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**Data issues and challenges
for the UNICEF Nigeria
Country Office**

Action Plan

Contents

List of Acronyms	3
1. Introduction: about this action plan	5
2. Overview: securing sustainable foundations.....	6
3. An integrated digital birth registration and national identity system	7
4. A robust HMIS, incorporating improved routine immunisation records.....	9
5. An Expanded EMIS, containing school records of learning outcomes	11
6. An upscaled CPIMS+ and a new VAC survey	12
7. Collaboration for better data and its use	13

List of Acronyms

AFD	Agence Française de Développement
ASC	Annual School Census
BMGF	Bill and Melinda Gates Foundation
CPMIS+	Child Protection Management Information System
CRVS	Civil Registration and Vital Statistics
DCSF	UNICEF Data for Children Strategic Framework
DHIS2	District Health Information System version two
DHS	Demographic and Household Survey
DI	Development Initiatives
EMRs	Electronic Medical Records
EMIS	Education Management Information System
EU	European Union
FOS	Federal Office of Statistics
GBV	Gender-Based Violence
GBVIMS	Gender-Based Violence Information Management System
GHAIN	Global HIV/AIDS Initiative Nigeria
GPEI	Global Polio Eradication Initiative
HMIS	Health Management Information System
ICT	Information and Communication Technology
KRCs	Key Results for Children
LGAs	Local Government Areas
LQAs	Local Quality Assessments
LTA	Long-Term Agreement
MBNP	Ministry of Budget and National Planning
MDAs	Ministries, Departments and Agencies
MICS	Multiple Indicator Cluster Survey
MoLG	Ministry of Local Government
MoWA	Ministry of Women's Affairs
NANE	National Agency for Nomadic Education
NBS	National Bureau of Statistics
NCO	UNICEF Nigeria Country Office
NDB	National Data Bank
NEEDS	National Economic Empowerment and Development Strategy
NIMC	National Identity Management Commission
NINs	National Identity Numbers
NMEC	National Mass Education Commission
NOMIS	National OVC Management Information System
NPopC	National Population Commission
NSS	National Statistical System
ODK	Open Data Kit
OVC	Orphans and Vulnerable Children
PARIS21	Partnership in Statistics for Development in the 21st Century

PHCs	Primary Health Centres
QAOs	Quality Assurance Officers
RI	Routine Immunisation
SBSs	State Bureaux of Statistics
SDGs	Sustainable Development Goals
SSAs	State Statistical Agencies
UBEC	Universal Basic Education Commission
UNFPA	United Nations Population Fund
VACS	Violence Against Children Survey
WCARO	UNICEF West and Central Africa Regional Office
WHO	World Health Organisation

1.Introduction: about this action plan

In 2017, UNICEF developed a global Data for Children Strategic Framework (DCSF), which outlines UNICEF's general approach to data work – including the full spectrum of work required to drive demand for, strengthen the supply of, and enable the use of data – as well as some concrete directions for the organization as a whole.¹ The next step in the process is to translate that general framework into action at country and regional levels. Development Initiatives (DI) has entered into a Long-Term Agreement (LTA) with UNICEF to support country and regional offices in their own strategic planning of data investments.

DI is an independent international development organisation, which specialises in the role of data in driving poverty eradication and sustainable development.²

DI is contracted to provide UNICEF Nigeria with this Strategic Action Plan, backed up by evidence in an accompanying Diagnostic Report, making concrete and specific recommendations in relation to its investments in data over the next 3-5 years and beyond, with a particular focus on three of the eight Key Results for Children (KRCs):

- KRC#1: Immunisation
- KRC#4: Learning Outcomes
- KRC#5: Prevention of Violence Against Children

Additionally, it addresses two foundational and cross-cutting issues:

- Civil Registration and Vital Statistics (CRVS) and National Identity
- Data collaboration.

This plan makes recommendations in five core areas (Sections 3 to 7) but begins with an explanatory overview of why these recommendations cover a broader area than that requested in the Terms of reference.

¹ <https://data.unicef.org/resources/data-children-strategic-framework/>

² <http://devinit.org/>

2. Overview: securing sustainable foundations

Despite its wealth, Nigeria's data ecosystem is remarkably fragile. The development context is extremely challenging, with high levels of poverty and inequality and fragmentary service provision. Exacerbated by security concerns, the humanitarian context in the north of the country is even worse. There is a chronic lack of commitment to, and investment in, data collection and management information systems. The national and state statistical systems are chaotic, overlapping and competitive rather than complementary. And, compared to many countries, the UNICEF Country Office (NCO) has limited influence in its partnership with government ministries, departments and authorities (MDAs).

In many areas of UNICEF's work, state-level pilots and grassroots-level programmes are an effective way to deliver results for children in such a context. However, when it comes to data, a piecemeal approach is not, in our opinion, suitable. The scale of the problems facing the country – its size, its population density, and the policy and institutional obstacles that get in the way of streamlined, evidence-based decision making – lead us to the conclusion that the data needs of the country would be best-served by focusing on the basics. Until and unless robust foundational systems are in place, meaningful data analysis – for planning, impact monitoring, or advocacy – is not possible. UNICEF's investments need to focus on improving, updating, harmonising and broadening core management information systems. Data investment planning therefore needs to be systematic, sustainable and forward-looking. Building reliable systems – and facilitating effective data use – will take many years.

In the key areas in which this study has been focused, our recommended long-term system goals for the UNICEF NCO to invest in and support are:

- Digital birth certificates and national identity numbers for all new-borns, achieved via integration of the civil registration (CRVS) and national identity systems.
- A robust and comprehensive Health Management Information System (HMIS) that paves the way for integrated electronic medical records.
- A robust and comprehensive Education Management Information System (EMIS) that expands from the annual school census into more regular capture of school records with a focus on learning outcomes.
- Integration of the Child Protection Management Information System (CPIMS+) with the currently separate systems for orphans and vulnerable children (NOMIS) and on gender-based violence (GBVIMS+).

The terms of reference for this research called for a specific focus on three of the West and Central Africa Regional Office (WCARO)'s eight KRCs: Immunisation, Learning Outcomes and Protection from Violence. The recommendations above are consistent with this mandate.

- A comprehensive and reliable digitised CRVS and National ID system would create a fundamental platform for the efficient delivery of all services.
- Improving routine immunisation services will best be achieved through more efficient inputting, monitoring and planning within the HMIS.
- The sustainable approach to monitoring learning outcomes is through capturing schools' continuous assessment records in the EMIS.
- Data investments to improve the monitoring of violence against children would be substantially smaller than the above systems (because the aim is a coherent case management – rather than whole population – system). It could also be enhanced by alerts in the HMIS and EMIS.

3. An integrated digital birth registration and national identity system

Current levels of birth registration are below 40%. They are also difficult to monitor meaningfully, due to a poorly coordinated, paper-based system – with four separate agencies empowered to issue birth certificates.

Birth registration is not at present linked to the development of a national identity system which – until recently – was focused on the expensive and logistically-difficult issuing of biometric ID cards. Integrating digital civil registration with a National Identity Number (NINs) would have the potential to generate huge data and development benefits. In the short term it would ensure that everyone is counted and accounted for. In the longer term it will enable citizens to have all their data records linked to a single NIN. It would also disincentivise poor birth registration practices, including exaggeration of numbers of children registered.

An effective CRVS and NIN system needs to be free for all. In due course, possession of a NIN could be made a prerequisite for access to all services. This would incentivise near complete registration. It would also make it possible for different MDAs to access each other's records in relation to individual citizens, creating the potential for improved casework management, cooperation and meta-analysis.

These challenges and opportunities are directly addressed by the **Strategic Roadmap**³ drawn up by the National Identity Management Commission (NIMC) and the proposed Nigeria Digital Identification for Development Project⁴ which contains a clear plan for the integration of birth registration and national identity with over \$400m funding being considered by the World Bank, European Investment Bank and French Development Agency. This has the makings of a valuable project. However, there are a number of risks associated with it.

- First, the process of birth registration is currently overseen by the Nigeria Population Commission (NPopC), while responsibility for the issuance of NINs rests with NIMC. NPopC and NIMC are rival institutions, which compete with each other for resources and political support. Integrating their data systems – essential to the success of the integration project – will be a very difficult political and logistical challenge.
- In this context, it is a concern that NIMC is the lead partner. With the World Bank as the principal funder, the project is likely to drift towards a commercial plan for the issuance of ID cards, rather than focusing on universal coverage. That would leave most of those in poverty behind. There is a risk of NPopC being squeezed out. This danger is highlighted by the fact that the current proposal allocates insufficient funds – just 10% of the total budget – for digital birth registration.

We recommend that both UNICEF and UNFPA prioritise engagement in – and funding of – this project, with a focus on the CRVS side. In doing so, they should seek to exert their influence over its direction, so as to ensure that the overall goal of the project – to create an optimal digital CRVS and NIN system for citizens and service providers – remains intact. The stabilising force of the UNICEF NCO is likely to be the best way to ensure that the link between the burgeoning NIN system and digital birth registration is maintained during the implementation phase. In addition, such an approach would create an opportunity for UNICEF to strengthen its relationship with the important but underfunded NPopC.

³https://www.nimc.gov.ng/docs/reports/strategicRoadmapDigitalID_Nigeria_May2018.pdf

⁴<http://documents.worldbank.org/curated/en/501321536599368311/pdf/Concept-Project-Information-Document-Integrated-Safeguards-Data-Sheet-Nigeria-Digital-Identification-for-Development-Project-P167183.pdf>

As part of this investment, we recommend that UNICEF should:

- Build on learnings from the registration pilots in Kebbi and Adamawa, support NPopC to develop a realistic, phased programme to work towards the equipment and human capacity required for a national digital birth registration programme. NPopC has requested 4,000 data capture devices and 4,000 printers (to equip approximately five registrars per LGA) – supported by capacity training. UNICEF/UNFPA should support them to achieve this in a realistic rollout.
- Ensure that UNICEF’s RapidSMS CRVS dashboard is integrated with digital birth registration and becomes a critical monitoring tool for the development of integrated CRVS-NIN.

In addition, we recommend that:

- While birth registration should be the CRVS priority for the next 3-5 years, UNICEF should provide policy and advocacy support to the WHO’s work on cause of death registration – and verbal autopsies in particular.
- Promote the link between NINs and access to services – and encourage MDAs to use them in all record-keeping.
- In the short-term, UNICEF should provide all necessary political support to UNFPA in ensuring that a robust national census takes place by 2021. This would provide a credible baseline for CRVS and ID number targets, among many other things.
- Advocate for the use of NINs as the basis for a future, permanent electoral register. Given the vast amounts of funds allocated to the electoral register for each election, this should give the project a significant boost.

Required resources

- Equipping 4,000 registrars with data capture devices (approximately \$2 million).
- Supporting registrars with maintenance and consumables (approximately \$1 million per year).
- Integration of RapidSMS dashboard with digital registration (approximately \$100,000).
- Building NPopC management and administrative capacity at federal and state level (\$tbc).
- Training of registrars (\$tbc).

4.A robust HMIS, incorporating improved routine immunisation records

The National Primary Health Care Development Agency (NPHCDA) is currently rolling out its “One Primary Health Centre (PHC) per ward” programme – around 10,000 nationally. For this to become the basis of a robust public health system, PHCs need to be fully integrated into – and supported by – a robust health management information system (HMIS). Parts of the current system work well, but they are paper-bound and thus labour-intensive. Administrative staff in PHCs are required to fill out a plethora of daily registers, and complex monthly summaries, which are then input digitally at Local Government Area (LGA) level. Data from secondary and tertiary health facilities is poorly recorded. Private facilities’ records are also not currently incorporated.

UNICEF has a **global track record** in leading multi-agency partnerships to leverage data solutions that support the achievement of health objectives. We recommend that the UNICEF NCO takes a leadership role, to ensure that the HMIS continues to develop – at federal, state, local and ward levels – as the cornerstone of the health service. This will require close collaboration with the government and development partners – principally the World Health Organisation, the US Agency for International Development (USAID) and the Bill and Melinda Gates Foundation.

The first step will be to *provide the necessary support and to the federal agencies responsible – the Ministry of Health, the Primary Health Care Development Agency and, above all, the HMIS team – to ensure that they have the capacity to manage and improve the system nationally*. In our judgment, the current HMIS leadership is impressive. This represents another opportunity for the UNICEF NCO to build a new, trusted partner relationship with a government agency.

Secondly, there is a need *to support gradual but systematic efforts to shift the digital inputting of data into HMIS from LGA to facility-level* – and to make it as good as possible. Maximising the comprehensiveness and accuracy of facility-level data capture would involve, through phased rollouts:

- Supporting efforts to ensure that all secondary and tertiary health facilities enter their data directly into the HMIS– including private health providers.
- Shifting the responsibility for digital data entry into HMIS within PHCs from administrative staff to professional health workers.
- Investing in data capture technology.
- Advocating for data validation to be done within the system, rather than – as presently – before digital entry.
- Supporting a move towards more regular (two-yearly) revisions of HMIS fields. This will only become possible once paper-based forms have been extensively phased out.
- Supporting efforts to introduce and scale up personal electronic medical records at state secondary and tertiary facilities – and piloting at PHCs. This could include piloting the use of National Identity Numbers as the key to patient records.

The best way to improve the capture and management of immunisation data is not to keep it separate. Routine immunisation (RI) – including local outreach projects – is already recorded on HMIS forms. Enhancing the comprehensiveness, accuracy and ease of use of RI data can be achieved by following the recommendations above. Non-routine immunisation – in the form of well-funded donor-led campaigns tend to have their own monitoring systems built in. Open Data Kit data capture technology, for example, has already been successfully used generating daily planning data during immunisation campaigns. More accurate and comprehensive monitoring of RI data within the HMIS is also likely to be

more cost-effective and reliable than the current practice of checking delivery records held by service users via Local Quality Assessments.

In addition, *we recommend that UNICEF supports measures to facilitate and increase the use of health data*. This would include:

- Expanding the use of quarterly dashboards at state and LGA levels, to make the value of HMIS data more meaningful to those delivering health services.
- Advocating for more HMIS data to be made publicly available. An example of what is possible with an HMIS-driven dashboard - “Disease Outbreaks in Uganda” – has been built by the UN Global Pulse Lab in Kampala.⁵
- Supporting and advising the HMIS team in its efforts to ensure that all health information systems are designed to be interoperable with each other. The work of the Health Data Collaborative in Tanzania⁶ provides a good example of governance, as does the interoperability technology⁷ being developed in South Africa.

Required resources

- As a point of comparison, UNICEF NCO spent approximately \$112 million on basic health programmes during 2018.⁸
- UNICEF should specifically commit to providing financial support to the federal HMIS leadership to better plan, coordinate and monitor improvements to the HMIS (\$tbc).
- UNICEF should also specifically commit to supporting better use of HMIS data at federal and state level. This would need to involve a technical initiative (approximately \$250,000) supported by substantial outreach (\$tbc).
- How UNICEF commits to the remaining recommendations made above should be dependent on collaboration between the key development partners to harmonise investments.

⁵ <https://diseaseoutbreaks.unglobalpulse.net/uganda/>

⁶ <https://www.healthdatacollaborative.org/where-we-work/tanzania/>

⁷ <https://ohie.org/>

⁸ <http://d-portal.org/ctrack.html?country=NG&publisher=XM-DAC-41122#view=sectors&year=2017>

5. An Expanded EMIS, containing school records of learning outcomes

The Education Management Information System (EMIS) is widely used in Nigeria, but it is not yet widely useful. It currently only contains information from the Annual School Census (ASC), which focuses on pupil and staff numbers and physical infrastructure. Paper-based census forms from thousands of schools are keyed in at state level – a mind-numbing task that does not lend itself to reliable validation or accuracy. This data is never analysed or used beyond school level, rendering EMIS virtually redundant. Pupil attainment levels were last surveyed nationally in 2011. School paper-based records of individual achievement are not exported or digitised. Data and quality assurance monitoring capability is low.

We recommend that UNICEF supports incremental improvements to the quality, quantity, range and timeliness of EMIS data – ultimately to include learning outcomes and local inputting.

This will involve programmatic work to:

- Consolidate the coverage and data quality of the ASC. Continue to support the ASC as the core of the EMIS but support the incremental move of data capture from state to LGA level.
- Continue to support measures to improve school record-keeping – especially of pupil achievement – based on the existing manual.
- Collaborate with the Ministry of Education and the Universal Basic Education Commission to develop a strategy to expand EMIS to cover more elements of school records – in particular class-level aggregates of learning outcomes.
- Incrementally build the capacity and professional incentives of LGA-level EMIS and Quality Assurance Officers to digitally capture school records, on an ongoing roving basis, in the course of their visits to schools.
- Pilot on-site data capture of selected school learning outcome records, to supplement Monitoring of Learning Achievement.
- Empower EMIS Officers to train Head Teachers to input ACS results and school records.
- Improve digital access to EMIS data at state and federal level, with the aim of stimulating use and analysis of the data.

Required Resources

- While UNICEF has played the key role in supporting the EMIS, these efforts would be enhanced with an increased commitment from UNESCO.
- As a point of comparison UNICEF NCO spent approximately \$28 million on education programmes in 2018.⁹
- Design and implement technical improvements to the EMIS (approximately \$500,000)
- Proof-of-concept piloting of roving and on-site data capture (approximately \$500,000)
- Outreach and training to improve the capacity of LGA-level EMIS and QA officers. (\$tbc)

⁹ <http://d-portal.org/ctrack.html?country=NG&publisher=XM-DAC-41122#view=sectors&year=2017>

6. An upscaled CPIMS+ and a new VAC survey

By its nature, child protection data is usually managed in the form of case management systems. In Nigeria, UNICEF oversees its own Child Protection Information Management System (CPIMS+), which is growing from strength to strength, and collaborates with UNFPA on the Gender-based Violence Information Management System (GBVIMS+), which will shortly be made interoperable with CPIMS+. USAID funds and supports the National OVC Management Information System (NOMIS), which was initially focused on orphans and vulnerable children with HIV. NOMIS and CPIMS+ both come under the remit of the Ministry of Women Affairs and Social Development (MoWA) and have significant areas of overlap. UNICEF last conducted a survey of Violence Against Children (VAC) in 2014. It was of high quality and provided an excellent resource for policy and advocacy.

We recommend that UNICEF continues to invest in rolling out CPIMS+ nationally, while seeking to reduce wasteful duplication with NOMIS. As the Ministry of Women has limited capacity to make an informed decision on this, we recommend UNICEF to seek privately to persuade USAID to phase out NOMIS as a separate system. In addition, we recommend advocacy for both the HMIS and the EMIS to include 'alert' which would allow PHC, school and LGA professionals to flag possible child protection cases.

We also recommend a new survey of Violence Against Children, based on the successful 2014 one, to provide updated information and enable analysis of changes over the last five years.

Required resources

- Capacity building for federal MoWA (approximately \$100,000)
- Technical infrastructure and capacity building to scale up CPIMS+ a state at a time (approximately \$100,000 per state?)
- VAC Survey (approximately \$2-3 million?)

7. Collaboration for better data and its use

Nigeria's government structures do not lend themselves easily to collaboration. There is an alphabet soup of MDAs in all sectors, often with overlapping, competing or even conflicting mandates. Political and system engagement between federal and state levels is strained at best, and sometimes dysfunctional. The National Bureau of Statistics lacks the political authority to act both as the key driver of a more unified approach, and as the champion and guardian of data quality. It is hard to know where UNICEF can most usefully effect meaningful change in this landscape. However, there is a big opportunity to maximise the impact of data interventions by focusing on the LGA level. This is where most data are collated – and where it is most likely to be useful and used. Most MDAs are represented at this level, but resources tend to be thinly stretched – often over large regions with some hard to reach areas.

We recommend that UNICEF pilot the notion of inter-agency capacity-sharing at LGA level. This could be tried by catalysing the creation of cross-departmental technical support groups, to encourage collaboration between data-savvy staff – initially in the form of knowledge and skills sharing, and peer-to-peer mentoring. Creating communities that bring together IT-equipped workers from health, education, child protection, NPopC and NIMC can not only improve the robustness of services, but also stimulate the sharing and use of data.

This could also extend to resource sharing, initially focused on human resources. When problems occur, it would be better to ask a local person from a different agency to help, rather than calling someone from your own agency's LGA headquarters, possibly hours away. In due course, it could also be cost-effective for government agencies to share technical resources too.

Cross-departmental collaboration on data and systems could make a big difference at federal and state levels too. Making similar data systems interoperable would be a good starting point. The most obvious example would be large survey data. *We recommend that UNICEF encourages the National Bureau of Statistics (NBS) and NPopC to share common statistics from MICS and NDHS in comparable formats* to track trends across the two sources.

We also recommend support for forums and working groups to share and use data, wherever the opportunity arises.

There is a general need to build respect for data. *We recommend that UNICEF adopt a multi-faceted strategy to make the case for the usefulness of data.* This could include:

- Using “non-data” communications experts to run a public campaign to engage government, private sector and civil society on the opportunities that the data can bring to better policy making.
- Supporting national and state-level data forums that showcase the value of data for analysis, planning and policy-making – including the benefits of both institutional and system interoperability.
- Identifying data-friendly politicians, promoting them as “Champions” and providing them with resources and advice.
- Building on the NCO's Monitoring for Results partnership with the M&E department of the Ministry of Budget and National Planning (MBNP), by supporting its efforts to make the case for cross-cutting, government-wide evidence-based decision-making and results-based management as well as advocating for adoption of budget lines to support the data generation

function. Relevant action could be taken to raise national resource and provide the national contribution to the funding of data work in country.

- Provide support to the NBS to convene its National Consultative Committee on Statistics (which hasn't met in five years due to a lack of funds)

Finally, to be seen as a trusted partner on data for children, the NCO itself needs to collaborate better – both internally, across sections, and with its partners. We recommend that UNICEF make efforts to work more effectively on data issues, across the UN system, with development partners, and with potential allies in government. For example, it could:

- Ensure that all UN agencies are aware - and supportive - of UNICEF data priorities.
- Insist that the UN Working Group on Data meets regularly and help to shape its agenda.
- Ensure that data features more prominently in future UNSDPF meetings.

Required Resources

- This section has thrown up a range of options. We do not feel we have a full enough understanding of UNICEF's local political priorities to place them in any particular order.

Development Initiatives (DI) is an independent international development organisation working on the use of data to drive poverty eradication and sustainable development. Our vision is a world without poverty that invests in human security and where everyone shares the benefits of opportunity and growth.

We work to ensure that decisions about the allocation of finance and resources result in an end to poverty, increase the resilience of the world's most vulnerable people, and ensure no one is left behind.

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