



Optimizing Electronic Medical Records

Optimized 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.

THE OPPORTUNITY

The availability of timely, accurate, client-line information at scale will accelerate epidemic control. In PEPFAR countries, electronic medical records (EMRs) are implemented at varying levels of maturity and scale; however, all systems need optimization to meet current reporting requirements; share information with lab, dispensing, supply chain, and community systems; and improve data quality. Data captured in optimized EMRs allow for advanced analytics to better monitor epidemics and improve differentiated care models. Standardizing functionalities and reporting requirements for EMRs allow data across countries to be comparable, supporting better resource allocation decisions.

THE DATA.FI SOLUTION

Data.FI optimizes EMRs and integrates disparate health information systems (HIS) by driving consensus and catalyzing local leadership for improved governance. We work with local technology partners to build capacity and leverage or create global goods open-source solutions to maximize sustainability and reduce costs. Our approach to EMR optimization involves assessing existing systems and developing a costed implementation roadmap.

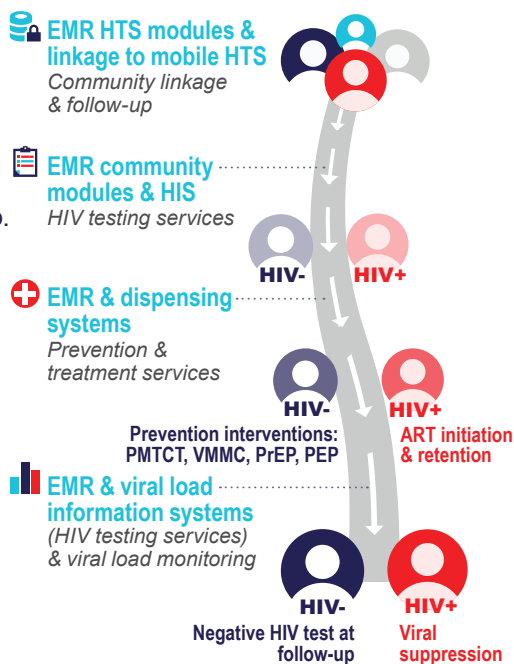
Step 1: EMR Assessment and Costed Roadmap: Data.FI will rapidly assess the state of the EMR, adapting our global EMR assessment methodology and tool to the local context. The global tool is modular; depending on the local context, we may apply any or all of the following components:

- **Governance:** Assesses the enabling environment, including policy and governance for EMR implementations
- **Functionality:** Assesses the EMRs' ability to support PEPFAR reporting, adhere to clinical care and treatment guidelines, and meet implementing partner needs
- **Infrastructure:** Assesses the infrastructure required to implement EMRs
- **Software development:** Assesses methodologies and processes used by technology partners

Data are collected over a two-week period from three to five sites, using 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/documenting system policy and standards. System enhancements may include the following:

- Aligning EMRs to treatment guidelines and reporting requirements of PEPFAR and countries
- Architecting, networking, and interoperating systems for exchange of information across community, testing, facility, dispensing, and lab systems
- Building in 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, and pre-exposure prophylaxis
- Facilitating linkages between community and facility systems through client scheduling and early outreach for missed appointments



WHAT IS THE IMPACT?

Under Data.FI, we have conducted full EMR assessments in Nigeria and Namibia, and we support EMR optimization for USAID sites in Malawi. In Nigeria, we are building an integrated EMR, LAMISPlus, to harmonize reporting across USAID implementing partners with the support of a community of practice aimed at strengthening data governance. The entire build will be completed in less than one year and enhance agile performance management by ensuring ready access to a unified data set across implementing partners. In collaboration with implementing partners in Malawi, we are supporting improvements to the client registry system by conducting system requirements and standardizing the data collection processes that feed data into the EMR at USAID sites.

In Kenya, under Kenya HMIS II project, funded by the Centers for Disease Control and Prevention (CDC), Palladium is scaling a point-of-care EMR to 1,120 sites, which support more than 60% of adult people living with HIV on treatment nationwide. KenyaEMR is built on the OpenMRS platform but has been highly customized to meet PEPFAR reporting requirements and Kenyan care and treatment guidelines. We also built a prevention-focused key populations module on a stand-alone OpenMRS instance, which is currently being scaled.

Data.FI's partner Jembi currently supports implementation of the national EMR solution in Cameroon based on the OpenMRS Bahmni platform. The objectives are to optimize the registration process; simplify clinical forms; improve the scheduler; support laboratory data integration to view viral load trends; enhance clinical dashboards; and introduce PEPFAR, CDC, and Ministry of Health reports. Jembi has added additional features, including HIV patient tracking dashboards to reduce the incidence of lost to follow-up, and index testing dashboards to link HIV client contacts to care. The HIV module assists healthcare workers to uniquely identify clients who require HIV care and tracks their progress through the cascade.

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 HIS 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 a new EMR
- Improving data exchange, including interoperability, between information systems (e.g., lab, dispensing, community, etc.)
- Strengthening the skills of local technology partners to sustain and enhance the EMR as requirements shift

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FOR MORE INFORMATION

Emily Harris, Data.FI AOR
emharris@usaid.gov
+1-571-309-1266

Jenifer Chapman, Project Director
jenifer.chapman@thepalladiumgroup.com
+1-202-775-9680