis, diphtheria, pertussis, tetanus, polio, and measles) is reflected by US\$7/Disability Adjusted Life Years.

Several aspects of design and implementation contributed to efficiency, including timely procurement of vaccines through UNICEF, and effective implementation of major activities through WHO and UNICEF. The ICR noted that the costs of using UN services were relatively higher than using country public service structures, but that effectiveness and quality considerations prevented long-drawn efforts, and made the use of UN agencies less costly in the long term.

At the same time, other factors beyond the control of the project reduced efficiency. Conflict and insecurity were limiting factors to implementation in some areas. In the North East, insecurity due to the Boko Haram threat limited accessibility to some LGAs, hindering surveillance and vaccination activities, although the adaptations introduced by the project (see Section 4) proved to be an effective mitigating factor. Implementation was also affected in 2020-2021 by the COVID-19 pandemic that considerably slowed down main activities and supervision (ICR, p. 27), including delayed construction of a planned Lagos vaccine storage hub that was subsequently transitioned to the IMPACT project (see Section 10).

Efficiency Rating

Substantial



a. If available, enter the Economic Rate of Return (ERR) and/or Financial Rate of Return (FRR) at appraisal and the re-estimated value at evaluation:

	Rate Available?	Point value (%)	*Coverage/Scope (%)
Appraisal		0	0 <input type="checkbox"/> Not Applicable
ICR Estimate		0	0 <input type="checkbox"/> Not Applicable

* Refers to percent of total project cost for which ERR/FRR was calculated.

6. Outcome

Relevance of objectives is rated high, as the objectives were responsive to a national and global priority and because the objectives remained closely aligned with the World Bank Group Country Partnership Framework for the Federal Republic of Nigeria for the period FY21-FY25. Efficacy is rated high, as the objectives were fully achieved. Efficiency is rated substantial, as childhood vaccinations are highly cost-effective, but overall efficiency was slightly moderated by an implementation slowdown in the final year due to the COVID-19 pandemic and by security challenges in some areas. The overall outcome is rated highly satisfactory, indicative of essentially no shortcomings in the project’s overall preparation, implementation, and achievement, and also reflective of the extent to which the project objectives were achieved, efficiently.

a. Outcome Rating

Highly Satisfactory

7. Risk to Development Outcome

Several factors indicate that outcomes are likely to be maintained, as the sustainability of outcomes is anchored in the Nigeria Strategy for Immunization and Primary Health Care System Strengthening (ICR, p. 37). Institutional strengthening was extensive, including in setting up a Polio Emergency Operations Center, a National Emergency Routine Immunization Coordination Center, State Routine Immunization Coordination Centers, the use of performance and accountability frameworks for management at national and sub-national levels (ICR, p. 27), and logistical strengthening, including the cold chain for vaccines. The follow-on Bank-assisted operation (Immunization Plus and Malaria Progress by Accelerating Coverage and Transforming Services or IMPACT Project, Phase 1 of the Nigeria Improved Child Survival Program for Human Capital Multiphase Programmatic Approach, P167156) became effective in February 2021. It continues key project activities and reflects government commitment to immunization performance and integration of polio and routine immunization. Quarterly LQAS surveys are institutionalized and now provide real-time data for monitoring immunization performance, and allow prompt responses.



However, and in addition to macro-economic constraints, the security situation is worsening and is no longer limited to the North East, as it has now spread to the North West, making more populations hard to reach (ICR, p. 33). Also, the recent emergence of vaccine-derived polioviruses can pose a future threat to the gains made in the fight against polio.

8. Assessment of Bank Performance

a. Quality-at-Entry

Project preparation used the same institutional arrangements that were found to be effective under the preceding project, namely the National Primary Health Care Development Agency, Expert Review Committee, and inter-agency coordination committee. Vaccination campaigns were planned to be undertaken with the support of WHO and UNICEF. Procurement of vaccines was planned to be undertaken through UNICEF, with transfer of financial management responsibilities to UN agencies and a waiver for audits (ICR, p. 32). Risks were adequately identified along with risk management measures, and the overall implementation risk was rated as moderate (PAD, pp. 36-37). The PAD (p. 10) noted that the project did not require additional implementation capacity beyond what was already available for the preceding project, namely the use of existing public health infrastructure at the federal, state and LGA levels. The operation was to benefit from technical support provided by the Expert Review Committee, WHO, UNICEF, and CDC. The use of an IDA buy-down financing mechanism was also to be used as in the previous project, and donor agencies such as the Bill and Melinda Gates Foundation, Rotary, the UN Foundation, and CDC was to help bridge the financing gap by providing funds to the Poliomyelitis Fund to buy down the net present value of the debt incurred by the country (ICR, p. 25) based on coverage performance: essentially, donor agencies buy down the principal and service charges of IDA credits in lieu of the Borrower, thereby turning the credits into grants to the Borrower (PAD, p. 8). M&E arrangements were robust, and were largely based on WHO and UNICEF systems.

However, the initial project design could have initiated activities to gradually address constraints facing routine immunization, whose critical role is widely acknowledged, including by the ICR (p. 6), as being the first pillar of polio eradication. For effectiveness purposes, regardless of vaccine financing issues, maintaining satisfactory coverage of polio immunization made it imperative for this operation to begin addressing constraints facing routine immunization delivery. Vaccine supply chain systems are critical to vaccine availability, and the country faced challenges in cold chain and logistics. Storage capacity at the national hubs was inadequate, with only 50% of required storage space available (Project Paper, May 23, 2018, p. 13). Also, there were repeated and impactful stock-outs of routine immunization vaccines in 2011 and 2012, before the commencement of the project (Project Paper of March 24, 2015, p. 3), i.e., routine immunization was compromised before project start-up. The PAD (p. 9) listed "improved focus on routine immunization" as a lesson learned and reflected in project design, but such a focus was not visible in the original design. Nevertheless, this issue was satisfactorily rectified through AF rounds at their entry stage.



Quality-at-Entry Rating

Satisfactory

b. Quality of supervision

According to the ICR (p. 32), the quality of supervision provided by the Bank team was exemplary. Implementation support and supervision benefited from the contributions of a multi-disciplinary team of Bank specialists, including in technical areas, financial management, procurement, and in environmental and social safeguards. The Bank Team made regular supervision missions until the start of the COVID-19 pandemic, when the missions became virtual. Reporting was regular, and Implementation Status and Results Reports were produced in a timely manner. Reporting provided a clear picture of project status and progress made, and adequately informed decision-making. By adding survey tools such as quarterly LQAS at the LGA level, the Bank facilitated close monitoring of project progress, allowing prompt initiation of corrective actions when needed.

The Bank Team was pro-active in advancing and processing three AFs and three restructurings that facilitated the attainment of development objectives in polio and routine immunization coverage. The Team showed flexibility and responsiveness to government needs (ICR, p. 32), including for funding reallocations between project categories, reallocations between UNICEF and WHO, and in project extensions. The Team built a strong collaborative relationship with UNICEF and WHO, whose contributions were critical to the project. The Team contributed to adequate participation and coordination processes among important bodies such as the Expert Review Committee, the National Primary Health Care Development Agency, and the inter-agency coordinating committee. The Team also contributed to ensuring adequate transition arrangements to the follow-on IMPACT project (see Section 7). As no shortcomings were observed in supervision performance, and in view of the extent of proactiveness in resolving challenges in pursuit of achieving development outcomes, the quality of supervision is rated highly satisfactory.

Quality of Supervision Rating

Highly Satisfactory

Overall Bank Performance Rating

Satisfactory

9. M&E Design, Implementation, & Utilization

a. M&E Design

The objectives were clearly stated and reflected by the indicators, which were measurable. Baselines were available. M&E and the results framework built on well-established systems and methodologies used by WHO and UNICEF in collaboration with National Primary Health Care Development Agency. M&E arrangements built on existing mechanisms that included multiple layers of independent monitoring, including Enhanced Independent Monitoring, cluster sample surveys such as LQAS, and independent performance audits. With the introduction of routine immunization as a project component starting with the



first AF in 2015, the project planned to use the annual SMART surveys, which are household surveys conducted by the National Bureau of Statistics in collaboration with stakeholders and UNICEF technical assistance.

b. M&E Implementation

M&E implementation proceeded in a largely satisfactory manner, but with some understandable constraints in FCV areas, where the project introduced effective adaptations (see Section 4). Implementation was guided by WHO and UNICEF protocols and by recommendations of polio advisory bodies. The project also formed a pool of supervisors from various administrative levels to ensure that all wards were properly supervised. Government officials and partner agencies were involved in supervision. Additional surveys were conducted both inside and outside households, including in markets, transit points, and areas where children gather, to further assess coverage. In selected high-risk areas, vaccination teams were tracked through a system operated through the global positioning system (GPS) from mobile phones attached to vaccination teams.

c. M&E Utilization

M&E data were extensively shared and used to facilitate informed decision-making by the National Primary Health Care Development Agency, government agencies, and UN and donor agencies. M&E findings were used to provide additional implementation support where needed, and LQAS surveys provided real-time data for decision-making and for providing support to struggling LGAs (ICR, p. 29). Performance audits were used by donor agencies as triggers for the buy-down financing mechanisms. M&E findings were also used by international stakeholders for monitoring progress in global polio eradication and in childhood immunizations.

M&E Quality Rating

High

10. Other Issues

a. Safeguards

The project complied with safeguard policies (ICR, p. 30). The original project did not trigger any safeguard policy and was classified under Environmental Assessment Category C. The first AF revised the project classification to Environmental Assessment Category B in view of the introduction of routine immunization



support that can be associated with moderate risks related to health care waste. The project effectively addressed OP/BP 4.01 under the National Health Care Waste Management Plan with protocols for health care waste management at the health facility level. AF3 introduced support for improving the cold chain, supply, and logistics for vaccines, and safeguard measures were established to address the construction of cold and dry storage facilities. The government prepared a site-specific Environmental and Social Management Plan to renovate the South West Zonal cold and dry stores (Lagos hub). Subsequently, the delayed construction of the Lagos hub resulting from the COVID-19 pandemic was transitioned to the IMPACT Project (see Section 7).

b. Fiduciary Compliance

The project complied with fiduciary aspects (ICR, p. 30). Fiduciary responsibilities were borne by UNICEF and WHO during the larger part of project implementation.

Financial management. The project fully complied with financial management stipulations. Using the Bank-UN Framework Agreement, financial management responsibilities were vested with UNICEF and WHO under agreements signed with the government. The agreements granted audit exemptions in view of the strength of control mechanisms. Under AF3 in 2018, the National Primary Health Care Development Agency was assigned responsibility to implement component III for system strengthening related to routine immunization. Its financial management performance was satisfactory, and no issues were reported.

Procurement. Procurement awarded to UN agencies, and procurement activities carried out by the National Primary Health Care Development, were satisfactory and complied with Bank guidelines.

c. Unintended impacts (Positive or Negative)

The ICR (pp. 24-25) reported positive unintended impacts:

- The coordination set-up of the Emergency Operation Center and the strengthening of surveillance capacity and data management facilitated the country's response to the COVID-19 pandemic.
- The country intended to apply surveillance methods to non-communicable diseases.
- According to the ICR (p. 23), the project enhanced women's voices and status in their respective communities, and provided them with economic benefits. Out of 1.3 million people who were engaged by the project to deliver services at various levels (vaccinators, supervisors, community mobilizers, demand promoters, and state and LGA facilitators), 60% were women, as the project gave them preference to participate in vaccine delivery and associated activities.

d. Other



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11. Ratings

Ratings	ICR	IEG	Reason for Disagreements/Comment
Outcome	Highly Satisfactory	Highly Satisfactory	
Bank Performance	Highly Satisfactory	Satisfactory	The ICR rated Quality-at-Entry as highly satisfactory, and this ICR Review rated Quality-at-Entry as satisfactory because it would be difficult to maintain effective polio vaccination coverage without addressing constraints facing routine immunization. This issue was satisfactorily rectified in subsequent additional financing rounds. Both the ICR and this ICR Review rated Quality of Supervision as highly satisfactory. The aggregation of both sub-ratings is consistent with a satisfactory rating for Overall Bank Performance.
Quality of M&E	High	High	
Quality of ICR	---	High	

12. Lessons

The ICR (pp. 37-39) offered several important lessons and recommendations, including the following lessons, partially re-stated by IEG:

Leveraging partner capacities, expertise, and field presence of UN agencies significantly contributes to project progress toward achieving its objectives. Given that most of the project funds were channeled through WHO and UNICEF, the government utilized the well-functioning presence of these agencies on the ground, including for reaching communities in all states, particularly in FCV settings in the North. Strong capacities and financial management structures of UN agencies were effectively utilized to ensure availability, uninterrupted supply, and timely delivery of vaccines to children, with close monitoring. Although costs were relatively higher compared to solely using public delivery structures, the fact that project operations were undertaken effectively



with quality considerations and in a timely manner prevented long-drawn efforts and made the use of UN agencies less costly in the long term.

Systematic collection, analysis, and use of real time data for decision-making are key for improved vaccination performance and for providing prompt support to lagging areas. Prior to the project, only administrative data and irregular survey data were available. State-wide data could not adequately guide effective local targeting and course corrections. Learning from polio eradication efforts that instituted the use of Lot Quality Assurance Sampling surveys, the project adapted this method for routine immunization, resulting in systematic and robust data collection at the lowest administrative level, and allowing quick decision-making and course corrections in real time, including for supporting immunization officers and providing extra resources in remote communities. The method was institutionalized by the national and state emergency routine immunization centers, thus contributing to improved routine immunization coverage.

Innovative service delivery strategies in FCV settings facilitate the achievement of intended immunization results. A set of interventions developed to reach target populations in security-compromised areas played a key role in the final push toward polio eradication and routine immunization improvement. These interventions included monthly security risk assessments; carrying out “hit and run” and “catch-up” campaigns based on evolving and changing security situations; assigning permanent health teams from within the community; and enhanced routine immunization services with the addition of attractive “pluses” such as multi-vitamin supplementation, malaria diagnosis, and provision of biscuits for children through health camps. Community involvement and ownership facilitated such interventions, and included participation of LGA Chairmen, traditional leaders, and religious leaders, all contributing to improved vaccine acceptance and demand generation.

IEG’s review identifies an additional lesson that builds on an important recommendation made by the ICR on capacity integration (p. 36):

National capacities that were developed by the project for immunization programs can be effectively leveraged to strengthen other programs by integrating such capacities with other programs in the health sector. Leveraging capacities that were built to enhance polio and routine immunization was initiated during the project period. For example, the Emergency Operation Center Model used by the polio program was leveraged as part of the acknowledged successful national response to the 2014 Ebola outbreak. Improved surveillance capacity, mechanisms, and data management facilitated the national response to COVID-19, and the cold chain equipment and transport logistics are being used in the ongoing deployment of COVID-19 vaccines. The government institutionalized the use of performance and accountability frameworks for management at national and sub-national levels. The sector intends to apply enhanced surveillance capacities to non-communicable diseases, thus benefiting program areas beyond vaccine-preventable illnesses.



13. Assessment Recommended?

No

14. Comments on Quality of ICR

The ICR was results-oriented and closely aligned with development objectives. It provided an adequate critique of the project and its performance. The theory of change was well articulated, and the results chain illustrated the intended pathway toward attaining intended outcomes. The ICR appropriately linked the narrative and efficacy ratings to the evidence. Its analysis was thorough and candid. Its reporting on fiduciary compliance was meticulous. It offered specific lessons derived from project experience. Lessons in tailoring health services to FCV areas should be useful for future similar operations. The experience of the project, as analyzed by the ICR, may also be useful for informing polio eradication operations in the remaining countries that still have wild polio transmission. The ICR followed guidelines, but with two minor lapses: the initial and revised component sections were not sufficiently informative, and the main text was lengthy.

a. Quality of ICR Rating

High