# Ensuring good quality data for the Voluntary Medical Male Circumcision (VMMC) Program

On a regular basis, MakSPH-METS in collaboration with the Ministry of Health (MoH) and Implementing Partners (IPs) conduct VMMC onsite mentorship visits to all CDC-supported VMMC sites. In Fiscal Year 2024 (FY2024), these mentorships were held in February (62 sites) and September (82 sites). The mentorship activity focused on VMMC service quality assessment (SQA) and data quality assessment (DQA) at each site.

The DQA validated VMMC program outputs across national and PEPFAR systems for the periods of April-December 2023 and January to June 2024 respectively. While the SQA used electronic Excel-based MoH Service Quality Assessment tool, the data quality .

assessment adapted the National Routine DQA tool. Overall, the assessed sites reported accurate VMMC outputs across all data sources except in the PIRS -Nerve Centre compared to the count from the VMMC registers. Uganda Prisons Services (UPS) showed remarkable improvement in the quality of VMMC output reported in the Nerve Centre (VMMC_Circ) and HMIS 105 (Follow-up indicator) between the two periods. Similarly, UEC, UPMB, MoH RRH Strategy and IDI West Nile registered tremendous improvement in data quality in various data sources between the two review periods.

### Deviation (VF%) of number of records counted in the VMMC Register and those reported in the data source

| Implementing Mechanism | Males circumcised | | | | | | | | | | Follow up within 14 days | | | | | |
| | SMC Client Forms | | Nerve Centre in PIRS | | HMIS105 | | DHIS2 | | DATIM | | HMIS105 | | DHIS2 | | DATIM | |
| | 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Over all** | -1.3 | 0.0 | -8.3 | -8.2 | -0.6 | -1.3 | -0.6 | -0.3 | 1.2 | -1.5 | -3.5 | -2.9 | -3.1 | 3.6 | 2.4 | 3.4 |
| AIC Soroti Region | -1.4 | 0.4 | -32.0 | -26.3 | -6.4 | -1.3 | -6.4 | 1.1 | -4.7 | -4.2 | -9.0 | -1.1 | -8.4 | 0.2 | -4.6 | -3.3 |
| Baylor Fort Portal Mubende | -1.3 | -0.2 | -1.1 | -0.6 | -3.6 | 0.1 | -3.6 | 0.3 | -0.3 | 0.3 | -0.7 | -4.5 | -0.3 | 0.2 | -0.2 | 0.2 |
| Baylor -Hoima | -0.2 | | -7.0 | | -0.1 | | -0.1 | | -0.1 | | -11.7 | | -5.5 | | -0.4 | |
| IDI_Masaka Wakiso | -3.4 | -1.1 | -9.2 | -8.9 | 5.0 | -1.3 | 5.0 | -4.0 | 5.4 | -0.3 | 1.7 | -1.2 | 2.6 | -3.3 | 7.6 | 0.7 |
| IDI WEST NILE | -0.1 | 0.0 | 0.1 | 0.1 | 0.0 | 0.6 | 0.0 | 0.1 | 0.0 | 0.1 | 0.0 | -0.3 | -2.3 | 30.2 | 0.0 | 33.9 |
| MoH RRH Strategy | 0.1 | -0.3 | -3.6 | -3.0 | -10.0 | 0.2 | -10.0 | -1.9 | -1.8 | -2.0 | -41.1 | 0.5 | -31.3 | 0.3 | -2.7 | 0.3 |
| ROM_Kampala | 1.9 | 2.3 | 0.3 | 1.4 | -1.2 | -5.7 | -1.2 | 3.0 | 0.1 | -5.4 | -4.6 | -0.6 | -6.8 | 8.6 | 3.6 | -0.3 |
| UEC | 3.0 | -0.4 | -17.1 | -12.2 | 9.9 | -8.7 | 9.9 | -0.4 | 10.4 | -1.4 | 6.7 | -18.2 | 7.2 | -0.2 | 11.9 | 0.1 |
| UPMB | 0.0 | 0.2 | 2.3 | 5.5 | -1.9 | 20.4 | -1.9 | 15.7 | 0.9 | 18.0 | -0.9 | -3.3 | 5.7 | -2.8 | 6.9 | -0.2 |
| UPS | -0.6 | 1.1 | 94.6 | -0.2 | -29.7 | -11.8 | -29.7 | -22.6 | -10.1 | -22.6 | -22.2 | -4.0 | -42.6 | -24.5 | -14.4 | -24.5 |

| Implementing Mechanism | Thematic Area | | | | | | | | | | | | | | | | |
| | Over all | | 1. Management Systems | | 2. Supplies, Equipment and Environment | | 3. Registration, Group/individual Education, and IEC | | 4. Individual Counselling & 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Over all** | 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

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.

# Supporting MOH roll out integrated EMR Systems at all Regional Referral Hospitals

The Ministry of Health (MoH), in collaboration with MakSPH-METS and other stakeholders, has begun deploying integrated Electronic Medical Record (EMR) systems across all Regional Referral Hospitals in Uganda. This initiative, which started March aims to enhance patient care, reduce redundancies, and improve data management efficiency.

The initiative focuses on integrating UgandaEMR+ (used primarily in HIV/TB clinics) with eAFYA (deployed in out patient department (OPD) settings), and ALIS in the laboratory to address challenges such as duplicate patient registration and commodity tracking. Key objectives included establishing a Shared Health Record (SHR) functionality and improving commodity management.

The first phase has been successfully completed, covering Masaka, Naguru, Mubende, and Fort Portal Regional Referral Hospitals. At these facilities, technical teams deployed and tested the SHR functionality, conducted training on new integration features, and upgraded the EMR servers.

Notable achievements include the restoration of Health Information Exchange (HIE) function, enabling real-time data reflection onto EMR dashboards, successful stock service integration allowing UgandaEMR+ to manage requisitions from eAFYA, and staff training on new dispensing functionalities.



Reorientation of health workers at Mubende RRH
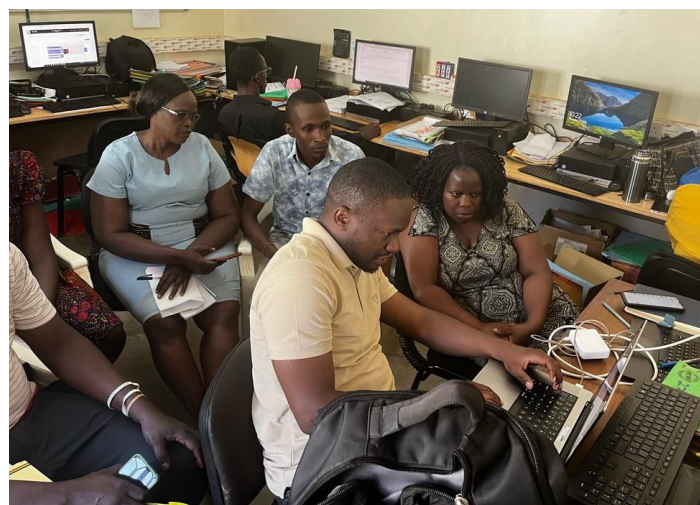


Musa Mwanje of METS training health workers at Lira RRH

The second phase, covering Entebbe, Arua, Lira, and Gulu Regional Referral Hospitals, is currently underway. The third phase including Hoima, Soroti, Mbale, and Mbarara Regional Referral Hospitals, is scheduled for implementation.

Challenges encountered include insufficient training time for staff at high-volume facilities and the need to standardize drug lists across facilities to streamline the integration process. Despite these obstacles, the integration efforts are progressing, with plans to expand to laboratory services in the future.
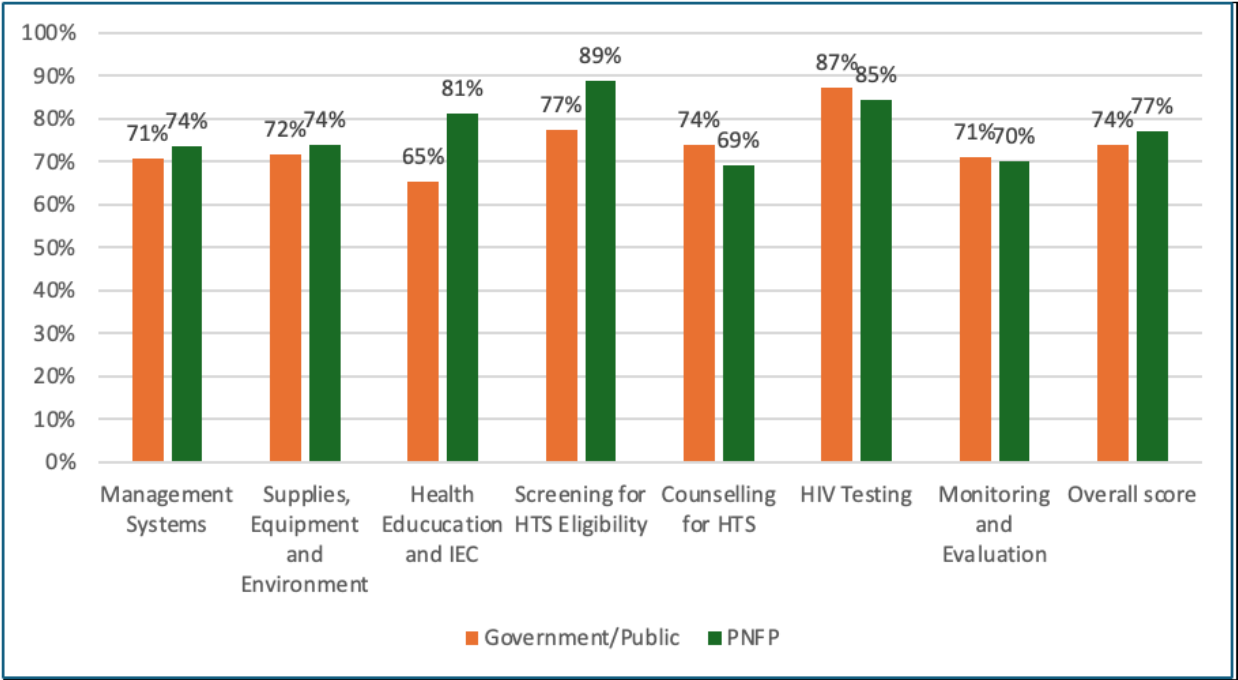
# HIV Testing Services Quality Assessment Shows Progress

*The Ministry of Health (MoH) recently completed a comprehensive service quality assessment of HIV Testing Services (HTS) across Uganda, revealing key insights into the national progress toward standardized quality care. This assessment, conducted with technical and financial support from MakSPH-METS, evaluated facilities' adherence to national quality standards while identifying areas for improvement.*

*The assessment examined a variety of services provided during HIV testing, including pre-test information sessions, post-test counselling, linkage to appropriate prevention and treatment services, coordination with laboratory services, and quality assurance mechanisms.*

*The Service Quality Assessment (SQA) thoroughly evaluated all processes within the Continuum of Linkage to Care and HIV Prevention, providing a holistic view of how effectively Uganda's health system is delivering these crucial services. During the assessment, evaluators examined seven critical thematic areas across 48 sampled health facilities: Management Systems; Environment, Supplies, and Equipment; Health Education & IEC; Screening for HTS Eligibility; Counselling for HTS; HIV Testing; and Monitoring and Evaluation (M&E).*

*This systematic approach allowed for detailed comparison between Government/Public facilities and Private Not for Profit (PNFP) health facilities in Uganda.*



*Adherence to HTS Service Quality Standards by Health Facility Ownership*

*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 overall, scoring 77% and 74% respectively. Among the seven thematic areas evaluated, PNFP facilities performed slightly better than government sites in four categories of health education, eligibility screening, management and availability of supplies and equipment. This highlighted potential areas for targeted improvement initiatives within the public healthcare sector.*

*Going forward, the assessment findings will directly inform the development of targeted strategies to address identified gaps, ultimately strengthening Uganda's HIV response. By reviewing service delivery across the testing continuum, MoH continues to build a more effective, standardized approach to HIV testing and linkage to care—a critical component in the country's broader efforts to combat HIV/AIDS.*

# Strengthening the Local Area Network at Regional Referral

*The MoH recognizes digital health and ICT as key to improving healthcare delivery. MakSPH-METS has been instrumental in advancing digital health systems in Uganda, supporting policy development, strengthening ICT infrastructure, developing and maintaining health information systems, and training the workforce in use of the systems.*

*To support the digital health transformation at the regional referral hospitals, MakSPH has* *successfully implemented local area network (LAN) installations in six (6) key health facilities, including Mubende RRH, Masaka RRH, Fort Portal RRH, Kiruddu Hospital, Naguru Hospital, and Mulago Specialised Women's Hospital. This involved installation of stable internet networks, providing essential computer equipment, and establishing robust power solutions, METS is enabling seamless electronic data capture and interdepartmental communication.*
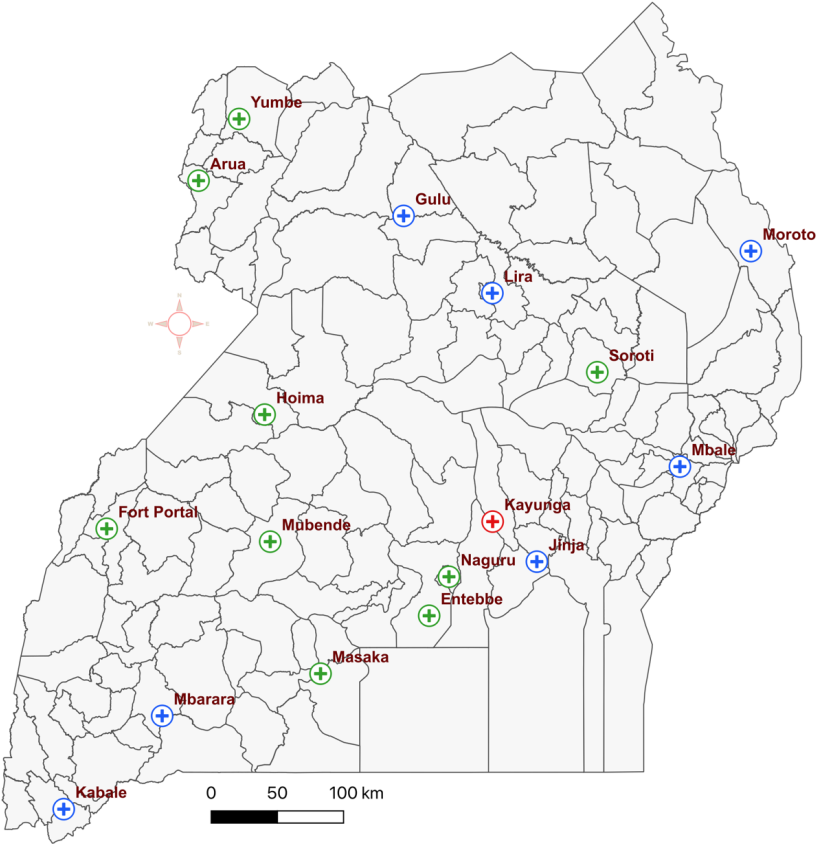


*Locations of Regional Referral Hospitals in Uganda*

**Key achievements include:**

- Completion of LAN installations in the six hospitals
- Strengthening of infrastructure for electronic medical record systems
- Support for system integration of HIV care with general outpatient services
- Initiated comprehensive beneficiary feedback mechanisms

## Masaka Regional Referral Hospital

*'MakSPH-METS' implementation of our new Local Area Network has revolutionized hospital operations across all departments. This robust network infrastructure has created seamless connectivity throughout our facility, breaking down communication barriers and unifying our healthcare ecosystem'.*

*'Medical staff now access critical patient information instantaneously, dramatically accelerating clinical decision-making and enhancing care quality. The upgraded LAN has empowered full deployment of integrated digital health records, telemedicine capabilities, and cloud-based healthcare solutions—technological advancements that significantly boost efficiency and patient outcomes.*

*Administrative functions have experienced remarkable improvements, with streamlined scheduling, billing, and operational processes eliminating previous bottlenecks. The comprehensive network transformation has elevated performance across clinical, administrative, and support services, resulting in measurably higher hospital efficiency and superior patient care delivery.*

## Fort Portal Regional Referral Hospital

*The LAN support provided has transformed the facility's operations by addressing critical gaps in network infrastructure, security, and resource allocation. Hospital staff now benefit from improved network reliability, faster data transfer rates, and enhanced productivity. The upgraded infrastructure—including new switches, routers, firewalls, and servers—has enabled better implementation of medical applications across clinical departments, laboratories, and administrative areas, ultimately leading to more efficient workflows and improved patient care.*

*Looking forward, sustainability of these improvements requires regular maintenance, ongoing staff training, performance monitoring, and budgetary allocation for future upgrades. The facility has specifically identified the need for additional ICT equipment such as laptops, desktops, and tablets to further strengthen the digitization of electronic medical records. These measures will ensure the continued success of the LAN solution, creating lasting benefits for patients, clinicians, and administrators throughout the hospital.*
*~Simon Mulungi, Regional Information Technology Officer*

*Next steps extend beyond infrastructure, with plans for continued capacity building, on-site mentorship for healthcare workers and conducting and impact assessment on beneficiary facilities. METS is committed to ensuring that technological investments translate into improvement in thealthcare delivery.*

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