

Optimizing Electronic Medical Records

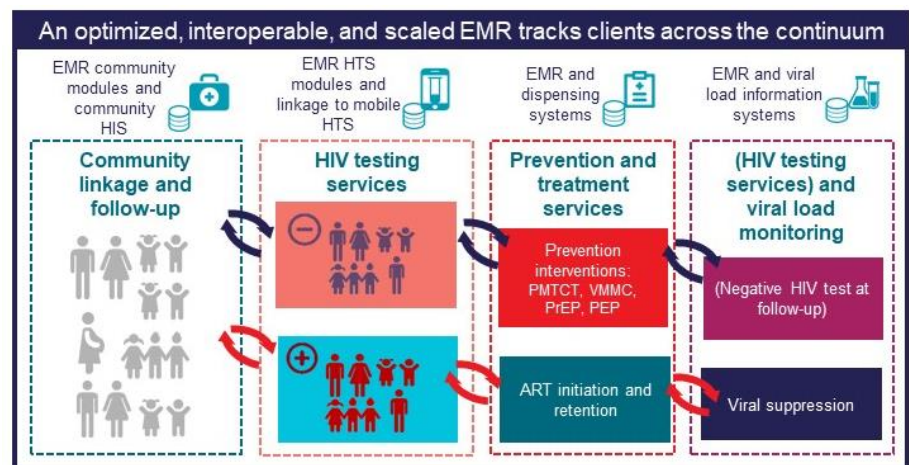
Optimized electronic medical records (EMRs) track clients across clinical services, improving continuity of care and the client care experience. EMRs also generate high-quality data for clinical performance monitoring and case-based surveillance, informing client-centered approaches and enabling cohort analyses and program monitoring.

THE OPPORTUNITY

The availability of timely, accurate, client-line information at scale will accelerate epidemic control. In United States President's Emergency Plan for AIDS Relief (PEPFAR) countries, EMRs are implemented at varying levels of maturity and scale. EMR systems need to be optimized to meet reporting requirements with high-quality data, and in cases where system maturity allows, to share information between laboratory, dispensing, supply chain, and community systems. Data captured in enhanced EMRs allow for advanced analytics to better monitor the epidemic and to improve differentiated care models. Standardizing functionalities and reporting requirements within EMRs allow for data across countries to be more easily comparable, supporting better resource allocation decisions.

THE DATA.FI SOLUTION

Our approach to EMR optimization involves driving consensus and catalyzing local leadership for improved governance, assessing existing systems, and then developing a costed implementation roadmap. We work in tandem with local technology partners to then implement the roadmap — ensuring country ownership, leveraging global goods, or creating open-source solutions to maximize sustainability and reduce costs.



Step 1: EMR Assessment and Costed Roadmap: Data.FI will rapidly assess the state of the EMR, adapting our global EMR assessment method and tool to the local context. The global tool is modular; depending on the local context, we may apply any or all of the following four components:

- **Governance:** Assesses the enabling environment, including policy and governance for EMR systems implementation
- **Functionality:** Assesses the EMR systems' ability to support PEPFAR reporting, adhere to clinical care and treatment guidelines, and meet implementing partner needs

- **Infrastructure:** Assesses the infrastructure, security, and technical support required to implement EMR systems
- **Software development:** Assesses methods and processes used by technology partners

Data are collected over a two-week period from three to five sites through a combination of key informant interviews, user observation, system demonstrations, detailed software reviews, and review of data outputs. Following the assessment, Data.FI will produce a costed roadmap for EMR optimization and lead the stakeholder alignment process to build consensus on objectives and priorities.

Step 2: Implementation of roadmap: Most roadmaps will outline governance and system enhancements. Governance support may include establishing or strengthening a community of practice or oversight group with responsibility for sustaining the EMR, and building consensus around and documenting system policy and standards. System enhancements may include:

- Aligning EMRs to PEPFAR and country treatment guidelines and reporting requirements
- Architecting, networking, and interoperating systems for exchange of information across community, testing, facility, dispensing, and laboratory systems
- Incorporating decision support for point-of-care EMRs to facilitate quality care and differentiated care delivery
- Developing new modules for key populations, orphans and vulnerable children (OVC), HIV testing, pre-exposure prophylaxis, and COVID-19
- Facilitating linkages between community and facility systems through client scheduling and early outreach for missed appointments

WHAT IS THE IMPACT?

Data.FI is optimizing EMRs in five countries, helping to scale what exists, and introducing new system functionality. We are building new system components, interoperating EMRs with other systems (e.g., laboratory and OVC systems), and improving system governance.

In **Nigeria**, we are leading a cross-partner community of practice to optimize an integrated EMR, LAMISPlus. We are ensuring alignment across testing, treatment, laboratory, pharmacy, and commodity information systems and links to the National Data Repository (NDR). We are also supporting scale-up of existing EMRs in **Namibia**, where we scaled the ePMS Quantum to 55 sites in three new regions, and in **Malawi**, where we are improving EMR use across USAID and Centers for Disease Control and Prevention (CDC) implementing partners at more than 200 sites.

We are improving case management through the use of EMRs in **Burundi** with the SIDAInfo platform. In **South Africa**, we supported the enhancement of the TB/HIV Information System and the release of v1.13 in 2020, and its integration into the National Department of Health Information Hub (InfoHub).

PUTTING THE SOLUTION INTO ACTION

Data.FI works with country programs to customize an EMR optimization strategy based on the country's objectives, local operating environment, and health information system maturity level. Data.FI can support implementation of the solution through the following:

- Assessing the EMR and recommending an optimization strategy
- Aligning stakeholders around an action plan
- Improving system policy and strengthening the governance structures that support continued system optimization
- Building new modules within an EMR or building a new open-source EMR
- Improving data exchange, including interoperability, between information systems (e.g., laboratory, dispensing, community, etc.)
- Strengthening the skills of local technology partners to sustain and enhance the EMR as requirements shift

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