



DATA.FI IMPACT STORY

International Women's Day – March 8, 2023

The digital revolution has been far from equitable. Over one-third of all women don't have internet access and they represent less than 30 percent of the global tech sector workforce.

Despite these inequities, women like Nigeria's **Dorcas Essien and Nonye Nwanya** are breaking barriers and defying the odds. Essien and Nwanya are part of an elite team of digital health practitioners implementing Data.FI, a USAID-funded project, led by Palladium, that helps improve HIV/AIDS and COVID-19 outcomes in 26 countries through the power of data.

This International Women's Day, as the global community celebrates women and girls who are advancing transformative technology, we celebrate Essien and Nwanya's leadership and success. Together, they are steering three major ongoing technology innovation projects in Nigeria, making their teams, local communities, and country's health information system stronger as a result.

In particular, they are utilizing innovative data systems to help Nigeria's orphans and vulnerable children (OVC) get better access to health care.

Female Empowerment in Action

In Nigeria, Dorcas Essien and Nonye Nwanya are proving that gender equity is about opportunity and action. Empowering female leadership results in a tech sector with more dynamism, more innovation, and more impact.

Above: Interviewers administer the mobile application tool to household members during the data capture process for the OVC Pilot Survey in Adamawa State supported by the Federal Ministry of Women Affairs. Photo by Data.FI/Nigeria.



Technology Innovation Projects

National OVC Pilot Survey in Nigeria

The first of these projects was the National OVC pilot survey which was held in six states in Nigeria (Adamawa, Akwa Ibom, Enugu, Katsina, Oyo, and Plateau) and developed and implemented by Ms. Essien. The survey was designed to assess the prevalence and basic needs of OVC in Nigeria in order to guide decision makers on how best these children could be linked to health care.

The survey required a single software package to enable the entry, editing, tabulation, and dissemination of survey data collected on OVC in the six participating states. After considering various options, Essien chose the Census and Survey Processing System (CSPPro) on a mobile architecture framework because it combined the features of the integrated microcomputer processing system (IMPS) and the integrated system for survey analysis (ISSA). In short, CSPPro offered the most operability and leverage for conducting a large survey and allowed Essien and her team to create, modify, and run data entry, batch editing, and tabulation application in a single, integrated development environment.

She needed to configure a data dictionary that would establish consistent meanings and relationships for the expected data as well as ensure that each and every various software form corresponded to that dictionary. This would allow her team to collect usable, high-quality data on the children included in the survey, including socio-demographic characteristics, educational attainment, and basic facts about their health.

22:47 Fri, 12 Aug 97%

Head of Household Form

Search

State
Select the appropriate state

- Abia
- Adamawa
- Akwa Ibom
- Anambra
- Bauchi
- Bayelsa
- Benue
- Bayelsa
- Benue
- Borno
- Cross River
- Delta
- Ebonyi
- Edo
- Ekiti
- Enugu
- Abuja
- Gombe
- Imo
- Jigawa
- Kaduna
- Kano

Navigation Menu:

- (Id Items)
- Information On Location
- Informed Consent Form
- Information about Household Members
- Socia-Demographic Characteristics Of The Resp...
- Household Safety and Care
- Educational/Vocational/ Quranic School
- Health
- Immunization
- Family And Economic Stability
- Cross Cutting Issues
- Knowledge and Attitudes about COVID 19
- Violence Experience In The Family
- Knowledge of existing social services workforce in the co...
- Supervisor Details

She also used programming logics (PHP, JavaScript, HTML, and CSS) to design a robust mobile survey app so that more survey responses could be recorded quickly and easily. Essien also configured the sync module on the CSPro mobile to enable users to synchronize their data from the mobile app to the CSPro web server, so that there would be one consistent and synced data bank across the six pilot states.

Once the technology was configured and prepared, it remained to actually implement the survey. Essien stepped up here also.

Together with support from Nonye Nwanya and other Data.FI health informatics team members, she coordinated and supported the training of interviewers, data managers, and other stakeholders who would go out at the community level and collect data on OVC. The data managers were trained on how to use the mobile app, how to profile and analysis the raw data, and how to troubleshoot the data collection tool in case anything went wrong in the field. And while the data was being collected, Essien and her team provided around-the-clock technical support from a central control room that was set up in each of the states. They ensured that the data was collected quickly and effectively and then synced to the CSPro web server for further analysis and dissemination.



Photo of an orphan in Adamawa State, Nigeria by Immanuel Afolabi.

National OVC Management Information System (NOMIS)

The National OVC Pilot Survey was a big step to improve the understanding of OVC in Nigeria. It's findings, subsequent iterations and program implementation should feed into the National OVC Management Information System (NOMIS), the national electronic platform for the management of data for OVC programs in Nigeria. NOMIS was originally introduced back in 2011, and is designed to support end-users (e.g., case managers, case workers, and supervisors) as they care for OVC and their families. It is particularly

important to make sure children receive continuity of care and services no matter their location or socio-economic condition.

NOMIS is another story of female tech leadership because Ms. Essien and Ms. Nwanya helped design and develop the system when it came online and have led the charge for concerted efforts to improve the functionality of NOMIS and to establish a stable, scalable architecture capable of meeting growing program demands.

After an assessment conducted by Data.FI in September 2019 identified several gaps in NOMIS and various areas for improvement, Essien and Nwanya worked to implement innovative digital solutions. They introduced more efficient operability, quality assurance checks, and improved the reporting of program data. These improvements include

- improved architecture and user experience
- improved technology
- improved security architecture
- interoperability with other system
- robust report feature
- enhanced case management approach

This process is ongoing. However, Essien and Nwanya serve as tireless advocates and engineers for NOMIS. Their work allows

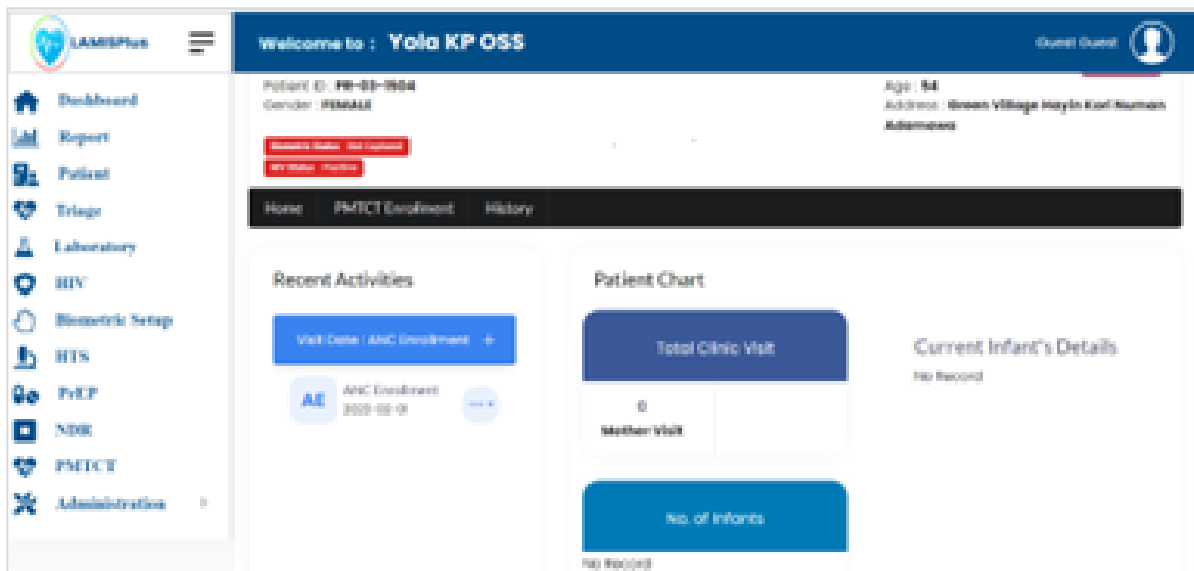


front-line health care workers to assess beneficiary needs and establish specific care plans, objectives, goals, and benchmarks. They also maintain constant contact with and provide technical support to implementing agencies like USAID, the Department of Defense (DOD), and the Centers for Disease Control and Prevention (CDC).

Lafiya Management Information System (LAMISPlus)

While the first two projects specifically address the health care needs of OVC, LAMISPlus has a much broader functionality in addressing the HIV/AIDS epidemic in Nigeria. The optimized version of the Lafiya Management Information System (LAMIS), LAMISPlus, is a re-platformed, open-source, modular electronic medical records system that enables all USAID implementing partners in Nigeria to link HIV client records through a facility-level interoperability layer and for them to exchange those data with the National Data Repository.

Ms. Nwanya is currently leading the ongoing deployment of LAMISPlus in 17 Nigerian states. Once fully operational, LAMISPlus



will support both point-of-care services and retrospective data entry along with the standard of health facility workflow. This is a real 'silver bullet,' as it will enable health providers to track clients across the continuum of care and ensure that antiretroviral treatment is consistency received. As part of her work, Nwanya has developed computer models for LAMISPlus to identify challenges and craft proactive digital solutions. She is also in charge of the system governance efforts for LAMISPlus, drafting standard operating procedures, formal protocols, and establishing points of contact across the 17 pilot states.

Alongside these responsibilities, Nwanya has helped run regular quality assurance checks, has identified basic product key performance indicators (KPIs), and engages stakeholders to support business quality assurance.

Nwanya's leadership and technical expertise are vital for the overall success of LAMISPlus. And while there is still a way to go, the technology promises to significantly streamline Nigeria's health information system and help the country meet its HIV/AIDS targets.



From left to right: Software Developer Dorcas Essien and Business Analyst and Informatics Advisor Nonye Nwanya, both of Data.FI/Nigeria.

Data for Implementation (Data.FI) is a five-year cooperative agreement funded by the U.S. President's Emergency Plan for AIDS Relief through the U.S. Agency for International Development under Agreement No. 7200AA19CA0004, beginning April 15, 2019. It is implemented by Palladium, in partnership with JSI Research & Training Institute (JSI), Johns Hopkins University (JHU) Department of Epidemiology, Right to Care (RTC), Cooper/Smith, DT Global, Jembi Health Systems, and Macro-Eyes, and supported by expert local resource partners.

This publication was produced for review by the U.S. President's Emergency Plan for AIDS Relief through the United States Agency for International Development. It was prepared by Data for Implementation. The information provided is not official U.S. Government information and does not necessarily reflect the views or positions of the U.S. President's Emergency Plan for AIDS Relief, U.S. Agency for International Development, or the United States Government. **IS-23-02**

MARCH 2023

FOR MORE INFORMATION

Madeline Schneider, Data.FI AOR
mschneider@usaid.gov

Jenifer Chapman, Project Director
datafiproject@thepalladiumgroup.com

<https://datafi.thepalladiumgroup.com>