

2012

Identifying
and
addressing
barriers to
immunization
coverage

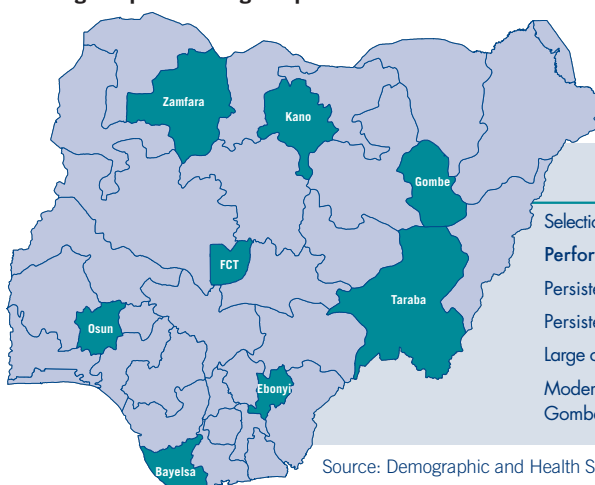


Landscape Analysis of Routine Immunization in Nigeria

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Nigeria has succeeded in implementing major improvements in routine immunization (RI) over the past three years; national DTP3 coverage rates reached a high of 69% in 2010.¹ However, this progress comes in the context of ongoing vaccine stock-outs, significant coverage heterogeneity among states, an overall coverage rate below the average for Africa, and an under-five mortality rate of 138 child deaths per 1,000 live births—the 18th highest rate in the world.² Scaling up coverage for current and future vaccines can reduce mortality from childhood killers like pneumonia, diarrhea and malaria, which account for over 60% of deaths among Nigerian children less than 5 years of age. Vaccines can bring economic benefits as well: according to recent IVAC projections, achieving 90% immunization coverage in the next decade could add \$17 billion to the Nigerian economy.³

Given the significant burden of vaccine-preventable diseases in Nigeria, improving RI coverage would reduce child mortality and accelerate progress towards the MDG 4 target. So in 2011, IVAC conducted a Landscape Analysis of Routine Immunization in Nigeria, (LARI), to identify **key barriers to RI and a range of potential high-impact solutions.**



Source: Demographic and Health Surveys for Nigeria, 2008; National Immunization Cluster Survey, 2010

DATA COLLECTION

This project draws on three types of informational interviews:

Key Informant Interviews with officials, mid-level managers, health care providers, NGOs, and other influencers at the national, state, LGA and community levels (126 interviews)

Facility and community-based Focus Group Discussions with men's and women's groups (11 focus groups)

Facility-based participant observation and exit interviews to determine core issues facing RI utilization, uptake and demand (14 facilities)

LARI was conducted in conjunction with Solina Health and Nigeria's National Primary Health Care Development Agency (NPHCDA), with funding from the Bill & Melinda Gates Foundation. The study draws on 126 key informant interviews and 11 focus group discussions in eight representative Nigerian states. This policy brief summarizes the key findings from the study, with the objective of providing on-the-ground feedback relevant to decision-makers.

As a project designed to help improve RI in Nigeria, the data and results from this study have been shared with local authorities and communities in Nigeria through a series of meetings and "town hall" conferences. In the end, the selection of an appropriate mix of interventions and their eventual impact will be determined by local authorities and the communities they represent.

STATE SELECTION

Selection was based on performance typology and geographic representation

Performance typology (DTP3 coverage)

Persistently Low coverage (<50% in 2008 & 2010): Kano, Taraba

Persistently High coverage (≥70% in 2008 & 2010): FCT, Osun

Large coverage gains (≥40% rise between 2008 & 2010): Zamfara, Bayelsa

Moderate to no coverage gains (<40% rise between 2008 & 2010): Gombe, Ebonyi

¹ WHO-UNICEF Joint Coverage Estimates, 2011

² UNICEF, 2009

³ Stack et al., 2011, Estimated Economic Benefits During The 'Decade Of Vaccines' Include Treatment Savings, Gains In Labor Productivity, Health Affairs, 30 (6). Projections for 90% coverage rate for Hib, PCV, rotavirus, measles, and pertussis vaccines; gains realized through averted treatment costs and productivity losses.

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The Nigerian RI System

Nigeria has 36 states plus the Federal Capital Territory, comprising 774 Local Government Areas (LGAs). There is considerable political and fiscal decentralization, and health is a concurrent responsibility of all three tiers of government—federal, state, and local. The federal government of Nigeria pays 100% for traditional vaccines as well as Hepatitis B vaccine, and co-pays for newer GAVI-supported vaccines. Through the NPHCDA, the federal government provides vaccines, immunization guidelines and technical support to the states and LGAs. State and local governments are responsible for funding and implementing immunization programs at the sub-national level.

Nigeria's RI strengths are most apparent at higher government levels. Strong support for RI is evident from the NPHCDA and the Federal Ministry of Health, and funds for RI have been consistently included in the federal budget. There is also a record of success with polio eradication and a demonstrated ability to disseminate pro-immunization messages and increase demand for vaccines.

Weaknesses in the RI system are structural and logistical. We identified 30 key barriers in six domains, (see "Identified Barriers to RI Coverage," page 3). The states we studied were selected to represent performance and geographic heterogeneity; however, we found more homogeneity in barriers than originally expected. Inadequate transportation, cold chain, and financing barriers emerged as the leading issues across all states. Other recurring themes included a lack of accountability and limited political benefit from RI support. Disbursement of designated funds has been problematic, and fiscal decentralization has resulted in inconsistent funding levels across states and LGAs. Overarching issues of structure and governance affect supply and service delivery at every level. While demand was not the primary issue highlighted by respondents, there are areas in which poor knowledge about vaccines at the community level were also cited. The relative contribution of each barrier to immunization rates was unclear.

The external context for RI is mixed. The system faces potential threats from a shrinking program landscape, an unstable global economy, domestic unrest, the prioritization of polio eradication efforts over routine immunization and, security over health spending. However, important opportunities include strong global support for RI, a favorable political climate in-country, generally high community demand, and the potential for leveraging accelerated disease control efforts (e.g., polio & measles).

BREAKING DOWN BARRIERS: TARGETED INTERVENTION PACKAGES

While in any given facility a single issue such as cold chain or transport may appear as the limiting bottleneck, those barriers occur in a larger context that must be addressed to ensure that vaccines are available **in sufficient quantity and in the right locations** to reach every child. The following six intervention "packages" are targeted towards high priority barriers with feasible interventions. Intervention package components are drawn from respondent suggestions, literature review, and expert feedback. Nigerian state and federal governments are best able to evaluate appropriate activities. These packages should be considered illustrative of potential approaches that may be tailored to specific contexts.

The first three packages target supply chain issues: financing, transport and cold chain. The next two are cross-cutting: the performance management package addresses human resources capacity as well as governance and accountability, while the advocacy and leadership package addresses governance, service delivery, financing, and demand-side issues. The final package focuses on demand creation.

Financing & Vaccine Security Package

Inadequate funding disrupts all aspects of supply and service delivery. The financing package comprises strategies to guarantee predictable government and flexible donor financing, including **state-level basket funds**, a **recurrent federal budget line** for vaccine procurement and **financial guarantees** from donors.

With fiscal decentralization, states and LGAs directly manage funding for RI implementation. Even when funds are budgeted for RI at the sub-national level, their timely release to LGAs and Primary Healthcare Centers (PHCs) is not guaranteed. A state basket fund pools financing from the state with funds from each LGA, delivering funds for service provision, vaccine logistics, equipment maintenance and other important expenses. Flexible funding from donors could also improve cash flow at the service provider level by targeting peripheral supply points.

Delayed funding release during the 2011 fiscal year has caused stock-outs. Respondents therefore suggested funding vaccine procurement as a recurrent rather than a capital expense. Recurrent classification will likely regularize funds release, with the caveat that efforts to optimize the recurrent/capital spending balance may target recurrent expenses. Other options include donor-backed revolving funds or financial guarantees to avoid supply interruption when federal funds are delayed.

Transport Package

Inadequate transportation is a near-universal need. While transport from the national cold store to state cold stores is relatively consistent, there are multiple breakdowns along the supply chain from state cold stores to facilities and communities. Potential components of a transport package include **transportation contracts** and **vehicle distribution**. Some transportation contracts already exist; with improved implementation, they could function at scale while providing context-appropriate service. Potential improvements include provisions for vehicle maintenance, coordination with state and local cold stores, and preferential contracting with female-owned businesses to empower women.

Vehicle distribution and maintenance could also alleviate transport difficulties. This is not the preferred option in most contexts; it is difficult to avoid vehicle misuse, and providing maintenance can be logistically problematic. However, in remote and riverine communities that rely on outreach efforts rather than in-facility services, a PHC vehicle or boat could dramatically improve access to services. In 2008, 36% of Nigerian women reported distance to a health facility as an obstacle to seeking medical care⁴. Furthermore, distance to a health facility was the number one reason mothers gave for failing to vaccinate their children⁵. Vehicle provision could also be implemented as part of a results-based incentive scheme.

Cold Chain Package

The consistent citation of cold chain problems indicates a need for proactive cold chain strategies. Cold chain issues include erratic power supply, inadequate capacity, and poorly maintained equipment. Potential interventions include provision of **solar fridges**, **maintenance contracts** for equipment, and development of **satellite cold storage** units to serve health facilities far from LGA cold stores.

As with transportation contracts, maintenance contracts offer good potential for context-appropriate services that can be implemented and managed at scale. Protocols for maintenance and repairs of cold chain equipment may enable facilities to more fully utilize existing equipment. Provision of additional storage through fridges or satellite units could also alleviate transportation difficulties in some remote areas by allowing for advance planning and storage of multiple days' worth of vaccine. This would be especially important as Nigeria adds new vaccines to the RI schedule.

Performance Management Package

Issues of performance management and accountability were widespread. A performance management package could combine a tightened, **data-based accountability** system with **results-based financing** (RBF) or similar "challenge" grants rewarding high performance. **Mid-level management training** and **SMS reminders to staff** could encourage supportive supervision as staff and officials work to make changes.

Appropriate targets for RBF in Nigeria may include PHC heads, LGA chairs, or state governors. A Bill & Melinda Gates Foundation challenge grant program for polio eradication already targets state governors. Strong monitoring and evaluation are critical components of a successful RBF program. Independent data checks and improved data management could maintain credibility and avoid incentivizing falsification.

Improving management skills will enable mid-level staff to hold workers accountable and improve performance. This could be integrated with supervision of other PHC activities for efficient resource management. SMS reminders to staff may have an impact in areas where health worker performance or motivation is lacking.

Advocacy & Leadership Package

Advocacy and leadership can target structural issues; it can also tap into the potential of agencies or individuals to support RI efforts. This package therefore includes support to **State Primary Health Care**

⁴ Demographic and Health Survey, 2008.
⁵ National Immunization Cluster Survey, 2010.

Identified Barriers to RI Coverage

FINANCE

- Delays in release of designated funds (at all levels)
- Inadequate funding, especially at the local level
- Inefficient use of funds
- Appropriation of RI-designated funds for non-RI projects
- Non-sustainable financing of donor projects

LOGISTICS

- Vaccine stock-outs
- Transportation challenges at peripheral points
- Inadequate cold chain capacity
- Poor cold chain equipment maintenance
- Inconsistent power supply

GOVERNANCE

- Poor accountability
- Disconnect of responsibility and authority due to the concurrency of responsibility for health by all levels of government
- RI investments are not visible and are therefore less politically attractive
- Capacity gaps

HUMAN RESOURCES

- Poor performance management
- Staff shortages
- Inefficient staff allocation or allocation of staff time
- Culture of monetization of tasks
- Poor attitude, work ethic, and motivation
- Capacity gaps

SERVICE DELIVERY

- Poor integration of RI services with broader primary health services
- Inadequate quantity of health facilities
- Low or nonexistent community engagement
- Poor access to hard-to-reach communities
- Poor conditions at health facilities

HMIS

- Administrative data are not reliable or valid
- Unclear protocols and inadequate training of staff for appropriate data collection and utilization
- Data are not used for decision making
- Some PHCs lack basic data collection tools such as the State-provided registers
- Poor forecasting
- Lack of feedback to community, reducing accountability

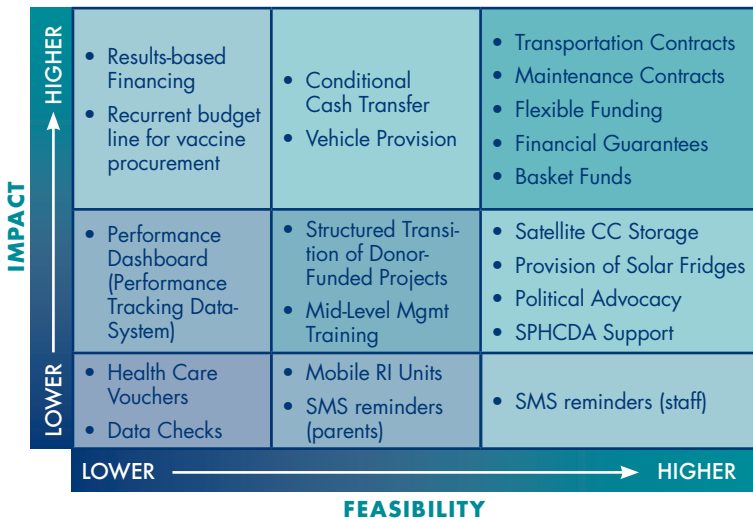
Development Agencies, targeted state-level advocacy, and structured transition of donor-supported projects.

At sub-national levels, commitment to RI is dependent on the individual preferences of decision-makers. Effective advocacy will focus on increasing the political value of investing in vaccines and including those messages alongside economic and human rights justifications for RI investments. Local CSOs and NGOs can be highly effective advocates, and are particularly well-placed to provide accountability at the state and LGA level.

To address structural inefficiencies, the National Health Bill provides for the establishment of State Primary Health Care Development Agencies (SPHCDA) so that state level stewardship, supervisory functions,

(continued on page 4)

Impact vs. Feasibility



With many potential solutions from which to choose, it helps to segment them on the basis of their potential impact and their feasibility. Placement of interventions into categories in this graphic illustrates relative impact and feasibility. Actual impacts will vary by state or region.

and service delivery will be domiciled in the same agency. Technical assistance to new SPHCDA's will ease the transition. Donor sustainability plans are also key to avoiding service interruptions. Governments, CSOs, or other in-country partners can provide counterpart funding from a project's start to encourage ownership, and funding responsibilities can be gradually transitioned throughout the project.

Demand Creation Package

While demand was not the primary issue highlighted by respondents, knowledge about and demand for vaccines is still low in some areas. Potential components of a demand creation package include **SMS reminders to parents** and incentive programs such as **conditional cash transfers** or **vouchers for other health care services**. These interventions may help increase overall immunization coverage, reduce dropouts between DTP1 and DTP3, and/or improve immunization timeliness.

Increasing demand for vaccines may also aid advocacy efforts by adding to the political value of RI investments.

Intervention Package Components & Targeted Barriers

Intervention Package	Potential Components	Barriers Targeted
Financing and Vaccine Security	<ul style="list-style-type: none"> Financial guarantees Re-designating vaccine budget line from capital to recurrent Creation of a basket fund Flexible funding for vaccine logistics 	<ul style="list-style-type: none"> Vaccine stock-outs Delay in release of budgeted funds Inadequate funding, esp. at LGA level Low access to hard-to-reach communities
Transport	<ul style="list-style-type: none"> Transportation contracts Vehicle procurement and distribution 	<ul style="list-style-type: none"> Vaccine stock-outs Transportation challenges at peripheral points Low access to hard-to-reach communities
Cold Chain	<ul style="list-style-type: none"> Provision of solar fridges Maintenance contracts Satellite cold storage centers 	<ul style="list-style-type: none"> Vaccine stock-outs Inadequate cold chain capacity Poorly maintained equipment Overly long links in supply chain
Performance Management	<ul style="list-style-type: none"> Results-based financing Data checks Mid-level management training SMS reminders to staff 	<ul style="list-style-type: none"> Poor accountability Administrative data are not reliable or valid Data are not used for decision-making Poor performance management Low morale Staff shortages Inefficient distribution of staff
Advocacy and Leadership	<ul style="list-style-type: none"> State Primary Health Care Development Agencies (SPHCDA's) Transition period from donor to gov't funding Targeted state-level advocacy Collaboration with traditional leaders 	<ul style="list-style-type: none"> Poor accountability Disconnect of responsibility, authority, and capacity Poor performance management in settings where vaccine supply is adequate, Non-sustainable financing of donor projects Inadequate funding at all levels Lack of community engagement Demand-side barriers
Demand Creation	<ul style="list-style-type: none"> SMS reminders to parents Vouchers to pay for future health services Conditional cash transfers 	<ul style="list-style-type: none"> Demand-side barriers