

MAKERERE UNIVERSITY SCHOOL OF PUBLIC HEALTH



MONITORING AND EVALUATION TECHNICAL SUPPORT (METS) PROGRAM





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List of Acronyms

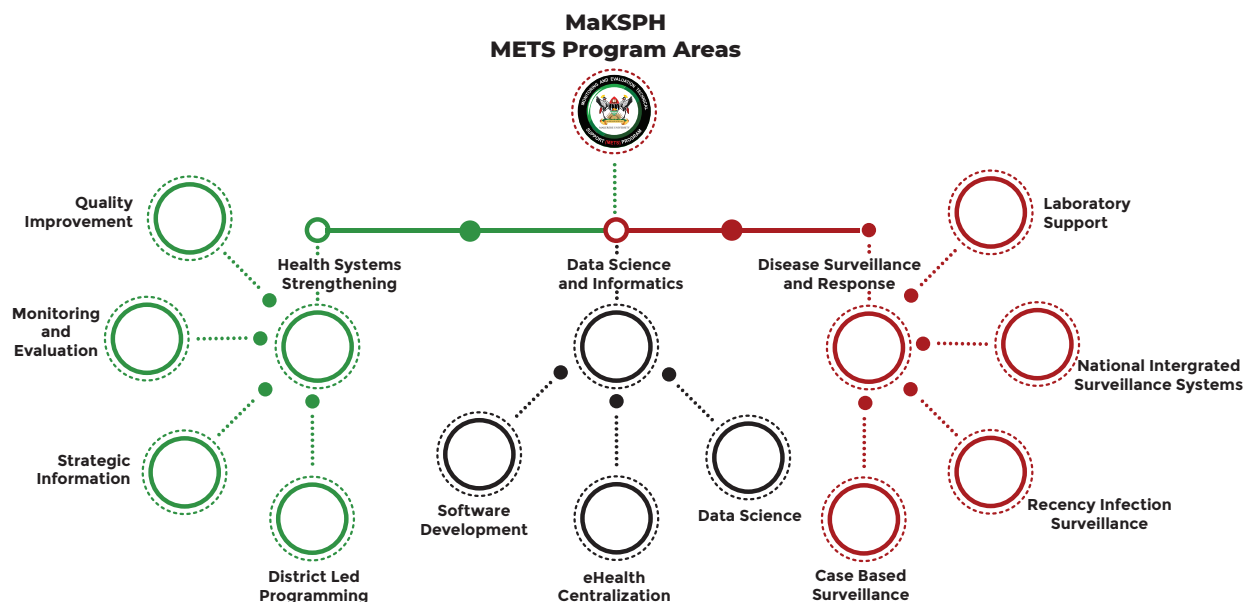
AGYW	Adolescent Girls and Young Women
CBS	Case-Based Surveillance
CDC	Centers for Disease Control and Prevention
CPHL	Central Public Health Laboratories
CQI	Continuous Quality Improvement
DHI	Division of Health Information
DHIS2	District Health Information System 2
DQA	Data Quality Assessment
DREAMS	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
UCSF	University of California San Francisco
VL	Viral Load
WSS	Weekly Stock Status System



Introduction

Makerere University School of Public Health (MakSPH) through the Monitoring and Evaluation Technical Support (METS) Program is implementing a 5-year grant (2020-2025) with funding from 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 (HIS), Case Based Surveillance (CBS), Monitoring and Evaluation (M&E) and Quality Improvement (QI) support. The program is implemented through three technical areas, namely:

- Health Systems Strengthening (HSS)
- Disease Surveillance and Response (DSR)
- Data Science and Informatics (DSI)



**MONITORING AND
EVALUATION TECHNICAL
SUPPORT PROGRAM
(METS) ANNUAL REPORT 2023**

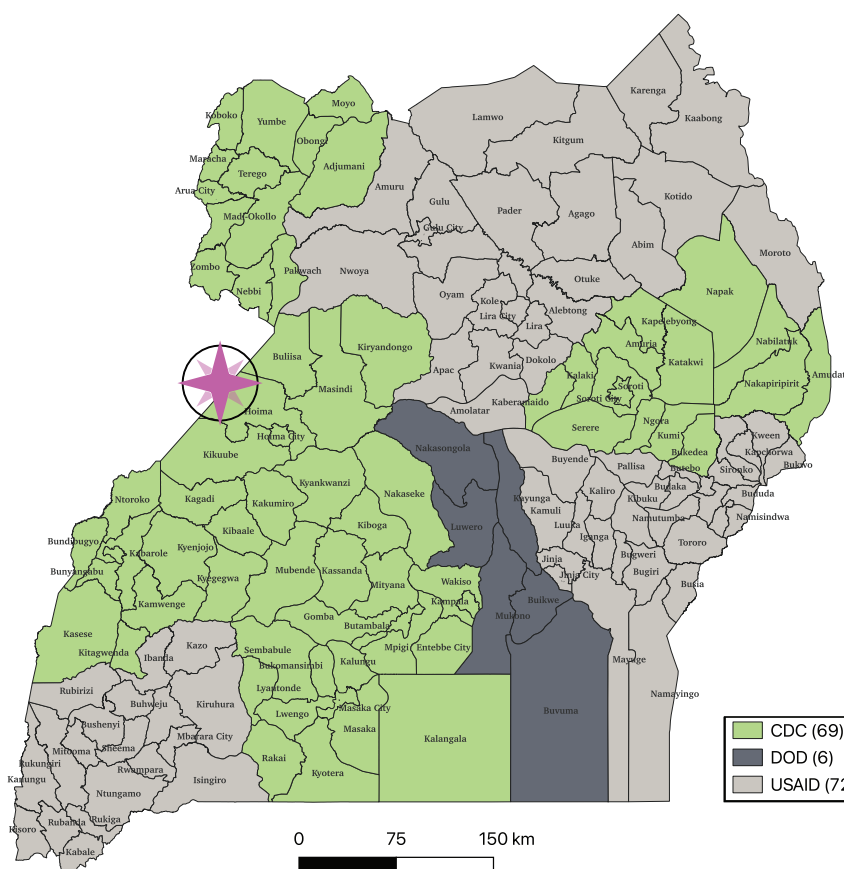
EDITORIAL

Nancy Karunganwa
Dr. Alice Namale
Dr. Simon Muhumuza
Dr. Evelyn Akello



The Program provides 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 PEPFAR 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. Additionally, METS provides technical assistance to IPs with; National and PEPFAR reporting, health information systems, continuous quality improvement, disease surveillance and response and strategic information

Map of Uganda showing METS Supported Areas by Agency



In 2024, METS further strengthened HIV monitoring and reporting systems, enhanced RRH systems and structures, contributed to science, supported comprehensive EMR centralization of patient data, hardware procurement and distribution CQI and case based surveillance implementation, among others. This report highlights the key program achievements and collaborations of the year 2023/2024.



Word from The Principal Investigator

I am pleased to present our annual report. Throughout the past year, MakSPH-METS Program has remained steadfast in its mission to strengthen Uganda's capacity for HIV and TB programming through strengthening robust health information systems, surveillance, and quality improvement initiatives.

MakSPH leverages its team of expertise in public health to guide program strategies, strengthen national capacity for data collection, analysis, and use. The innovations developed are solutions for health system challenges and they generate evidence that can be used to inform policy and practice.

MakSPH-METS provides technical support to MoH, RRHs, implementing partners at different health system levels.

Our collaborative approach, working closely with the Government of Uganda and various stakeholders, has enabled us to make significant strides in building sustainable health information systems and improving the quality of healthcare delivery. The achievements highlighted in this report reflect our commitment to strengthen health systems through development and implementation of innovative and impactful evidence-based solutions.

As we look to the future, I am confident that the METS Program will continue to play a pivotal role in strengthening Uganda's health systems through several initiatives.

1. Operationalising a sustainability plan through transitioning of the developed innovations to the Ministry of Health for ownership.
2. Disease outbreak management will be strengthened through continued capacity building for emergency response and optimization of existing integrated disease surveillance systems. The field teams will facilitate seamless coordination across health system levels to build



sustainable and resilient health systems capable of effectively responding to public health emergencies.

4. Lastly, we continue to strengthen collaboration with government, enhance coordination with implementing partners and promoting integration of health services

Our dedicated team of professionals, combined with the unwavering support from our partners and stakeholders, positions us well to address emerging health challenges and advance our nation's public health goals. The innovative solutions and capacity-building initiatives highlighted in this report demonstrate not only our progress but also our potential for greater impact in the years ahead.

Professor Rhoda Wanyenze
Dean – School of Public Health, Makerere University

Word from the Director

As we reflect on our fourth year in our journey to strengthen Uganda's health information systems, I am proud to present this annual report for the Monitoring and Evaluation Technical Support (METS), a Program housed under the Makerere University School of Public Health. Our work continues to be driven by a fundamental commitment: empowering Uganda's health systems to effectively monitor, track, and respond to HIV and TB challenges.

Since 2020, we have been working closely with the MoH focusing on building robust, data-driven capabilities across health facilities. Our integrated approach through Health Systems Strengthening, Disease Surveillance and Response, and Data Science and Informatics has allowed us to create meaningful, innovative improvements on data collection, analysis and use.

This year has been particularly transformative. We have made significant strides in enhancing case-based surveillance, developing more sophisticated health information systems, and supporting quality improvement initiatives. By bridging technical expertise with local knowledge, we are helping to create a more responsive and efficient health infrastructure.

Our three technical pillars - HSS, DSR, and DSI - were blended to address complex health challenges and transform data into actionable insights that can save lives and improve health outcomes and patient experiences.



As we move closer to the conclusion of our five-year grant in 2025, we remain committed to supporting the transition of the innovations and systems that we have supported to the Ministry of Health, building capacity, enhancing technical capabilities, and supporting Uganda's health system in its critical work of addressing HIV and TB.

Dr. Alice Namale
METS Program Director



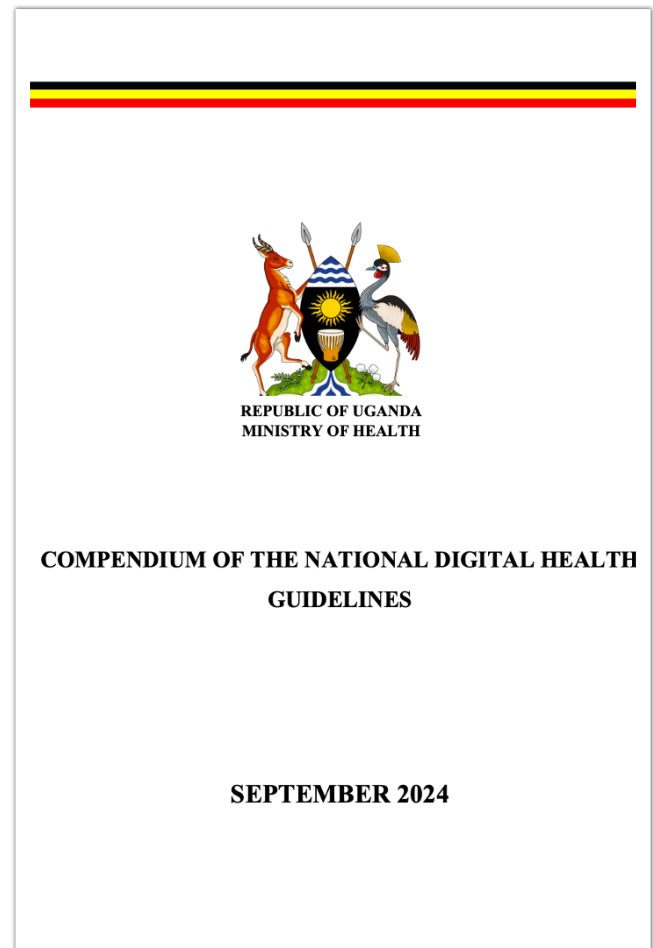
Data Science and Informatics(DSI)

Support implementation of the National Digital Health Strategy

The Ministry of Health has adopted digital health systems to improve efficiency and patient outcomes. MakSPH-METS continues to actively support MOH in this endeavor, with support from PEPFAR, CDC, SITES and other partners.

Development of National Digital Health Guidelines and Standards

MakSPH-METS continued to support the Ministry of Health in developing a framework that ensures effective governance, leadership, and implementation of digital health within the country. This framework includes policies, strategies, and guidelines to be used within the health sector. The support provided encompassed the validation, finalization, and approval of key documents that form part of the national digital health guidelines compendium. These documents include; 1) Uganda Digital Health Enterprise Architecture, Standards and Knowledge Guidelines, 2) The Uganda Health Information Exchange and Interoperability Guidelines, 3) The Uganda Health Data Protection, Privacy and Confidentiality Guidelines, 4) The Uganda Health Data Access, Sharing and Use Guidelines, 5) Guidelines for the implementation of the Electronic Medical Records System.



Procurement & Distribution of Health Information Systems (HIS) hardware

PEPFAR through MakSPH-METS, procured and distributed computers, tablets, video conferencing, solar, and networking equipment. This equipment is intended to support the Ministry of Health's digitalization drive, improve Electronic Medical Records (EMR) coverage, and accelerate the implementation of Point of Care (PoC) EMRs. The equipment was distributed to 39 Implementing partners across all agencies (USAID, CDC, STATE, and DoD) and 16 RRHs. The hardware included heavy duty servers and client computers (Laptops, desktops, tablets), networking equipment, video conferencing equipment, biometrics devices and power backup equipment (solar). METS supported the development of an improved IT Asset Management System (ITAMS) to track and monitor distribution of procured IT equipment. The table (R) summarizes the quantities of the equipment distributed.

#	ITEM	QUANTITY
1	Solar Equipment	300
2	Mini Servers	120
3	Video Conference Equipment	20
4	Client PCs	240
5	Laptops	300
6	Fingerprint Readers	300
7	Tablets	400
8	Network Racks	300
9	Network Switches	100
10	Network Routers	62
11	Access Points	430
12	Network Cables	180



Handover of network equipment to staff from Mulago National Referral Hospital

Digital Information Systems Development & Maintenance

Roll out of Electronic Medical Records (EMR)

In the year under review, MakSPH-METS provided technical assistance towards the development and release of UgandaEMR+ deployed at health facilities across the country. The latest version of UgandaEMR has expanded scope beyond HIV and TB and also has capabilities of information exchange with other systems including interoperability with EAFYA and ALIS (Laboratory Information System); automated submission of data into DHIS2 and the National Data Warehouse; and works seamlessly with the continuous quality improvement (CQI) audit tool, and the surveillance modules including Case Based Surveillance, Recency surveillance and mortality surveillance.

- **Roll out of integrated EMR Systems:** METS supported the rollout of the eAFYA-UgandaEMR-ALIS package across Regional Referrals and General Hospitals.



CDC Kenya Team being taken through the patient queuing functionality in the UgandaEMR POC system at Kyenjojo Hospital



Enabling Information Systems Interoperability

System interoperability is critical for improving access to data across different information systems. This has been a major area of support to MOH in the past year. Some progress on the system integration efforts is highlighted below;

EAFYA and UgandaEMR, ALIS

Key accomplishments include successful integration of eAFYA with UgandaEMR through a Shared Health Record (SHR). The retrieval of eAFYA from SHR was completed, and the system tested at Naguru and Entebbe regional referral hospitals.

- eAFYA-ALIS integration: 100% complete.

UgandaEMR and DHIS2

MakSPH-METS supported the automation of report submission from Uganda-EMR into the national eHMIS. Through a centrally hosted health information exchange (HIE) system, METS has been able to have reports like TX_CURR (people living with HIV currently on treatment) and TX_NEW (newly identified HIV positives initiated on treatment) submitted automatically to the national DHIS2. Work to have more reports submitted is currently under way.

KP Tracker and ART Access Integration

The KP Tracker system monitors services provided to key populations in the community and at health facilities and the ART Access, developed by IDI Uganda, tracks services and commodities provided at the pharmacies in the community. This integration was intended to reduce duplication and also ensure a coordinated distribution of services and commodities to the supported population. The METS team provided technical support during the integration of these two systems.

UgandaEMR and ART Access Synchronization

UgandaEMR was integrated with the ART Access system to allow data exchange for ART clients who receive their drugs from Community Retail Pharmacy Drug Distribution Points (CRPDDP)s. Through this synchronization, clients registered in the EMR are now linked to pharmacies in their respective communities for convenient drug refills. The ART Access system used in pharmacies facilitates the transmission of visit/encounter data back to the EMR to ensure complete coordination between the two systems.

Key and Priority Populations Tracker System

The Combination Prevention tracker system supports the tracking and monitoring of services provided to KP/PP populations across the country. Following the update of KP program registers and data collection tools by Ministry of Health, MakSPH-METS HIS team supported the digitalization of the approved tools into the tracker system.



CSO Representatives receiving IT hardware intended to improve KP data management on behalf of their organizations

Through the METS Program, Civil Society Organizations were supported with IT hardware for data management processes at their service delivery locations. METS also provided mentorships and training to help improve data quality and use.

Ministry of Health Digitalizes HIV Prevention Services Nationwide

MakSPH-METS supported the Ministry of Health to launch a comprehensive digital transformation of HIV prevention services across Uganda, equipping 82 safe spaces with modern technology to enhance care for high-risk groups.



Dr. Evelyn Akello (R) hands over equipment to MARPI delegation

The CDC supported initiative aims to streamline patient tracking and improve service delivery through civil society organizations (CSOs) that provide essential support services to vulnerable populations.

The program has already trained 112 staff members in digital data management and cybersecurity, with 60% being dedicated data personnel. Each facility received customized equipment based on a thorough needs assessment. The equipment included laptops, desktop computers, internet routers, and data backup devices.

The digitalization initiative integrates these facilities into the national tracker system, ensuring secure and efficient health data management. Implementing partners will provide ongoing maintenance support to ensure sustainability.

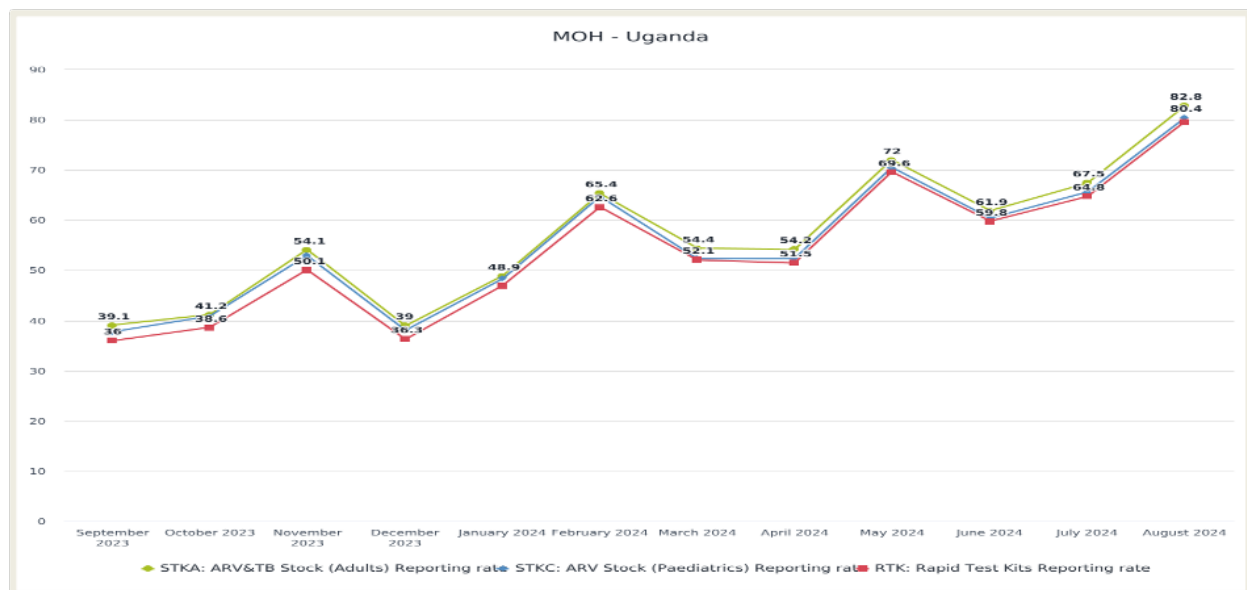
This modernization effort marks a significant advancement in Uganda's HIV prevention strategy, positioning the country at the forefront of digital health innovations in East Africa.



The Weekly Stock Status (WSS) System – formerly RASS

This system, introduced in 2018, plays a critical role in improving stock visibility and preventing stockouts of life-saving antiretroviral (ARV) drugs and other essential health commodities in Uganda. Unlike traditional reporting systems, the WSS enables weekly stock data submissions, facilitating timely decision-making and redistribution of commodities.

MakSPH-METS and MoH have provided continuous training, user support, and stakeholder engagement to enhance system use and address stock status related challenges. These efforts have led to a significant rise in the number of facilities actively reporting, from 500 in 2021 to over 1,700 in 2024. Additionally, National reporting rates surged from 39% in 2018 to 82% in 2024. Ministry of Health is now able to utilise this data to monitor stock levels across the country and redistribute commodities to avert stock outages.



12-Month Trend of Reporting Rates (Sept 2023 - Aug 2024)

In 2024, METS and UCSF worked with Division of Health Information (DHI) and Pharmacy teams to develop a new dashboard incorporating advanced analytics for stock monitoring, distribution and forecasting.

Moving forward, the WSS system will be hosted at MoH and aligned to the new National HMIS tools and improved to reflect the updated list of commodities intended to be tracked by the Ministry of Health.

Using Artificial Intelligence (AI) for Improved Healthcare

ART Client Deduplication

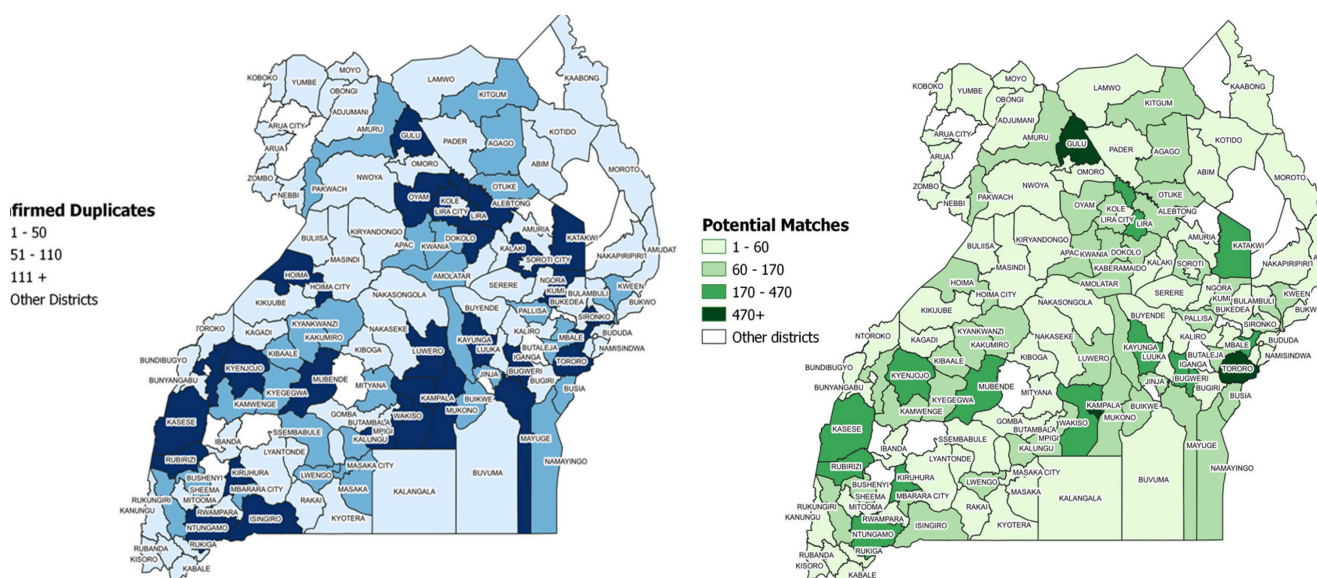
USG/PEPFAR, through MakSPH-METS in collaboration with Implementing partners (IPs), carried out a project to de-duplicate clients receiving ART services. The objective of the project was to establish the level of duplication in HIV care under PEPFAR support in Uganda.

The team reviewed records of 1,183,041 clients, representing 91% of ART clients receiving care at 1,262 facilities countrywide.

The overall results showed that 12,452 (about 1%) of the records were matched, with clients having almost identical data elements with just minor deviations, especially in names or the interchange of variables such as sex. Additionally, 84,276 (7.2%) of the records were identified as potential duplicates. At facility level, 92% (11,395/12,454) of duplicates were clients within the same facilities.

At district level, 98% (12,230/12,454) were clients within the same districts. Most duplicates are in Kampala, Wakiso, Gulu, Tororo, Pallisa, Katakwi, Lira, Kasese, Mayuge, Buyende, Jinja, Iganga, and Kamuli.

Potential duplicates exhibited similar patterns to matched clients in terms of facility and district distribution, age and gender demographics, and time gaps between records.

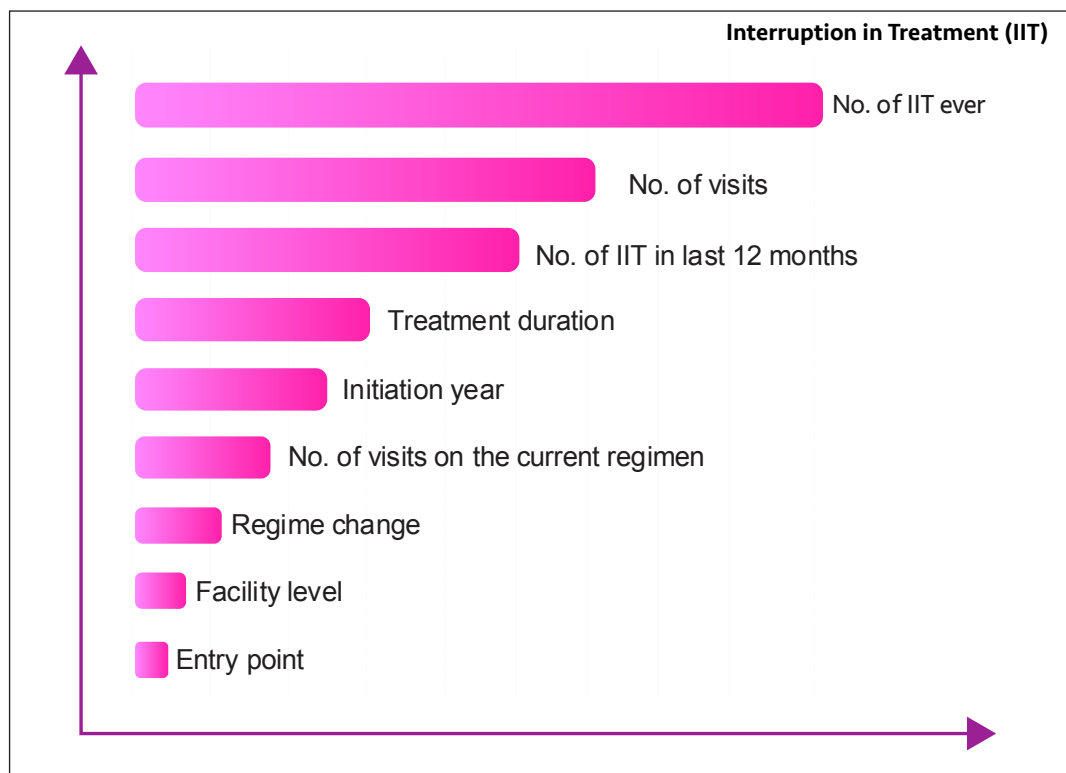


The maps show the distribution of duplicate and potential duplicate records among active HIV clients across various districts in the country



Interruption in HIV Treatment Predictive Model

METS, in collaboration with Ministry of Health (MoH), supported the development and validation of a machine learning model to predict HIV clients at high risk of missing treatment appointments. Using longitudinal clinical data from over 66,000 clients and more than 1.4 million clinical visits across 86 health facilities, the project highlights the transformative role of Artificial intelligence (AI) in HIV care. Among the models tested, the BERT model demonstrated superior performance, achieving an AUC score of 0.96, accuracy of 94.8%, and perfect recall for identifying missed appointments. This breakthrough enables early identification of clients at risk, paving the way for targeted interventions and improved retention in care.



The figure presents the nine most influential predictors, highlighting that longitudinal treatment and adherence history predictors had the greatest impact on predicting treatment interruptions. In contrast, demographic variables played a minor role in predicting retention.

The findings contribute significantly to Uganda's efforts to achieve the UNAIDS 95-95-95 targets and represent a vital step in integrating artificial intelligence into routine healthcare systems. This innovative work has also been accepted for presentation at CROI 2025.

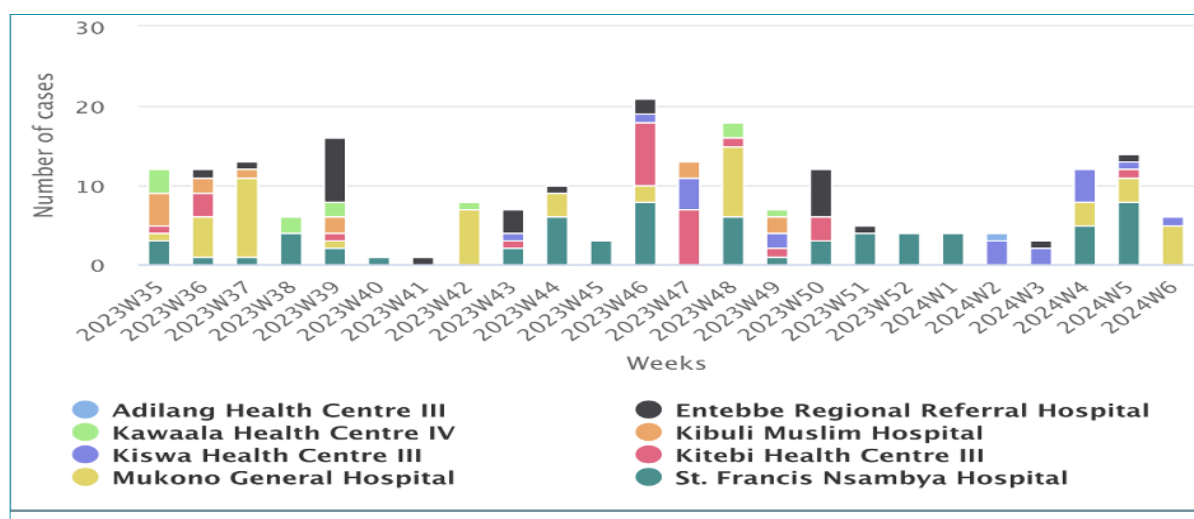


Development of the National Health Data Warehouse

MakSPH-METS has supported the design and development of the National Data Warehouse (NDW), a central repository of data that will be used as the national repository for all health-related information. Once centralized, the data can be used for making informed decisions on a wide array of interventions in the country. METS provided technical support in software development, business analysis, visualization, and systems administration.

The data warehouse is used to store, analyse, and visualize health information products from data sources such as HMIS/DHIS2, EMRs, Surveys, and eDSR among others serving program specific needs whether aggregate or at case level.

Figures below are sample information products for the National Integrated Surveillance System (NISS) program



eDSR Data Exported into the NDW

District	Site	# Cases enrolled	# Cases with results	# Specimens tested at UVRI	# Cases COVID19+	# Cases Influenza+	# Cases RSV+
Agago District	Adilang Health Centre	1	0	0	0	0	0
Kampala District	Kawaala Health	11	11	0	0	0	0
Kampala District	Kibuli Muslim	13	10	0	0	0	0
Kampala District	Kiswa Health Centre	19	16	0	0	0	0
Kampala District	Kitebi Health Centre	27	25	0	0	0	0
Kampala District	St. Francis Nsambya	66	61	0	0	0	0
Mukono District	Mukono General	49	35	0	0	0	0
Wakiso District	Entebbe Regional	26	17	0	0	0	0
Total Cases		212	175	0	0	0	0

The number of ILI and SARI cases registered during the epi week for sentinel sites in the Kampala Metropolitan Area (KMA)

Disease Surveillance and Response (DSR)

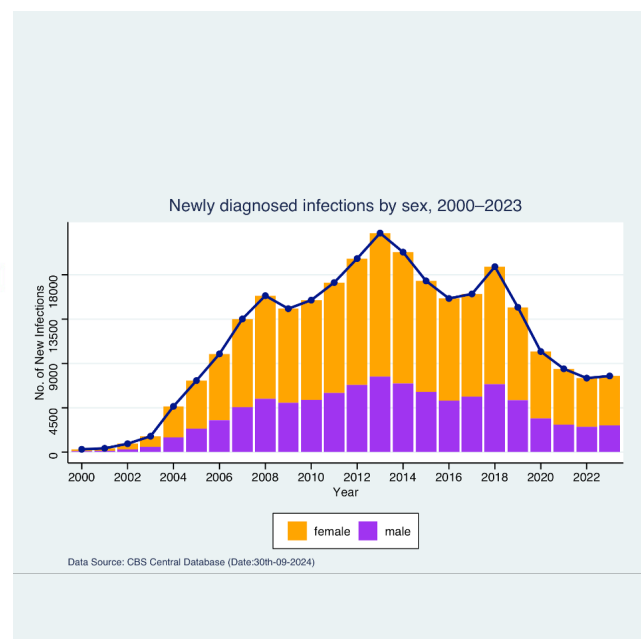
MakSPH-METS continues to support the MOH in implementing disease surveillance. Working with the Integrated Epidemiology Surveillance and Public Health Emergencies (IES & PHE) Division, there were various notable achievements.

HIV Case Based Surveillance (CBS) Implementation

Currently implemented at 778 facilities countrywide, HIV Case Based surveillance (CBS) provides vital information on sentinel events among those individuals in HIV care. Information such as who is receiving HIV care, time to viral suppression, helps policy makers and program managers to make decisions related to improvements in the quality of service. Over the past year, the team worked with Implementing Partners and MOH to ensure essential HIV data is transmitted to a central database at the MOH for analysis and decision-making.



Map of Uganda showing active CBS Sites



Newly diagnosed HIV infections disaggregated by sex over the years

This surveillance system provides valuable insights for tailoring HIV prevention and treatment strategies across Uganda. The graph shows data of the newly diagnosed HIV infections from 2002 to 2023, disaggregated by sex. A noticeable trend is observed in the number of newly diagnosed HIV positive clients among females being higher each year compared to males.



CBS Dashboard Development

To improve access to data by all stakeholders, a national level dashboard was developed showing key sentinel events such as ART initiation, Viral load suppression, CD4 count, advanced HIV disease, and death, by facility, district, region, and IP, – see figure. This was achieved working together with UCSF.



The data shows more female clients in HIV diagnosis, ART initiation, and viral load suppression. While mortality rates were comparable between genders, case distribution revealed concentration in ages 25-49, peaking at 35-39 years. Following the implementation of the "test and treat" policy in 2018, both case identification and ART initiation rates increased significantly

One key challenge relates to suboptimal reporting from facilities: about 60% (465 of the 778) active facilities were uploading data to the central database at MOH due to power outages and internet challenges.

Moving forward, there is a need to strengthen transmission of data from facilities into the National Data Warehouse (NDW), ensuring that the data is analyzed and shared with stakeholders for program improvement.

Implementation of HIV Recency Testing

Aimed at identifying where and among whom the 'new' HIV infections are occurring, the Recent HIV infection surveillance program was expanded to 14 new sites bringing the total number of implementing sites to 1,092. To note, about 12% of newly diagnosed HIV infected adults are categorized as 'recent', that is, having occurred within 12 months.

1,092

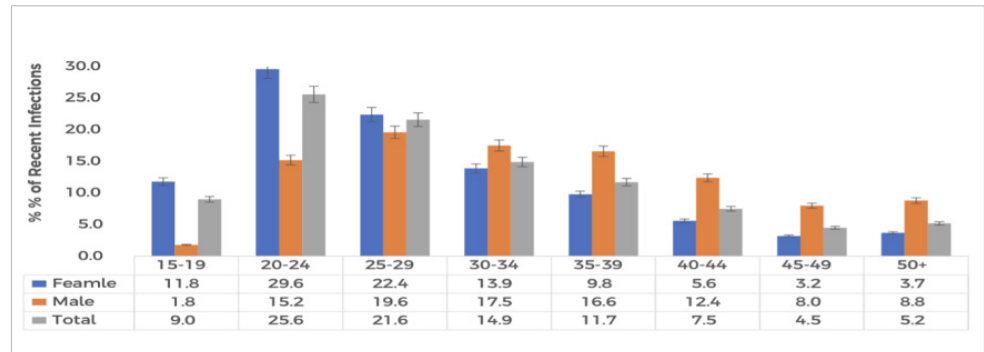
Implementing Sites

12%

Are recent HIV infected adults

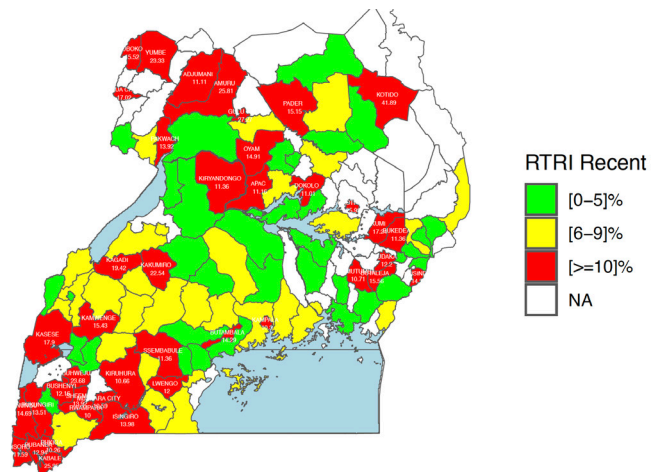
<30

Age of females who are at higher risk of recent HIV infections



Recent infections by age and sex

As shown in the map below, 'hot spots' or localities with many new infections have been identified in various geographical locations countrywide.



Map showing hot spots for new HIV infections in Uganda 2024

These locations are the focus of intensified HIV prevention initiatives, as highlighted in the Recency Public Health Response Implementation guidelines released recently.

Cross Border Health Surveillance



Ugandan representatives from METS and USAID/SITES collaborate with regional experts at the East African Community's Digital Health, Data, and Technologies (DIDATI) conference, where cross-border health data sharing frameworks between member states were developed

METS, in partnership with Ministries of Health from Uganda, Kenya, and Tanzania, along with various international partners, has been actively working to improve health data sharing and service delivery for mobile populations across East African borders. A joint supervision visit to Busia Health Center IV in Eastern Uganda marked the initial steps towards digitilising and creating interoperable health data systems, aimed at enhancing strategic health decision-making. This effort was further advanced through a comprehensive cross-border data sharing simulation workshop involving multiple stakeholders, which demonstrated the operational capabilities of a regional Health Information Exchange (HIE) platform.

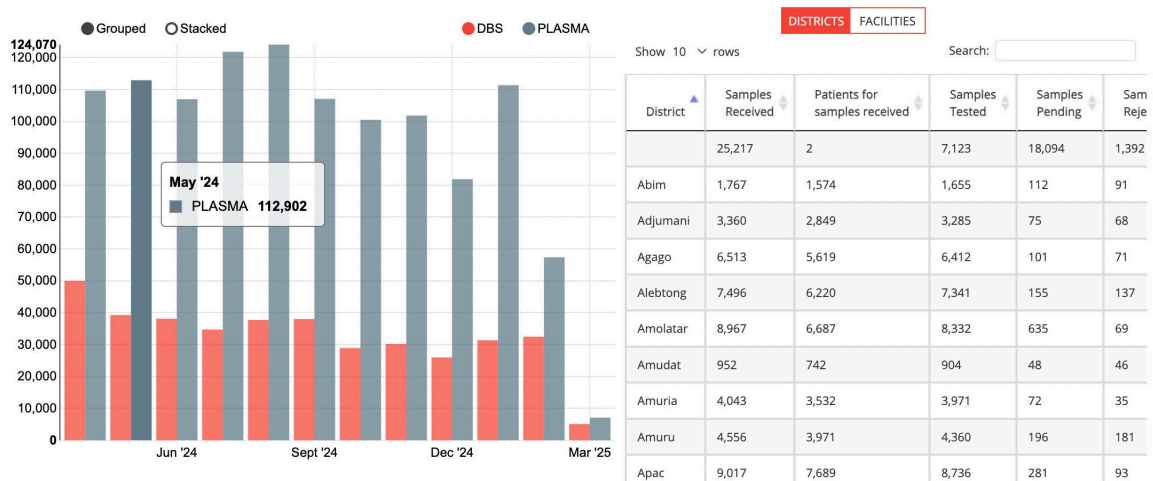
During a cross-border data sharing forum in Dar-es-Salaam, METS and partners successfully showcased the potential for regional information exchange through a shared platform hosted by the East African Community (EAC). Key achievements include developing data-sharing guidelines addressing critical aspects like data security, confidentiality, and access, and establishing agreements to improve reporting indicators for cross-border patients, with plans to expand services beyond HIV. The collaborative initiative represents a significant stride towards creating a more integrated, responsive healthcare system that can effectively track and support mobile populations across national boundaries.



Viral Load Monitoring

METS supports Viral Load (VL) data cleaning, analysis and quarterly reporting as part of the efforts to measure progress towards achieving the 3rd 95 (VL suppression).

The Viral Load Dashboard provides real time information on VL suppression and visualises data by district, health facility, age, sex, regiment and TB status. Below is the screenshot of the national viral load dashboard.



Snapshot of the CPHL VL Dashboard, covering the period June 2024 to Dec. 2024

By the end of 2024, a total of 1,306,253 individuals received at least one VL test. Of these, 1,255,490 (96%) were virally suppressed at a cut-off of <1000 copies/ml. The national VL testing coverage was 93%. Lower VL coverage levels continue to be seen in the 20–24-year age group. VL suppression is lower in males. VL suppression is lower in Acholi, Bugisu, Busoga, Karamoja, Lango, and West Nile regions. (JAR Report 2023).

A key focus area in the coming year is the roll out of the viral load health information exchange (HIE) that will reduce VL results turn-around-time and improve patient care



Support to Acute Fébrile Illness (AFI) Surveillance

In 2023, MoH, in collaboration with METS, IDI, and UVRI, launched a pilot surveillance program for Acute Febrile Illness (AFI) at Jinja Regional Referral Hospital. This initiative was aimed at identifying the underlying causes of sudden-onset fever among hospital patients through comprehensive clinical assessment and laboratory testing.

In 2024, the program expanded to five Regional Referral Hospitals: Jinja, Arua, Kabale, Mubende, and Mbale. Within the Kampala metropolitan area alone, 765 patients with fever had been enrolled. Laboratory analysis revealed differing causes of the fevers: 225 cases were attributed to malaria, 30 to bacterial pathogens, and 104 to respiratory viruses.

From these surveillance efforts, it can be said that despite Uganda's endemic malaria status, the majority of febrile illnesses were not malaria related. This evidence emphasised the critical importance of accurate diagnostic testing before prescribing antimalarial medications, hence the need for targeted approach to fever management in clinical settings.

Severe Acute Respiratory Infection (SARI) Surveillance

From August 2023 to September 2024, patterns of respiratory illnesses across health facilities successfully tracked. Most healthcare providers now report cases of Severe Acute Respiratory Infections (SARI) and Influenza-Like Illnesses (ILI) through the national health information system (DHIS2).

To ensure data quality, our team conducted a comprehensive review of information collected through both routine symptom-based reporting and specialized monitoring sites in the Kampala metropolitan area. This review examined how effectively respiratory illnesses were being tracked, including SARI, ILI, and Pneumonia-Related Disease Surveillance (PRDS).

This integrated approach to monitoring respiratory illnesses allows health authorities to identify potential outbreaks earlier and allocate resources more effectively where they are needed.

Summary of SARI/ILI enrolment, Testing and Positives Sep 18th 2024

Enrolment and sample testing at UVRI					Positive Results (Cumulative)			
Indicators/sites	# Cum. cases enrolled	# Specimens reached UVRI	Variance	# Tested at UVRI	SARS-COV2	Influenza	RSV (<2 Yrs SARI)	PRDS
Total Cases	603	494(81%)		487(98%)	15(3%)	78 (16%)	8/17 (47%)	3/7(42%)
1. Entebbe RRH	53	44	9	41	1	8	0/2	1/1
2. Kawaala HCIV	22	15	7	15	0	3	0	0
3. Kibuli Muslim	47	39	8	39	5	7	0	0
4. Kiswa HCIII	77	64	13	62	1	12	0	0
5. Kitebi HCIII	84	73	11	73	1	16	0	0
6. Mukono Hosp	191	136	55	136	2	15	2/3	0
7. Nsambya Hosp	129	123	6	121	5	17	6/12	2/6

Summary Over the past 2 weeks,

- enrolled 32 new cases; From Kibuli (9), Kiswa (7), Mukono (16).
- 79 tests were conducted and 25 positives; 2+ influenza and 4- SARS-COV2

Progress on SARI/ILI/PRDS implementation in Kampala Metropolitan Area

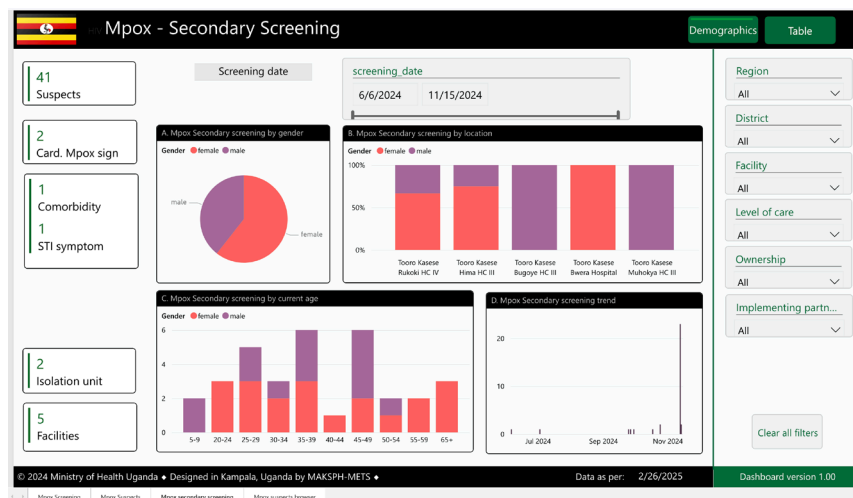


Strengthening Mpox Screening among PLHIV

In July 2024, Uganda confirmed the first cases of Mpox following two cases in Kasese District. As of December 9, 2024, 926 confirmed cases had been registered and six four (4) deaths across 56 districts.

Recognising the increased risk of Mpox acquisition and severity among HIV infected persons, METS supported the Ministry of Health (MoH) to leverage the established HIV Case Based Surveillance electronic systems to screen HIV infected clients in care for Mpox. At every clinic visit, health workers look out for symptoms and signs suggestive of Mpox and all those that meet the Mpox standard case definition are referred to a rapid response team within the district to undergo thorough evaluation including swab collection, blood tests to confirm or exclude Mpox. This information is transmitted to MOH in real time, using the EMR. The goal is to enable more efficient disease tracking and response.

This initiative was piloted in Kasese District at 15 health facilities. A dashboard (see below) has been developed to make it easy for the different stakeholders to track progress and respond in a timely manner. Roll out the initiative is underway. This involves training providers on how to screen individuals for Mpox and identify suspects, how to manage suspected cases, how to enter data on screening into the EMR, and how to ensure data is transmitted to MOH daily.



Key lessons learnt from this pilot include:

- Screening with EMR feasible and where it is not feasible, paper-based tools can be used and retrospective data entry conducted
- IP and District involvement is critical by leveraging on PEPFAR and GHS resources
- Clinics have scheduled ART clinic days (1-2 days) per week, therefore, for capacity building and enhanced screening to be effective, such days need to be targeted for mentorship

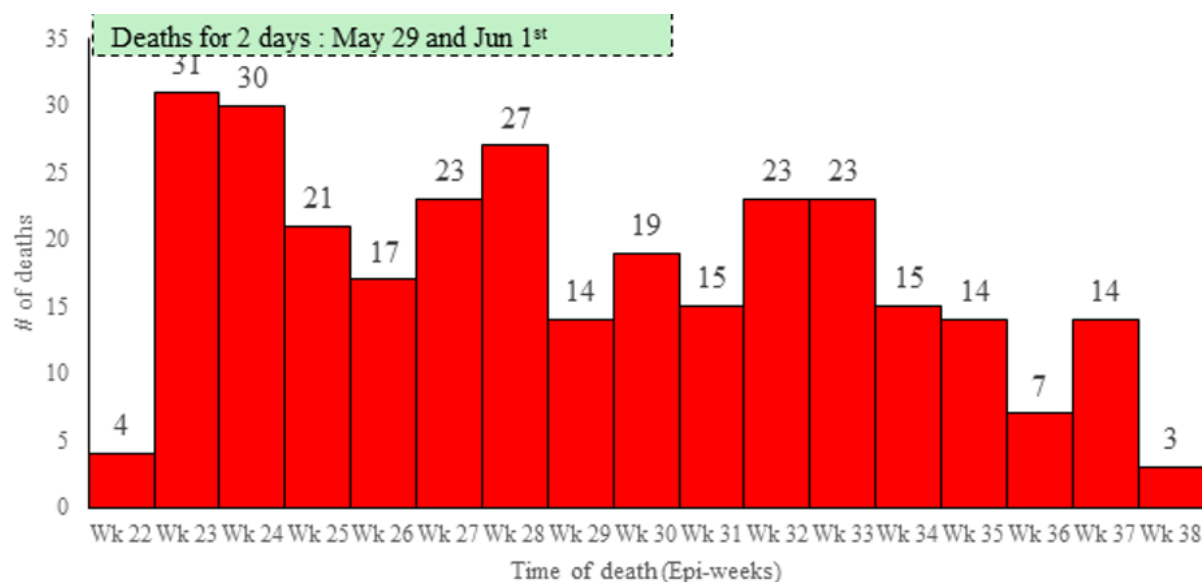
One key challenge is availability of internet connectivity at facilities to support data transmission. METS is working with partners to address this.



Mortality surveillance

Mortality surveillance is critical for understanding who has died, where and why. Leveraging the electronic medical records already rolled out at health facilities, METS supported the Ministry of Health conduct pilot implementation for surveillance of death countrywide. Key support areas were on integration of mortality reporting tools (HMIS100) into the EMR, electronic system upgrades at health facilities, orienting health providers on death notification processes, and ensuring reports are shared with MOH so that data can be made available to all stakeholders. Between April and December 2024, to date, 100 facilities were successfully activated in Kigezi, Hoima, Rwenzori Regions, Kampala and Kibuku districts. As a result, a total of 767 deaths were identified at the activated facilities and 1,096 health workers oriented on death notification and certification of cause of death.

To complement the health facility component, METS initiated community level all-cause mortality surveillance across 22 sub-counties in Kibuku District. Between June and September 2024, a total of 302 deaths were identified in the district. It is interesting to note that community deaths (57%) outnumbered facility deaths (40%), with males accounting for 54% of fatalities and most deaths occurring in specific epidemiological weeks of 23, 24 and 28 (see figure below).



Distribution of deaths in Kibuku district; Most deaths occurred in epidemiological weeks 23, 24 and 28

Whereas the initiative demonstrated the feasibility of implementing all-cause mortality surveillance at the community level, key challenges emerged, including discrepancies in death reporting between facilities and communities and limitations in establishing causes of non-trauma deaths.



Health Systems Strengthening (HSS)

Supporting National Reporting Systems for TB, HIV, and Related Conditions



Feedback meeting following a data cleaning exercise to ensure accurate data collection and reporting for improved program management in Orwamuge HCIII in Abim District

METS, working with the PEPFAR, SITES, CDC and Implementing Partners (IPs) continues to generate National and PEPFAR reports on a regular basis. Some of the key processes for report generation include orienting IPs on new indicators, review and update of data collection tools, supporting data cleaning, dissemination of the weekly 'surge' dashboard and the quarterly program reports.

As part of program sustainability, the MOH is working with partners including METS to reduce the HIV reporting burden that requires many

person hours at the health facility and lots of paper for the clinical records, and reporting tools. Over the past year, METS supported MOH review the reporting tools to try and shorten the routine program reports and reduce the need for printing.

At the same time, METS continued to support MOH roll out digital data collection tools in the form of electronic medical records (EMR). This will not only improve the quality of data, but also ensure reports from facilities are submitted to MOH on time.

Printing and Distribution of Critical HMIS Tools

To ensure availability of data collection tools at the health facilities providing HIV care, METS continues to support the printing and distribution of HMIS tools. On an annual basis, the required quantities are determined by a technical working group at the MOH, comprising members from PEPFAR and other Development Partners, Implementing Partners, the national TB program, and the MOH AIDS Control Program. Once printing is done, METS works with Implementing Partners to ensure equitable distribution of the tools to the implementing facilities.



HMIS Tools Distribution: Robert (METS) working with Baylor Team to load tools for distribution to health facilities



Supporting MoH to conduct National Program Evaluations

Program evaluations are important to better understand effectiveness and impact and how best to improve implementation. In the year under review, METS worked with MOH and CDC to conduct several national program evaluations. METS role involved supporting protocol development and approvals by the various Research and Ethics committees, oversee field data collection, lead the data analysis, report writing and coordinate the dissemination of the evaluation findings. Below is the list of evaluations conducted in the year under review.

1	Evaluation of the National PMTCT Group Antenatal Care/ Postnatal Care Differentiated Service Delivery model: Uganda 2021-2023.
2	Evaluation of Non-Communicable Disease (NCD) Integration into HIV Care in Uganda: Prevalence, Predictors, and Outcomes of Non-Communicable Diseases (Hypertension, Diabetes Mellitus, Obesity and Mental Health Disorders) among persons living with HIV in Uganda.
3	Outcome Evaluation of the Young People and Adolescent Peer Support (YAPS) program Implementation in Uganda.
4	Evaluation of the Integrated Community-based HIV Service Delivery Model (ICSDM) in Uganda: Analysis of outcomes, experiences, and cost.
5	National Tuberculosis Preventive Therapy (TPT) in PLHIV to assess the effectiveness of TPT in reducing TB incidence and all-cause mortality among PLHIV in Uganda.
6	Outcome evaluation of the Uganda No Means No Program.



Case Results from one of the Evaluations:NCD

Prevalence and Predictors of Hypertension among People Living with HIV In Uganda: Findings from a National Survey

There were 7,872 participants, majority being female 5259 (66.8%), with age groups 30-34 years (18.5%) and 25-29 years (18.2%) contributing more than a third of participants, while most participants were rural residents (61%). The prevalence of hypertension among PLHIV was 25.3%. Nearly half of the hypertensive cases were found in Kampala.

The findings were presented at the National Conference of Uganda Scientific Event On HIV/AIDS and NCDs held on 17-18th October 2024 in Kampala.

In conclusion, the prevalence of hypertension among PLHIV in Uganda is high and increases with age. Screening and treatment of hypertension should be integrated in the HIV program to prevent cardiovascular diseases and premature deaths.



Strengthening Governance, Leadership and Management (GLM)



The Governance, Leadership and Management (GLM) training for Masaka Regional Referral Hospital was officiated by Dr. Martin Sendyona, Head of the Standards Compliance and Patient Protection Department, (SCAPP) Department at MoH in July 2024

In 2019, the Ministry of Health (MoH) adopted a regional strategy which is anchored on regional referral hospitals (RRH) to strengthen planning and coordination of decentralized HIV and TB service delivery. MakSPH-METS Program works closely with MoH to strengthen the strategy through training in governance and leadership, digitization of health information systems and quality improvement for HIV and TB services.

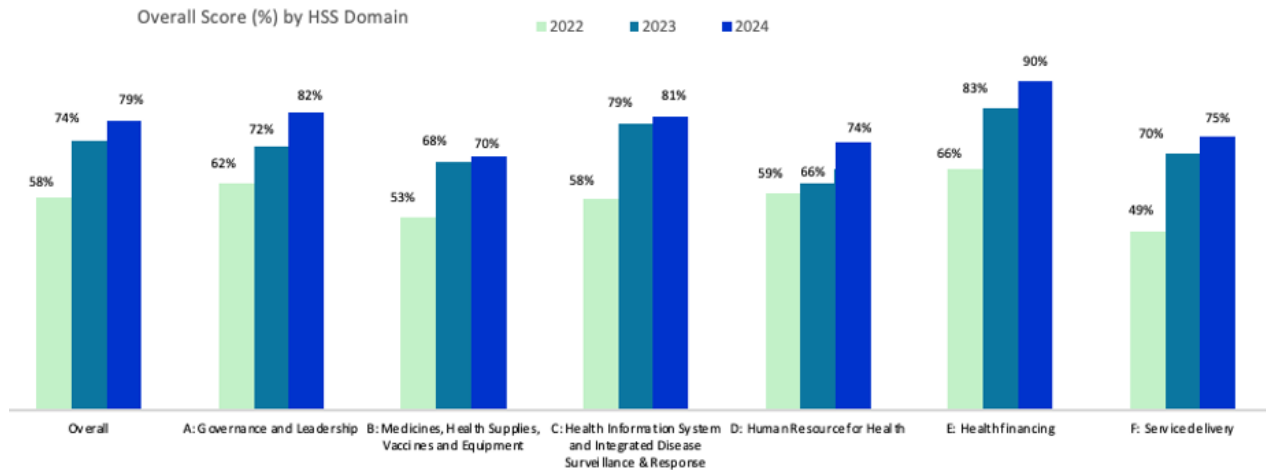
METS trained technical staff from 4 RRHs (Masaka, Mubende, Yumbe and Entebbe in Governance, Leadership and Management (GLM). In total, 87

(average 20 participants per hospital) RRH staff were trained, including senior management and staff from the Community Health Departments. The overall purpose of the training was to equip participants with practical skills in health governance, leadership and management with a goal of improving monitoring and coordination of health delivery in their catchment areas. At the end of the training, participants developed action plans to address gaps identified during the training sessions. These will be implemented by leveraging resources available to the Hospitals and partners supporting the respective RRHs.



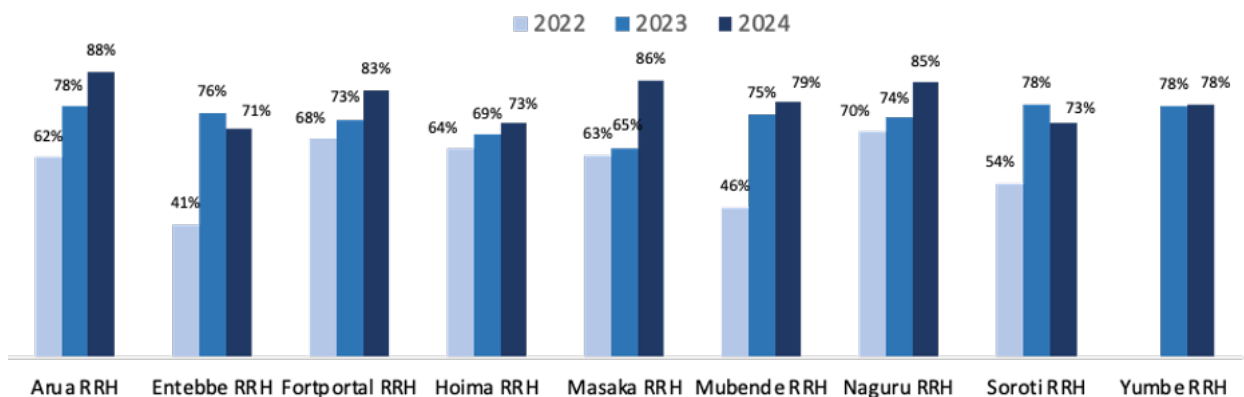
Annual Regional Referral Hospital Capacity Assessment

In order to measure improvements in health system capacity at the RRHs, an evaluation model was developed and applied on an annual basis to measure changes. Between 2022 and 2024, the overall health system capacity scores increased from 58% to 79% (see figure below). Improvements were noted in all domains including governance and leadership, Medicines and Supplies Management; Information Systems; Human Resources; Financing, and Service Delivery.



Trends in RRH Capacity: 2022 to 2024

Looking at the individual regional referral hospital improvement trends between 2022 and 2024, there were notable improvements in 8 out of the 9 RRH supported as shown in the chart below.



Facility health systems strengthening capacity assessment results (2022-2024)

The RRH strategy has improved systems contributing to efforts to end the HIV/AIDS epidemic in Uganda.

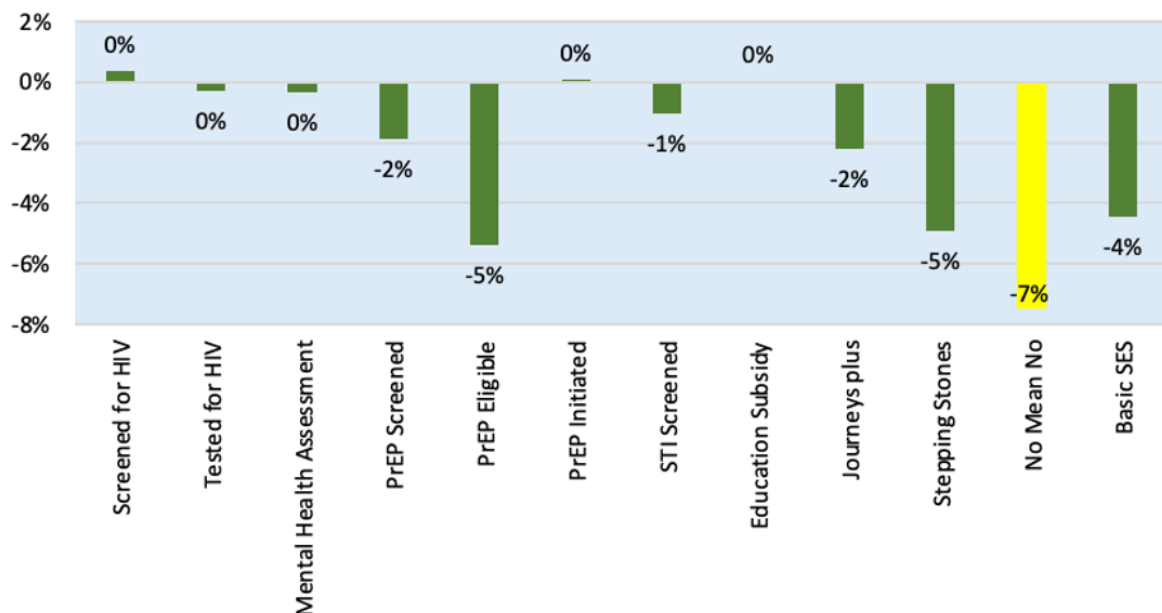


Data Quality Assessments (DQAs)

For optimal use, data must be of good quality - accurate, complete, consistent, timely and valid. To improve data quality at the point of data collection (implementing sites), METS has supported MOH to conduct several data quality assessments across the continuum of HIV care. Over the year ending September 2024, up to eight (8) DQAs were conducted in the program areas of circumcision (VMMC), Prevention of Mother to Child Transmission (PMTCT), Non Communicable Diseases (NCD), Ca/GANC, NCD, Cervical Cancer (CaCx), Key Populations Pre-Exposure Prophylaxis (KP/PrEP), HIV Testing (HTS), DREAMS, and Orphaned and Vulnerable Children (OVC). Following each data quality assessment, the findings are shared with the participating facility, the Implementing Partner supporting the region, the technical teams at the MOH and PEPFAR for corrective action.

DREAMS Program

METS conducted a DREAMS data quality and service assessment in CDC supported regions. All indicators assessed were within acceptable range of deviation +10% (Figure below). The main cause of the deviations was delayed data entry into the DREAMS tracking system used for reporting.



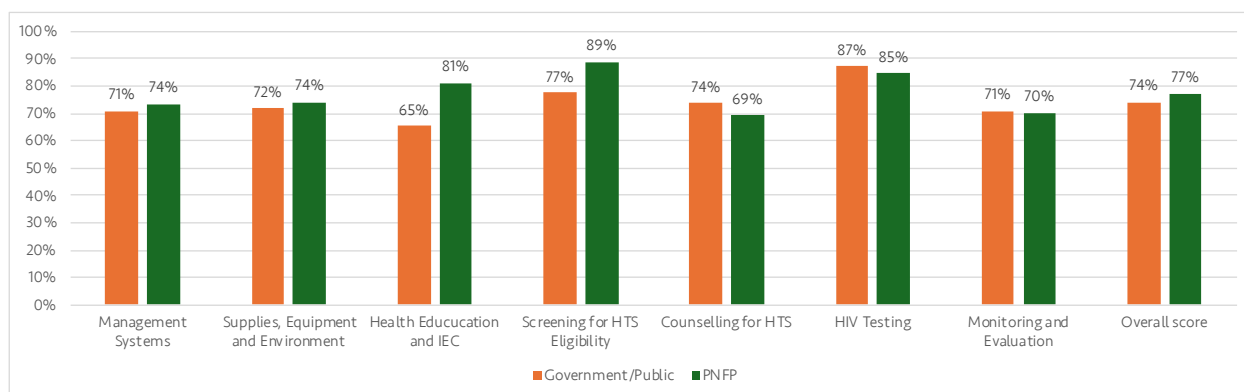
DREAMS data quality assessment results (2022-2024)

KP Program

METS conducted a key population data quality assessment at 149 health facilities in CDC and MUWRP supported regions. A systems assessment and verification of the quality of data entry in primary tools and KP tracker was conducted. Underreporting was seen among MSM and TG indicative of delayed data entry in the tracker particularly for high volume health facilities. Overreporting for SW indicating the failure to get records at the facility for data that was entered in the tracker.

HIV Testing Services

METS conducted HTS data and service quality assessment and on-site mentorship at 48 HTS health facilities aimed at ensuring compliance to HIV Testing Services and data standards and further reinforce the knowledge and skills among HTS service providers.



A graph showing adherence to the MoH HTS service standards performance

Based on the quality assessment, Private Not-For-Profit (PNFP) health facilities demonstrated superior adherence to HIV Testing Services (HTS) quality standards compared to government facilities, scoring 77% and 74% respectively. Among the seven thematic areas evaluated, PNFP facilities performed slightly better than government sites in four categories, highlighting potential areas for targeted improvement initiatives within the public healthcare sector.



Voluntary Medical Male Circumcision (VMMC)

On a regular basis, METS in collaboration with MoH and Implementing Mechanisms conducts VMMC onsite mentorship visits to all CDC supported VMMC sites. In FY2024, the mentorships were held in February and September 2024 in the 60 and 82 CDC-supported sites in Uganda respectively. The mentorship activity focused on VMMC service quality assessment (SQA) in each VMMC site and VMMC data quality assessment (DQA).

The DQAs validated VMMC output across national and PAPFAR systems for the periods of April-December 2023 and January to June 2024 respectively. While the SQA used electronic excel based MoH SMC Service Quality assessment tool, the DQA adapted the National Routine DQA tool.

These results of the VMMC service quality assessments are highlighted in the table below.

Implementing Mechanism	Thematic Area																	
	Overall		1. Management Systems		2. Supplies, Equipment and Environment		3. Registration, Group/Individual Education, and IEC		4. Individual Counsellor & HIV Testing		5a. Male Circumcision - ShangRing Procedure		5b. Male Circumcision Surgical Procedure		6. Monitoring & Evaluation		7. Infection Prevention	
	Feb-24	Sep-24	Feb-24	Sep-24	Feb-24	Sep-24	Feb-24	Sep-24	Feb-24	Sep-24	Feb-24	Sep-24	Feb-24	Sep-24	Feb-24	Sep-24	Feb-24	Sep-24
Overall	78	86	80	88	81	88	82	85	76	87	100	91	78	81	79	86	83	87
AIC_Soroti	81	79	85	85	83	79	93	100	82	75			76	50	83	80	72	86
Baylor Fort Portal Mubende	74	81	87	88	77	74	85	77	75	70		87	78	83	68	89	79	77
BAYLOR-HOIMA	67		100		88		50		50				36		93		89	
IDI_Masaka Wakiso	89	96	79	94	94	97	87	93	93	95	100	95	83	88	85	91	94	98
IDI West Nile	82	95	67	97	67	98	92	85	78	97			70	94	95	93	94	98
MoH_RRH Strategy	80	73	73	79	68	84	67	67	67	79			80	77	83	79	79	69
ROM_Kampala	46	86	52	92	67	87	100	88	50	89	100		100	87	36	74	75	91
UEC_UCMB	88	92	96	97	88	92	83	96	81	100	100		92	98	87	84	97	99
UPMB	87	92	84	96	82	89	82	95	78	93			72	83	93	96	89	96
Uganda Prisons Service	43	78	64	67	69	88	67	63	67	83			80	73	45	89	53	65
Key: <50%50-74%75-90%>90%Not observed																		

The data shows significant improvement in VMMC service quality across implementing partners, with overall scores increasing from 78% in February to 86% in September 2024. Eight of ten implementing mechanisms demonstrated improvement, with ROM_Kampala showing the most improvement (46% to 86%), followed by Uganda Prisons Service (43% to 78%).

IDI_Masaka Wakiso achieved the highest September score at 96%, while IDI West Nile and UEC_UCMB also performed exceptionally at 95% and 92% respectively. Across thematic areas, Individual Counselling & HIV Testing showed the greatest improvement (76% to 87%), while Management Systems improved from 80% to 88%. The ShangRing Procedure was the only area that declined (100% to 91%), scores show the need for further investigation to ensure all circumcision methods maintain high quality standards.

Support towards Continuous Quality Improvement (CQI)

National CQI collaboratives

METS supports MoH to design and implement national QI collaboratives which are aimed at improving quality of care. During the period, METS supported the finalization of the HTS and CoT collaborative change packages and development of the job aid.

The findings of one of the QI collaboratives was presented at the annual INTEREST Conference 2024, a premier scientific conference for HIV in Africa and brings together scientists involved in HIV treatment, pathogenesis, and prevention research from around the world. The conference showcased cutting-edge knowledge in the diagnosis and treatment of HIV and the prevention of the HIV-1 infection.



Enhancing HIV Case Identification through a National HIV Testing Services (HTS) Continuous Quality Improvement Collaborative in Uganda, October 2022 – September 2023.

Innocent Musoke¹, Simon Muhumuza¹, Julius Sseendwala¹, Ibrahim M. Lutalo¹, Alice Namale¹, Daniel Bogere², Herbert Kadama³, Evelyn Akello¹

¹Makerere University School of Public Health, Monitoring and Evaluation Technical Support (MAKSPH-METS) Program, Kampala, Uganda

²US Centers for Disease Control and Prevention, Global Health Center, Division of Global HIV & TB, Kampala, Uganda

³Ministry of Health, Kampala, Uganda.

INTEREST 2024, Benin

Background

- Identifying the last PLHIV and preventing HIV transmission is challenging using traditional HIV testing (HTS) approaches.
- By December 2021, Uganda's HTS approaches had identified 86.6% of the estimated 1,433,337 PLHIV, leaving 192,067 undiagnosed.
- National HTS yield target of 5% hasn't been met, and testing positivity rate declined to 2.3% in 2021.
- Makerere University School of Public Health, in collaboration with Ministry of Health and partners implemented HTS CQI collaborative aimed at increasing testing yield and linking newly identified PLHIV into care at 700 sites contributing 80% of the new enrollments on ART.

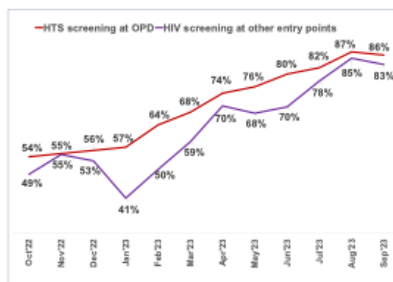
Methodology

- CQI interventions: biweekly meetings, orientation of health facility staff in using CQI approaches to improve yield, quarterly coaching and mentorship visits
- Biweekly data reviews conducted to identify gaps in HTS screening at all entry points, HTS eligible identified and tested for HIV and linkage of HIV-positive clients into care.
- Regional learning sessions were held with participating site teams to facilitate sharing of best practices and lessons learnt.

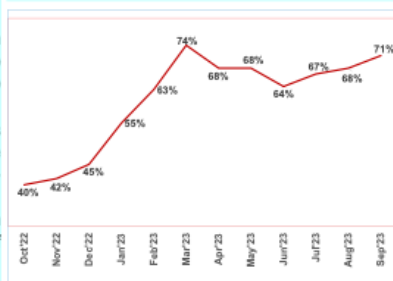
Presented at INTEREST 2024 Conference, Benin | 14-21 JULY 2024

Results

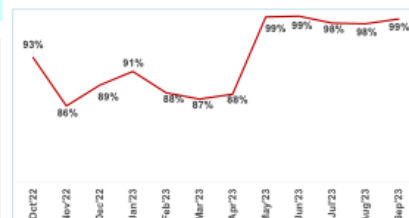
HIV Testing Services Screening



Clients screened, eligible and tested for HIV



Tested HIV Positive and linked to care



Conclusion

- A carefully designed CQI approaches might improve HTS yield that could lead to attaining the global target of ensuring 95% of PLHIV know their HIV status.

Acknowledgements

- This project was supported by PEPFAR through the CDC
- The findings and conclusions in this report are those of the author(s) and do not necessarily represent the official position of CDC

Corresponding Author: Innocent Musoke, Makerere University School of Public Health: Email: imusoke@musph.ac.ug
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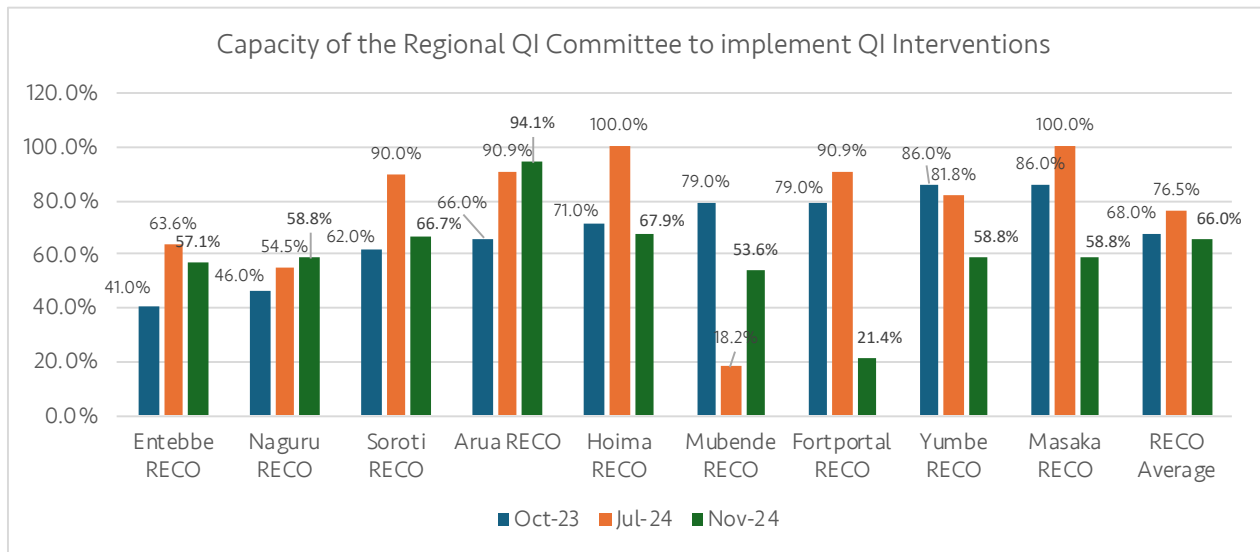


CQI Support to RRHs

METS provides Continuous Quality Improvement (CQI) support to Regional Referral Hospitals (RRHs) through quarterly mentorships and assessments. These structured activities evaluate progress in quality improvement implementation across CDC-supported RRHs while building team capacity to utilize CQI approaches for addressing performance and quality gaps.

The objectives of this support are to evaluate implementation of previously agreed action plans and adoption of established best practices. It determines the status of RRH and Regional QI Committee (RECO) structures and their capacity to effectively perform required mandates. Additionally, the program involves reviewing performance data and supporting facilities in updating existing QI projects and initiating new ones where necessary. Finally, it provides targeted mentorship and coaching to site teams based on identified gaps, ensuring each facility maintains an updated action plan.

The capacity of Regional Quality Improvement Committees (RECOs) to fulfill their mandates declined from 76.5% in July 2024 to 66.0% in November 2024. This reduction can be attributed to budget constraints and minimal dedicated resources, resulting in irregular committee meetings. Despite these financial challenges, RECOs have continued to perform their core functions of district coordination, implementation support, and resource mobilization.



Noteworthy, regular quality assessments at RRHs have proven ideal contributors for continuous improvement. While 5S implementation has improved significantly across most RRHs, exceeding average performance metrics, there remains a need to integrate this approach with broader CQI concepts. Departments that maintained weekly Work Improvement Team (WIT) meetings demonstrated notable improvements with higher action point implementation rates. Additionally, distributing leadership responsibilities beyond facility directors to other team members has fostered greater ownership of quality improvement initiatives.

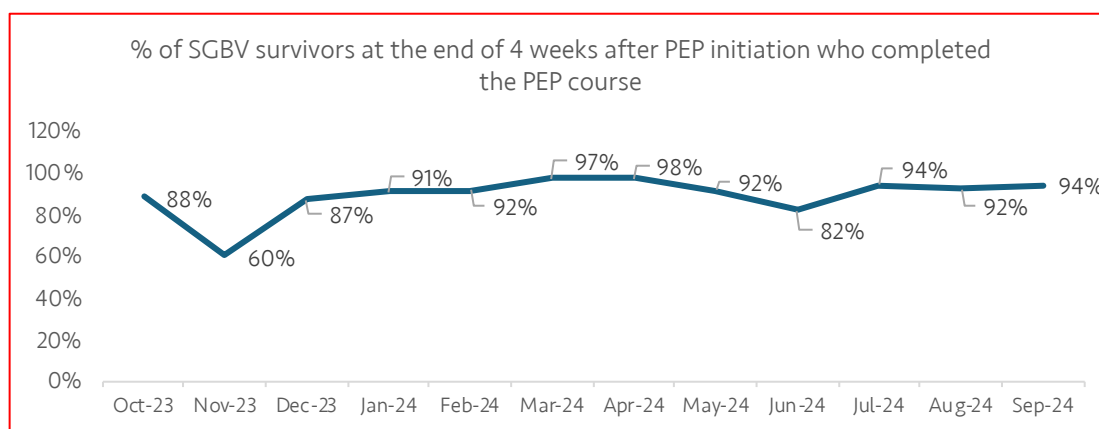
Strengthening Response Services for Gender-Based Violence (GBV)



Team conducting a GBV data and service improvement exercise

The Ministry of Health, with PEPFAR support, launched a quality improvement exercise in October 2023 to enhance post-exposure prophylaxis (PEP) services for survivors of sexual and gender-based violence (SGBV). Implemented across 406 health facilities nationwide, the program focuses on improving PEP eligibility assessment, initiation, and completion rates.

The program has shown noteworthy progress in its first year. PEP initiation rates for eligible SGBV survivors increased from 88% to 94%, while completion rates at four weeks improved significantly from 73% to 97%. Importantly, HIV testing after PEP completion rose from 75% to 98%, with 99% of survivors testing HIV-negative.



PEP initiation rates for SGBV survivors

Through regular monitoring, staff training, and collaborative learning sessions, this initiative demonstrates how systematic quality improvement can strengthen SGBV response services. These promising results suggest that nationwide implementation could contribute significantly to reducing HIV transmission rates in Uganda.



Events and Publications

International Conferences

AUTHORS	PRESENTATION TITLE	CONFERENCE/MEETING
Dr Paul Katongole	Rapid Initiation of a Ring Approach to Infection Prevention and Control (IPC) at Non-Ebola Healthcare Facilities in Mubende District, Uganda	The Society for Healthcare Epidemiology of America (SHEA) Conference, Houston Texas, USA
Naseef Mayanja	Overcoming EMR System Implementation Challenges in Resource-Limited Settings: Best Practices and Innovations from UgandaEMR	2024 Uganda National Digital Health Conference
Musa Mwanje	Using Machine Learning to Predict ART Interruptions & Viral Load Suppression	2024 Uganda National Digital Health Conference
Derrick Baluku	Data Sharing Standards, Methods, and Approaches in Health Information Systems: A Review of Practices in Uganda	2024 Uganda National Digital Health Conference
Dr Evelyn Akello	The Uganda DREAMS Tracker; a Novel Innovation Impacting Programming and Health Outcomes through Data Use	2024 Uganda National Digital Health Conference
Alex Mirugwe	Visualization, Prediction, Intervention: Interruptions in ART Adherence & Viral Load Suppression	2024 PEPFAR Uganda Science Summit
Dr Edgar Kansiime	Implementation of HIV Case Based Surveillance; Experience from Uganda	2024 PEPFAR Uganda Science Summit
Dr Simon Muhumuza	Measurement of Health System Strengthening Efforts for Decentralized HIV and TB Response in Uganda: Application of the Progression Evaluation Model, 2022- 2023	International Conference on HIV Treatment, Pathogenesis, and Prevention Research (INTEREST 2024), Cotonou, Benin
Innocent Musoke	Enhancing HIV Case Identification through a National HIV Testing Services (HTS) Continuous Quality Improvement Collaborative in Uganda, October 2022 – September 2023	International Conference on HIV Treatment, Pathogenesis, and Prevention Research (INTEREST 2024), Cotonou, Benin



International Events attended by METS Staff

MEETINGS/EVENTS	LOCATION
Design and Data use Academy	Kigali-Rwanda
OpenHIE Community Meeting	SriLanka
Technical Assistance for Partners' Strategic Meeting	Atlanta, USA
SRA International Annual Meeting	Seattle, Washington, USA
2024 OpenMRS Implementers Meeting	Nairobi, Kenya
UCSF Compliance Visit	San Francisco, California, USA
Cross Border Data Sharing Meetings	Nairobi, Kenya Mombasa, Kenya Mororogo, Tanzania Busia, Kenya
Cyber-secutity Training	Nairobi, Kenya



Conferences in Pictures

OpenMRS Conference



Held in Nairobi Kenya, the conference provided systems developers an opportunity to network with implementers, health sector leaders through sharing knowledge, experience, networking and showcasing work done by the different OpenMRS distributions across the world. METS was recognized as an Established Contributor in the OpenMRS community for the active participation in the community and for providing solutions to health problems, an award that has since then elevated METS to become one of the OpenMRS community partners. See <https://openmrs.org/who-we-are/openmrs-partners/>.

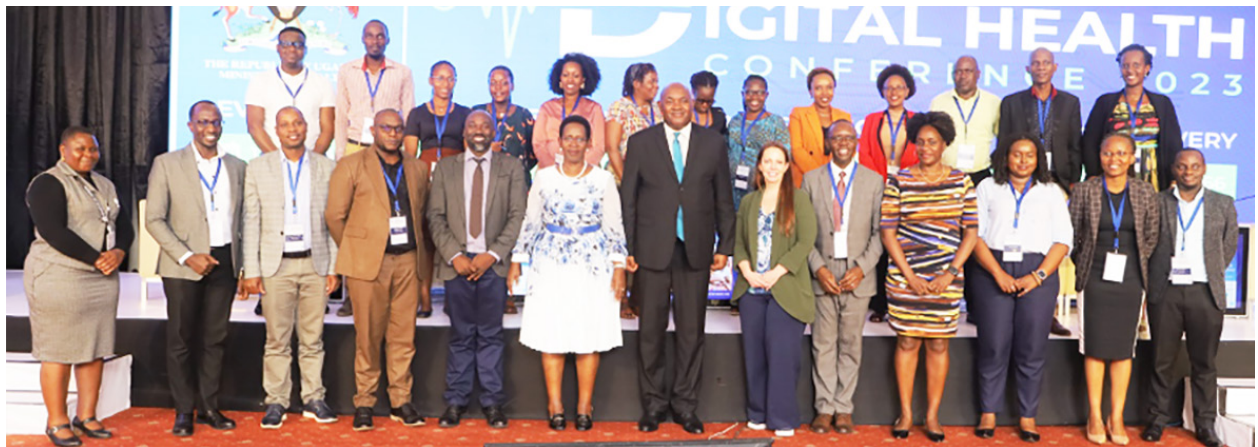
Attended by: Software Developers

Cross Boarder Data Sharing Initiative



Ugandan representatives from METS and USAID/SITES collaborate with regional experts at the East African Community's Digital Health, Data, and Technologies (DIDATI) conference, where cross-border health data sharing frameworks between member states were developed

National Digital Health Conference



METS was part of the organising committee for the first ever National Digital Health Conference under the theme "Leveraging digital health to improve efficiency in service delivery". The conference held on 13th - 14th November 2023, brought together thought leaders, policy makers, researchers, innovators, practitioners, digital health vendors and funders to discuss Uganda's progress in implementing digital health initiatives and how the country could tap into opportunities presented by digital health.



Quality Improvement (QI) National Conference



The 10th National Health Care Quality Improvement Conference, held in Entebbe, Uganda from 12-14 March 2024, brought together health service providers nationwide to advance healthcare quality in resource-limited settings. Under the theme "Innovations to Strengthen Health Systems for Delivery of Quality Health Care," the conference served as a critical knowledge-sharing platform for discussing innovative practices and strategies to enhance patient service delivery. Key highlights included the launch of two significant documents: the Harmonised Health Facility Assessment

Report and the Quality-of-Care Implementation Guide for Reproductive, Maternal, New-born, Child and Adolescent Health and Nutrition Services. Participants engaged in collaborative discussions, sharing experiences and best practices aimed at systematically improving healthcare quality and system resilience. The conference emphasized practical innovation, reflection, and continuous improvement as essential mechanisms for strengthening healthcare delivery in challenging resource environments.

PERFAR Science Summit



The annual PEPFAR Science Summit is a United States - Uganda Mission-led platform that brings together U.S. government researchers, Uganda's Ministry of Health, and the U.S. Government's implementing partners (IPs) in Uganda to share new scientific research to inform the implementation of HIV programs and related policies. The sixth annual summit took place from 22nd -23rd January 2024 at Mestil Hotel and Residences, Kampala. Themed "Following the Science to Epidemic Control" the summit aimed at disseminating key findings from recent HIV, TB, and related scientific research as well as discussing the implications for national programs, including for the PEPFAR Uganda Country Operational Plan.

Publications

Alex Mirugwe's manuscript titled "Sentiment Analysis of Social Media Data on Ebola Outbreak Using Deep Learning Classifiers" was published in Life as part of the Special Issue AI and Precision Medicine: Using Machine Learning for Disease Diagnosis and Prediction

Website: <https://www.mdpi.com/2075-1729/14/6/708>

PDF Version: <https://www.mdpi.com/2075-1729/14/6/708/pdf>



Pictorial



Ambassador William Popp visited the METS stall set up at the Bio-Behavioural Survey dissemination conducted by the MakSPH Crane Survey Program in Oct. 2024. METS showcased innovations like UgandaEMR - an electronic medical records system, Real-Time ARV Stock Monitoring system - an early warning system for the medical supply chain, the CBS Dashboard – a quick access portal that identifies trends and areas needing emergency medical attention.



Dr. Charles Olaro takes a group photo with the participants at the Uganda Scientific Event On HIV/AIDS and NCDs



Milton Kaye (5th from Left) attended a Cybersecurity training, inset is the Ugandan team at the training in Nairobi, Kenya in September 2024



Alex Ochedikol (extreme left) poses with the safe male circumcision team at Soroti RRH after a training on emergency resuscitation and CQI held in October 2024



Derrick Baluku presenting during the Lightning Talk on Reporting and Data Validation in UgandaEMR during the OpenMRS Conference in Nairobi, Kenya in September 2024



METS together with teams from MoH, CDC visit CPHL to consolidate systems within the MoH infrastructure. The Ministry of Health (MoH) has embarked on the journey to develop a national data warehouse, a centralized repository that will store integrated data from various data sources in the health care sector to aid in data access and analysis.



Rose Baryamutuuma (Red dress) conducts a key population data quality assessment with staff at Buwama HCIII in July 2024



MoH and METs team meeting with Hoima RRH Director during the EMR point of care activation



Participants' group photo during the Electronic Medical Records Training of Trainers workshop held at at MakSPH Auditorium in September 2024



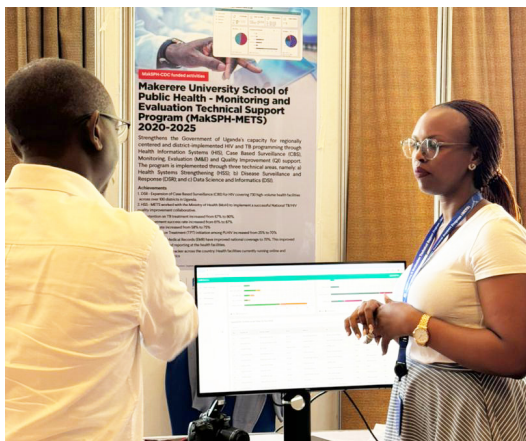
Partners and representatives from CDC Foundation visited METS to best understand implementation of Mortality surveillance (under DSR) and discuss areas of collaboration and support. METS currently supports Information systems (EMR), surveillance programs and data use



Prof. Wanyenze was awarded for her efforts in research during the 2024 graduation ceremony. During the same ceremony, Professor David Serwadda, a member of our Steering Committee, was awarded a Certificate for Professor Emeritus of Makerere University



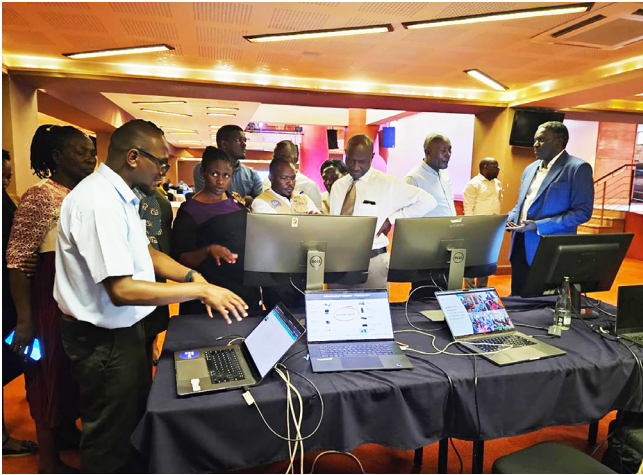
Dr. Henry Mwebesa reads a tribute to Amy Boore, the former Program Director – Division of Global Health Protection at CDC Uganda. Dr. Amy Boore was instrumental in providing technical assistance to METS during efforts to implement the global health security agenda. Specifically in the implementation of National Integrated Surveillance Systems (NISS) and building of the National Data Warehouse



Integration of health information systems was one of the most demonstrated approaches in the contributions by METS to the National Health digitalization strategy. Efforts include support to the National Data Warehousing and synchronization of data to the national health information management system (DHIS2)



Dr. Alice Namale (L) and Dr. Edgar Kansiime (3rd Left) join the CBS Dashboard demo team (Naseef Mayanja and Jaba Humphrey) for a photo at the exhibition hosted for the Bio-Behavioural Survey dissemination



METS team demonstrated the electronic version of the HIV testing and counseling form in UgandaEMR+ during the HTS Implementers Meeting at Kabira Country Club in June 2024



Dr. Alice Namale and Jonathan Mpango attended the CDC Executive Directors' Meeting with Ambassador William Popp at the Uganda Episcopal Conference in Nsambya for a meet and greet as well as discuss issues on strategic alignment



Naseef Mayanja provides technical assistance to Kisugu and Komamboga HC staff under the G2G KCCA implementing mechanism in the use of UgandaEMR Mobile for both HTS and HIV community services



NCD Evaluation team led by Herbert Mulira (C) enroute to Lulamba HCIII in Kalangala District in August 2024



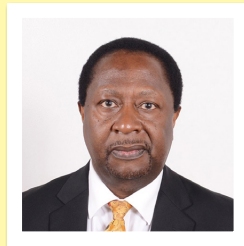
Steering Committee



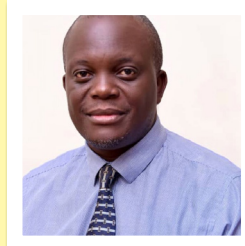
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PROF. RHODA WANYENZE
MEMBER



PROF. DAVID SERWADDA
MEMBER



PROF. FREDRICK MAKUMBI
MEMBER



RAY RANSOM
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DR. ALLAN MURUTA
MEMBER



PAUL MBAKA
MEMBER



DR. ALICE NAMALE
EX OFFICIO MEMBER



Word from the Steering Committee Chairperson

As we reflect on another year of the Monitoring and Evaluation Technical Support (METS) Program, I am deeply impressed by the organization's unwavering commitment to strengthening Uganda's health systems. The Ministry of Health's partnership with the Centers for Disease Control and Prevention continues to be a testament to the power of strategic, collaborative approaches in addressing complex health challenges.

The MakSPH-METS Program stands at a critical intersection of innovation and implementation for MoH. By focusing on Health Systems Strengthening, Disease Surveillance and Response, and Data Science and Informatics, we are building sustainable capacity that will have lasting impact long after our current grant cycle concludes. Our work goes beyond immediate health interventions; we are investing in Uganda's future by empowering local teams with advanced technical support capabilities.

In a landscape where health challenges are increasingly complex, the MakSPH-METS Program demonstrates remarkable adaptability and strategic vision. We have consistently prioritized local ownership, technical excellence, and meaningful collaboration with government partners. The Steering Committee takes pride in supporting an initiative that transforms how health systems operate and respond to critical challenges like HIV and Tuberculosis elimination.

As we approach the last of our fifth year, we are optimistic about the continued progress and potential for scalable innovations that the MakSPH-METS Program has developed over time. The dedication of our team, the trust of our partners, and the resilience of the communities we serve continue to inspire our collective efforts.

Dr. Sarah Byakika
Chairperson Steering Committee



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