Data.FI: Because Data Save Lives

Data.FI helps countries strengthen and sustain access to mission-critical, high-quality data to accelerate HIV and COVID-19 epidemic control. We work across all population groups and intervention areas to identify clients at risk and link them to testing, prevention, and treatment services. We provide end-to-end solutions in the data ecosystem that serve public health goals and protect clients' rights—from streamlining information needs, to building sustainable and scalable data systems that support continuity of client care and robust analysis.
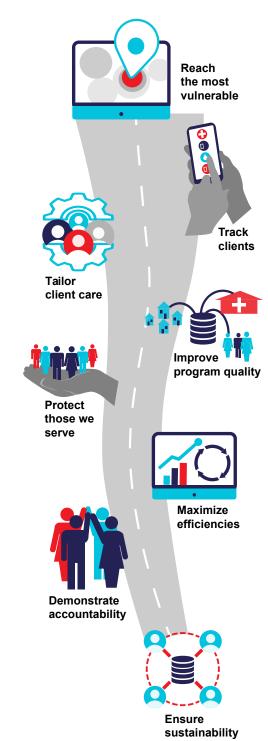
Data.FI works across all technology platforms, aligning our interventions to each country's unique data and information system landscape. We provide rapid insight for decision making, using both efficient and advanced analytics. We help the United States Agency for International Development (USAID) and partners diagnose performance challenges to best focus resources. We develop and employ evidence-based approaches to ensuring that data are used to inform meaningful change and save lives. We strengthen government capacity for health information system (HIS) governance and build local partner capabilities in line with USAID's local partner transition goals. Data.FI leverages our existing network of in-country relationships to build government trust, coordinate stakeholders and expand the pool of local partners able to respond to the HIV and COVID-19 pandemics.

> **Our partnership combines technological know-how with public health expertise and country experience to ensure that our digital solutions are sustainable and meet local contextual and health program strategic needs.**

Data.FI is a five-year, US$180 million global cooperative agreement (2019–2024), funded by the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) through USAID. Data.FI is implemented by Palladium, the JSI Research & Training Institute, Johns Hopkins University, Department of Epidemiology, Right to Care, Cooper/Smith, IMC Worldwide, Jembi Health Systems and macro-eyes and is supported by a community of resources partners.

Data.FI supports USAID, governments, and partners to:

- Reach the most vulnerable
- Track clients
- Tailor client care
- Improve program quality
- Protect those we serve
- Maximize efficiencies
- Demonstrate accountability
- Ensure sustainability

Reach the most vulnerable

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Data.FI solutions:
Reach the most vulnerable

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. This method can be applied to at-risk adolescent girls and young women (AGYW), key populations, orphans and vulnerable children (OVC), pre-exposure prophylaxis (PrEP), and voluntary medical male circumcision (VMMC) candidates to inform response efforts.

Track clients

Electronic medical record (EMR) systems. Data.FI optimizes electronic medical records (EMRs) to track clients across the 95-95-95 continuum, improve continuity of care, and generate data for epidemic and program performance monitoring, following software development lifecycle best practices. Data.FI interoperates EMRs with HIV testing service (HTS), laboratory, dispensing, commodity, and community-level systems.

OVC and DREAMS information systems. Data.FI builds and interoperates OVC and DREAMS longitudinal case management systems, harmonizing data standards across IPs and government.

Deduplicating client records. Data.FI develops master client indices, linking records across systems. Data.FI can also provide a quick estimate of duplicate records for countries looking to quantify this problem.

Tailor client care

Predictive analytics. Data.FI applies ML/AI models that triangulate data to predict which clients will face various outcomes across the clinical cascade (e.g., treatment interruptions), to inform client-centered care. Our *client phenotyping* approach combines descriptive analytics and ML/AI techniques to develop localized profiles of vulnerable clients and to test differentiated care models. Models are built into existing information systems or apps, for continuous care customization.

Improve program quality

Epidemic control rooms (ECR). Though our ECRs— technology-enabled data review meetings during which decision makers visualize integrated data sets and follow a standardized approach to analyze and action data in real time—Data.FI is setting standards for continuous program improvement.

Digitized viral load tracking. Digital lab systems track viral load from specimen collection to results return, delivering results to health facilities in real time and pinpointing bottlenecks in the lab value chain.

Protect those we serve

Data protection support. Data.FI supports USAID and partners to securely manage client data and develop technologies that protect client data, including unique IDs that follow *privacy by design* principles.

Benefit-risk assessments. Data.FI provides guidance on biometrics and other data capture initiatives and supports risk mitigation planning.

Maximize efficiencies

Data warehouses that support advanced analytics. Data.FI develops central data warehouses to unify data across sites and disparate systems (EMR, lab, dispensing, HRH). An analytical layer provides comprehensive, de-duplicated data for program management, client-care improvement, and cohort analyses. A dashboard customized to local data needs supports rapid program pivots.

Efficiency analysis and costing. Data.FI analyses the efficiency of different programming models, and financial and human resource configurations, and provides cost estimates for services and systems.

Demonstrate accountability

Data quality improvement. Data.FI solutions include our *Data Quality Score,* intended for use above-site to assess data quality *before* investments in site-level audit processes, and *anomaly detection*, which uses statistical approaches to model relationships between variables and identify atypical observations.

Surge support to Missions to answer priority questions linked to the COP and POART processes.

Real-time, rapid data collection. Through a network of on-the-ground lay data contributors, Data.FI can rapidly answer questions about health facility status/readiness, population knowledge, and behaviors.

Indicator and data capture tool development. Data.FI refines and harmonizes indicators and tools.

Ensure sustainability

Local partner capacity assessment and strengthening. Applying the *PEPFAR Strategic Information Capacity Assessment (PSICA) Tool* we developed with USAID, we provide rapid assessments of local partner capacity and strengthen gaps through virtual training and coaching.

HIS coordination. Data.FI works with local stakeholders to strengthen HIS governance, ensuring data standards and data safety protocols are aligned and met, and that system investments are sustainable.