

Strengthening Routine Immunisation (RI) Systems

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Mother and Daughter Accessing Immunisation Services in Ekiti

Strengthening Routine Immunisation (RI) Systems

Summary

Routine immunisation (RI) against vaccine preventable diseases (e.g. measles, polio, TB, tetanus, diphtheria, and whooping cough) is one of the most cost-effective interventions for reducing childhood illness and mortality. Yet in 2006 (NICS, 2006) only 18 percent of Nigerian children were fully protected from these diseases. Vaccine preventable diseases (VPDs) contributed to high mortality rates among children, accounting for 22 percent of deaths before five years of age (NICS 2006). Immunisation coverage in Nigeria is too low to make the expected contribution to MDG 4 (child mortality) or MDG 5 (maternal mortality).

From inception in 2002, PATHS has worked in collaboration with Nigerian stakeholders to contribute towards improving Routine Immunisation (RI)

services. A PATHS-supported technical roundtable on immunisation held in 2004 and to which a wide range of federal and state level stakeholders were invited, identified supply and demand-side barriers to increasing immunisation coverage. These barriers included both systemic and programmatic challenges that were, to varying degrees, confronting all states. The roundtable recommended a broad strategic framework that could be adapted to fit state-specific needs, challenges and priorities. The framework included components on system strengthening; evidence-based programmatic interventions; and social mobilisation and demand creation.

System strengthening interventions in the PATHS-supported states included a focus on engaging with politicians and health managers to improve state stewardship of, and increase funding to, the health sector with a particular emphasis on PHC services and routine immunisation; strengthening evidence-based planning; fostering intersectoral collaboration; and developing structures to facilitate coordination and harmonisation. Other system-wide initiatives included strengthening institutional management and quality improvement for better health services; introduction of Drug Revolving Funds; and integration of primary and secondary health care levels into decentralised structures¹ (Gunduma, Essential Service and System Package (ESSP), District Health System (DHS), in Jigawa, Ekiti, and Enugu respectively).

The programmatic support was needs driven and often preceded by rapid appraisals or assessments. The support focused on strengthening all immunisation system components including:

- improvement in skills and competencies (through training)
- Support to Government (SMOH) to coordinate partners and stakeholders in immunisation using the multiyear planning tool
- micro planning and dialogue with communities
- provision of supplies and cold chain equipment
- Community mobilisation.

State stakeholders drew on national and international consultants to support the systems strengthening activities.

PATHS also provided some technical support to structural reforms that aimed at re-integrating the National Programme for Immunisation (NPI) into the National PHC Development Agency (NPHCDA).

Partly as a result of support provided by the PATHS programme, improvements were seen in immunisation coverage. Using DPT3 coverage at 52 weeks (card and history) as a proxy indicator, Jigawa state doubled its immunisation coverage between 2003 and 2006 (i.e. from 8.8% to 15.6%) while Ekiti state increased its immunisation coverage by 20% between 2003 and 2006 (from 55.2% to 65.5%). While improvements were made in immunisation coverage, it was not possible to assess the impact of the support on VPDs in the PATHS-supported states. Data on VPDs, such as measles and neonatal tetanus (NT) were inconclusive. Available data showed a very low incidence of NT, this should however be interpreted within the context of a low-supervised delivery coverage, low service utilisation, and incomplete death reporting.

The key drivers of the modest gains achieved in the PATHS-supported states were:

- creating pressure for a higher level of political support for immunisation
- building the commitment of health managers
- increased financing for immunisation
- developing skills and competencies for planning, implementation, monitoring and supervision
- increasing access to services by increasing the number of institutions providing RI and the frequency of immunisation sessions
- providing adequate, safe, and potent vaccines; and
- creating demand through social mobilisation and behaviour change communication.

These interventions are consistent to a large extent with WHO's "Reaching Every District" strategy, which in Nigeria has been repackaged as the "Reaching Every Ward" strategy.

¹ For more details see the PATHS Technical Brief on Developing Integrated and Decentralised Health Systems

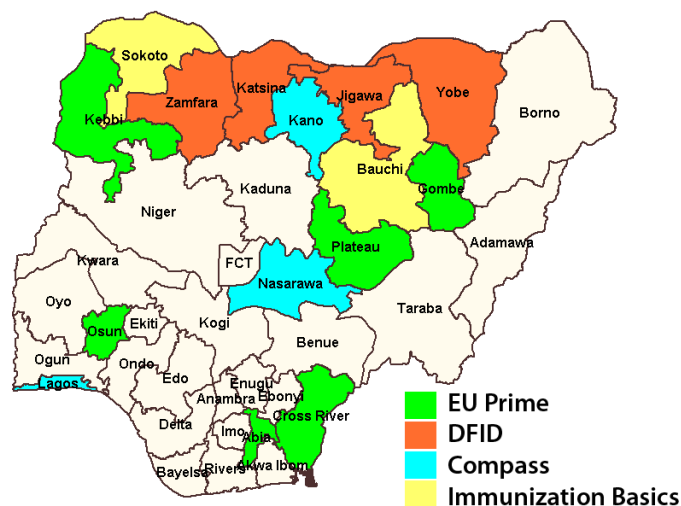
Introduction

In 2003, the Nigeria Demographic and Health Survey (NDHS) indicated that only one in ten Nigerian children under two years were protected from vaccine preventable diseases (VPDs), using DPT3 as a proxy indicator. More recently, the National Immunisation Cluster Survey (NICS, 2006) indicated that about four in ten Nigerian children are protected from VPDs using DPT3 as a proxy indicator. BCG and measles coverage had increased from 2003 to 2006: BCG from 23 percent to 41 percent and measles from 25 percent to 33 percent respectively; OPV3 coverage declined slightly from 39 percent to 37 percent. Despite these gains, Nigeria is one of the four countries that remained endemic for polio (others were Afghanistan, Pakistan, and India) and was a major exporter of the wild polio virus (WPV). Improvements in the routine immunisation programme, due to innovations such as IPDs (immunisation plus days) and increasing support by development partners (see below) and other donors, contributed greatly towards polio eradication efforts in Nigeria. However by early 2008, three of the PATHS-supported states, Kaduna, Kano, and Jigawa, still remained high-risk states for wild polio transmission.

Routine immunisation was one of the key MDG focused areas supported in the PATHS states. States adopted a systems-wide approach to strengthening RI services. Specific programmatic interventions were defined largely by pre-intervention situational analysis findings. This included strengthening various components of the immunisation systems in Kaduna, Kano, Jigawa, Ekiti and Enugu.

In addition to DFID funding through the PATHS program, several Development Partners were supporting improved immunisation coverage in Nigeria. It was therefore felt to be important to include all stakeholders in the design of the national and state-level response to the problem.

Development Partners support to immunisation in Nigeria (2008)



KEY FACTS

Immunisation Plus Days

Immunisation Plus Days (IPDs) replaced National Immunisation Days. IPDs were supplementary mass immunisation activities. In addition to Oral Polio Vaccine (OPV), which had been the focus of National Immunisation Days, other primary healthcare issues were addressed, and other vaccines and Vitamin A were administered. IPDs were usually carried out within a short time period. The aim of the mass campaigns was to target every person in the defined target group, regardless of their prior immunisation status.

The Response

Strategies

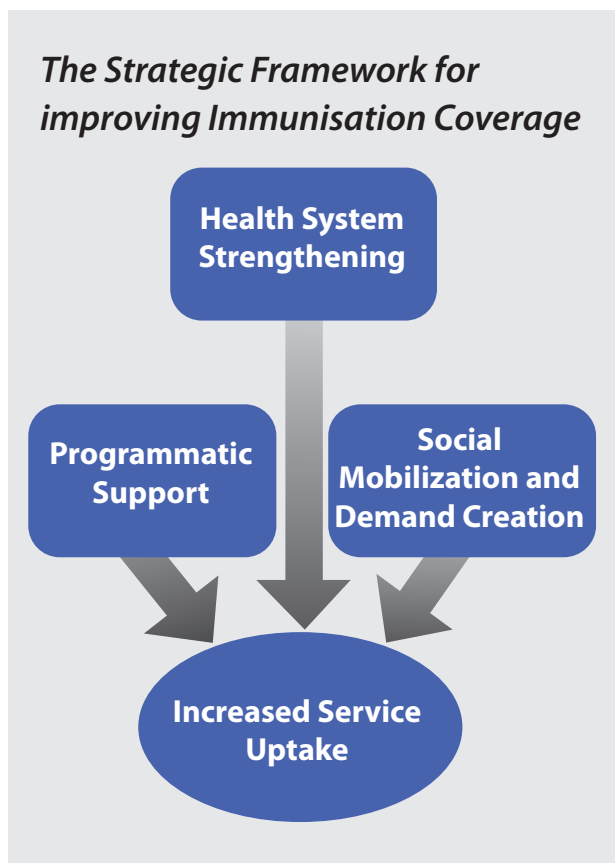
PATHS supported a technical roundtable on Immunisation and Integrated Management of Childhood Illnesses (IMCI) in 2004. During the meeting the poor performance in RI and the slow progress in relation to IMCI implementation in Nigeria were discussed and key supply- and demand-side barriers to increasing immunisation coverage were identified. Roundtable participants included a wide range of stakeholders from the Federal Ministry of Health, bilateral and multilateral organisations, PATHS personnel (from the states of Jigawa, Ekiti, Benue, and Enugu) and representatives of NPI.

The key constraints to increasing immunisation coverage that were identified were:

- Inadequate financing of PHC (compromised by a lack of political commitment, and sometimes financial malfeasance) and under-management of services;
- The large emphasis on vertically-run health programmes which undermined attempts to integrate RI into PHC services;
- Inadequate skills and competencies in use of data for planning and programme monitoring;

- Inadequate staff (poorly skilled, distributed, and motivated health staff);
- Inadequate immunisation supplies and logistics;
- Inadequate coverage of services, and many barriers of access affecting potential users;
- Inadequate community participation and demand for services.

The Strategic Framework for improving Immunisation Coverage



Discussions at the Roundtable



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The roundtable recommended the need for a systems-wide approach to improving immunisation coverage and child health services, and highlighted a series of possible interventions to remove the barriers identified. The recommended system wide package of interventions included:

- Increasing financing for PHC (budgeting and releasing funding);
- Strengthening integration of child health interventions;
- Harmonising donor support to immunisation and child health;
- Strengthening the PHC system (especially in relation to human resource deficiencies, evidence-based planning, supportive supervision, supplies, preventive maintenance for cold chain and infrastructure, and information management);
- Enhancing equity in access to services – extending outreach services to underserved populations, working in partnership with the private and NGO sectors;
- Capacity building – building competencies and skills;
- Demand creation and community participation drawing on lessons learned from other successful community mobilisation programmes.²

General Approach

The approach taken in the PATHS-supported states was to support a rapid appraisal process that identified state-specific barriers to increasing RI coverage; supporting stakeholders to develop an appropriate intervention package based on a menu of potential interventions; and providing on-going technical advisory support for implementation.

1. An *initial rapid needs assessment* helped identify state-specific immunisation system weaknesses. This process was undertaken by the SMoH with support from consultants. A high degree of involvement of state stakeholders was designed

² These included: the USAID BASICS CAPA (Catchment Area Planning and Action) approach which was implemented in Abia, Lagos and Kano states, and the Ghana Community-based Health Planning and Service approach (CHPS).

to promote ownership and responsibility for the process and its outcomes. The rapid appraisal process focused on the status of the health system (in relation to stewardship and governance, financing, human resources, continuity and adequacy of supplies, supervision and monitoring), and immunisation-specific system components such as the cold chain and logistics, vaccine supply and safety, surveillance of vaccine preventable disease, immunisation service delivery strategies, and advocacy.



Challenges

Key barriers to increasing RI coverage in Ekiti state

- Poor PHC Infrastructure: facilities through which RI services were provided were in a great state of disrepair
- Ad hoc planning and non-use of data for planning or monitoring the quality of RI services
- Inadequate funding of RI by LGAs either because no budget lines existed for RI or due to non-release of funds. In 2003 and 2004, PHC facilities received inadequate funds for outreach services, collection of routine vaccines, and submission of immunisation returns
- Broken down cold chain equipment and thus questionable vaccine potency
- Inadequate number of health staff; and about 40 percent of staff lacked the requisite skills and competencies for effective immunisation service delivery, maintaining cold chain equipment, data analysis and use of data for decision making
- Lack of structured in-service training for the staff
- Weak intersectoral collaboration and poor coordination of the efforts of government agencies involved in providing RI services (SMoH, PHCA, NPI, LGA and PHC staff)
- Poor vaccine and supplies (syringes and needles) management and distribution
- Lack of private sector involvement in RI.

In addition, demand-side reasons for low immunisation uptake were explored.

In Jigawa a rapid appraisal of the immunisation system undertaken in 2004 revealed immunisation coverage of 5 percent. This was associated with both system-wide weaknesses and specific challenges facing the immunisation programme. Programme-specific challenges included inadequate supplies (vaccines and logistics) and poor injection safety practices, inadequate maintenance of cold chain equipment, and poor coverage of RI services (only 20 percent of available clinics at the LGA level were providing RI).

In Ekiti, a 2004 state roundtable on immunisation mapped out the key barriers to increasing immunisation coverage in the state. The roundtable provided an opportunity for state stakeholders to dialogue about, and reached consensus on, how to address these barriers and subsequently improve RI coverage. The event helped harness political will and commitment to RI services. For example, pledges were made and redeemed by LGA Chairmen and traditional authorities to increase funding and health managers also pledged to provide funding for RI within the context of health budget constraints. Also in Ekiti, a demand-side rapid appraisal of barriers to immunisation uptake found adequate awareness among the Ekiti population of the benefits of immunisation, except for some rural minorities such as the Gaa and the Ebira. The barriers to RI were found to be largely supply driven. Peripheral or rural facilities were inadequately staffed and those listed as managing these facilities were not seen at their posts for weeks, months or even years. There were no outreach services or facility-based daily immunisation services. The midwives of the Christ Apostolic Church, a key health service provider in the state, were not equipped to provide immunisation services and had to refer their clients elsewhere for immunisation.

In Enugu considerable thought was given as to the best action that could be undertaken by the state to promote an increase in the uptake of routine immunisation which would complement the Federal governments' many supplemental immunisation campaigns as well as the work undertaken by HSDPII and UNICEF, the latter two concentrating on improving provider provision. It was thus agreed that PATHS would concentrate its' efforts in supporting government to increase demand from amongst the communities to promote uptake. This was supported

by the development of a minimum service package which has as a core element the provision of routine immunisation with all primary care facilities expected to be able to provide the service.

In Kaduna, a RI rapid appraisal was undertaken to support the State Action Committee on Immunisation (SACI) to develop a RI plan. Among other issues, the rapid appraisal identified the need to undertake an in-depth immunisation system assessment (especially of the cold chain and associated training needs). Most of the LGAs in Kaduna had cold chain equipment in excess of the minimum requirement recommended by NPI. However, much of this equipment was not functional at the time of the cold chain assessment, and the state lacked a policy on cold chain preventive maintenance and repair. In most cases, the transport required for vaccine distribution was not available. Important cold chain equipment like solar refrigerators, which according to the NPI should be available in all peripheral PHC facilities, were not available in most of the LGAs visited despite the erratic electric power supply. The in-depth review of the immunisation systems and training need assessment using the WHO tool in Kaduna was completed in June 2007.

A report of the rapid appraisal in Kano (Nov 2005) summed up the situation as

...“returns from the National Programme for Immunisation (NPI) for immunisation coverage in Kano State, indicate an unsatisfactory situation. This is indicated by a low first dose coverage and a high drop out rate. There are regular major epidemics of measles in the state as recently as 2005. This provides strong evidence as to the low state of immunisation of children in the state. Studies have indicated significant problems with the cold chain and with the supply and distribution of vaccines. There are also important issues around community perceptions about the safety and desirability of immunisations particularly polio, and by association with the other antigens as well”.

2. In collaboration with partners, and following the identification of state specific needs, *a state specific response or intervention package* was developed to address the identified challenges. Implementation work plans were then prepared. Implementation of work plans was monitored by state teams comprising representatives from SMOH and PATHS.

In Ekiti, the state developed a policy and work plan to increase RI coverage. PATHS' programmatic support focused on increasing access by increasing the number of RI providing facilities; improving quality through skills training in at least one PHC facility per ward, provision of equipment and supervision; and strengthening partnership and intersectoral collaboration with the private health sector. In Kaduna, a three year plan was prepared (2007 – 2009) that SACI is using to guide and coordinate all partners and LGAs on immunisation activities.

In Enugu, in support of the implementation of a facility based Minimum Service Package, a series of Packages of Care were developed including one for Integrated Management of Childhood Illnesses (IMCI) of which immunisation was a key aspect.

3. Where appropriate, *a national consultant* was engaged on an intermittent or continuous basis to work closely with the state level team to implement the work plan.

In Jigawa, for example, the national consultant provided ongoing technical support and assisted with immunisation planning, implementation, supportive supervision and training needs identification. The consultant also supported the provision of cold chain equipment and immunisation forms/registers; training of staff and expansion of static immunisation sites to increase access; use of NGOs, CBOs and a media campaign to increase demand for RI services and to counter the negative attitudes emanating from the polio campaign; and the setting up and institutionalisation of the Inter-Agency Coordinating Committee (IACC) on Immunisation and Child Health. This support occurred over a three year period, from 2004 to 2007.

Specific Health Systems Strengthening Approaches – State Examples

Increasing financing (budgeting and releasing funding) for RI

In Jigawa, senior state stakeholders from the Ministries of Health, Local Government, and the Primary Health Care Agency were engaged to obtain their commitment and support and re-direct their attention to RI as an essential component of an effective immunisation strategy. Commitment by these stakeholders was expected to facilitate local ownership, increase funding of PHC activities (including RI), and facilitate the release of approved budgeted funds. The engagement process contributed to the establishment of the SIACC and the development of a state health strategic plan and budget as well as annual operational plans for RI. Furthermore, state-wide capacity for planning, budgeting and financial management was strengthened through provision of training and hands-on support by consultants to improve financial management and accountability.

Ekiti developed an annual integrated plan and budget for increasing immunisation coverage which captured the activities of both partners and government in the state. All partners and other stakeholders were expected to buy into the state-owned plan for increasing immunisation coverage.

Strengthening integration of child health interventions and harmonising donor support.

In Jigawa, a state Inter-Agency Coordinating Committee (IACC) on Immunisation and Child Health was established in 2004. The vision was to harmonise child survival (including RI) plans and support provided by development partners, including the UN agencies working in child health. The intention was that the IACC would ultimately replace other parallel coordination structures such as the State Task Force on immunisation (which focused on Supplemental Immunisation Activities - SIAs), and the State Polio eradication team (which focused on Polio).

In Kano, efforts to harmonise donor support led to the establishment of a Donor Coordination Forum in the health sector to address child health and other priority health issues. Limited support including the provision of a generator to a zonal cold store and a one-off stock of consumables was provided for immunisation programmatic support because the EU was billed to provide comprehensive support on RI and child survival services.

In Ekiti, PATHS contributed to the strengthening of intersectoral collaboration and partnerships by, for example, working closely and in collaboration with others such as WHO, NPI and UNICEF to strengthen data management and its use for management decision-making; and in developing a user friendly integrated supervisory system. Both these activities, although focused on strengthening the health system as a whole, were expected to impact positively on RI. Ekiti's support to the private sector was also an additional strategy to increase access to PHC, including immunisation services.

In Enugu with the introduction of the Minimum Service Package, a costing exercise was undertaken to determine the cost of implementing the package in both primary and secondary care. This cost then formed the basis of the facility budgets for inclusion in the wider health sector budget for onward submission to State Government. This started in 2007 and has continued.

Strengthening the PHC system³

In Jigawa, the PHC system was improved by instituting system-wide interventions⁴ which were designed to improve the quality of care available within health facilities. Interventions included:

- Strengthening institutional management and quality improvement using a change management approach called Integrated Management Through Participatory Appraisal and Continuing Transformation or IMPACT
- Improving the technical skills and competencies of service providers through training

³ Particularly in the areas of human resource management; evidence-based planning; supportive supervision; supplies management; preventive maintenance for cold chain and infrastructure; and information management.

⁴ For more details on the specific system strengthening initiatives, see the appropriate Technical Briefs.

- Ensuring the availability of drugs at health facilities through introduction of Drug Revolving Funds
- Developing capacity for evidence-based planning, monitoring, supportive supervision, and health information management
- Decentralisation and integration of primary and secondary health care services via introduction of the Gunduma (or district) Health System.

PATHS also provided the following specific programmatic support to immunisation service

IMPACT

Improved Management Through Participatory Appraisal and Continuing Transformation (IMPACT) provided the framework for all management and systems strengthening work within the PATHS states. The approach aimed to get health facilities at all levels working well by strengthening essential systems, procedures and methods of management. Performance assessment through PPRHAA was the first component of IMPACT. The second component focused on support for essential systems strengthening (e.g. strengthening of drug or financial management systems). The third component focused on provision of on-going supportive supervision. The fourth component was quality assessment and recognition. Health facilities were assessed against pre-defined quality standards, and, if they reached these standards, they were accredited and received public recognition.

delivery in Jigawa:

- Increased the number of static RI services (from 198 to 341) and outreach RI services (from 2 to 307) in order to reduce the inequalities in access to RI services.
- Supported the development of micro-plans and dialogue at the community-service interface in collaboration with other donors (e.g. WHO, UNICEF) and other donor-funded programmes (e.g. USAID COMPASS). Community dialogue (led by COMPASS) and radio phone-in programmes

appeared to be effective tools for creating demand for RI and IPDs.

- Established ward level committees and coordination committees for child health in LGAs to help increase community dialogue and improve implementation and monitoring of RI at LGA level.
- Improved the supplies and equipment situation for example by providing vaccination cards to support IPDs, and cold chain equipment to state cold stores and health facilities to ensure vaccine safety and potency.

“Look I am having my children immunized and I believe I would not harm my own children just to convince you”.

A traditional ruler in Jigawa talking to his subjects

“These health workers are Muslims like us; I am convinced they will not harm our children by immunization”.

A mother, Jigawa

Capacity building – building competencies and skills

Ekiti invested in quality improvement by strengthening the technical skills and competencies of about 400 service providers on immunisation, cold chain management, and supervisory skills. The 400 participants, drawn from all 16 LGAs in the state, were trained by 40 health care providers who had been trained as trainers. The course focused on immunisation skills and competencies, including vaccine and cold chain management, supportive supervision, and monitoring service quality and performance gaps. Regular performance review meetings were held where performance gaps were identified and plans were made to address them.

In Kaduna, an immunisation training needs assessment identified gaps in pre-service and service institutions and generated information for the development of a comprehensive training plan on immunisation. Thirty operational-level health workers from the six PATHS-supported LGAs were trained on RI service delivery.

In Jigawa, a total of 562 service providers were trained in the field practice of RI. In Enugu 12 master trainers were trained to roll out the Packages of Care to as many public facilities as possible. This has resulted in over 1,300 staff being trained in their use.

Engagement with Traditional Authorities in Dutse, Jigawa





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Immunising a Child in Kaduna

Demand creation and community participation

In Jigawa, following an improvement in the RI supply situation, dialogue with the communities was strengthened by supporting the formation of ward development committees in all the 288 political wards in the state as well as supporting NGOs and CBOs to mobilise communities. These committees as well as the NGOs and CBOs intensified dialogue with the communities in order to increase demand for health services, including immunisation, as the supply side situation improved. The community mobilisation was complemented by a media campaign using the eight state radio stations.

The focus of Enugu's efforts was in increasing demand and a range of activities were undertaken to achieve this aim:

- The commissioning of an NGO, CREASUP, to use their highly successful peer to peer child support approach to encourage school children to educate their peers, parents and communities of the need for all children to be **routinely** immunised.
- The production and airing of a series of a TV programme called Change and Smile, a number of episodes of which were dedicated to immunisation.
- The training of over 600 CBOs in the use of a Better Health Kit such that they could go back to their various communities and share their knowledge and understanding of the relevant health messages including the need for routine immunisation.
- The staging of a distance learning radio programme for some 62 listening groups

CASE STUDY:

CREASUP – Creating Demand for RI in Enugu

An Enugu-based NGO, CREASUP, was commissioned to use their highly successful peer-to-peer child support approach to encourage school children to educate their peers, parents and communities of the need for all children to be routinely immunised. The campaign centred on schools, both primary and secondary, and in the communities surrounding Early Bird Clinics (clinics supported by PATHS). Over the period October 2005 to September 2006, the NGO trained 1,350 peer educators and school facilitators who reached some 40,000 secondary school children, 43,000 primary school children and 50,000 people across the communities in the catchment area of the Early Bird Clinics.

Mobilising School Children in Enugu



© Sanctus Okoreke

comprising of both health workers and community members. These groups were spread across the state and on completion of hearing each episode undertook community mobilisation. Again immunisation was a key aspect of the programmes.

- Several of the District Health Boards ran their own health promotional campaigns. For example, Isi Uzo District managed a campaign involving 32 communities. This resulted in a total of 118 children over the age of 6 months being given tetanus toxoid immunisation as well as a number of pregnant women. Due to the overwhelming turnout the District ran out of needles and syringes sadly reducing the potential number that could have been immunised. The grand finale day of the campaign resulted in 206 women turning up with their babies for a mother and baby competition who were only allowed to enter if they could produce the evidence of up-to-date routine immunisation i.e. their immunisation records. Three pregnant women were awarded prizes along with three babies.

“The introduction of routine immunisation has gradually reduced the belief in “Ogbanje” which was the traditional reason given for the high infant mortality rate amongst our people for many years”

Igwe Kingsley Chime

Results

Jigawa state's achievement in increasing routine immunisation coverage was substantial - a two-fold increase from 2003 to 2006 (using NICS data, with DPT3 as a proxy indicator) - however the level of protection of eligible children and women from VPDs remains low relative to regional targets, and the GIVS (Global Immunisation and Vaccines Strategy 2006-2015) target are yet to be achieved.

Similar significant increases in RI coverage took place in almost all the North West Zone states as a result of the increased attention paid by government and development partners to the unacceptably low immunisation coverage in these states. However, much more needed to be done to improve service quality and ensure that the right vaccines were given at the appropriate time and according to the agreed immunisation schedule.

There was also an increase in RI coverage in Ekiti state. The DPT3 coverage increased from 55.2 percent in 2003 to 65.5 percent in 2006 (52 weeks, card and history).⁵ The proportion of children fully immunized at 52 weeks, a measure of the overall strength and quality of the immunisation system, marginally increased from 35.5 percent in 2003 to 36.7 percent in 2006, as measured by card and history. If projected at this level of effort, more than 90 percent RI coverage will be achieved by 2015. The same cannot be said for the rate of increase in the coverage of fully immunized children at 52 weeks, as measured by card and history. The DPT3 (14 weeks) - measles (39 weeks) dropout rate may be responsible



© PATHS Photographer

Routine Immunisation Session in Ekiti

for the lower coverage of fully immunized eligible children by age of 52 weeks.

In spite of these gains, Ekiti was yet to achieve the national targets. There were still measles outbreaks in the state.

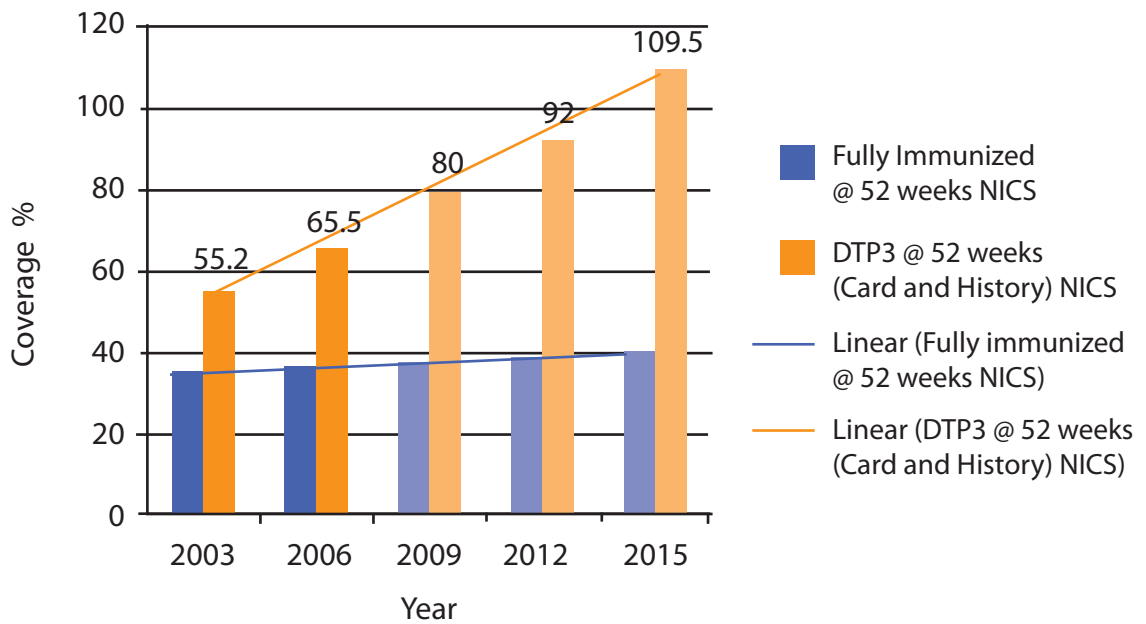
Enugu has seen a slow but systematic increase of particularly DPT1 and 3 despite a lack of vaccine for periods during 2006 and 2007. When this performance is sustained and projected, the state could attain routine immunization coverage of 90% by 2015 with all LGAs achieving RI coverage of at least 80%. Enugu can achieve Measles coverage of 90% before 2015. DPT1-DPT3 dropout rates are about 10%. This suggests a good quality RI services.

DPT3 Coverage - DPT3 Card & History (North West Zone, NICS 2006) and supporting Partners

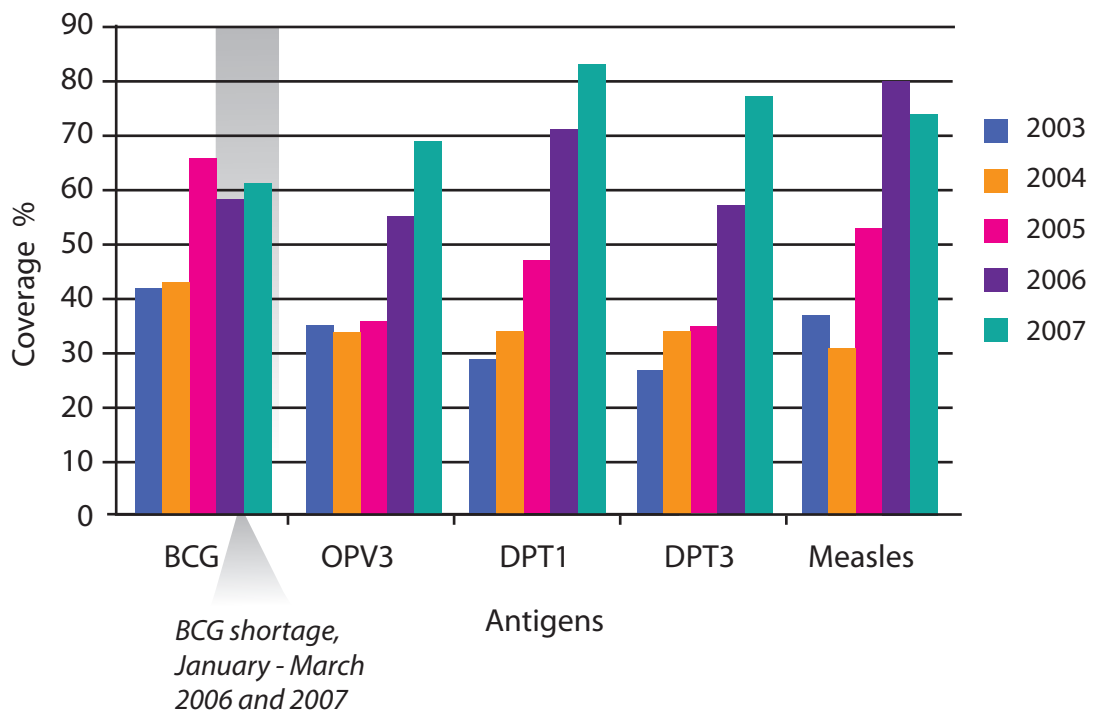
State	Partner	DPT3 Card and History (%)		% Increase
		2003	2006	
Jigawa	DFID (PATHS)	8	15.6	95%
Kaduna	DFID (PATHS)	20.5	33.2	62%
Kano	COMPASS (USAID)	8.9	22.9	157%
Katsina	DFID	12.6	24.6	95%
Kebbi	EU Prime	1.9	23.1	1,116%

⁵ 2006 NICS Report.

Immunisation coverage in Ekiti State (actual and projected) – data from NICS 2006



Enugu State Under 1% Routine Immunization Coverage, 2003-2007



Data Quality Issues

Reliable data on immunisation is vital if progress towards attaining the 2015 goals on reduction in child mortality is to be monitored effectively. In practice, however, in Nigeria routine immunisation service coverage data was often exaggerated compared with survey data from the DHS, NICS, and EPI Cluster Surveys. This was despite enormous efforts to improve national level data quality by PATHS and other donors such as GAVI, WHO, and UNICEF. Although surveys to monitor the trends in immunisation coverage were undertaken every three years, quality administrative data was essential to measure performance gaps and inequalities in coverage on an on-going basis. It was therefore imperative to improve the quality of service data on immunisation not only in PATHS-supported states but nationally.

The variance between the NICS data and the service data in Jigawa suggested either serious flaws in data quality, non-adherence to immunisation schedules, or underestimated target population figures. Assuming a reliable and effective cold chain, the persistence of circulating wild polio virus in Jigawa and measles outbreaks point to a far lower immunisation coverage than is reported (>80%). A total of 5,260, 26,607, and 13,560 children were vaccinated in Jigawa with DPT3 in 2004, 2005 and 2006 respectively. However, a large proportion of these vaccinations, given during RI or IPDs, might not be valid doses.

Errors in data recording tend to be amplified during SIAs. In addition, the enormous pressure to meet targets, with little supervision, creates a situation that facilitates falsification of data. Wide variations between DPT3 coverage rates using administrative and survey data (particularly with the introduction of IPDs) could suggest that using DPT3 as a proxy indicator for RI coverage is not the most effective indicator to use. More effort is certainly required to improve the validity of vaccination doses recording especially as immunisation coverage continues to improve, however it is also possible that other indicators (such as OPV3) may be better used to show trends in RI, since OPV coverage is not put onto immunisation cards during SIAs.

Where the IPDs and other SIAs continue, perhaps OPV3 might be a better indicator of trends in RI, since coverage with OPV is not charted on the immunisation cards during the SIAs.

Similar disparities between administrative and survey coverage data were found in Ekiti. The variance between administrative (45 percent) and survey data (69 percent) DPT3 coverage (Card + History, precision ± 10 percent) was similar to that observed in Jigawa. The higher results from the survey data suggested underreporting of administrative data or perhaps an over-estimation of the target population.



Challenges

The disparity between administrative data and survey data was further complicated by the management of data from SIAs. As part of Nigeria's strategy to increase demand for immunisation services, and also to meet the expressed needs of the clients, other antigens such as DPT were given in addition to polio vaccine during SIAs. This complicates matters as DPT3 is used as a proxy indicator to measure the performance of RI. The coverage figures obtained for DPT3 were well over 100%, suggesting that more children were being vaccinated than were eligible. It was therefore not clear what proportion of doses given during SIAs were actually valid doses? Or what was the margin of error, for example, of DPT documentation on the immunisation cards during SIAs? A key question was how to reconcile the high DPT3 coverage, which was documented, with lower OPV3 coverage rates (not reported on the card during SIAs)? These were some of the questions that needed to be answered while efforts were made to harmonise state level EPI data.

Sustainability

Financing

Funding of immunisation services in the Africa region is largely donor driven, and is a great concern to the Task Force on Immunisation in Africa. Because national governments fund only about eight percent of the real cost of immunisation, GAVI, during its first disbursement phase (2000-2005), encouraged countries to draw attention to the funding gap and identify how immunisation would be funded on a sustained basis after the withdrawal of GAVI contributions.

Financing RI in the PATHS-supported states within the context of PHC budgets, remained a considerable risk for the sustainability of the moderate gains made in increasing RI coverage. This is especially so in Jigawa where most of the funding of RI comes from donors. The health sector is grossly underfunded in the states as a result of inadequate releases of budgeted funds (and sometimes the misapplication of available funds). Therefore, although Nigeria was paying for almost all its vaccine requirements, the underfunding of the health sector in general threatens the sustainability of the gains made. For example, Jigawa state, with 91 percent of its population below the poverty line⁶, spent an equivalent of US\$3 per capita on health compared with the recommended US\$34 recommended for poor countries.

Although much progress was made in improving planning and budgeting in Jigawa, the persistence of corruption, lack of accountability (e.g. failure to submit financial expenditure returns on GAVI funds made available to the LGAs), and non-release of approved budgetary funds by LGA officials, remained serious bottlenecks and threats to the sustainability of the modest immunisation coverage gains made. The gains made in increasing RI coverage can only be sustained or accelerated, in the long term by state level commitment to progressively increasing the funds released for implementing state and LGA plans for RI within the context of PHC.

In Kaduna state the bulk of resources provided by government and partners to SACI were taken up

by the SIAs. Yet the SIAs alone cannot achieve the Polio Eradication Initiative (PEI) objectives. SIAs are expensive to implement (not least because they provide allowances to participating health staff which are unsustainable), and their implementation left inadequate funds for strengthening RI.

In Ekiti, a major focus was on strengthening of the health budgeting process, and linking the health budget with annual plans and tracking budgetary expenditure. This work made it possible for programme areas, such as immunisation, to know their 'share' or budgetary component of the disaggregated health sector budget, which helped health managers plan better.

In Enugu, the costs of the minimum service package were calculated – this included the needs of immunisation. However the release of the budget on a regular monthly basis to meet the needs remained problematic despite repeated efforts.

The PHC system as a vehicle for increasing access to immunisation

Although PHC was the prime strategy for delivering a minimum package of health interventions (including immunisation) to the Nigerian population, the strategy operated within a rather incoherent and hierarchical health system. The system was plagued with deteriorating infrastructure, inadequate manpower (numbers and distribution), inadequate financing, 'one line' budgeting, poor information management, low utilisation, and weak stewardship and accountability at the LGA level, amongst others. PATHS supported efforts in Jigawa (Gunduma Health System), Ekiti (Essential Services and Systems Package Clusters), and Enugu (District Health System) to restructure the health system so that primary and secondary care were integrated in a decentralised system, effectively linked by a referral system, and adequately funded to deliver both levels of care. In the absence of such reforms, it was difficult to see what could be done to improve the delivery of PHC services. It is essential that these structural reforms are both deepened and sustained.

⁶ World Bank, 2006, Nigeria Poverty Assessment, The World Bank Group, Africa Region Human Development III (draft).

Immunisation system functionality and quality of services

Potent vaccines must be given at the right time and interval (in the case of multiple doses) in order to elicit the expected immunogenic response from children. A well-managed cold chain ensures that vaccines reach the user in a safe and potent condition. The availability of cold chain equipment (cold boxes, vaccine carriers, fridge and freezers) had improved considerably in the PATHS-supported states due to investments by the Polio Eradication Initiative. PATHS complemented these efforts by providing a needs-driven supply of cold chain equipment. Another challenge in this area was the absence of a preventive maintenance and repair system. In a recent survey (June 2007) in Kaduna it was observed that most of the solar fridges that had been introduced in order to extend services to some remote areas had broken down. Other persistent constraints were vaccine adequacy and a sustained supply. Continuity in the supply of adequate vaccines is essential for sustaining and improving upon the gains made in improving RI coverage.

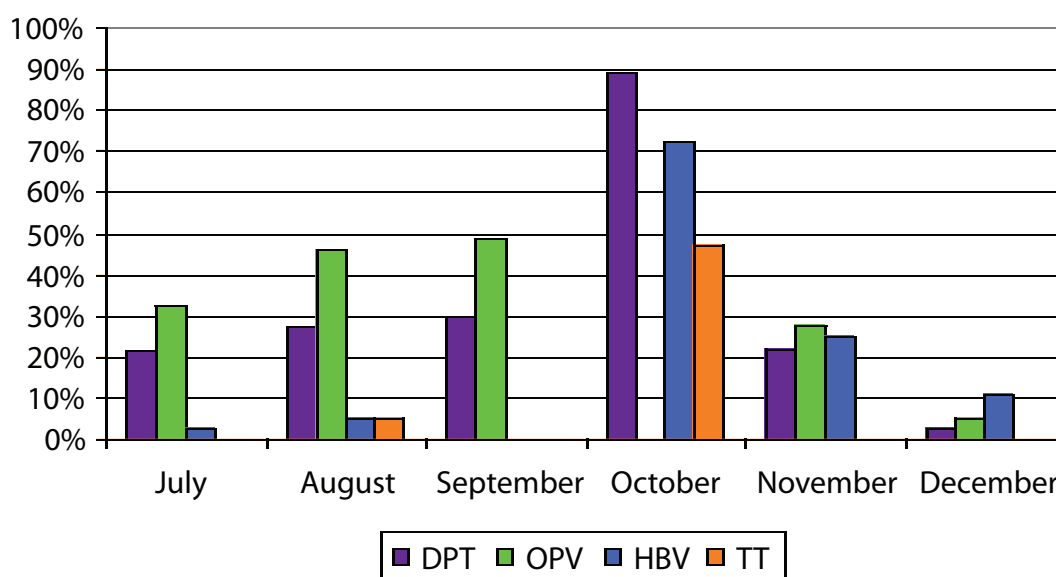
Skilled human resources

PATHS supported the strengthening of human resource planning at the federal level. This led to the development of a Federal Human Resource Policy and Plan. The support was designed to assess long-term HR needs and provide the necessary policy framework for ensuring adequate numbers and mix of staff. The policy provided guidance on the distribution of available human resources and on meeting the training needs of health workers. This would ensure that health staff were available and equipped with the competencies and skills required to provide quality health services, including RI.

At state level, RI training needs assessments were conducted, and based on the findings, training activities were designed to provide health staff with the skills and competencies necessary for the planning, implementation, and evaluation of RI services within the context of PHC.

Improved planning skills, especially micro-planning and the 'Reaching Every Ward' approach, contributed towards some increase in access to RI services. A further expansion in access requires increased numbers of health workers to manage a correspondingly increased number of RI outreach points.

Proportion of states with adequate vaccines July-December 2007(NPI, 2008)



Human resource capacity building through provision of training can be very wasteful if not properly standardised, monitored and evaluated. Obviously, there is a need for some local flexibility. Even where partners are funding immunisation training activities, states should negotiate with them to commit a proportion of capacity building funds to supportive supervision. Although many staff were trained, many more of the existing staff still need to be trained in order to achieve a critical mass of skilled staff that can make an impact on the quality of services. However, any additional recruitment must be undertaken within the context of a state human resource management plan for the health sector.

Transport

Transport for the distribution of vaccines within the states and for servicing outreach points within the wards remained a major constraint to sustaining and improving upon the modest gains made in increasing immunisation coverage. In some states such as Kaduna where micro-planning with communities had taken place, some communities offered to pay the transport cost of outreach teams visiting their communities. In Jigawa, the National Union of Road Transport Workers formed a fruitful partnership with the public sector to improve emergency transportation of pregnant women. This type of public-private partnership is perhaps a viable option that could be explored in strengthening vaccine distribution.

Supervision

The greatest challenges to sustaining supportive supervision were funds, transport, and preparation of supervisory work plans. Training has been done in the PATHS-supported states and an integrated supervisory checklist has been developed. Good stewardship and governance would ensure that this important activity was planned, budgeted, coordinated, and regularly carried out.

Increasing access

Access to immunisation improved threefold in Jigawa (BCG scar increased from 8.6 percent to 24 percent), although less remarkably in Ekiti (BCG scar 54.4 percent to 67.5 percent). Access could be further accelerated by increasing the number of facilities providing weekly immunisation services, by changing the timing of facility-based services to suit user preferences, and by increasing outreach services. In addition, improving the staffing situation and building partnerships with the NGO, mission or private sectors, especially where they play a key role in service delivery (e.g. the southern states of Ekiti and Enugu) would strengthen access. This is consistent with the Reaching Every Ward approach.

Drop Out Rates (DOR) indicate a failure to access immunisation services after an initial contact. This could be due to many reasons e.g. clients or their carers not knowing when to return; or a decision not to return, either due to a dissatisfaction with services, perhaps due to irregularities in vaccine supplies, injection complications, poor provider behaviour, being asked to pay 'under the table' fees. The high opportunity costs associated with accessing services may also prevent clients from completing a course of injections. The drop-out rate for DPT1-DPT3 in Jigawa was 47.7 percent and 7.2 percent in Ekiti (NICS 2006). This suggested that, unlike in Jigawa, the quality of immunisation services in Ekiti were of good quality and meeting client needs as they return for subsequent doses. Jigawa therefore needs to improve upon the quality of the service delivery by addressing reasons for the high dropout rate, while Ekiti should not be complacent, but address how to increase access to eligible children that are not currently reached.

Conclusions

Although PATHS provided tangible technical support to structural reforms aimed at re-integrating the NPI into the NPHCDA, its support to immunisation in Nigeria was focused mainly at the state level.

By early 2008, it was too soon to see the complete impact of PATHS support to RI in the states. For example, VPD data on measles and neonatal tetanus was not conclusive. Although data showed very low incidence of neonatal tetanus, this data should be interpreted within the context of poorly supervised service delivery, low service utilisation, and incomplete death reporting. Jigawa was still a high-risk area for the transmission of wild polio virus.

However, Enugu, Ekiti and Jigawa demonstrated that it was possible to increase immunisation service uptake by strengthening the health system and providing programmatic support in a systematic way.

The key drivers of the modest gains achieved were:

- creating pressure for a higher level of political support for immunisation
- building the commitment of health managers
- increased financing for PHC and RI services
- developing skills and competencies for planning, implementation, monitoring and supervision
- improving access by increasing the number of institutions providing RI and increasing the frequency of immunisation sessions
- providing adequate, safe, and potent vaccines; and
- creating demand through social mobilisation and behaviour change communication.

These interventions are consistent to a large extent with WHO's "Reaching every District" strategy, which in Nigeria has been repackaged as the "Reaching every Ward" strategy.



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Routine Immunisation in Kano

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