

Changing the landscape of data and digital health solutions

COP21 Solutions

November 2020



Data.FI brings together leaders across the digital health and analytics landscape to harness the power of data to save lives

WHO WE ARE

Data.FI is a global health field-support mechanism with a \$180M ceiling implemented 2019–2024 by:

- Palladium (prime)
- John Snow Inc.
- Right to Care
- macro-eyes
- IMC Worldwide
- Johns Hopkins University
- Cooper/Smith
- Jembi Health Systems

Data.FI is supported by a community of resources partners including BAO, Development Gateway, Fraym, IBM, Premise, Regenstrief, and others.



Digital health
system enhancement
and scale-up to
transform health
care



Data analytics that
pinpoint health
care inefficiencies
and solutions



Decision support
interventions to
maximize the use
of real-time data



**Data standards and
governance**
structures that
optimize investments
and ensure data
quality

Data.FI supports USAID to:

- Reach those in need of HIV services
- Track clients
- Tailor client care
- Improve program quality
- Protect those we serve
- Maximize efficiencies
- Demonstrate accountability
- Ensure sustainability



Reaching those in need of HIV services

Data.FI Solutions

Population profiling and size
estimation

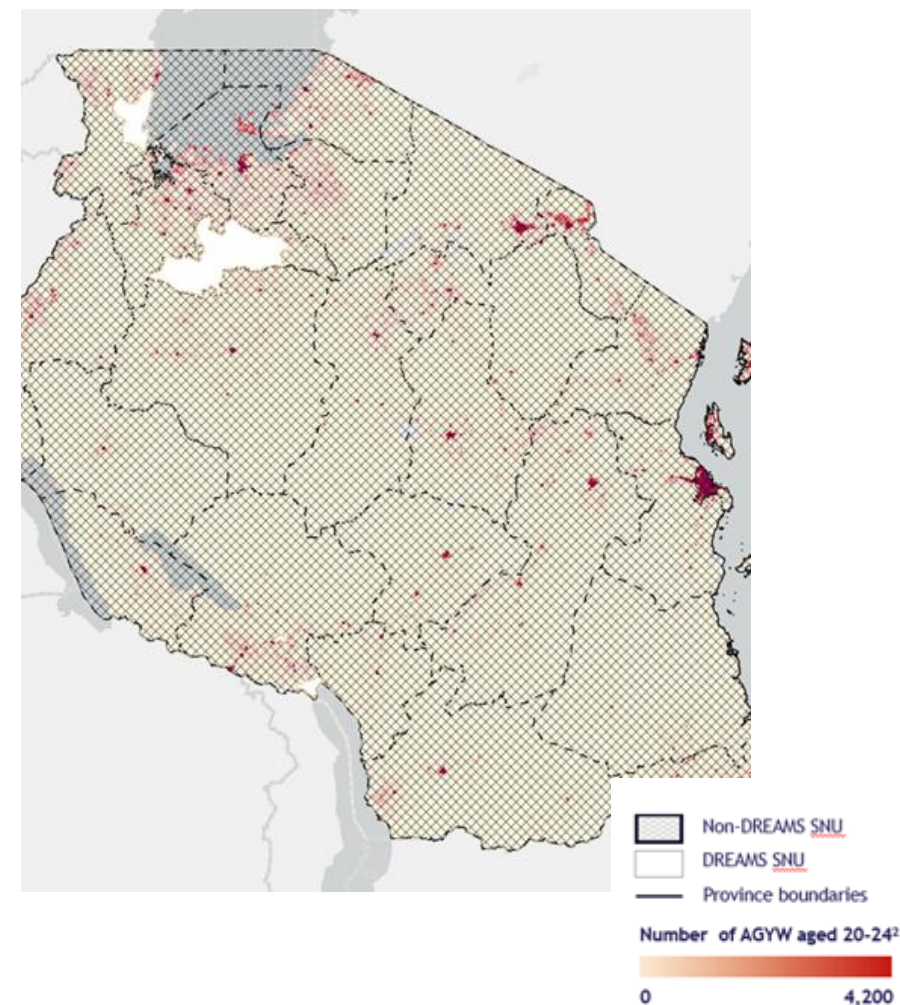
Population profiling and size estimation

Data.FI applies artificial intelligence/machine learning (AI/ML) techniques to generate subpopulation profile maps and size estimates to understand hyperlocal spatial distribution of populations at risk of acquiring HIV or treatment interruption.

We apply best practices from the literature to characterize risk, taking into account multiple overlapping vulnerabilities.

This method can be applied to:

- At-risk adolescent girls and young women (AGYW)
- Key populations (KPs)
- Orphans and vulnerable children (OVC)
- Pre-exposure prophylaxis (PrEP) candidates
- Voluntary medical male circumcision (VMMC) candidates



Data.FI is helping USAID reach AGYW in Uganda, Tanzania, Mozambique, Haiti, and eSwatini

We are supporting DREAMS programming by better estimating the density and location of AGYW considered at risk for HIV and estimating the size of those populations.

- Data.FI applied machine learning and spatial interpolation techniques to generate hyperlocal risk maps and size estimates of the population of AGYW
- Method uses population-based survey data and satellite imagery to create localized population information at a 1km resolution
- Risk profile maps visually represent the density and location of AGYW considered at risk for HIV
- In Uganda, these estimates were used to calculate saturation among current DREAMS districts, and identify high-priority districts for DREAMS expansion

Tracking clients

Data.FI Solutions

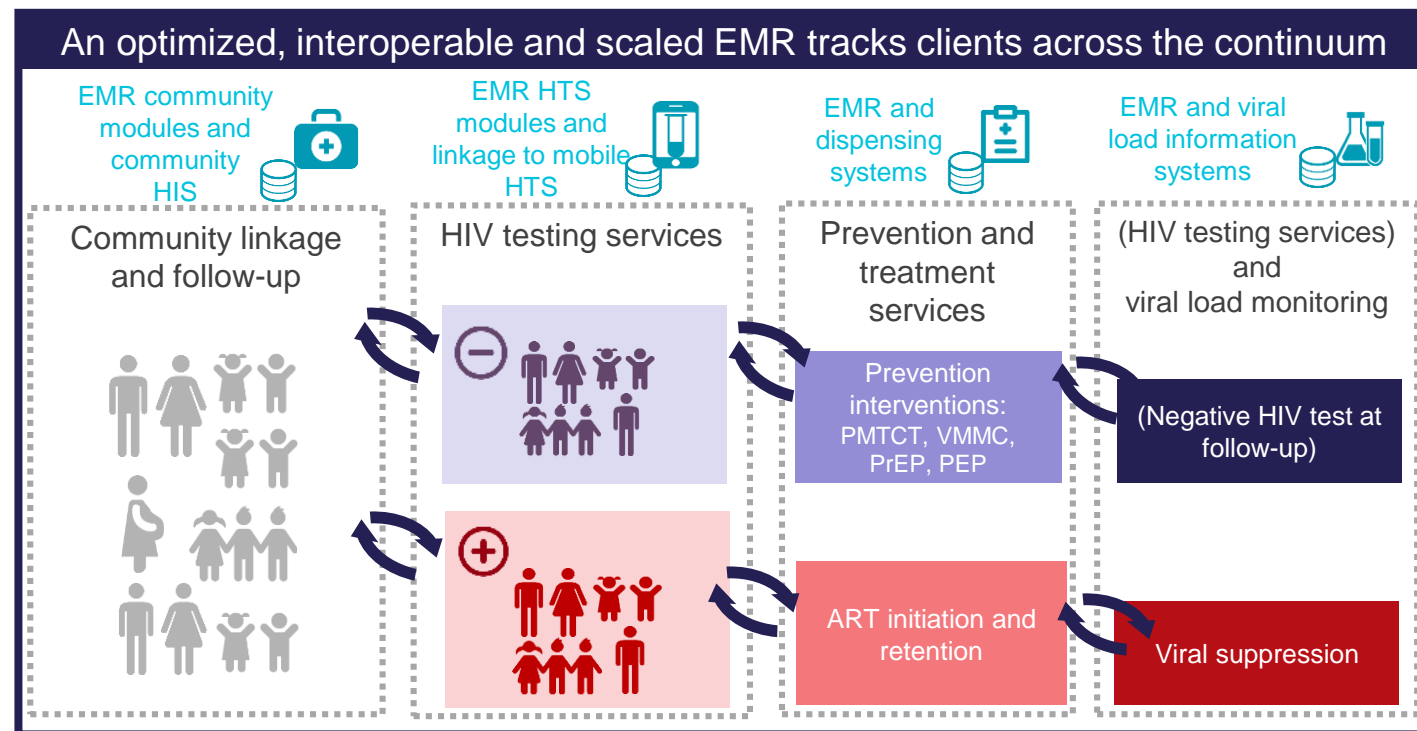
1. Electronic medical record (EMR) systems
2. OVC and DREAMS case management systems
3. Deduplication of client records

Optimizing and scaling EMRs

EMRs track clients across the continuum, generating data for improving clinical care, and ultimately informing client-centered approaches and enabling cohort analyses and program monitoring.

Data.FI supports USAID and countries to optimize and scale EMRs by:

- Assessing existing EMRs for optimization and scale
- Aligning EMRs to treatment guidelines and reporting requirements from PEPFAR and countries
- Architecting, networking, and interoperating systems for exchange of information across community, testing, facility, dispensing, and lab systems
- Developing new modules for KP, OVC, PrEP
- Building in decision support for point of care EMR systems to facilitate quality care and differentiated care models
- Providing implementation and user support
- Facilitating linkages between community and facility systems through client scheduling and outreach for early missed appointments



Developing a global good: The LAMISPlus experience in Nigeria

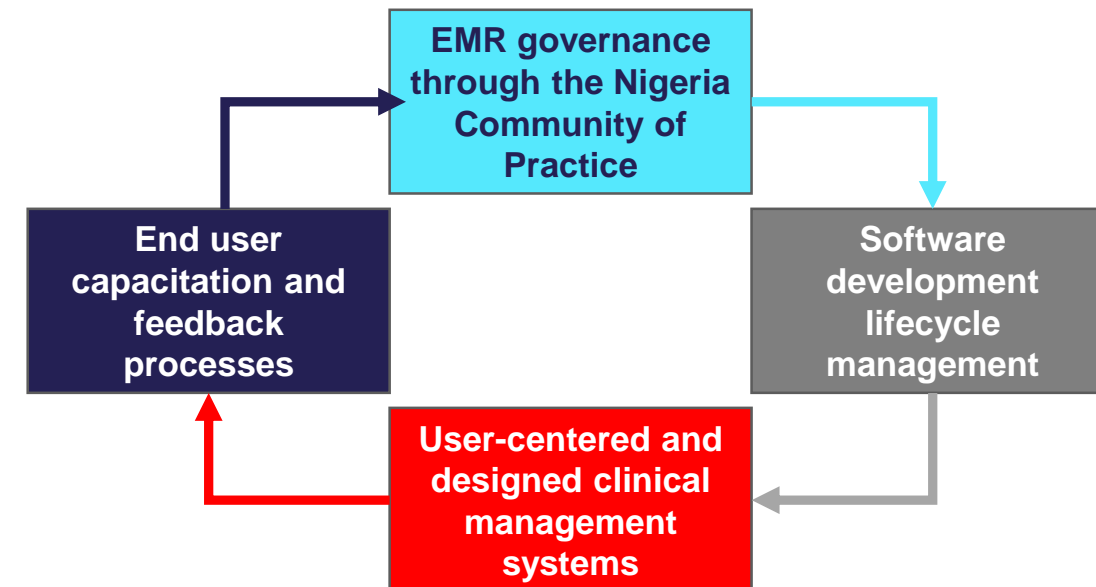
The LAMISPlus EMR system is an *emergent global good* application. It is a *software tool that is free, open source, and used to manage, analyze, or transmit health-related data, with proven utility in several settings.*

Data.FI established best-practices for the development of LAMISPlus including:

- Establishing a community of practice to ensure **stakeholder ownership**
- Using best-in-class software development and project management tools and methods, and publicly available technical documentation and source code for **sustainability**
- Applying responsive capacitation and user feedback modalities to ensure **optimal software uptake and responsiveness** to emerging user needs

LAMISPlus v1.2 incorporates these modules/functionalities:

- General clinic services
- HIV services
- COVID-19 Surveillance
- PMTCT services
- HTS services
- Report generation
- Administration module
- KP services



OVC case management systems

Customizable for your country

M&E Harmonization

Data.FI guides USAID and IPs in gathering requirements for adaptation of Global OVC Tracker Modules balancing reporting needs with data collection burden, with the aim of harmonizing systems, gaining efficiency, and increasing the reliability of the resulting data set.

Appropriate Technology

By leveraging the individual records module of DHIS2, called Tracker, we increase the ability to seamlessly push data into DATIM; mobile devices appropriate for community data collection allow decentralized data collection.

Performance Monitoring

Access to real-time OVC MIS supported by USAID ensures standardization of data collection and indicator calculation between partners and facilitates performance monitoring of case management before the end of the reporting period, improving our collective ability to meet targets.

Sustainable

Once developed and rolled out to IPs, Data.FI builds the capacity of government or local IPs to maintain the OVC Tracker modules into the future; USAID reduces overall maintenance costs by investing in one centralized system.

Data.FI is streamlining OVC, DREAMS, and sexual violence prevention data management in Zimbabwe

COUNTRY CONTEXT:

6 IPs, each with its own system for collecting and reporting data, including 80 different data capture forms

→ inefficient and costly

Data are shared with USAID monthly

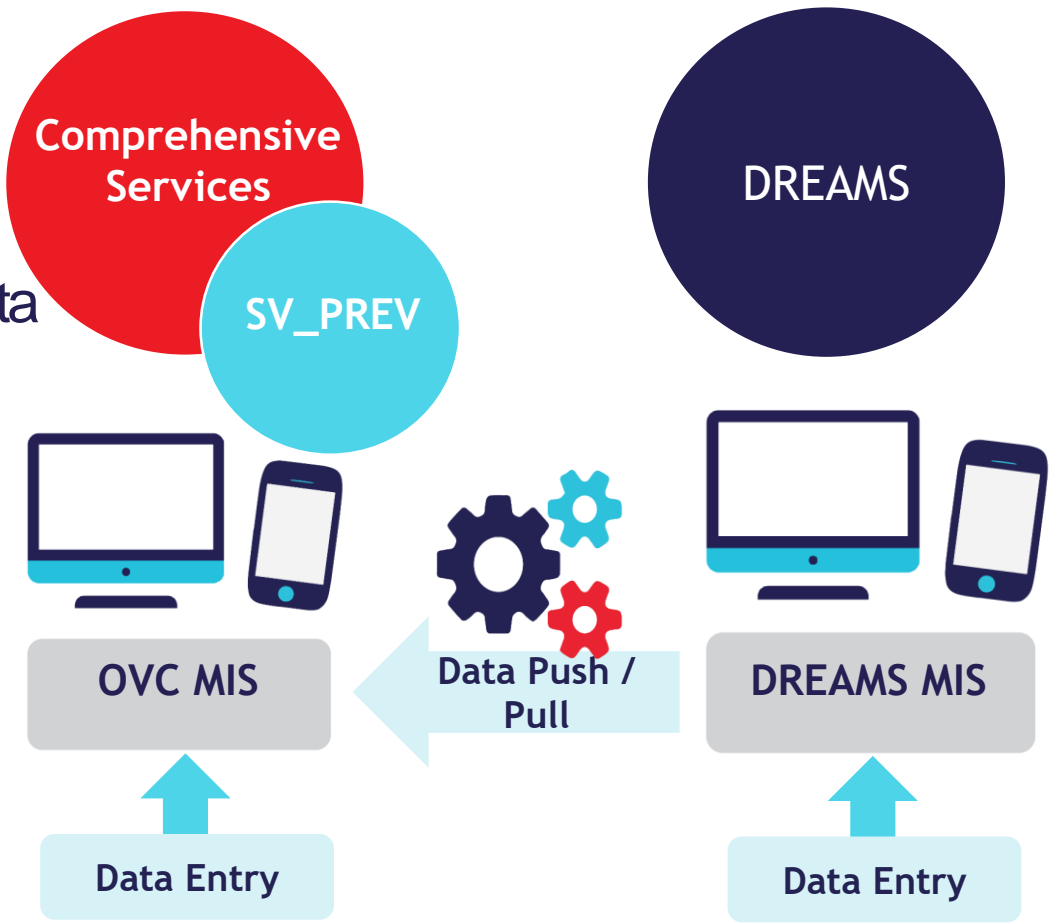
→ no data for real-time decision support

Partners manually calculate, aggregate, transfer data

→ data quality and reliability issues

IMPACT

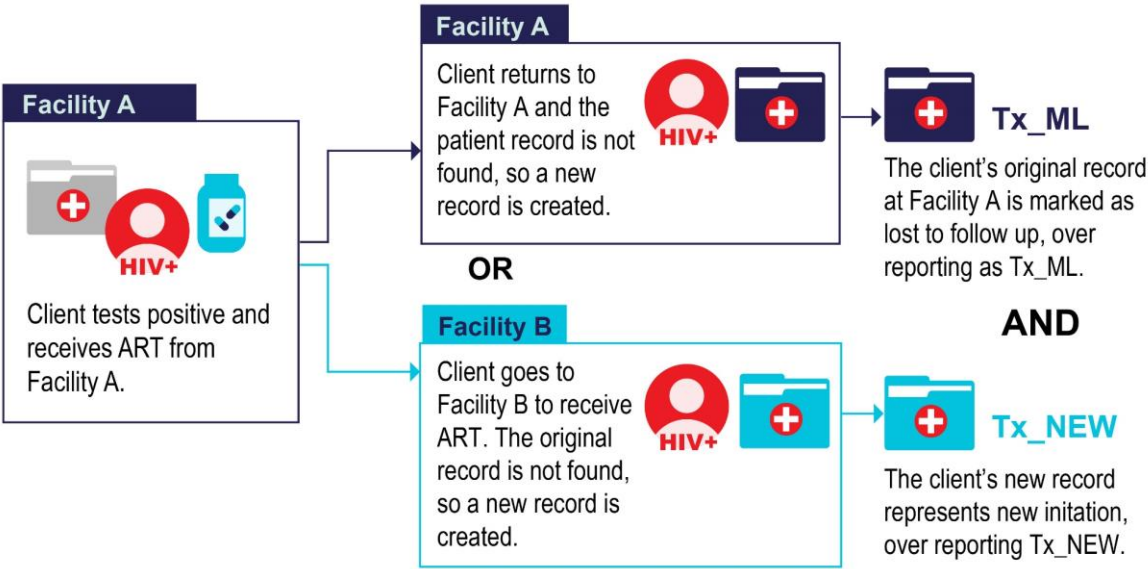
- A harmonized set of 6 data capture tools
- DHIS2 Tracker module that captures individual-level data and calculates indicators when multiple events are recorded and date-stamped for one individual



Deduplicating client records

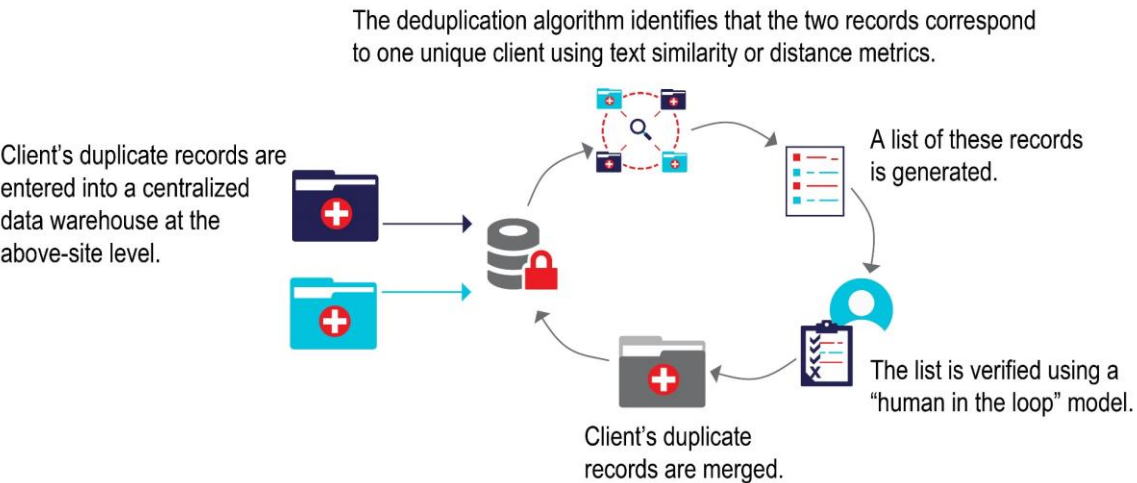
To improve data quality and client care

THE PROBLEM



In the **Red Scenario**, Facility A over-reported TX_NEW and TX_ML_LTFU; in the **Blue Scenario**, Facility A over-reported TX_ML_LTFU while Facility B over-reported TX_NEW

THE SOLUTION



At a systems level, deduplication proceeds through the stages in the graphic on the right: where records are pooled, an algorithm searches for likely duplicates, there is a measure of human verification (in some form, and not in perpetuity), and duplicates are linked.

A patient-matching model for South Africa

In South Africa, Data.FI supported the National Department of Health to develop and deploy a **supervised machine learning-based patient-matching model** for patient records.

The patient-matching model matches over 20 million patient records within the national TB/HIV system and establishes the mechanism for other client records ingested within the InfoHub to be matched and unified.

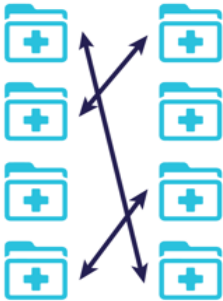
The matching model will allow the SA HIV program to:

- Identify clients who have become lost to follow-up at a facility but present themselves elsewhere for treatment, or tests captured through another data source
- Trace clients who have become lost to follow-up at one facility and present themselves at another facility, flagging them as having transferred out of one facility and transferred into another facility
- Augment existing test results for a client by overlaying the client record with lab results, filling in the blanks for clients whose test result record appears incomplete in the record

DEDUPLICATION

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NYC	newyorkcity

1. Preprocessing:
Clean and standardize records



2. Indexing:
Identifying candidate record pairs

REC	REC	FN SCORE	LN SCORE
A	B	.42	.55
A	C	.19	.04
B	D	.76	.61

3. Comparing:
Quantify similarity between variables



4. Classifying:
Determine if records are linked



Tailoring client care

Data.FI Solutions

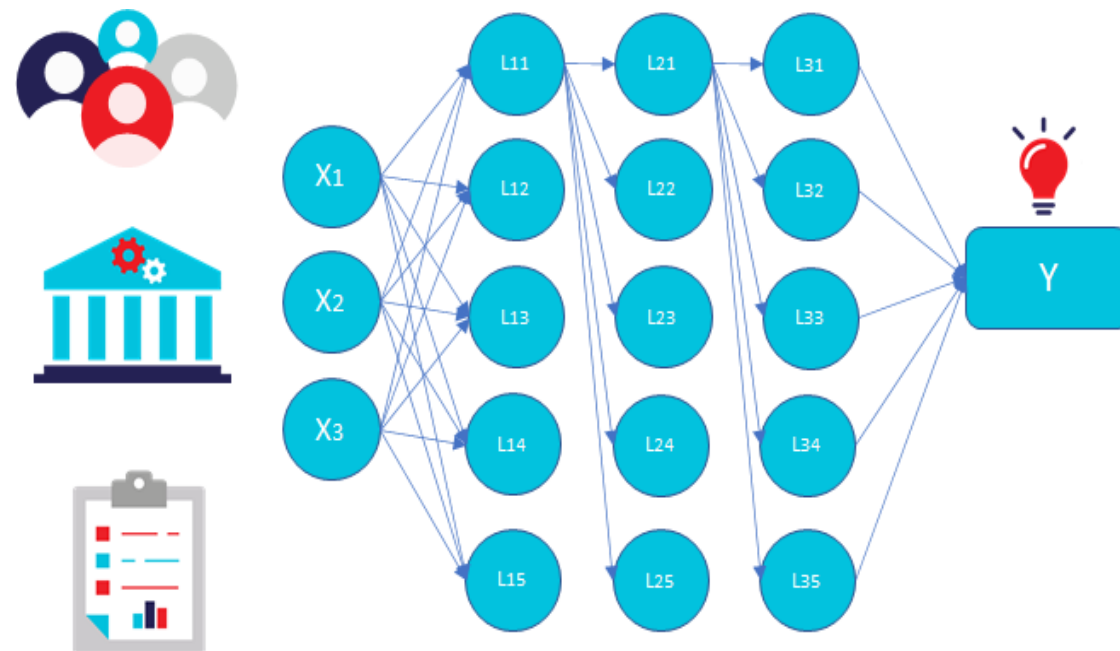
Predictive analytics and client phenotyping

Predictive analytics

ML/AI models identify patterns in data to predict which clients will face various outcomes across the clinical cascade and therefore to inform client-centered care.

With the proliferation of non-traditional data, rapidly advancing algorithms, and ever-expanding computational power, we have the tools to get more from our data, tailor client care, and improve clinical outcomes.

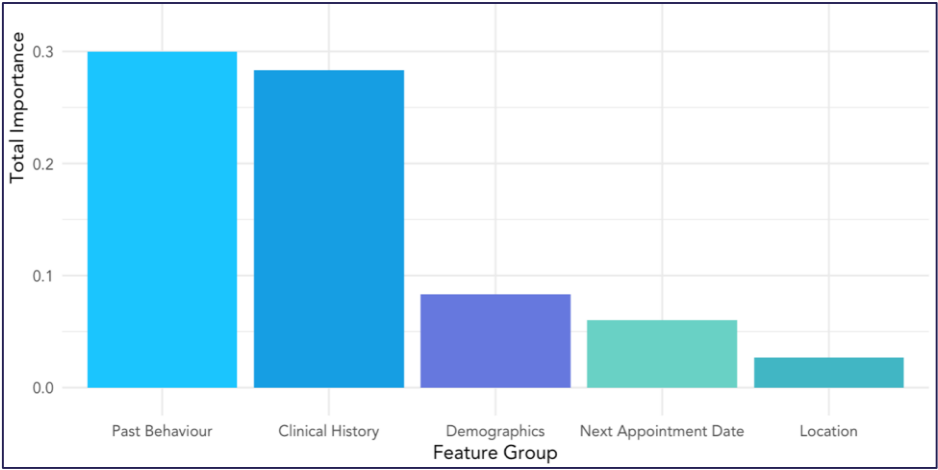
Our method can be used to predict which individuals are most likely to test positive, face co-infections (TB, COVID), experience treatment interruptions, be virally suppressed, or respond to different interventions.



Data.FI is predicting which clients will face treatment interruption in Mozambique and Nigeria

In Mozambique, the model identified the 20% of clients at greatest risk of treatment interruption. Of these, 75% interrupted treatment. IPs can use predictions to flag high-risk clients proactively and direct support services prior to visit dates, or to identify which clients already late for visits are most likely to self-return.

Scaling the Solution: This process can be replicated in any country with client-line data, with minimal input from IPs. The model can be integrated into information systems to automatically and continuously identify clients at high risk of treatment interruption.



Client behavior, such as history of lateness for appointments, and clinical history, such as time on treatment, were the most important factors in making predictions. Demographic and locational factors had less predictive power.

Improving program quality

Data.FI Solutions

1. Epidemic Control Rooms
2. Digitized viral load tracking

Epidemic Control Rooms

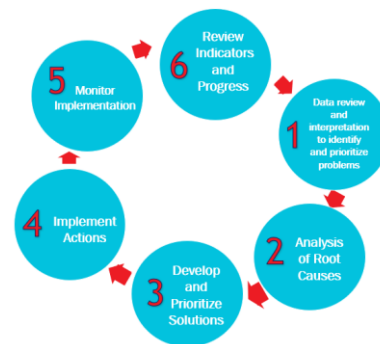
HIV Epidemic Control Rooms allow decision makers to analyze data in real time for continuous program improvement supported by change management practices.

Technology Enabled



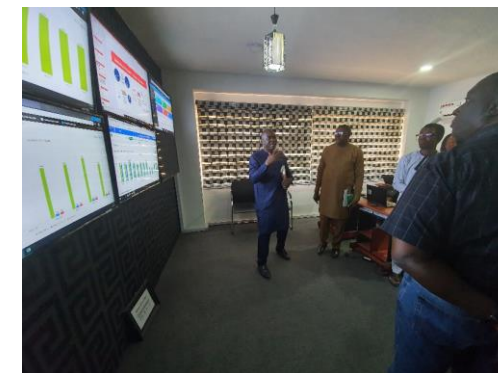
HIV Epidemic Control Rooms using technology-based data analytics and visualization platforms integrate and/or triangulate data from multiple sources (e.g., EMRs, lab, and pharmacy records).

Standardized Methodology



Standardized methods for actionable data review processes include root cause analysis, asking the right questions to better interpret data, monitoring actions, feedback across levels, and capturing lessons learned.

Rapid Course Correction



Weekly data review allows service providers, community service managers, and decision makers from IPs, OUs, and government to closely monitor HIV data in real time and compare performance across sites and regions.

Data.FI is improving HIV clinical outcomes across the cascade through epidemic control rooms in Nigeria

Prevention: Post ECR intervention, the average percent of PrEP initiation increased from 13% to 112% of the annual target.

Retention: Our analysis revealed that 44 facilities had program losses, with a total of 11,564 persons assumed to be LTFU. Post ECR intervention, 84% (9,703) of clients previously LTFU were tracked back to care.

Viral Load Testing: Post ECR intervention, the average percent of eligible patients with documented VL testing results increased from 44% to 70%. In the seven lowest performing facilities, the average increased from zero to 79%.



Nigeria Data Use Brief

Establishing the Epidemic Control Room

Data FI works with USAID Mission and host country governments to establish Epidemic Control Rooms (ECRs) referred to as Situation Rooms that analyze data from disparate sources. For example, data from all implementing partners, electronic medical records, labs, pharmacies, and a country's census can be aggregated and analyzed. Through regular data review meetings in the Epidemic Control Rooms, service providers, implementing partners, and national and sub-national health management teams are convened to analyze data in real time to monitor HIV programming and plan responses to identified gaps or needs. Data FI supports this ongoing process with capacity building.

In Nigeria, Data FI continues its support to the Abuja State Ministry of Health (SMOH) in convening weekly Situation Room meetings in collaboration with the SMOH and other implementing partners. These meetings help to engage with local government and LGA officials and health care providers around their performance on targeted HIV testing and linkage to care.

DATA ANALYSIS REVEALS LOW LINKAGE AT UYO UNIVERSITY TEACHING HOSPITAL

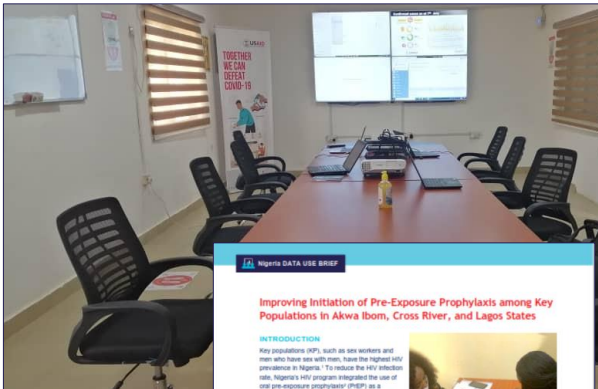
Data FI supports the SMOH to identify areas for analyzing and understanding data during the weekly Situation Room meetings. These meetings provide a platform to further SMOH efforts as they allow for dialogue around challenges and data sharing. Using the data helps Data FI and its partners to provide recommendations and advice. During the third of three meetings, discussions revealed that Uyo LGA showed the highest number of HIV+ patients unlinked to treatment. Compared to Abuja State's state average, Uyo LGA consistently reported lower percentage linkage to care. Despite having a higher number of identified positive clients, Uyo LGA had a steep drop into the data. University of Uyo Teaching Hospital (UUTH) was found responsible for 40% of those clients unlinked to HIV treatment in the LGA.

Located in Uyo LGA within Akwa Ibom State, UUTH is a tertiary facility separating run from the state government. Under the state strategy, adherence for "test and treat", UUTH is under the jurisdiction of the Federal government, meaning doctors are not required to adhere to the state strategy. Some specialized services should still be adhered to the state strategy, citing drug resistance as one major reason. In addition, many people only seek care when sick. Conversations among implementing partners and facilities have also revealed that clients are deterred from seeking treatment due to cost fees.

Figure 1. Linkage rates, 2016-2019

Year	Linkage Rate (%)
2016	34%
2017	37%
2018	35%
2019	33%

PEPFAR USAID Data.FI



Nigeria DATA USE BRIEF

Improving Initiation of Pre-Exposure Prophylaxis among Key Populations in Akwa Ibom, Cross River, and Lagos States

INTRODUCTION

Key populations (KPs), such as sex workers and men who have sex with men, have the highest HIV prevalence in Nigeria. To reduce the HIV infection rate, Nigeria's HIV program integrated the use of pre-exposure prophylaxis (PrEP) as a substantive additional measure to existing services for KPs.

The USAID-funded KP CARE-1 project, implemented by Heartland Alliance Nigeria, established KP one-stop shops (KPOSS) to provide oral PrEP to KPs in three states—Akwa Ibom, Cross River, and Lagos. Each KP one-stop shop was provided with yearly targets for distribution of oral PrEP. In this brief, we describe findings from a Data FI assessment of the work of Heartland Alliance to reach yearly targets for PrEP distribution, as well as measures taken to improve performance.

HOW DATA FI SUPPORTED THE PrEP DATA REVIEW AND USE PROCESS

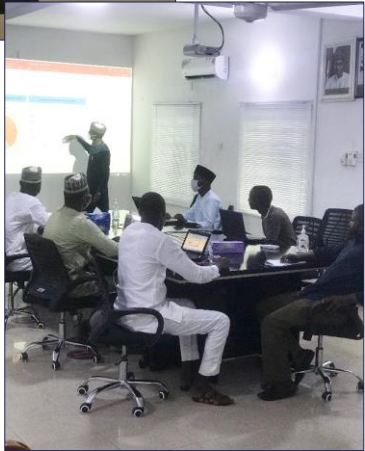
Data FI collected, validated, and analyzed weekly high-frequency report (HFR) data on the PrEP indicator to assess the achievement of PrEP targets against performance. The results of these weekly HFR analyses were disseminated to Heartland Alliance and discussed during Enhanced Site Management (ESM) cluster meetings supported by the U.S. Agency for International Development (USAID). During these meetings, Data FI facilitated discussions among all USAID implementing partners (IPs) to review performance, identify gaps, and outline cause-corrective measures. The discussions provided IPs with opportunities to share best practices.

Data Analysis Found PrEP Initiation Gap in Most KP Community One-Stop Shops

The analysis revealed that PrEP initiation was low in all three states where Heartland Alliance was implementing KP one-stop shops. Data FI then provided another level of analysis of each KP ODS in the three states, finding that the average PrEP initiation rate was 16 percent and that six out of seven KP ODS had an initiation rate below 2 percent and 3.2 percent (see Figure 1). Data FI shared these results with Heartland Alliance in July 2020.

1 Federal Ministry of Health (FMOH), Integrated Behavioral and Surveillance Survey (IBSS) (2014).
2 Akwa Ibom State, National Agency for the Control of AIDS (NACA), National HIV/AIDS Survey (NHS) (2014).
3 The response strategies in a cascade of HIV shop steps by HIV-negative patients to protect them against HIV infection.

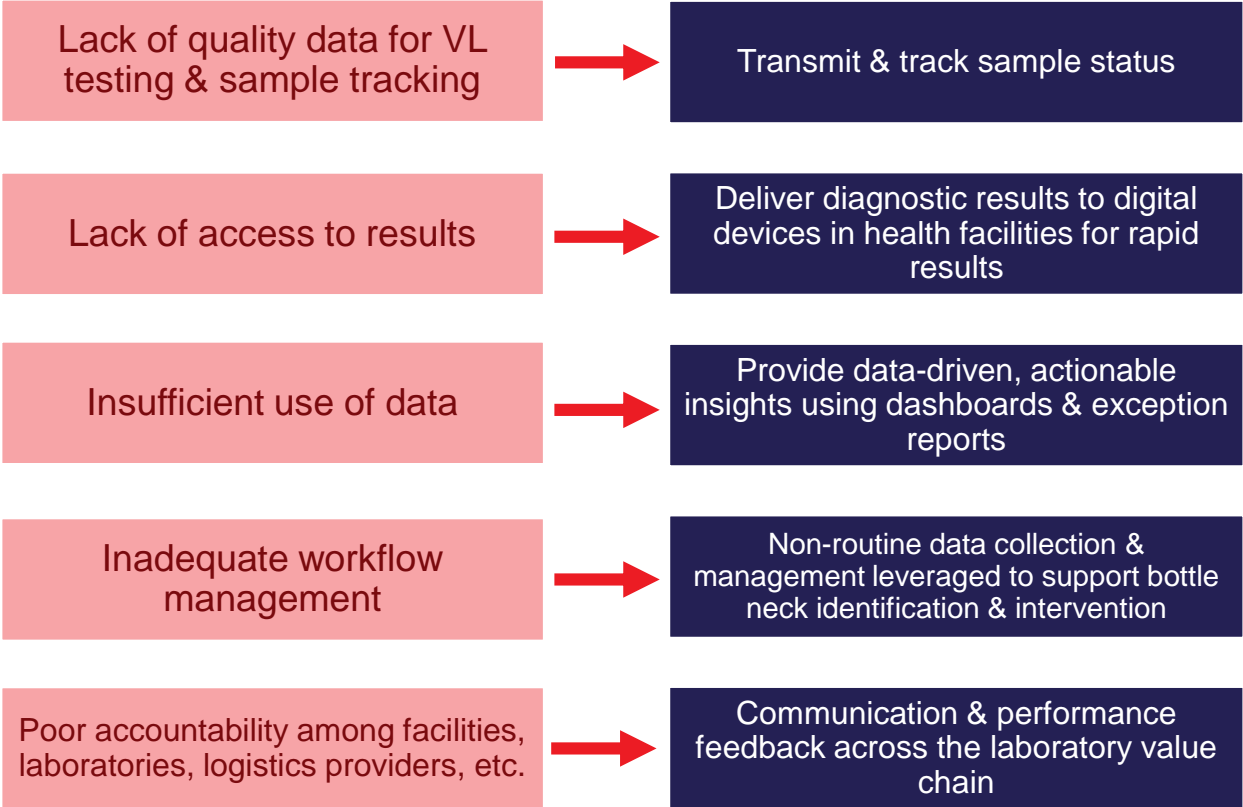
PEPFAR USAID Data.FI



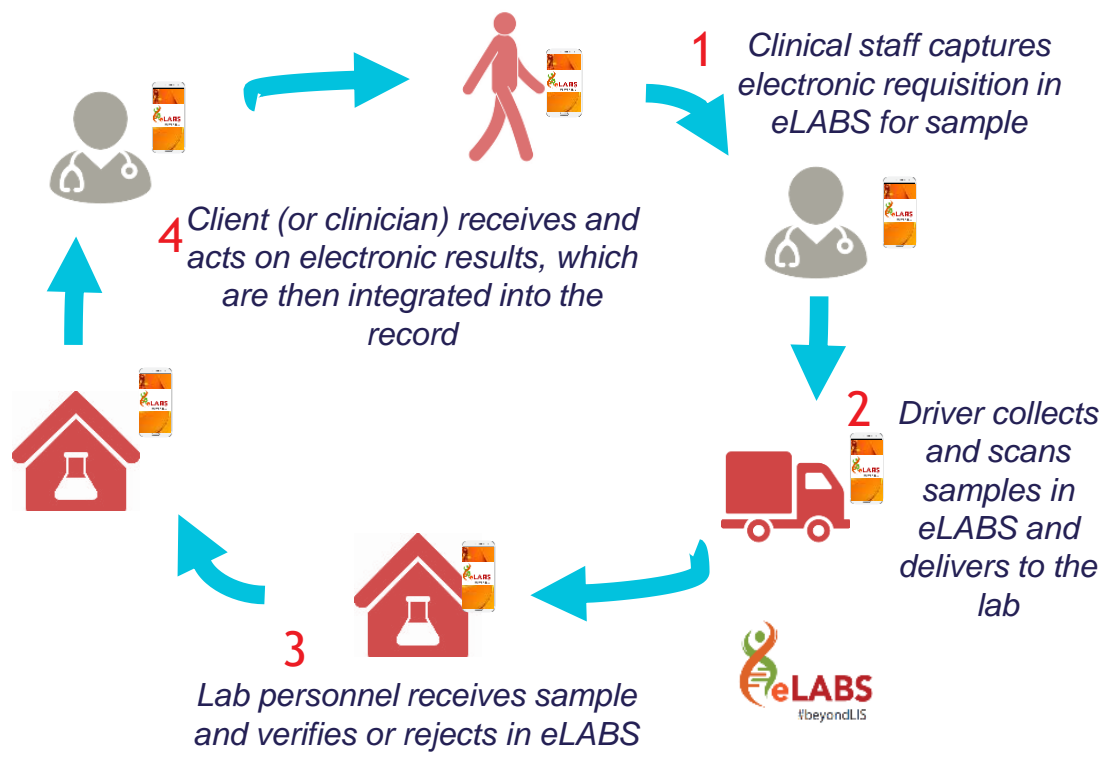
Digitized viral load tracking

VL System Challenge

Digital VL Solutions



eLABS is currently used in over 1,000 facilities in Zambia and South Africa, with facilities reporting a 60% improvement in total turnaround time for viral load results.



Protecting those we serve

Data.FI Solutions

Data protection support

Data protection support

With the emphasis on collecting, integrating, and using client-level data, Data.FI supports USAID and partners to securely manage client data and develop technologies that protect client data.

Data.FI supports USAID and partners to:

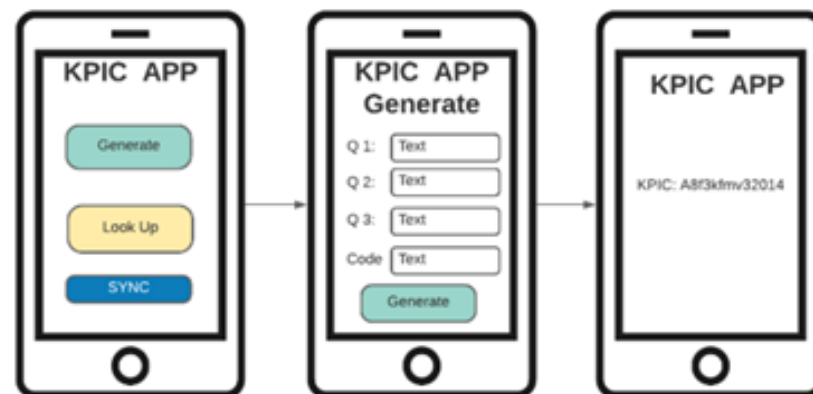
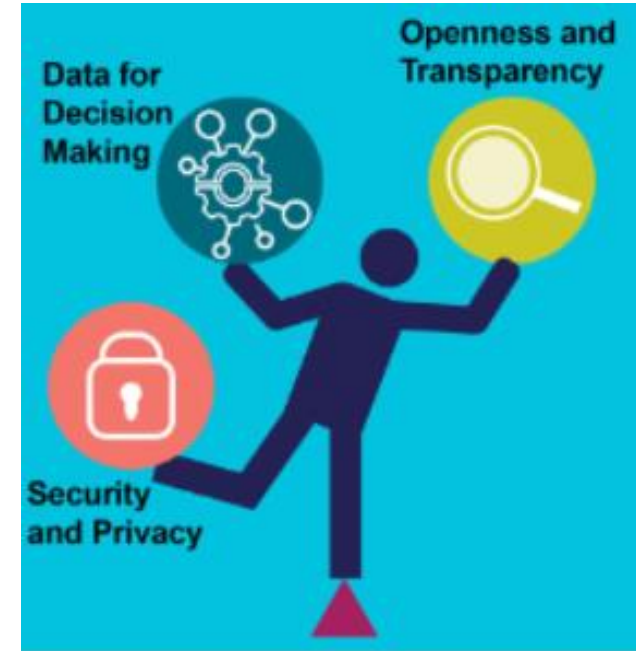
- Conduct **benefits and risks assessments** of biomarkers and other data-capture initiatives
- Develop **data management plans** that protect client data, with a focus on **local partners**
- Design technologies that protect client data, such as **unique IDs** based on *privacy by design* principles

		DATA.FI TOOL SERIES	Introduction to Benefits and Risks Assessment
1			
2	Benefits and Risks Assessment Framework	This benefits and risks assessment framework was developed for Data.FI staff and partners to outline the steps that should be followed to identify how to avoid, mitigate, or manage risks related to data managed by Data.FI partners. It was developed with the support of the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) and the U.S. Agency for International Development (USAID), and is a companion tool to "Benefits and Risks Assessment: How-to Guide for Data.FI."	
	Purpose:	<p>The purpose of the benefits and risks assessment is to identify and increase potential benefits, and identify, manage and mitigate potential risks. The assessment can help teams make decisions at pivotal times in a project whether that be a 'go no go' decision, or aid in the project design and planning phase. A benefits and risks assessment goes beyond a traditional risk assessment, allowing us to systematically highlight and assess the potential benefits, harms, and risks that could result from activities such as:</p> <ul style="list-style-type: none">• Creating or using a digital tool, service or platform• Collecting or using data during program implementation• Collecting or using data during consultation, research, or monitoring and evaluation (M&E) processes• Collecting or using data from or about children, refugees and migrants, ethnic minorities, or other vulnerable groups• Engaging in consortia, partnerships, agreements, or contracts that involve data processing or data sharing <p>A benefits and risks assessment helps teams to identify how to avoid, mitigate, or manage risks related to data, to document by when those measures need to be in place, and who is responsible for taking the steps. Benefits and risks assessments cover the wider, overall harms and risks (both online and offline) that might result from an initiative, as well as data and privacy-related risks. The assessment should integrate the risks related to the feasibility of technology. For example, if electricity or internet are not available, consider how the technology process and the associated risks may change. The assessment should include a gender and inclusion lens to ensure that specific or differential risks to women and key populations are specifically identified and mitigated.</p>	
3	When should you conduct a benefits and risks assessment?	This type of assessment should be done for any initiative that involves personal or sensitive data. The first assessment should be completed during the design phase of any tool, service or platform, program or grant, when developing a research or M&E plan, when determining if and how Data.FI partners will participate in a consortium that involves data sharing, or when negotiating agreements and contracts with partners or third parties. The assessment should be revised any time new features or updated versions of technologies or platforms are being designed or implemented, when substantive changes are made to the types of data being collected, when data privacy laws change, or when there is a significant change in the context (e.g., elections, conflict, etc.) that may affect the risk score.	
4			
5		HOW TO CONDUCT THE ASSESSMENT	



Data.FI is protecting client data in Uganda and Burundi

In **Uganda**, Data.FI is using a “privacy by design” unique identification approach in developing a mobile and web-based application for key populations to access HIV services safely. The alphanumeric key population identifier code (KPIC) permits health facilities to securely access clients' individual health records, without requiring the client to disclose their identity. This unique ID can be used without an expensive security infrastructure.



In **Burundi**, Data.FI conducted a biometrics benefits and risk assessment as a unique ID solution. Data.FI is now working with USAID and the government to document and implement a risk mitigation strategy.

Maximizing efficiencies

Data.FI Solutions

1. Data warehouses that support advanced analytics
2. Efficiency analysis and costing

Centralized data warehouses

A central data warehouse matches client records and unifies data across disparate systems, providing comprehensive data for program management, predictive analytics, and cohort analyses.

Centralized Warehouse

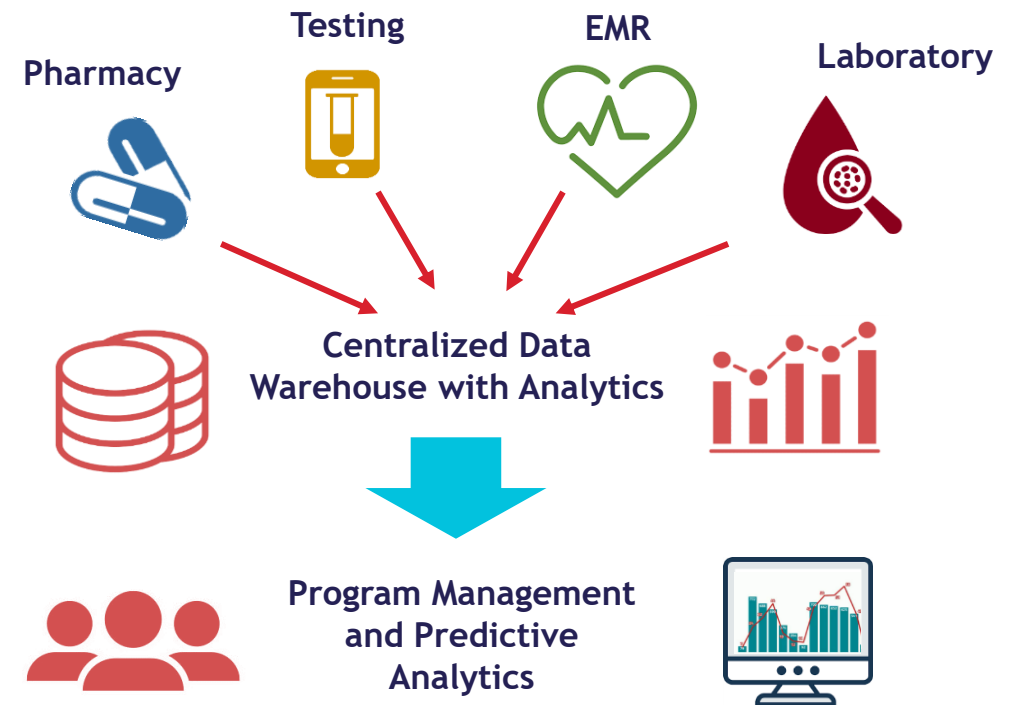
- Consensus and standards building for interoperability
- Ingestion of data sources from across the HIV continuum
- Data security protocols aligned with country regulations

Customizable Data Visualizations and Reports

- Real-time program analytics and access to high-frequency data
- Customizable and interactive dashboards for use in Epidemic Control Rooms
- Pre-programmed PEPFAR/MOH reports

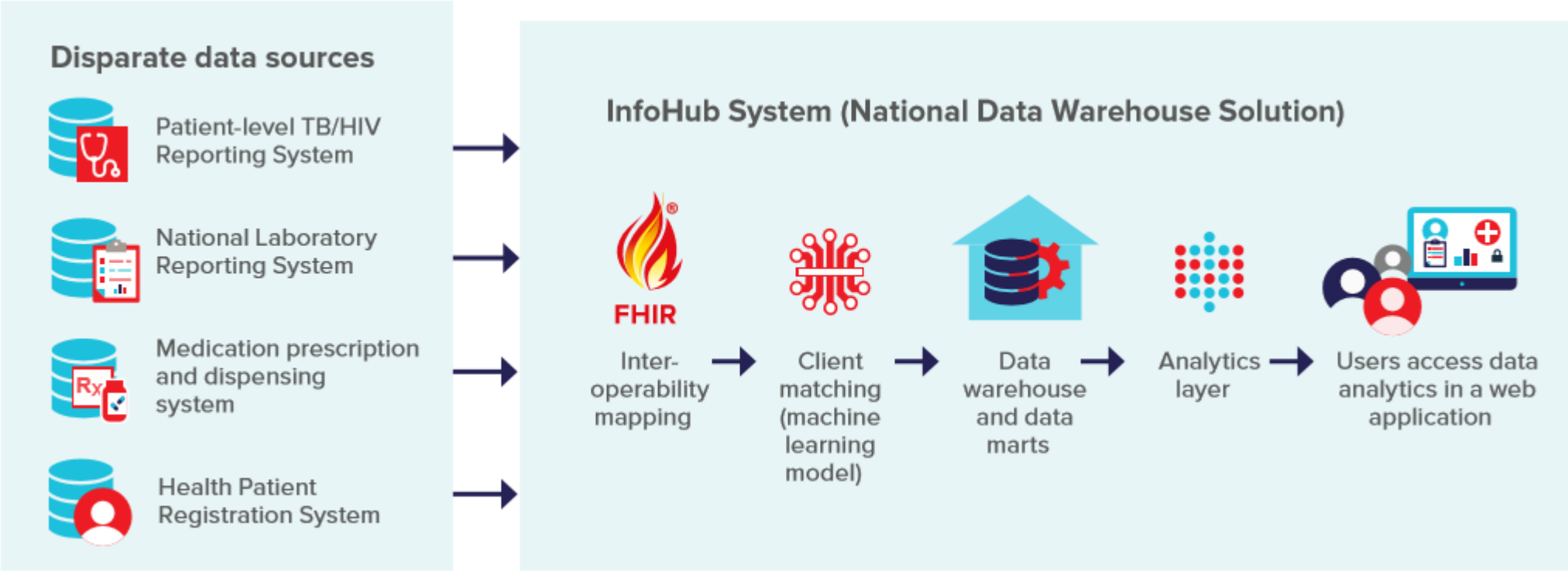
Surveillance and Predictive Analytics

- Client matching and deduplication across the HIV cohort
- Cohort analyses for assessing longitudinal outcomes and true LTFU
- Case-based surveillance



InfoHub in South Africa: An integrated analytics platform

In South Africa, Data.FI is supporting the National Department of Health to build a centralized data warehouse that integrates disparate HIS data into insightful analytics, designed primarily by and for key policy and program decision makers, data analysts, data scientists, and epidemiologists.



The InfoHub uses a machine learning algorithm that matches patients across the datasets, in order to minimize duplicate records. The InfoHub is built using open-source, non-proprietary digital technologies with Metabase, used to display analytics outputs designed for various user cadres and data use cases across the HIV continuum.

Efficiency analysis and costing

- **Human resources for health (HRH) optimization.** Data.FI supports USAID to optimize HRH for maximal health impact through models such as our HRH planning tool.
- **Value-based care.** Data.FI works with USAID and partners to incorporate client value markers into existing continuous quality improvement interventions.
- **Efficiency analysis and costing.** Data.FI analyzes the efficiency of different service delivery models and provides cost estimates for services and systems.
- **Modelling essential supplies.** Data.FI supports USAID to forecast medical supplies and equipment needs, as well as facility requirements (expansion/repurposing) at country and subnational levels.



Demonstrating accountability

Data.FI Solutions

1. Data quality improvement
 1. Data quality composite scores
 2. Anomaly detection
2. Real-time, rapid data collection

Data Quality Composite Score Tool (DQS)

The Data Quality Composite Score Tool allows decision makers to automatically evaluate the quality of data and identify areas for improvement

Standardized Method



Provides data quality scores (DQS) in three dimensions: completeness (number of submitted vs expected records), coherence (numerator being less or equal than denominator), and consistency (presence of outliers).

Wide Application



Designed to work with data from any other data collection tool or software and is intended for use by staff above the facility level to assess data quality before expensive investments in audit processes in the field.

Data Quality Improvement



Results allow decision makers rapidly assess data quality dimensions across IPs, regions or sites, identify and address data quality gaps as well as compare performance over different time periods—including post-intervention.

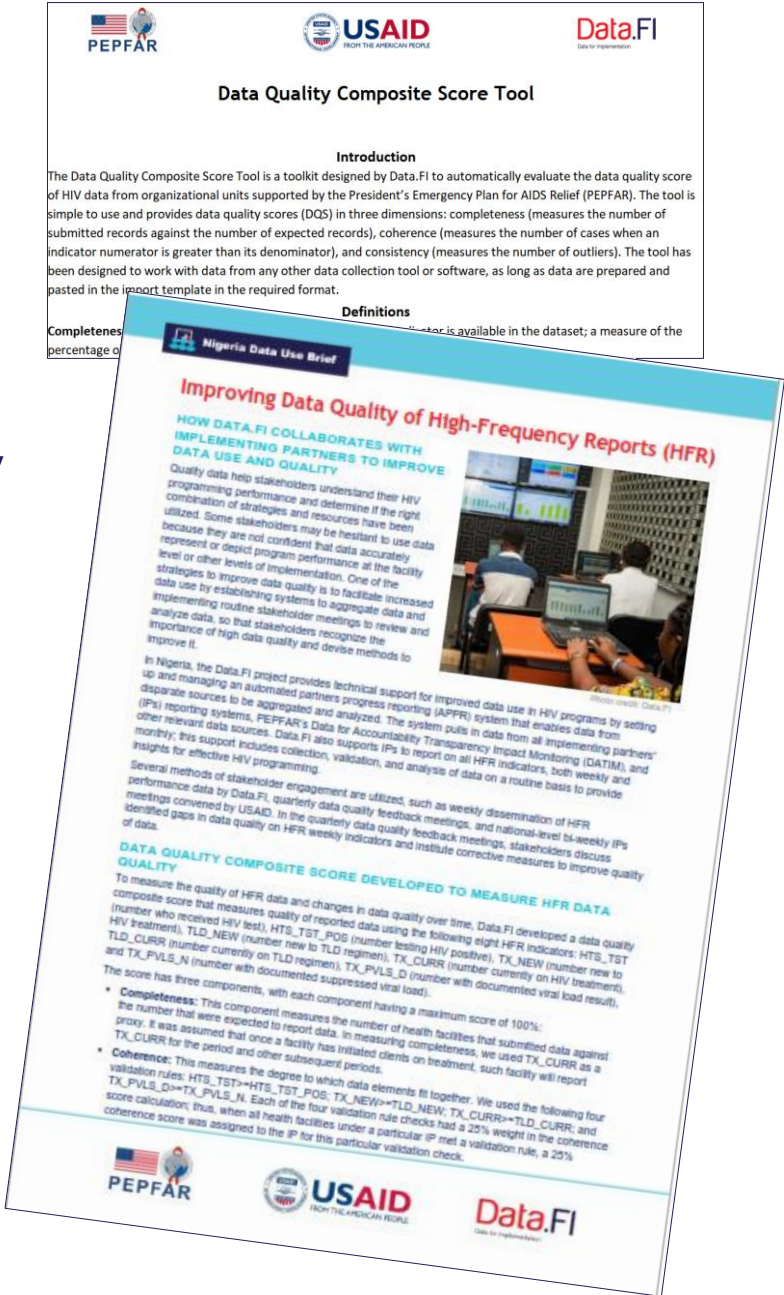
Data.FI is improving the quality of HFR data through use of the DQS tool in Nigeria and West Africa

Nigeria and West Africa countries (Burkina Faso, Ghana, Liberia, Mali, Senegal, and Togo): For 12–37 weeks of HFR data reviewed, all detected data quality issues were resolved by the partners, resulting in 100 percent end line scores.

Moving forward, countries expressed interest in using the DQS tool to review and correct data at regular intervals.



Photo by Robert Glod, courtesy of Flickr

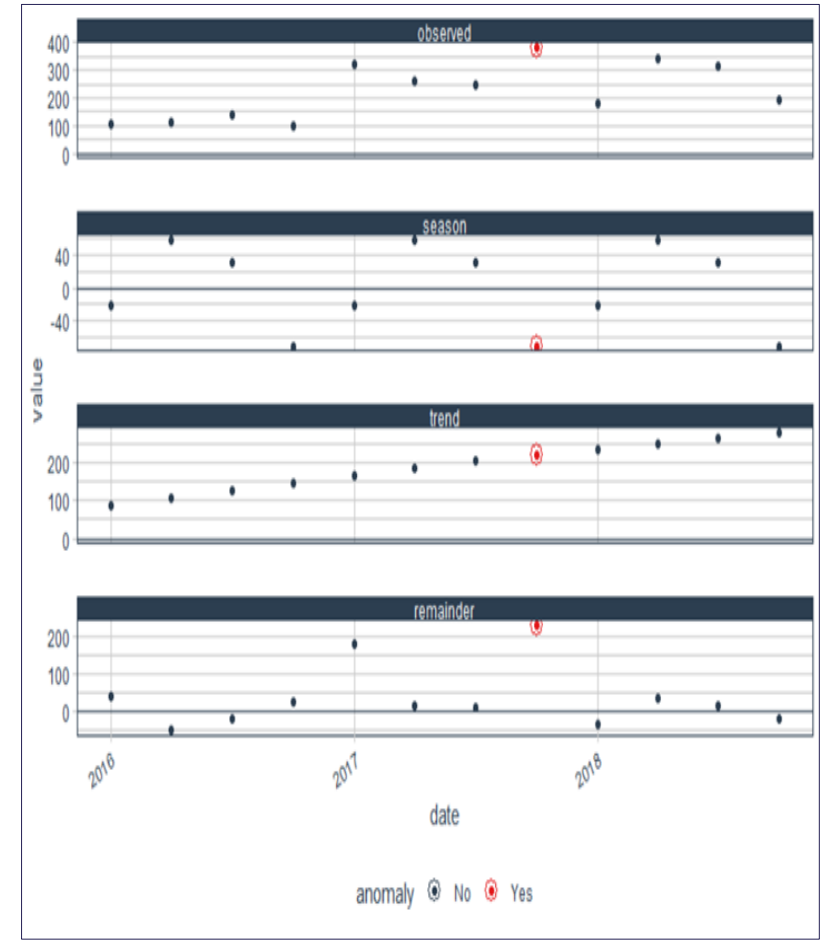


Anomaly detection

We apply algorithms to rapidly and efficiently flag anomalous data points in large datasets to identify likely data quality and performance issues.

Anomaly detection algorithms identify data points that deviate from normal values. They can help to flag atypical facility-level performance or patient outcomes. These approaches learn directly from the data provided. They do not require historical data, nor do they require any assumptions about where anomalies are likely to occur.

Facility	TX_CURR	TX_NEW	TX_PVLS	TX_ML	TX_RTT	PMTCT_ART	TB_ART	TB_STAT	HTS_TST
Alpha	59	4	55	4	4	NA	NA	NA	34
Beta	55	NA	47	3	5	NA	NA	NA	34
Gamma	577	52	456	143	162	25	1	2	344
Delta	64	3	57	5	6	4	NA	NA	24
Epsilon	49	NA	46	NA	4	NA	NA	NA	36
...									



Real-time, rapid data collection

Data.FI can crowdsource insight in real time.

Data.FI partner PREMISE has the largest global crowdsourcing network in the world. PREMISE's data contributors can meet critical on-the-ground data needs within 24–48 hours, capturing both population- and site-level data. PREMISE uses a cloud-based platform to assign data capture tasks, manage, analyze, and visualize data for users.



Reference Premise Network Coverage Letter (Apr. 2020) for full details

Ensuring sustainability of investments

Data.FI Solutions

1. PEPFAR Strategic Information (SI) Capacity Assessment
2. SI curriculum development and local partner training
3. HIS coordination and governance

Local partner capacity strengthening

Using our **PEPFAR Strategic Information Capacity Assessment (PSICA)** tool, Data.FI facilitates:

- Implementation of the online survey
- Analysis of results
- Joint mission-partner review and action planning



OCTOBER 2020

PEPFAR Strategic Information Capacity Assessment (PSICA) Tool

System and Tool	Instructions	Mark the box for each response (X)	Comments
SYSTEM AND TOOL: The organization's tools and systems for routine data collection and management fully meet the needs for PEPFAR and USAID required reporting.			
System and Tool Performance Expectations:			
1. Data are available at the required frequency for PEPFAR and USAID required reporting (from both data sources and data collection tools).	Required frequency refers to other standard results, monthly, quarterly, or real-time data requests.	Fully, Mostly, Sometimes, Not at all	
2. Data sources and data collection tools provide the required frequency for PEPFAR and USAID required reporting.	For example, data are requested by site, site, or other data requests.	Fully, Mostly, Sometimes, Not at all	
3. The organization has systems for ensuring ongoing data quality.	System may include validation, data quality assurance, or other data quality assurance tools (e.g., computer, database, manual, or other tools).	Yes, No	
4. The organization's electronic data management system (if any) is complete and up-to-date.	Check the database, if complete, and up to date. Data dictionary and metadata are complete and up-to-date. Metadata is complete and up-to-date. Metadata is complete and up-to-date.	Fully, Mostly, Sometimes, Not at all	
5. The organization's data management system (if any) is complete and up-to-date.	Check the database, if complete, and up to date. Data dictionary and metadata are complete and up-to-date. Metadata is complete and up-to-date.	Yes, No	
SYSTEM AUTOMATION: The organization is fully able to automate routine support information technology (IT) systems and infrastructure without manual intervention.			
System Automation Performance Expectations:			
1. The organization has automated all routine data collection and management tasks.		Automated, Mostly Automated, Some Automated, Not Automated	
2. The organization has automated all routine data collection and management tasks.		Yes, No	
3. The organization has automated all routine data collection and management tasks.		Yes, No	
CLIENT LEVEL DATA: The current delivery organization routinely collects and manages client level data in digital form for case management and/or patient monitoring.			
Client Level Data Performance Expectations:			
1. The organization routinely collects and manages client level data in digital form for case management and/or patient monitoring.	PEPFAR people living with HIV. The database is complete and up-to-date. Metadata is complete and up-to-date. Metadata is complete and up-to-date.	Yes, No	

USAID PEPFAR Data.FI

Data.FI supports missions and LPs to address capacity gaps through **targeted SI technical assistance**, including online training and virtual coaching.

Data.FI built an **online training course** for LPs in HIV Treatment Cascade Quality Assurance.

Data.FI is building LP capacity in Haiti, Kenya, Malawi, Tanzania, Zimbabwe, and the DRC

Data.FI implemented the PSICA tool with eight LPs.



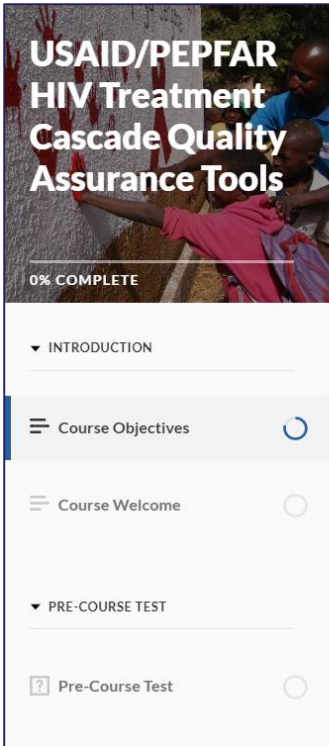
To address data quality issues in reporting and routine quality improvement efforts, Data.FI built an **online training course** for LPs and trained 25 LP staff in HIV Treatment Cascade Quality Assurance.

The process has been really helpful. The way [the questions] are crafted they are quite easy to follow and easy to understand.

-Grace Kumwenda, Chief of Party, IHDC/Malawi

The structure of the questions was really good because it enabled us to look at the M&E component in a holistic way.

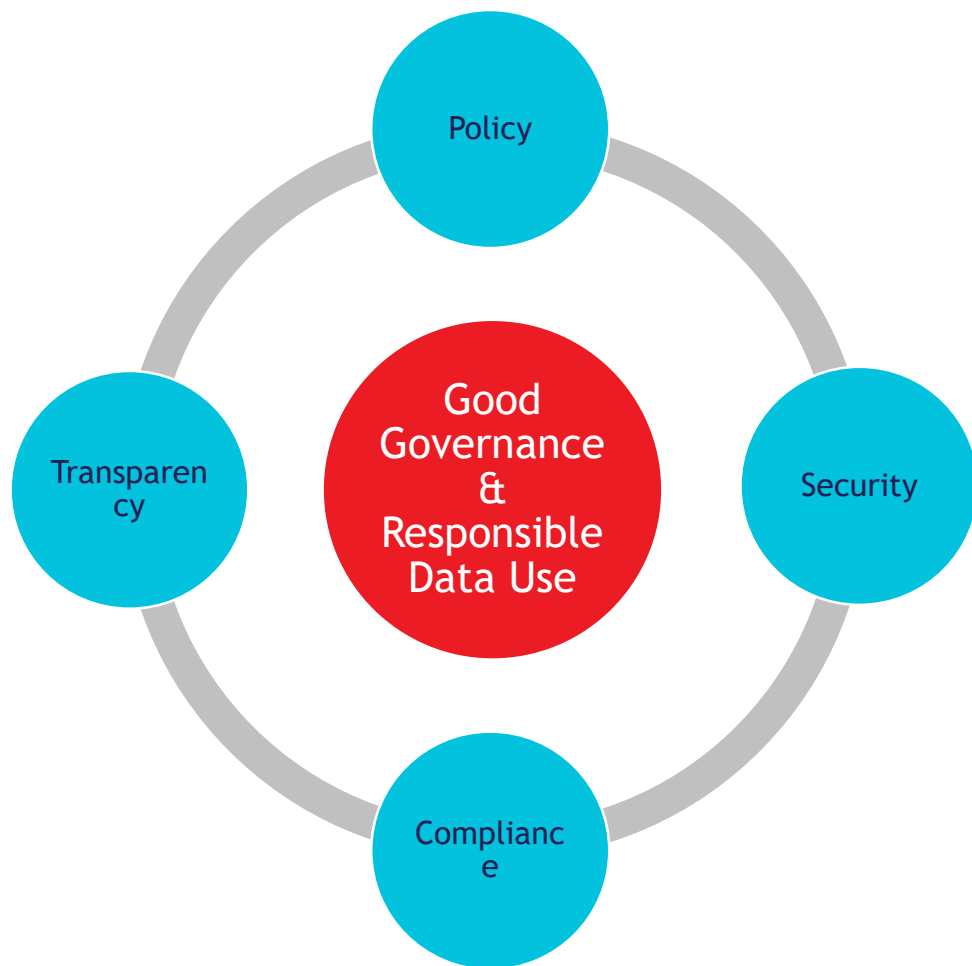
-Victor Kanje, M&E Specialist, USAID/Malawi



Welcome to the **USAID/PEPFAR Data Quality Assessment Tools** Online Course! This training focuses on the use of USAID/PEPFAR's Data Quality Assessment (DQA) tools and aims to provide learners with guidance and tips on the implementations and applications of DQA to improve HIV reporting. In this course, participants will be introduced to 3 new DQA tools that will ensure the optimization of data quality and use.



Strengthening HIS coordination and governance



Data.FI strengthens governments and partners to coordinate and sustain digital health investments by:

- Building consensus among stakeholders on common standards for system alignment
- Co-developing information system enhancements across government and partners with robust communities of practice
- Strengthening interoperability across disparate systems
- Supporting governments' eHealth strategies

Data.FI is strengthening local HIS leadership in Nigeria and Burundi

We bring stakeholders together to capitalize on local expertise and ensure sustainability and country ownership.

In **Nigeria**, through the LAMISPlus EMR community of practice, we brought together informatics staff among seven partner organizations. We held two **informatics bootcamps**, providing individual **mentoring** and learning sessions for local partners to collaboratively build open-source data modules into the national EMR.

We put in place **best practices in software development** including sharing programming code across partners in GitHub and use project management software platform JIRA to assign and monitor progress.

In **Burundi**, we supported the creation of the government-led SIDAInfo technical working group, which is collaboratively building a web-based version of the SIDAInfo EMR and supporting the development of unique client ID.



USAID/Nigeria's IT manager, Toks Aluko, confers with the Data.FI Nigeria team during the informatics bootcamp held in Lagos, Nigeria. Photo by Data.FI.



From left to right: Ekoche Ikeh (NACA), Bababunmi (FHI 360), and Ngodoo (Heartland Alliance) discuss the data analytics and mapping of indicators for different LAMISPlus modules. Photo by Data.FI.

Mechanism Information

PAD Number	936-8000
DUNS (Palladium)	186295239
Mechanism Name (FactsInfo)	Data for Implementation (Data.FI)
Mechanism ID (FactsInfo)	82099
Award Number (Cooperative Agreement)	7200AA19CA00004
Prime Partner	Palladium International, LLC
Sub Partners	JSI, JHU, Right to Care, Cooper/Smith, IMC Worldwide, Jembi Health Systems, Macro-Eyes
Start Date	April 15, 2019
End Date	April 14, 2024
Total Estimated Cost (+90% ceiling available)	\$179,895,772.99
Agreement Officer (AO)	Adrienne Shade (ashade@usaid.gov)
Agreement Officer Representative (AOR)	Emily Harris (emharris@usaid.gov)
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