MAKERERE UNIVERSITY
SCHOOL OF PUBLIC HEALTH

MONITORING AND EVALUATION TECHNICAL SUPPORT (METS) PROGRAM

ANNUAL REPORT
2023

Contents

List of Abbreviations and Acronyms

AGYW	Adolescent Girls and Young Women
CBS	Case-Based Surveillance
CDC	Centers for Disease Control and Prevention
CPHL	Central Public Health Laboratories
CQI	Continuous Quality Improvement
DHI	Division of Health Information
DHIS2	District Health Information System 2
DOD	Department of Defense
DQA	Data Quality Assessment
DREAMS	Determined, Resilient, Empowered, AIDS-free, Mentored, Safe
DSI	Data Science and Informatics
DSR	Disease Surveillance and Response
EID	Early Infant Diagnosis
EMR	Electronic Medical Records
GBV	Gender-Based Violence
GLM	Governance, Leadership and Management
HIE	Health Information Exchange
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
HSS	Health Systems Strengthening
HTS	HIV Testing Services
ICT	Information and Communication Technologies
KP/PP	Key Populations / Priority Populations
MakSPH	Makerere University School of Public Health
METS	Monitoring and Evaluation Technical Support Program
MoH	Ministry of Health
NCDs	Non-Communicable Diseases
NISS	National Integrated Surveillance
NTLP	National Tuberculosis and Leprosy Program
OVC	Orphans and Vulnerable Children
PEPFAR	President's Emergency Plan for AIDS Relief
PMTCT	Prevention of Mother to Child Transmission
PrEP	Pre-exposure Prophylaxis
QI	Quality Improvement
RASS	Real-Time ARV Stock Status
RRH	Regional Referral Hospital
SGBV	Sexual Gender-Based Violence
SCAPP	Standards, Compliance, Accreditation and Patient Protection
SQA	Service Quality Assessment
USAID	United States Agency for International Development
VL	Viral Load

Introduction

Makerere University School of Public Health (MakSPH) through the Monitoring and Evaluation Technical Support (METS) Program is implementing a 5-year (2020-2025) grant with funding from the United States Centers for Disease Control and Prevention (CDC). The overall purpose of the METS program is to strengthen the Government of Uganda's capacity for regionally centered and district-implemented HIV and TB programming through Health Information Systems, Case-Based Surveillance, Monitoring, Evaluation, and Quality Improvement support.

The Program provides national support to several Ministry of Health departments and divisions including the AIDS Control Program (ACP), Division of Health Information (DHI), Standards, Compliance, Accreditation and Patient Protection (SCAPP), National TB and Leprosy Program (NTLP), Pharmacy, Information, Communication and Technology (ICT) and the national laboratory at Central Public Health Laboratory (CPHL). Furthermore, we work with all 71 CDC-supported districts and 10 Regional Referral Hospitals (RRH). Additional support is given to implementing partners through streamlining national and PEPFAR reporting, technical assistance to Health Management Information System (HMIS), support to DREAMS and KP/PrEP programs, conducting of data and service quality assessments as well as HIV Recency implementation.

In the past year, METS has made significant strides in achieving its objectives and advancing its mission. Our commitment to strengthen health systems through development and implementation of innovative and impactful evidence-based solutions, has been at the forefront of all our endeavors. Aligned with our core values, we have continued to strive for excellence in health systems strengthening, disease surveillance, and data informatics. Our overarching goal to improve the experience of the patient at health facilities has guided our actions and decisions throughout the year.

METS has witnessed notable achievements, showcasing our dedication to innovation, care and treatment, prevention, case finding, and sustainability. This report highlights the key program achievements and partner collaborations of the year 2022/2023.

Congratulations on making it to 2024!

Prof. Rhoda Wanyenze
Dean SPH

It gives me great pleasure to share with you this issue of the METS Annual Report 2022/23, a compilation of events that have shaped our work plans.

It is the responsibility of the Makerere University School of Public Health to teach, research, and improve service delivery and this we are doing through innovations that we believe will impact our communities positively. Uganda has survived several pandemics, and this has continued to underscore the need to improve our public health response and investment to build the capacity of our front-line workers to manage these situations. COVID-19 taught us that systems are necessary in the new world if we are to realize our responsibility to deliver effective and uninterrupted services to our clients across the country.

The negative impact of these pandemics raised critical questions regarding preparedness, resource allocation, the need for health systems, and the willingness and capacity of the health workforce to handle the job at hand. It is for this reason that METS has focused on collaboration with implementing partners to offer technical assistance and training of health workers, district health teams as well as social workers to equip them with knowledge and skills to manage new challenges while providing improved healthcare to the people of Uganda. Functionalization of digital platforms to support the availability of real-time data and surveillance of disease and the response is key. To support this, documentation of existing health innovations and research has been a core activity in the period under review.

Our focus in the new year will be to continue to consolidate these efforts and integrate Non-Communicable Disease (NCD) prevention, treatment, and awareness as a way of addressing the quiet epidemic killing millions of Ugandans.

Special thanks to all the stakeholders especially the Ministry of Health, United States Centers for Disease Control and Prevention (CDC), USAID, University of California San Francisco, the Health Information Systems Program (HISP)-Uganda, Implementing Partners, and the staff at the various sites we have supported over the years. Without your support, our mandate would be impossible.

> **To support this, documentation of existing health innovations and research has been a core activity in the period under review.**

Word from the Director

Dr. Alice Namale
Director METS

I am delighted to share with you the progress made by our team over the past year. The Program has been working diligently to strengthen the capacity of the Ugandan Government to implement a regionally centered and district-implemented HIV and TB program through innovation in health information systems, case-based surveillance, monitoring, evaluation, and quality improvement support.

One of our mandates at METS is partner involvement, and we are proud to report that the Program has been engaging several Implementing Partners to execute its tasks. Through partner collaboration, outreach programs, and partnerships with Local Government, we have been able to make a significant impact in improving HIV prevention, treatment, and care in Uganda.

Speaking of impact, we have seen tremendous progress over the past year and are closer to achieving the 95-95-95 targets by 2023. Through our efforts, we have been able to improve access to HIV and TB services, reduce new infections, and increase the number of people living with HIV on treatment. These results are a testament to the hard work and dedication of our staff, partners, and community members.

However, we recognize that there are still challenges to overcome. Competing needs for funding, internet connectivity, and change in attitudes, especially among health workers, towards the Ministry of Health's digitalization strategy continue to pose significant challenges to our program efforts as well as our partners. Despite these challenges, we remain committed to our mission and work tirelessly to overcome them.

As we move forward into the new year, we remain committed to our core values of professionalism, integrity, innovativeness, responsiveness, accountability, and teamwork. We are excited to continue our work towards an efficient health sector in Uganda using strategic information. Together, we can make a difference.

> **Speaking of impact, we have seen tremendous progress over the past year and are closer to achieving the 95-95-95 targets by 2023.**

Our Beliefs

METS' vision is to build resilient health systems in Africa and beyond.

Our mission is to strengthen health systems through the development and implementation of innovative and impactful evidence-based solutions.

Our core values drive our mission:

Professionalism	Innovativeness	Accountability
Integrity	Responsiveness	Teamwork

METS program is implemented through six strategic objectives:

1. To increase data use through Government-owned and supported implementation of interconnected Health Information Systems (HIS).
2. To scale-up sustainable national coverage of unique identifier (UID)-linked patient data across health domains enabled through standards-based health information exchanges (HIEs)
3. To improve the operationalization of HIV/TB Case Based Surveillance (CBS) at a national scale.
4. To improve data use by the Government of Uganda (GoU) and PEPFAR through automated reporting from routine HIS
5. To improve the ability of Regional Referral Hospital (RRH) leadership to mobilize additional resources for a sustained response to the HIV epidemic, TB control and other disease outbreaks.
6. To sustain enterprise-wide implementation of continuous quality improvement (CQI) for all HIV and TB services

Where We Work

METS works in 71 CDC-supported districts and 10 Regional Referral Hospitals (RRH), providing targeted technical support to implementing partners.

PEPFAR Supported Districts by Agency
- CDC (71)
- DOD (4)
- USAID (72)
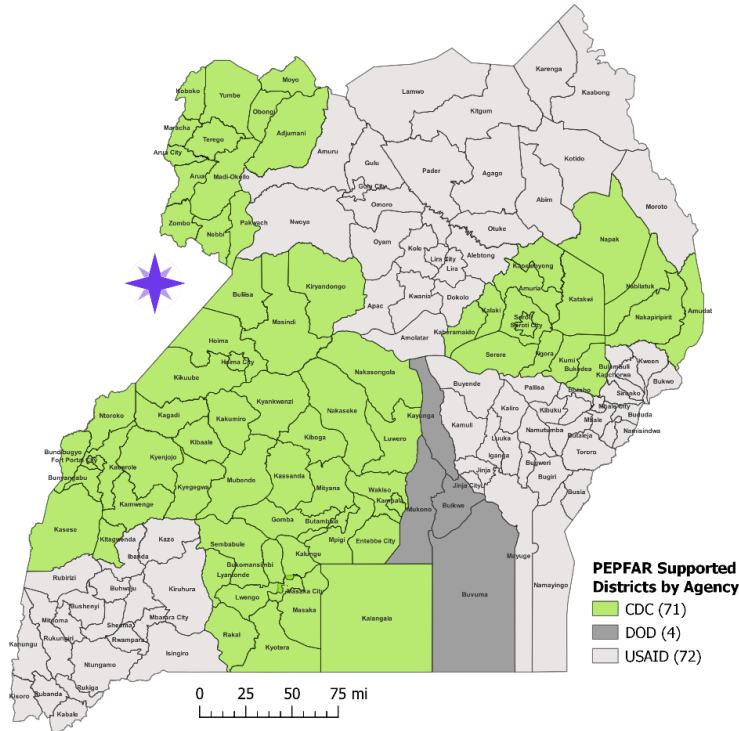
Partnerships

METS has over time established meaningful collaborations with various institutions, at international, national, sub-national levels, and community levels. At the international level, the program is implemented in partnership with the University of California San Francisco (UCSF). Key partners at the National level include the Ministry of Health (MoH), United States Government (USG) funded partners, non-USG partners, and the Health Information Systems Program (HISP- Uganda). In addition, the program collaborates with the Uganda AIDS Commission and the Ministry of Gender Labour and Social Development (MoGLSD) at the national level.
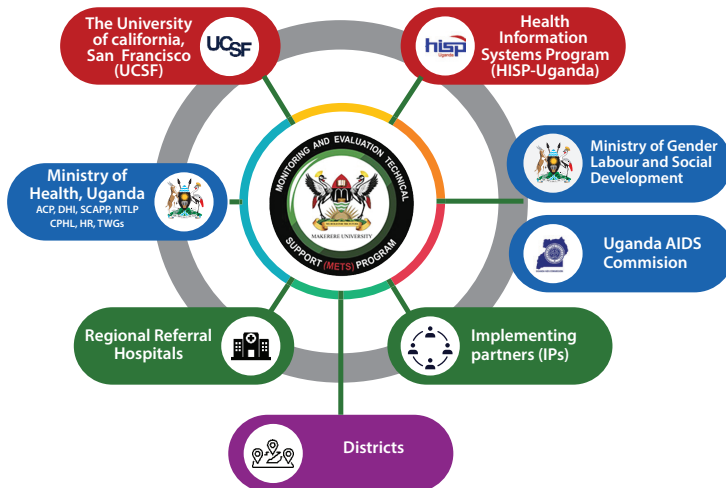
Within the MoH, METS collaborates with the different departments, including the AIDS Control Program (ACP), Division of Health Information (DHI), Standards, Compliance Accreditation and Patient Protection (SCAPP), National Tuberculosis Leprosy Protection (NTLP) & Central Public Health Laboratory (CPHL), Department of Human Resources (HR), Surveillance and Pharmacy.

METS' Key Achievements in 2023

Led National and PEPFAR reporting	Maintained the PEPFAR in-country reporting system (PIRS) and created the weekly surge report for over 2000 facilities subsequently generating 52 weekly surge reports
Supported National policy development	Supported the development of policy implementation frameworks for the national digital health strategy.
Advanced Digitalization of Healthcare	Rolled out electronic medical records (EMRs) to over 2600 ART facilities with an overall coverage of 74% countrywide.
National HMIS tools	Led the review, revision, printing, and distribution of National HMIS tools to all facilities providing HIV and TB care countrywide.
Deployed Artificial Intelligence to improve healthcare	Developed and deployed machine learning models for deduplication of client records, predicting drug resistance, and client loss-to-followup.

Scaled HIV Case-Based Surveillance	Rolled out HIV Case-Based surveillance to over 300 facilities. Supported the development of the national HIV CBS guidelines and a dashboard to improve data use.
Strengthened National digital health infrastructure	Coordinated centralized procurement and distribution of ICT hardware including data capture equipment, connectivity equipment, as well as solar kits, to support the digitalization of healthcare.
Accelerated HIS interoperability	Strengthened interoperability across various health information systems, within and across facilities, to improve access to data.
Supported National program assessments	Conducted 10 data and service quality assessments (D/SQA) for HIV and TB programs and an evaluation to assess the impact of the national TB Preventive Therapy (TPT) program.
Strengthened RRH capacity	Supported capacity building for 8 RRHs in governance, leadership, and management, as well as health information systems and quality improvement for HIV and TB Services .

This report highlights the achievements under each objective and sheds light on the challenges encountered and the improvement plans. These milestones are showcased in 6 thematic areas:

1. Support to national and PEPFAR program monitoring & evaluation for TB, HIV, and related conditions
2. Support for implementation of the National Digital Health Strategy
3. Improvement of National Disease Surveillance Systems
4. Improvement of the Quality of HIV and TB services
5. Strengthening health systems & leveraging partnerships
6. Sharing program experiences and Learnings

1. Supporting National and PEPFAR Program Monitoring & Evaluation for TB, HIV, and Related Conditions

National and PEPFAR Reporting

Effective October 1, 2021, METS assumed the lead role in the interagency PEPFAR reporting function. The program designed the PEPFAR In-country Reporting System (PIRS), allowing the generation of additional PEPFAR data not captured within the National HMIS. Additionally, METS created an automated online weekly surge report, with over 2,450 health facilities reporting on key indicators for HTS, VMMC, CxCa, PMTCT, TB, ART, and viral load weekly. METS also supports the generation of weekly reports on continuity of treatment (CoT) and VMMC outputs. The program collaborates closely with the Strategic Information (SI) TWG, Strategic Information Technical Support (SITES) project, CDC, and Implementing Partners (IPs) to produce quarterly and weekly National and PEPFAR reports. Four quarterly National and PEPFAR reports and 52 weekly surge reports were generated. Surge reports provide real-time monitoring of key HIV indicators for corrective action by all PEPFAR implementing partners.

Dr. Simon Muhumuza presented results from the inter-agency DQAs for VMMC, HTS, CxCa, and PMTCT at the PEPFAR Data Review meeting for the April-June period held in September 2023

Review, Printing, and Distribution of HMIS Tools

METS supported the joint quantification, printing, and distribution of the approved Country Operational Plan (COP) HIV/TB priority HMIS tools.

Additionally, the program facilitated two meetings to review these HMIS tools mid-term. The purpose of the mid-term review was to update and integrate new programs into the HIV-TB HMIS tools, ensuring the inclusion of all relevant HIV-TB data elements in the revised HMIS summary reports. METS provided both financial and technical support for the HMIS tools review, and the tools are currently in the final stages of preparation for pilot testing. The program also supported the roll-out of the revised standard operating procedures (SOPs) for HMIS report compilation.

Cross-referencing HMIS tools allocated to the RRH

Improving data quality through regular assessments

METS supports the Ministry of Health (MOH) in conducting periodic Data Quality Assessments (DQAs) to ensure high-quality data is being reported. The assessments evaluate data validity, accuracy, completeness, confidentiality, integrity, reliability, and timeliness. In 2022, METS coordinated eight services and data quality assessments (S/DQA) across various program areas including cervical cancer, PMTCT, recent infection surveillance, GBV, key populations, and PrEP, DREAMS, OVC, and VMMC. Findings showed marked improvement in data quality, but persistent challenges such as under-reporting and over-reporting for specific indicators. METS continues to work with district teams and implementing partners to monitor and implement site-specific action plans.

Overall score — 89.9%
M&E Structure — 94.1%
Understanding of Indicators — 97.2%
Data Management Processes — 80.7%
Use of data for decision making — 89.7%
Availability of HMIS Tools — 96.3%

Cervical cancer SQA feedback session, October 2023
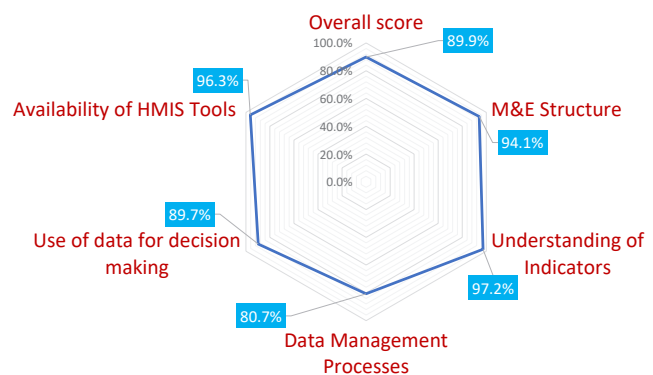
Average scores from the M&E systems assessment from the HTS DQA, 2023

KP/PP Data Quality Improvement

As part of our ongoing efforts to improve data use, METS implements periodic data quality audits to ensure adherence to data quality standards in the KP tracker system. This year, our data science team conducted a comprehensive data quality analysis of 2,266,227 client records from 1142 facilities. The team identified some anomalies across specific variables including population categories, gender, age, HIV status, phone numbers, and client registration date. Based on these findings, the following recommendations have been instituted as corrective action.

- **Data validation:** METS system developers are currently implementing a series of validation checks to prevent any breaches of the established logic within the system. These validations serve a dual purpose of diminishing data input errors while guaranteeing the precision and comprehensiveness of data.
- **Capacity development:** Some of the data quality issues that were identified pointed to capacity gaps among the data entry personnel. METS is working with implementing partners to design and implement capacity development programs aimed at enhancing proficiency in data entry and quality control. This initiative will ensure a consistent and standardized approach to data collection and management with the KP tracker system.

To further consolidate data quality improvement efforts in the KP/PP tracker system, METS worked with Data. Fi and USAID/SITES to integrate the Key Populations Identifier Code (KPIC), a web-based application that creates unique identifiers. This application will complement efforts to manage the duplication of records in the system. Key to note is that the tracker is undergoing a system upgrade to align with the National Health Management Information System (HMIS). Overall, the upgrade will enable efficient data management, and improve performance and reliability.

2. Supporting implementation of the National Digital Health Strategy

Development of National Policy Implementation Frameworks

METS supports the Ministry of Health (MOH) in developing policies and guidelines essential for the national digital transformation of healthcare. Some of these documents, including the Health Information Exchange and Interoperability guidelines, and the Health Data Protection, Privacy, and Confidentiality guidelines, have gained approval from the national technical committee.

Additionally, METS supported the development of the national client registry and contributed to developing a procurement guide for Health Information Systems hardware.

Panel discussion at the launch of the Health Information and Digital Health Strategic Plan. NB: Dr. Sarah Byakika (2nd L) and Ray Ransom are members of the METS Steering Committee

Dr. Diana Atwine, Permanent Secretary MoH, was joined by stakeholders during the launch of the Health Information and Digital Health Strategic Plan at Speke Resort, Munyonyo, in May 2023.

Procurement and distribution of Health Information Systems (HIS) hardware

Through centralized procurement and distribution of ICT hardware to health facilities, the program continued to support the rollout of EMR systems. The hardware includes data capture devices such as tablets, computers, and smartphones, as well as networking devices like routers, switches, and access points. Servers are also included to host the systems, along with power solutions in solar kits. This equipment is distributed through partner organizations that provide site-level installation and maintenance services. To facilitate equipment tracking and management, METS developed an IT Asset Management System (ITAMS), built on the DHIS2 platform, capturing data on hardware procured, allocated, and distributed as well as maintenance and custody status up until the final consumer.

Handover of network equipment to Staff from Arua Regional Referral Hospital

Enhancing the ICT skills of users

To enhance the ICT capacity of healthcare workers, the program supported training programs at 8 RRHs through the 'Building Uganda Health Informatics Capacity (BUHIC)' initiative. Additionally, in collaboration with HISP and MoH, an online course on ICT for healthcare workers has been developed. However, there remains a significant gap in ICT infrastructure nationwide, particularly the lack of internet connectivity, as well as the skills required for installation, maintenance, and effective use of the equipment. METS will continue to advocate for infrastructure improvements by collaborating with the Ministry of ICT and NITA-U to address internet connectivity gaps. Furthermore, partnerships with the Global Fund and JHPIEGO will be pursued to secure additional funding for hardware procurement

Digital Information Systems Development & Maintenance
Roll out of Electronic Medical Records (EMR)
METS supported the development of a comprehensive Electronic Medical Record (UgandaEMR+) with an expanded scope beyond HIV and TB. The new version (UgandaEMR 4. X) was presented to MOH and features an improved user interface, seamless data exchange capabilities, artificial intelligence, and machine learning. The figure below illustrates the contributory effect of centralized hardware distribution on EMR coverage, which started in 2021.

Sept 2021   Sept 2022 for 1,965 sites   Sept 2023 for 2,689 sites
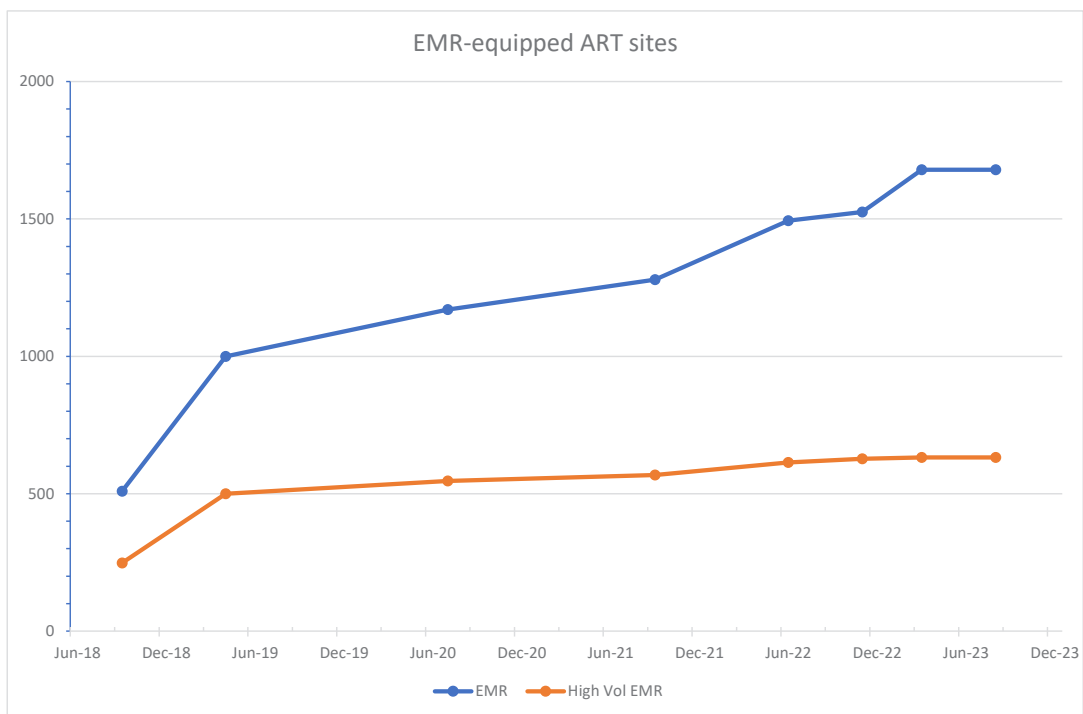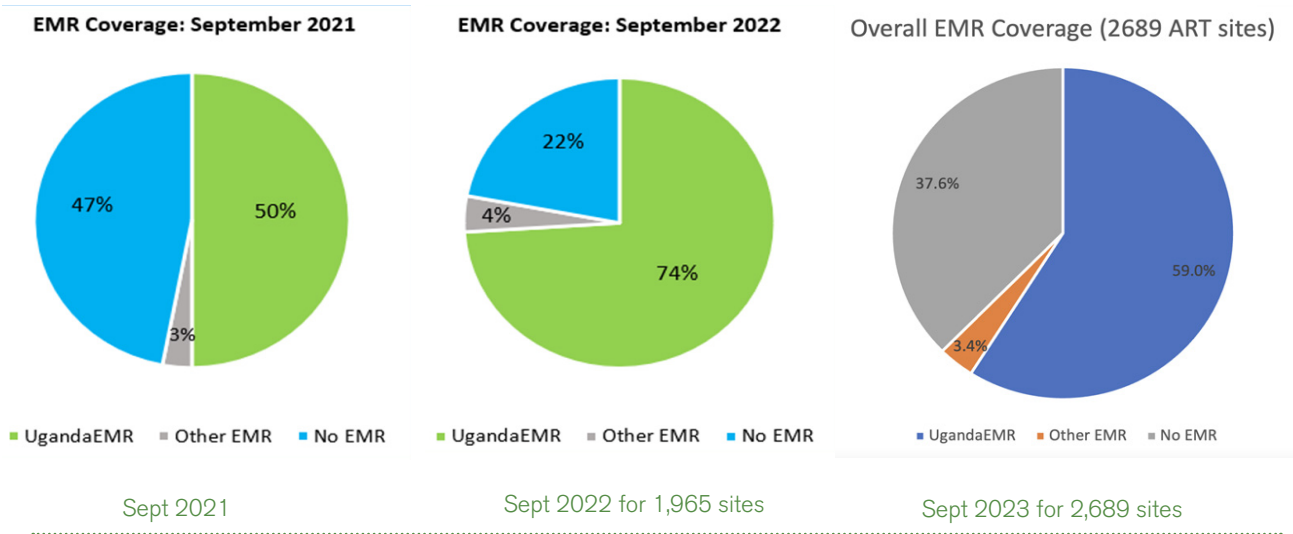
The centralized procurements have aided increase in EMR coverage at health facilities

Enabling Systems Interoperability

METS is working with MOH and stakeholders to ensure the various health information systems can 'communicate' as they support patient care, laboratory services, supply chain management, disease surveillance, and program management. Once completed, clients can access seamless services across sites and receive laboratory results in time, while the program will have better quality data for decision making thus improving efficiency.
Some of the current use cases for Health Information Exchange (HIE) include

ART Access HIE: This solution supports the exchange of information between the Community Retail Pharmacy Drug Distribution Points (CRPDDP) sites (Pharmacies attached to facilities) system (ART Access) and the Facility EMR to solve challenges associated with paper-based data collection. The exchange transmits patient treatment details from UgandaEMR to the ART Access and also supports community pharmacy data management.

Viral Load HIE: The Viral Load (VL) exchange supports VL test turn-around time. The facility EMR sends a test request to the central public health laboratory system. Once the results are available, the facility submits a request for the results and these are transmitted back to the patient record in the EMR. This exchange eliminates the need for manual entry of laboratory test requests to the central health laboratory system. The retrospective entry of Viral load results in the EMR since data is automatically synchronized between the two systems. The exchange is operational in over 1000 sites countrywide.

UgandaEMR and ALIS: EMRs and LIS are known system types that support the management of patient medical records and laboratory investigations. At the facility level, the existence of the two siloed LIS and EMR called for an integration between the two systems. UgandaEMR sends test requests to ALIS and the ALIS system sends back test results. This HIE will be implemented in the majority of the high-volume facilities with hubs as the priority sites.

Client Registry Integration: METS integrated UgandEMR with the national client registry, a system dedicated to the unique identification of patients. This registry was developed by MoH and has been piloted in over 70 facilities (Kampala and Greater Masaka) where UgandaEMR has successfully synchronized patient demographics and identification data to the client registry. This has been implemented in over 70 sites.

UgandaEMR and EAFYA: UgandaEMR has been integrated with EAFYA, one of the systems used in the outpatient clinics at Regional Referral Hospitals. This has been successfully integrated to share data between the two systems. This will be implemented at all RRHs where the systems co-exist.

Data Warehousing: In collaboration with the Ministry of Health, METS has taken steps toward addressing the challenges in healthcare data management. The MoH faces a complex landscape, with contrasting systems storing health data across multiple formats and locations. This challenge of a centralized data repository presents obstacles to efficient data access and analysis, urging the Ministry to seek solutions.

To overcome these challenges, the Ministry is implementing a robust data warehousing solution. This visionary project aims to establish a centralized data source, facilitating streamlined data storage, accessibility, and analysis for enhanced decision-making.

METS has played a significant role by providing technical support to the MoH in the design and implementation of this Data Warehouse. The support encompasses designing the architecture, creating pipelines, formulating database models, and crafting Extract, Transform, and Load (ETL) scripts. Furthermore, METS is set to aid in developing data analysis tools, such as intuitive dashboards, crucial for programmatic support and comprehensive data visualization.

CDC, JHPIEGO, METS visited MoH to inspect data center sites proposed for data warehouse

Moving forward, the focus is on the following key initiatives:

1. Implementation of Designed Architecture: The goal is to operationalize the proposed architecture and transform it into a fully functional data warehouse.
2. Pipeline Design for Data Transmission: Designing pipelines to ensure a seamless inflow of data from various sources, including community health information systems, into the centralized warehouse.
3. Development of Dashboards: Creating user-friendly dashboards that offer robust visualization and analysis capabilities, empowering stakeholders to derive actionable insights from the data.

The collaborative efforts between METS and the MoH signify a significant step forward in modernizing healthcare data management practices. This initiative promises to revolutionize data accessibility and utilization, fostering more informed decision-making and improving healthcare outcomes.

Key and Priority Populations Tracker System

Key and Priority Populations (KP/PP) are disproportionately impacted by the HIV epidemic, often facing criminalization, social marginalization, and human rights abuses that heighten their vulnerability to HIV. In Uganda, KP/PP encompasses fisherfolk, truckers, uniformed forces, and immigrant workers. The Ministry of Health is implementing targeted services to improve access to services while minimizing stigma for these populations.

KP/PrEP Tracker Training for CSOs and Drop-in Centers

The Key and Priority Population (KP/PP) Combination Prevention Tracker monitors prevention and treatment cascades within KP/PP populations. The tracker captures various HIV prevention and treatment services, such as ART, PrEP, viral load, lubricants, condoms, alcohol, drug harm-reduction interventions, and risk-

reduction counseling, enabling the monitoring of intervention layering per client. After data entry, the tracker generates PrEP and clinical cascades, disaggregated by KP/PP category, age, and service delivery point for the specified period and organization unit. The tracker aggregates data based on the organization's unit hierarchy and implementing mechanisms, with the capability to capture GIS coordinates of service delivery points.

The tracker currently hosts 956,476 and 946,741 KP and PP records, respectively. This year, METS collaborated with the Infectious Diseases Institute (IDI) to train users from Civil Society Organizations (CSOs) and Drop-in Centres (DIC) on data management, reporting, and information security.

Transitioning the RASS Dashboard into a Business Intelligence Tool

The Real-Time ARV Stock Status (RASS) dashboard operates on the concept of simplified reporting via Short Text Messaging Services (SMS) using mobile phones. Health facilities submit weekly reports on ARV stock status updates through the integrated mTrac and DHIS2 platforms. RASS has demonstrated considerable results in addressing commodity tracking challenges. Notably, the system's real-time monitoring capabilities, data-driven decision-making, and streamlined supply chain management have increased commodity availability, reduced stockouts, and improved patient care. METS is working with UCSF to transform the system into a Business Intelligence tool using a PowerBI-based dashboard.

This year, METS, in collaboration with the Ministry of Health (MOH) and partners, hosted a delegation from CDC Kenya during their benchmarking visit to Uganda. The purpose of the visit was to gain insight into Uganda's implementation experiences and identify best practices for the potential adaptation of RASS in Kenya. During the visit, the team examined the country's commodity reporting landscape and collaborative mechanisms. Led by the MOH, the delegation visited several health facilities, acquiring practical insights into commodity management tools, national data repositories, and user experiences.


Kenyan delegation and the METS team ahead of regional site visits

Accelerating Data Use for Decision Making: Trackers and Interactive Dashboards

Trackers and interactive dashboards play a vital role in healthcare by visually presenting complex data for quick decision-making. They facilitate real-time monitoring, support clinical decision-making, and contribute to quality improvement. Below is a summary of the dashboards developed and maintained by METS to support program management at national and sub-national levels.

- Viral Load Dashboard: This dashboard visualizes aggregated viral load data and key performance indicators. The system also serves as a results return portal for centralized testing.

▪ Early Infant Diagnosis Dashboard: The Early Infant Diagnosis (EID) dashboard monitors key service delivery indicators for HIV-exposed infants.

▪ Quality Improvement Database: The database tracks facility-level implementation of quality improvement projects and provides real-time data analytics for strategic decision-making.

▪ Electronic Case-Based Surveillance System: The Electronic Case-Based Surveillance System (eCBSS) tracks patients across the TB continuum of care. METS coordinated the rollout of eCBSS and 447 facilities have been enrolled to date.

▪ DREAMS, Orphans, and Vulnerable Children (OVC) Tracker: The system tracks services offered to adolescent girls and young women as well as orphans and vulnerable children.
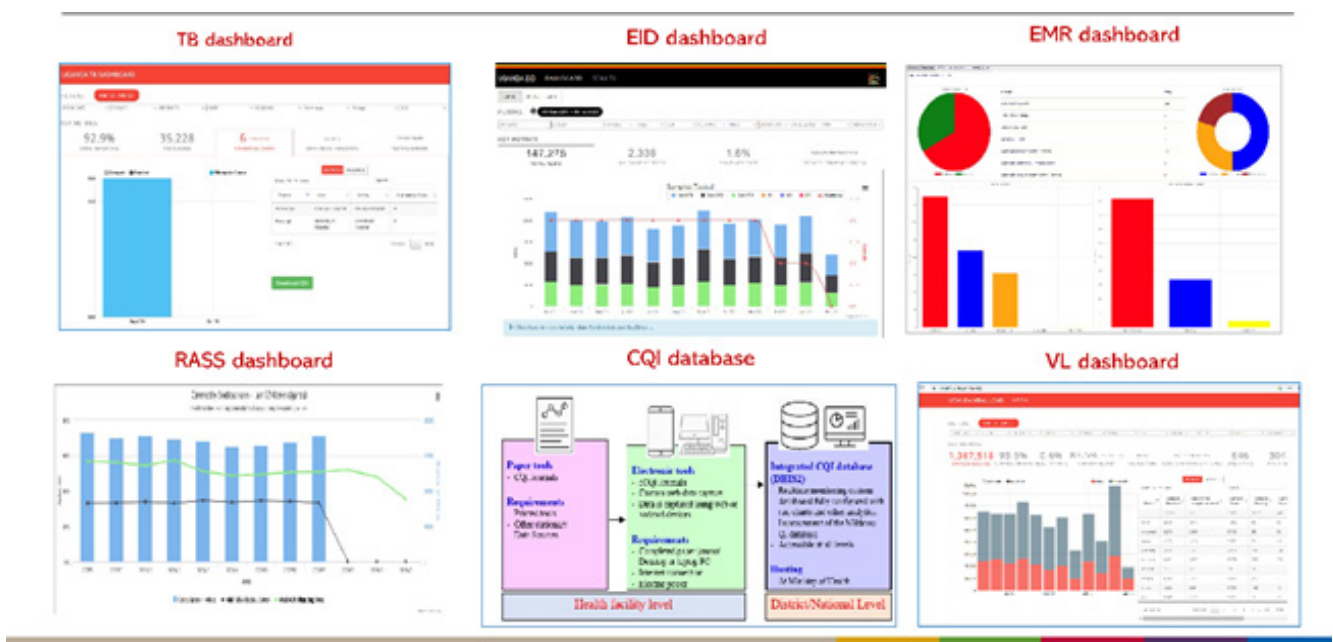
Data Visualization Dashboards

Using Artificial Intelligence for Improved Healthcare

The METS data science department aims to harness the power of Artificial Intelligence (AI) technologies and other data science tools to enhance healthcare delivery in Uganda. The potential of AI to revolutionize various sectors, including healthcare, inspired us to explore its capabilities and create intelligent clinical decision support systems that leverage these new technologies.

To date, the program has embarked on several data science projects, including using machine learning techniques to develop an algorithm for identifying duplicated clients within treatment cohort data in healthcare facilities with functional EMRs. Addressing the issue of duplicated clients has posed a significant challenge for HIV implementation programs due to the absence of a national health unique identifier. We are confident that the developed algorithm will mitigate this problem.

We also started the development of two machine learning models, one that can identify HIV clients who are likely to develop drug resistance or who are unlikely to achieve viral suppression, and the other aimed at identifying clients at high risk of disengaging from care. Our goal is to assess whether machine learning algorithms applied to routinely collected treatment data can effectively identify clients who may miss their next scheduled clinic visit and remain virologically unsuppressed during their next HIV viral load test. This approach will enable us to implement targeted interventions for these clients.

3. Improving National Disease Surveillance Systems

Roll out of HIV Case-Based Surveillance

METS supports the implementation of HIV Case-Based Surveillance (CBS), which tracks HIV-positive patients across the continuum of care to monitor sentinel events such as new diagnoses, linkage to care, disease progression, treatment outcomes, retention and survival, and program effectiveness. In 2022, METS helped develop a dashboard that visualizes CBS surveillance indicators and automates patient data extraction. Technical support was also provided for national guideline development, health worker training, site activation, database development, and data quality improvement.
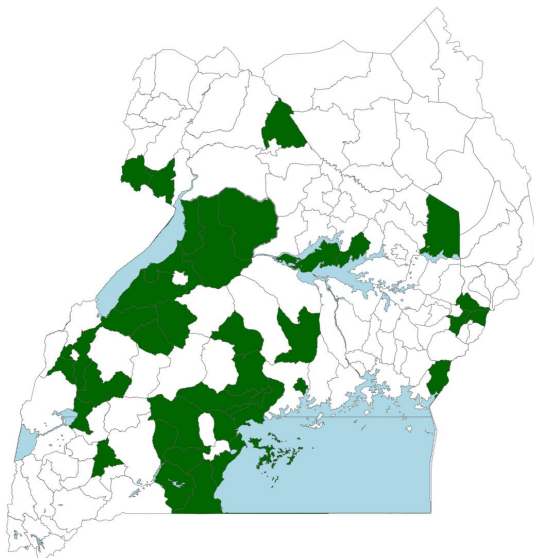

Sites implementing HIV CBS (Nov 2023)
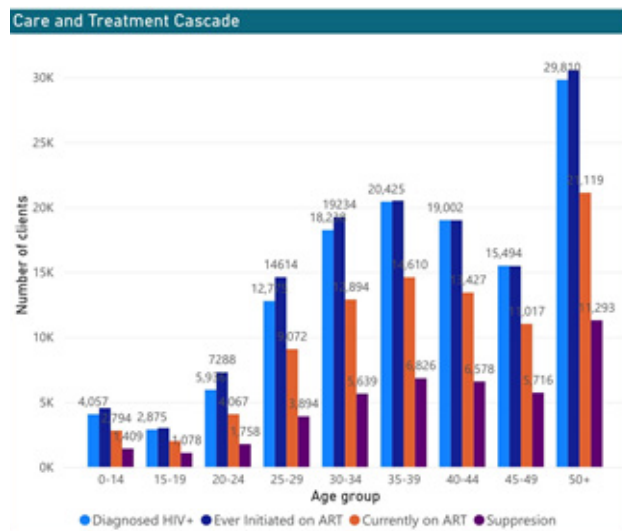
CBS dashboard extract showing HIV care and treatment cascade (Dec 2023)
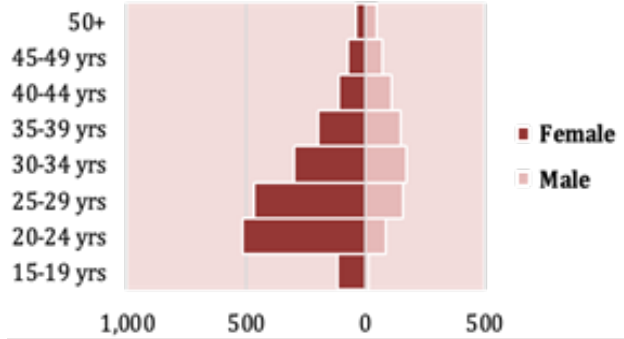
Expanding HIV Recency Infection Surveillance

The program also supports HIV recent infection surveillance to track epidemiological trends in newly diagnosed cases. Implemented recency HIV infection surveillance in about 1104 facilities nationally. This has enabled 'hot spot' mapping of clusters of recent infections and will guide the public health response strategy based on patterns of hot spots. Notably, most recent infections are among young females aged 15-29 years. Moving forward, METS will support MOH in implementing the public health response at national & sub-national levels. This will enhance HIV prevention efforts in the target population groups and geographical areas. To date, 214 sites have been activated to implement recent infection surveillance.
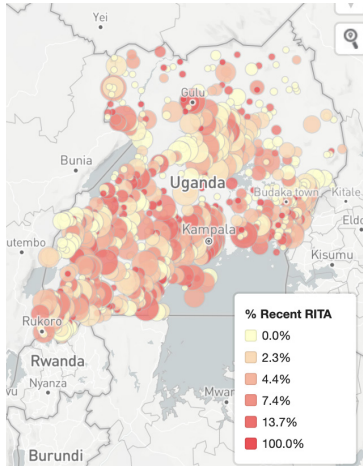
Hot spot mapping: Sept 2023

Recent HIV infections by age and gender

Supporting National Integrated Disease Surveillance

Acute Febrile Illness Surveillance

METS in collaboration with IDI and Baylor continued to support the implementation of Acute Febrile Illness (AFI) surveillance at Jinja Regional Referral Hospital. The program conducted support supervision visits with a focus on information systems and Arbovirus testing. With the commencement of arbovirus testing at UVRI and with support from IDI, the CDC recommended scaling up to at least two additional sites of Kabale and Arua. The table below shows AFI surveillance performance as of September 2023.

Total enrolled adults

Total enrolled adults
Jinja Regional Referral Hospital -
This year, Last year

152

Total enrolled adolscents

Total enrolled adolscents
Jinja Regional Referral Hospital -
This year, Last year

9

Total enrolled pediatric

Total enrolled paediatrics
Jinja Regional Referral Hospital -
This year, Last year

383

Number of paediatrics enrolled from OPD and IPD by Sex

Jinja Regional Referral Hospital		
	2022	2023
# of paediatrics enrolled from OPD - Male	22	71
# of paediatrics enrolled from OPD - Female	15	83
# of paediatrics enrolled from IPD - Male	29	66
# of paediatrics enrolled from IPD - Female	31	66
Total	97	286

Number of adults enrolled from OPD and IPD by Sex

Jinja Regional Referral Hospital			
	2022	2023	Total
# of adults enrolled from OPD - Male	3	9	12
# of adults enrolled from OPD - Female	5	10	15
# of adults enrolled from IPD - Male	19	50	69
# of adults enrolled from IPD - Female	20	36	56
Total	47	105	152

Implementation of integrated surveillance for SARI, ILI, AFI, and SARS-COV-2 variants

METS finalized a combined protocol for the surveillance of integrated AFI/SARI/ILI/SARS-COV-2 molecular surveillance paving the way for the implementation of SARI-ILI/ SARS-COV-2 surveillance at seven sites including Nsambya Hospital, Kibuli Muslim hospital, Mukono Hospital, Entebbe RRH, Kiswa HCIII, Kitebi HCIII, and Kawaala HCIV. Furthermore, in collaboration with Baylor Uganda and UVRI, METS set up the information system for SARI-ILI surveillance. Data is transmitted using the DHIS2 and eIDSR and is hosted at the MoH. To date, 48 clients have enrolled. Working with UVRI, Baylor, and IDI, METS developed a joint work plan for implementing Pan-respiratory disease surveillance within the Kampala Metropolitan Area (Kampala, Wakiso, and Mukono). The work plan has been submitted to NISS partners for harmonization and approval.

Dr. Allan Muruta, the Assistant Commissioner of Health Services, met with CDC, MakSPH, and the METS team for a program update on disease surveillance and response. He applauded METS for their excellent work on surveillance, and the remarkable progress made in the implementation of EMR and information systems.

Regional Health Information Exchange

The Regional Health Information Exchange (RHIE) initiative unites Uganda, Kenya, Tanzania, Rwanda, and the Democratic Republic of Congo (DRC), advancing the sharing of health-related information to strengthen epidemic intelligence and Early Warning, Alert, and Response Systems (EWARS). In 2005, the Ugandan government adopted the International Health Regulations (IHR), a global legal agreement encompassing 196 countries, including all WHO member states. The IHR mandates countries to detect, assess, and respond to public health events. Implementing the IHR is crucial for preventing and containing the spread of diseases across and within national borders. RHIE contributes to IHR implementation within the East African region through cross-border surveillance and points of entry, facilitating the early detection of public health threats. The cross-border health initiative aims to strengthen regional partnerships and promote data sharing.

This year, the cross-border health technical working committee convened a coordination and planning meeting in Nairobi, Kenya, focusing on digital solutions for collecting, using, and sharing health data. The committee also deliberated on potential solutions to key programmatic obstacles, including the need for standardized indicators, data-sharing policies, and frameworks. These issues and site-level assessments will be prioritized to support the effective implementation of cross-border health initiatives.

Cross-Border Data Sharing Initiative

Background: LHSS-EA is working with EAC to support the digitization and interoperability of health information systems to aid the monitoring of cross-border and mobile populations and facilitate continuity of care. The activity works with sites along the Kenya/Uganda borders in Busia, Sio port, and Malaba by leveraging the existing Electronic medical records (EMR) at the border sites to embed a cross-border mobility screening tool and to implement interoperability. Below are some highlights of the progress made by the project.

This partnership will aid health workers in tracking people living with HIV seeking treatment across borders while identifying unique characteristics of their behavior that would inform changes to standard HIV care. More countries in the region are to be enrolled in the partnership and data hosted at the EAC and the respective EMRs will use FHIR exchange to send data to the server.

Ugandan team on cross boarder health (MoH,METS, SITES, IPs and DHOs from Busia, Namayingo and Tororo) during the Uganda/Kenya learning form held in Busia-Kenya, October 2023

Field activities during the cross boarder initiative meet up

4. Improving the Quality of HIV and TB Services

Dr. Alice Namale discussed Implementing Partners' impact on QI implementation during the 9th QI Conference in Dec 2022.

The Ministry of Health has made significant progress in enhancing the quality of health services. Current national Quality Improvement (QI) strategies involve strengthening organizational structures, leadership, and accountability, improving compliance with health sector standards, and enhancing client-centered care and safety in healthcare practice. METS actively supports the development of national QI guidelines and standards. The program also assists the Ministry of Health in identifying QI priorities and implementing national QI strategies. Furthermore, the program plays a role in organizing national QI learning sessions, such as the annual QI conference.

At sub-national levels, METS, in collaboration with the MOH, adopts a multi-pronged capacity-building model for designing and implementing QI collaboratives. This model involves analyzing program performance data to identify improvement opportunities, co-developing coaching packages, conducting site-level mentorship and coaching, and organizing regional-level learning events. The collaboratives culminate in the synthesis and dissemination of program-specific national QI change packages. This year, METS supported the MOH in implementing four QI collaboratives as follows:

The TB/HIV QI Collaborative

Analysis of facility data showed improvements in TB screening at the Out-patient Department (OPD), keeping appointments, medicine refills, and treatment initiation with a documented treatment outcome in the past six months. The findings of the collaborative were presented at the 'World Conference on Lung Health 2023' for global learning.

Screenshot of the developed package

Dr. Flavia Nakanwagi presenting at The Union conference on lung health in Paris in November 2023

PrEP QI Collaborative

An assessment of program performance revealed gaps in several key performance indicators, including PrEP eligibility screening, PrEP initiation for eligible clients, appointment keeping, and documentation of client follow-up outcomes. The mentorship teams also identified challenges related to a failure to adhere to the program implementation roadmap and inadequate knowledge of QI approaches among Civil Society organizations at the forefront of service delivery. To address these gaps, the mentorship teams recommended the implementation of regional action plans with regular site-level follow-up.

DREAMS QI Collaborative

The collaborative leverages interventions in the DREAMS minimum package to enhance the prevention of HIV and unwanted pregnancies. It aims at increasing circumcision of male partners of Adolescent Girls and Young Women (AGYW), PrEP initiation among eligible AGYW, and access to family planning. Data indicates that the collaborative positively impacted PrEP and Family Planning uptake among AGYW.

PMTCT QI Collaborative

Overall, the collaborative assessed the utility of the audit tools to ensure that all HIV-positive pregnant women and mother-infant pairs were accounted for and had their statuses updated. The teams also assessed the completeness of the group antenatal registers during pregnancy and lactation periods. Findings indicated low utilization of the PMTCT audit tool and low reporting rates across most key performance indicators.

Cervical Cancer Integration into HIV Services

Cervical cancer ranks as the 4th most common cancer among women globally, and women living with HIV (WLHIV) are six times more likely to develop cervical cancer (CxCa) disease. Uganda bears one of the highest cervical cancer burdens, with an incidence rate of 54.8 cases per 100,000 women. In January 2021, the Ministry of Health (MOH) initiated a nationwide CxCa screening and management program at 605 facilities, targeting WLHIV aged 25 to 49 years.

The program's goal is to reduce the CxCa incidence rate by preventing the progression of pre-cancer cases to cervical cancer disease through early identification and treatment of pre-cancerous lesions. The program has achieved notable success, conducting 282,566 screenings, with 74% of those testing positive initiating treatment as of June 2022.

Overall CxCa National Cascade Performance FY20Q1-FY23Q4 (3YR performance)

136% of WLHIV targeted screened for CxCa — 738,265 of 543,151 WLHIV targeted have been screened in 3yrs

7% CxCa positive — 46,683 identified CxCa_Positive

78% CxCa_Tx — 38,569 treated for precancer and suspicious lesions
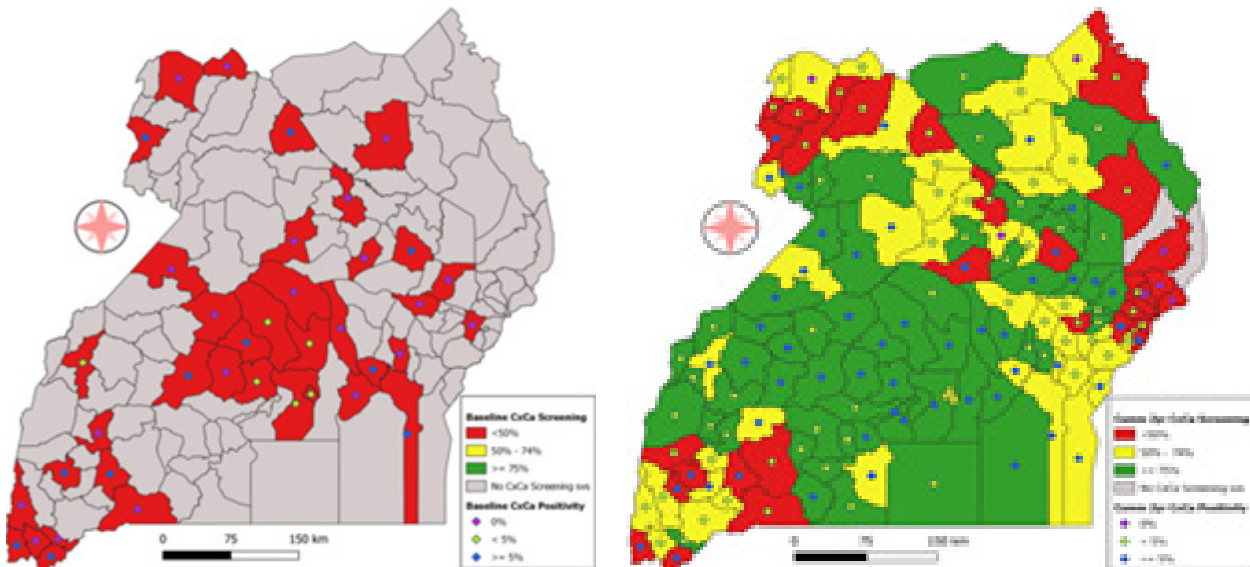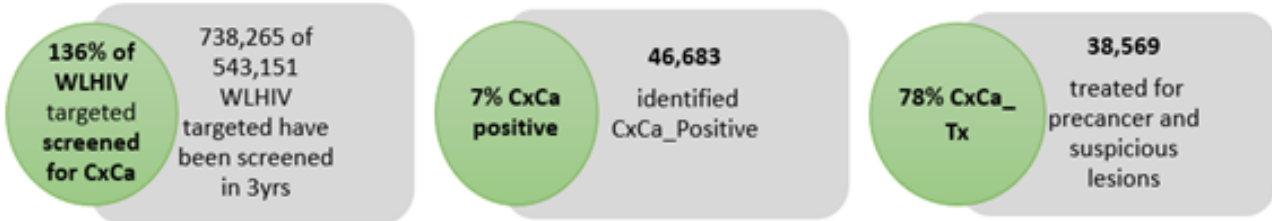
METS supports the MOH by developing and printing standards, guidelines, Monitoring and Evaluation tools, and providing training for the implementation of these new tools at sub-national levels. To ensure effective stakeholder engagement, METS coordinates weekly meetings at the national level to monitor implementation progress and clarify key program performance metrics, including quality assurance and commodity management. Additionally, METS provides support to the national CxCa Technical Working Group and assists in PEPFAR reporting.

Non-Communicable Diseases Integration into HIV Care

Research indicates several potential advantages associated with integrating HIV and Non-Communicable Disease (NCD) services. These benefits include improved patient retention, reduced appointment frequency, enhanced resource-sharing, and decreased social stigma. Additionally, evidence suggests that People Living with HIV (PLHIV) who have comorbid NCDs and receive integrated services achieve comparable or even higher levels of HIV control compared to those without comorbidities. Integrating the management and control of NCDs into existing HIV infrastructure offers a strategic opportunity to enhance health outcomes without duplicating health service streams.

Uganda employed a phased approach to roll out HIV-NCD service integration nationally. Several months into the implementation pilot, METS conducted a follow-up validation study to assess the level of NCD service integration into HIV care and determine site-level performance across the cascade indicators for the targeted NCD conditions. The team also documented best practices and challenges to inform the program's national rollout.

HIV Testing Services

METS supported the scale-up of the HIV Testing Services (HTS) module of the UgandaEMR at 286 facilities countrywide. The module will facilitate reporting and overall HTS data quality improvement. METS also provided technical support for the HMIS mid-term review, maintenance of the HTS index testing assessment system, and quarterly PEPFAR reporting. Going forward, METS will support the alignment of data elements in the HMIS and refine the HTS patient dashboard to reflect the key program performance indicators.

Voluntary Medical Male Circumcision

METS supports quality improvement for Voluntary Medical Male Circumcision (VMMC) services through facility-level mentorship programs. To facilitate daily reporting, METS developed the VMMC Nerve Centre, a module within the PEPFAR In-country Reporting System (PIRS). This web-based Nerve Centre is accessible on mobile devices, allowing for offline data entry. The system is connected to the VMMC dashboard, providing health providers and program managers with real-time access to program performance metrics. The system was piloted in 16 facilities. Throughout the year, METS conducted two mentorship programs aimed at assessing the quality of VMMC services and establishing action plans for ongoing improvements. METS also collected comprehensive data on adverse events and offered training sessions to facility teams on effectively utilizing and troubleshooting the Nerve Centre module for reporting.

Through CQI, the percentage of sites that meet MOH quality of care standards has improved across all thematic areas from 3% in 2016 to 41% in 2023. METS will work with IPs to sustain the current QI efforts through targeted and intensive QI support for sites with recurrent quality gaps.
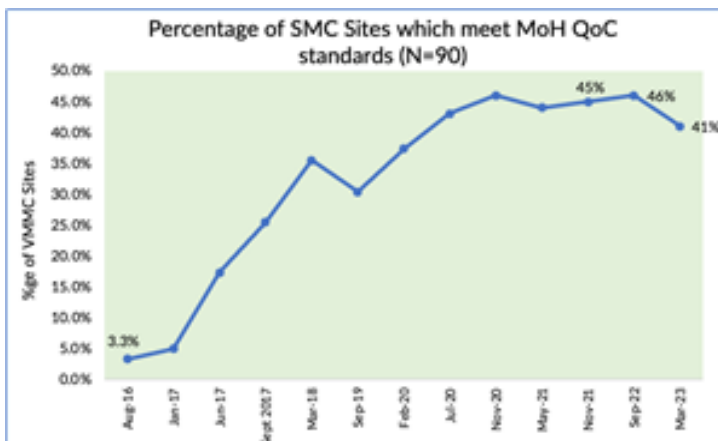
Onsite mentorship performance 2016-2023

A mentorship team observing a circumcision procedure

Prevention of Mother-to-Child Transmission of HIV (PMTCT)

The 2019 PMTCT impact evaluation showed that 46% of mother-infant pairs receive MCH services at Health Centre IIs, most of which are not accredited for PMTCT implementation. This undermines the efforts to achieve eMTCT of HIV. METS supported a national assessment to determine the capacity of HCIIs to deliver PMTCT services. Findings from the assessment indicated that the majority of HCIIs provide antenatal services but the quality of service was suboptimal.

METS conducted a Data Quality Assessment at 165 facilities to verify the availability, accuracy, completeness, consistency, and sources of PMTCT data. The assessment also determined the progress of the implementation of action plans and viral load monitoring. Findings from the assessment showed that while there's a marked improvement in data management systems, variations in data were still evident at selected facilities. To support improvements, METS provided technical support to MoH in the initiation and rollout of the AP3 and global alliance program. METS provides M&E and QI to support the elimination of AIDS in children by 2023.

5. Strengthening Systems & Leveraging Partnerships

Decentralized HIV and TB Response: The Regional Referral Hospitals Progression Model

Globally, the lack of universal metrics limits the ability to measure outcomes of health system strengthening (HSS) efforts. To establish a connection between HSS initiatives and program outcomes at sub-national levels, METS collaborated with the Ministry of Health (MoH) to develop a Monitoring and Evaluation (M&E) framework to assess the capacity of the health systems at Regional Referral Hospitals (RRH). The framework builds on the six World Health Organization HSS building blocks and uses a Progression Model to measure HSS improvements using a four-point Likert scale. Results from the 2022 baseline assessment showed gaps in leadership and governance, supply chain, health information systems, and health workforce. METS continues to support the RRHs to address the identified gaps and support conducted to monitor improvements in health system capacity at the RRHs.
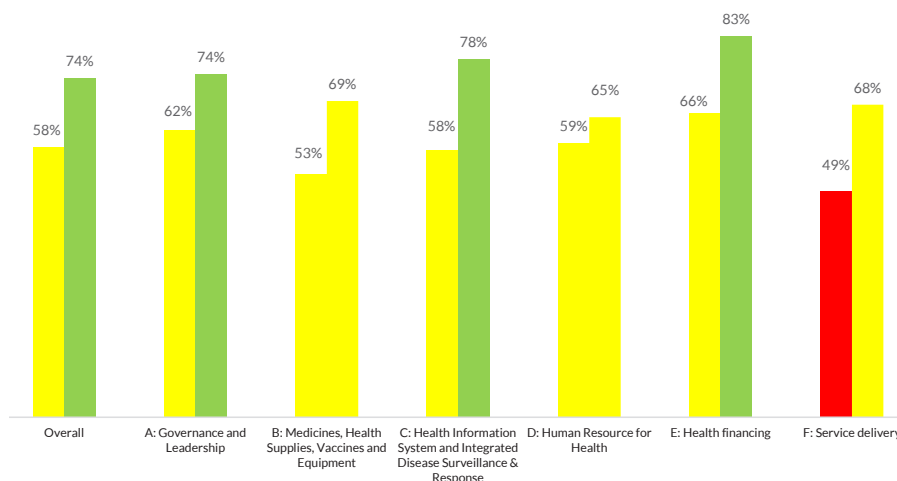
RRH health system capacity for the decentralized HIV response, by domain: 2022 vs 2023
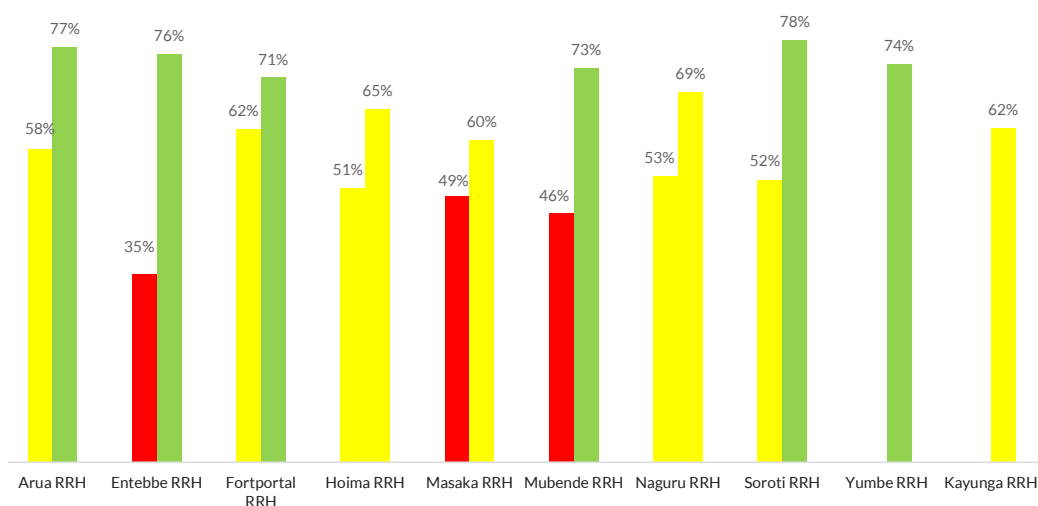
Health system capacity for delivering HIV and TB services at the 8 RRHs

6. Sharing Experiences and Learnings

Dr. Joseph Kabanda (CDC), Dr. Rachel King (UCSF), and Clare Ashaba (METS) during the evaluation protocol writing retreat for PMTCT G-ANC/PNC, YAPS, NCDs integration and Community DSD, August 2023

No Means No (NMN) project evaluation

This evaluation will assess whether the NMN program influences adolescent girls' knowledge, attitudes, and self-efficacy to prevent Sexual and Gender-Based Violence (SGBV) through a comparison of intervention and non-intervention districts, to establish how the NMN program referral system affected the uptake of support services for survivors of SGBV in the intervention districts and to explore the effect of meetings on the psychosocial well-being of SGBV survivors.

National Program Evaluations

The Centers for Disease Control and Prevention (CDC), Division of Global HIV/AIDS and TB (DGHT), has implemented a Country Monitoring and Accountability System (CMAS) aimed at identifying challenges associated with the rapid scale-up of complex PEPFAR/CDC programs. The CMAS initiative advocates for program evaluations to ensure accountability for PEPFAR investments. This initiative centers on guaranteeing the delivery of high-quality interventions and the proper management of financial and human resources. The evaluations will be implemented between October and December 2023. METS is collaborating with the MOH to design and implement the evaluation protocols.

National PMTCT Group Antenatal Care/ Postnatal Care Differentiated Service Delivery model, Uganda 2021-2023

To improve service delivery to pregnant and breastfeeding (PBF) AGYW, the MOH adopted the Group Antenatal/Postnatal (G-ANC/PNC) Differentiated Service Delivery (DSD) model of care to improve access and utilization of adolescent-youth friendly SRH and MCH services among mothers aged less than 25 years and their infants. This model seeks to reduce new infections among AGYW and ultimately improve maternal and infant health outcomes. PBF AGYW enrolled into the G-ANC/PNC model are organized into similar cohorts of 6-12 women at similar gestational age or infant age who visit the health center simultaneously. The cohort of ANC/PNC mothers actively participates in their own health assessments and discussions

led by trained peers and health workers. The evaluation will help to answer questions about the relevance, effectiveness, efficiency, impact, and sustainability of the G-ANC/PNC model within MNCH service delivery in Uganda.

Integrated Community Service Delivery Model (ICDM) for HIV and TB Care in Uganda

This innovative model supports households in addressing the barriers to; ART adherence, retention in care, VL suppression, and development of advanced HIV disease as well as barriers to integration and access to complementary HIV services including linkages to social livelihood programs and access to treatment literacy programs. The model ensures that all subpopulations (children, adolescents, pregnant and breastfeeding women) are mapped and grouped according to the villages they come from. Two or three villages together form a cell. It is this cell where both client-led and health worker-led clinical and social services are provided in the community including ART refills, ART adherence counseling, intensive adherence counseling for the non-suppressed clients, identification of Advanced HIV disease, screening for NCDS and TB symptoms as well as index client testing for HIV services. The model focuses on integrating health and social services, and the full participation and leadership of PLHIVs ultimately promotes client responsibility, self-care, and ownership of their treatment and health care towards achieving epidemic control.

Integrated Non-Communicable Disease (NCD) Implementation in Uganda

The findings of this assessment will inform national planning and implementation of targeted NCD prevention, treatment, and control activities in the HIV program for the achievement of program targets. In addition, findings will identify best practices, provide a basis for program and clinical practice improvement, resource allocation, strengthening policies for NCDs and HIV integration, and ultimately improve outcomes for PLHIV with NCDs.

Orientation of regional/IM care and treatment leads, physicians, M&E leads, and psychosocial specialists on national NCD integration into the HIV care program.

CDC-NCD TDY field visit to Namayumba HCIV in Wakiso District to assess Non-Communicable Diseases (NCD) integration into HIV care program implementation processes.

Young People and Adolescent Peer Support (YAPS) program in Uganda -Outcome Evaluation

The outcome evaluation aims to assess the effectiveness of the YAPs program in improving treatment outcomes among Young People and Adolescent Peers living with HIV (YAPLHIV). Specifically, the evaluation will aim at establishing the effect of the YAPs program on identification, linkage, and retention in the care of YAPLHIV. The evaluation will also establish whether the YAPs program has influenced viral load suppression among YAPLHIV.

METS Mid-Term Evaluation

Since October 2020, the MakSPH-METS program has been supporting the GoU's Capacity for Regionally centered and district-implemented HIV/TB programming through strengthening systems for electronic health information, CBS, M&E, and CQI. The program is taking steps to determine the extent to which it is on track to achieve its targets, identify implementation successes and challenges, and recommend improvement actions for adoption and scale-up. The Mid-Term Review (MTR) will address the following:

- To what extent has METS's "above-site" model/implementation approach for HIS activities resulted in meeting project outputs and outcomes? How efficient was the model?
- What were the main facilitators and barriers in project implementation to strengthen HIS at the site and above-site levels?
- To what extent did this model build the capacity of HIS and other systems sustainably? What are the lessons learned to inform future planning?

The MTR will also test assumptions in the results framework, and make the necessary adjustments. The findings will help the program consolidate the existing strengths and re-visit strategies, activities, and targets to address the identified gaps. The MTR will adopt a mixed-methods cross-sectional design with both quantitative and qualitative approaches at national and subnational levels. The evaluation protocol was approved by the Makerere University School of Public Health-Research and Ethics Committee (MakSPH-REC) and will be submitted to the CDC in January 2024.

International Conference Participation

Below are the abstracts that were presented at international conferences.

The Conference on Retroviruses and Opportunistic Infections (CROI):
- Lessons Learned Piloting the Integration of Non-Communicable Diseases (NCD) Screening and Treatment Services into Routine HIV Care in Uganda

AIDSImpact:
- Improving Quality and Safety of Voluntary Medical Male Circumcision (VMMC) Services in Uganda: Use of Data for Improved Outcomes
- Lessons Learned Piloting the Integration of Non-Communicable Diseases (NCD) Screening and Treatment Services into Routine HIV Care in Uganda

International Conference on AIDS and STIs in Africa (ICASA)
- Using Facility-Led Innovations to Improve Client Retention and Treatment Outcomes of TB/HIV Patients: Lessons from a National Collaborative in Uganda

The Union World Conference on Lung Health
- Improving TB/HIV clinical care outcomes through a National TB Quality Improvement Collaborative in Uganda: October 2021-December 2022

Captured conference moments
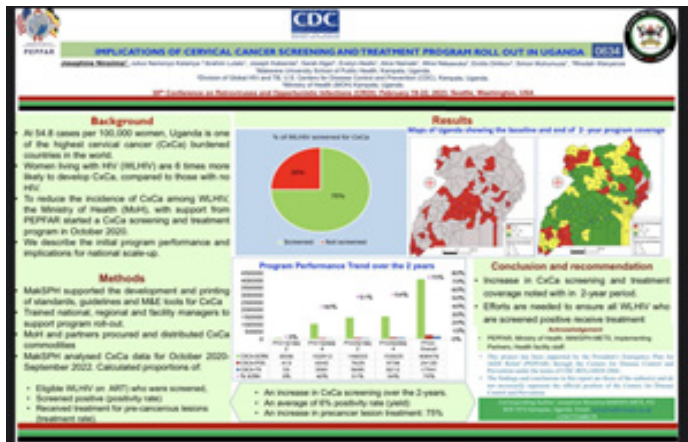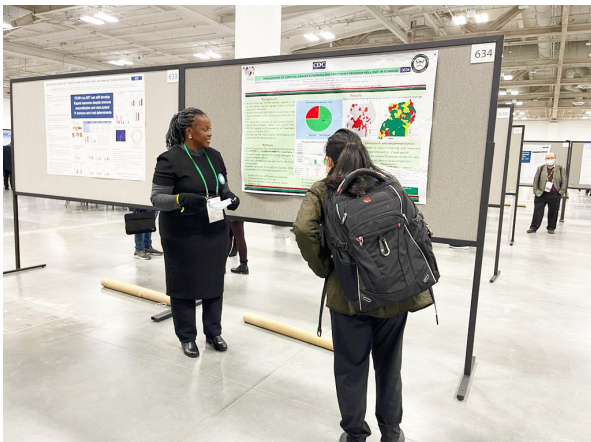
Poster presentation by Josephine Ninsiima for the 30th Conference on Retroviruses and Opportunistic Infections (CROI) held in February 2023 in Seattle Washington

DHIS2 Academy held in Dar es Salaam, Tanzania

METS team that represented at the Global OpenMRS conference held in Nigeria in July 2023

Participants who attended the DHIS2 Conference in Oslo, Norway

Jenkins Obbo presenting a poster on Improving Quality and Safety of Voluntary Medical Male Circumcision (VMMC) Services in Uganda: Use of Data for Improved Outcomes at the AIDS Impact conference, Stockholm, 2023

Evelyn Akello (2nd L) and Sharon Abowe (R) with Commissioner Sarah Byakika MOH-Ug (2nd R) and a colleague from Rwanda

Abstracts and manuscripts in draft

- Enhancing the Uptake of Oral HIV Pre-exposure Prophylaxis Services among Female Sex Workers in Uganda -Jenkins Tanga Obbo
- Lessons Learned Piloting the Integration of Non-Communicable Diseases (NCD) Screening and Treatment Services into Routine HIV Care in Uganda -Josephine Connie Ninsiima
- Improving Quality and Safety of Voluntary Medical Male Circumcision (VMMC) Services in Uganda: Use of Data for Improved Outcomes -Ibrahim Lutalo
- End-User Requirements and Uptake of the Uganda Electronic TB Case-Based Surveillance System -Mabel Nakawooya
- Using Supply Chain Real Time ARVs Stock Status Monitoring System (RASS) data to improve decision making for HIV programming in Ankole Sub Region -Naseef Mayanja
- Deduplication of Electronic Patient Data. The development of a patient matching algorithm for a single patient view -Alex Mirugwe
- Deduplication of Electronic Patient Data. The development of a patient matching algorithm for a single patient view -Alex Mirugwe
- How interoperability of healthcare information systems impacts patient care -Samuel Lubwama
- Design and Implementation of a Point of Service Electronic Medical Records System for Managing Patients in Low Resource Environment: Experience from Uganda -Jonathan Mpango
- Improving continuity on treatment among people living with HIV: A quality improvement collaborative approach in CDC-supported regions, Uganda, 2021-2022 -Flavia Nakanwagi
- Impact of strengthened governance, leadership, and management skills among district health managers on health service delivery in Uganda -Goretti Akidi
- Use of the National Key Populations (KP) Combination Prevention Tracker to monitor prevention services including Pre-Exposure Prophylaxis (PrEP) and Treatment cascades in Uganda -Rachel King
- Improving continuity on treatment among people living with HIV: A quality improvement collaborative approach in CDC-supported regions, Uganda, 2021-2022
- Improving Retention in Care: A Qualitative Study in Uganda to Understand the Facilitators of and Barriers to the National PMTCT Option B+ Programme -Rachel King
- Experiences and Lessons Learned from CQI Implementation in Uganda -UCSF/METS
- Training Models from Recency Implementation -UCSF/METS
- Quality Assurance for Recency Experience and Lessons Learned -UCSF/METS
- Characterizing HIV Recency Infections in Uganda -UCSF/METS

Transforming TB Care

METS has been instrumental in spearheading significant advancements in Tuberculosis (TB) care, collaborating closely with the Ministry of Health (MoH) to catalyze impactful changes. In June 2023, METS facilitated the TPT PROTECT conference, further emphasizing the need to intensify TB case finding and contact tracing.

Delegates at the TPT PROTECT Conference reviewed new treatment charts (HIV Care card) that guided the EMR setting and showed the longitudinal story (client treatment history) during the site visits aimed at sharing lessons and best practices conducted in May 2023.

METS supported MoH's digitization initiatives, particularly in the realm of HIV/TB data capture and reporting. By integrating eCBSS into UgandaEMR and supplying essential IT infrastructure to HIV/TB implementing partners, METS enabled seamless digitized TB data reporting, fostering interoperability between systems, and enhancing overall efficiency.

A significant milestone was achieved through METS' support of the National TB/Leprosy Program (NTLP) in establishing the first-ever National-level Quality Improvement Collaborative. Over 847 health facilities received support and mentorship, resulting in significant improvements. Notably, TB screening among outpatients surged from 73% to 96.4%, GeneXpert testing for Presumptive TB Patients (PTPs) increased from 54.9% to 80.8%, and TB cure rates witnessed a rise from 58.0% to 74.0%. These efforts contributed significantly to enhanced HIV/TB patient outcomes, reflected in improved retention of TB treatment (from 61% to 87%), Treatment Success Rate (TSR) (from 61% to 87%), and TB cure rates (from 58% to 75%) in 2021 and 2022, respectively. Through comprehensive support, METS has been a driving force behind the remarkable advancements in TB care, contributing significantly to improved patient outcomes and the overall healthcare landscape in Uganda.

METS systems development team with Dr. Stavia Turyahabwe, the Assistant Commissioner of Health Services- National Tuberculosis and Leprosy Program, MOH

Pictorial

Welcome to the visual realm of our organization's journey shown here below in our pictorial report. Each photograph is a story, a milestone celebration, a significance of our impact.

METS participated in the technical exchange visit between the Centers for Disease Control and Prevention (CDC) and the Uganda Ministry of Health (MoH) that was held in Atlanta, USA. The participants reviewed infrastructure, systems, and capacity-building mechanisms for the public health workforce for digital transformation. The team also explored partnerships for international coordination and global data networks to facilitate data sharing and decision-making.

Dr. Alice Namale (Director) and Shamim Kuteesa (Finance Manager) represented the Program at the farewell party for Dr. Lisa Nelson, Lisa Mills, Jessica Conley, and Waverly Vosburgh in May 2023

METS Team celebrating a goal against the MoH team during the friendly match held in August 2023

NTLP mid-term review orientation with WHO external reviewers before the fieldwork

METS team with the Minister of Health, Hon. Dr. Jane Ruth Aceng, and the Mubende Women MP during the End of Ebola declaration in January 2023

Dr. Esther Buregyeya joined the Director METS for a site visit in Kabarole to discuss the implementation progress of HIV Case-Based Surveillance

Paul Mbaka speaking during the handover ceremony of ICT equipment to MoH held at the ministry headquarters in April 2023. The ceremony was graced by representatives from the office of the Minister, CDC, USAID-SITES, and the media.

DHIS2 CONFERENCE IN OSLO, NORWAY

June 12, 2023 11:53

METS and CDC field team during a learning visit to Kamwozi HCII in Masaka district to explore how the Signalitic ledger distributed technology works and how EMRs can benefit from the solar powered innovation to support improvement of patient service delivery in Uganda, September 2023.

Troubleshooting session for MoH, CDC, METS and partners during the EMR integration brainstorm workshop in October 2023. The workshop was intended to find the best ways for EMRS (UgandaEMR, eAFYA, and the lab system named ALIS) to communicate and exchange information to improve the health service delivery at the facilities.

Assessment team pose for a group photo with staff at Fort Portal RRH after a Gender Based Violence DQA feedback session held in September 2023

Assessment of health education on Cervical Cancer during SQA in one of the facilities in October 2023

METS and CDC Uganda team met with Dr. Marta Ackers (5th from right) to discuss the Program impact, progress and future plans. Dr. Ackers is the CDC (EA) Regional Director

Dr. Arthur Fitzmaurice, a Senior Program Advisor at CDC-Uganda met with Communicators from CDC implementing partners for a review of focus areas for PEPFAR Country Operational Plan for 2023

Steering Committee

DR. SARAH BYAKIKA
CHAIR

PROF. RHODA WANYENZE
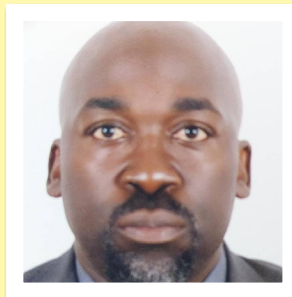MEMBER

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