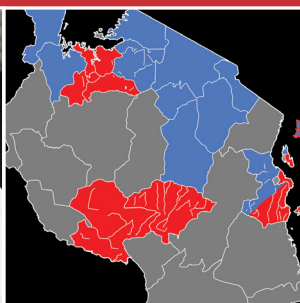




Strengthening M&E Systems and the Evidence Base for Health and Social Services



MEASURE Evaluation–Tanzania Final Project Report (2014–2019)



U.S. President's Malaria Initiative



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ABBREVIATIONS

AA	Associate Award
ANC	antenatal care
ART	antiretroviral therapy
ARV	Antiretroviral
BCC	behaviour change campaign
CBO	community-based organization
CCHP	Comprehensive Council Health Plan
CCW	community case workers
CDC	United States Centers for Disease Control and Prevention
CHMT	Council Health Management Team
CHSSP	Community Health and Social Welfare System Strengthening
CMVSO	Council Malaria Vector Surveillance Officer
COP	community of practice
CSO	civil society organisation
CTC	care-and-treatment centre
DACC	District AIDS Control Coordinator
DATIM	Data for Accountability, Transparency, and Impact Monitoring
DC	District Council
DDU	data demand and use
DESW	Department of Elders and Social Welfare
DHMIS	FP District Health Management Information System Focal Person
DHS	District Health Secretary
DMO	District Medical Officer
DMSO	District Malaria Surveillance Officer
DQA	data quality assessment
DRCHCo	District Reproductive and Child Health Coordinator
DSW	Department of Social Welfare
DSWO	District Social Welfare Officer
EGPAF	Elisabeth Glaser Pediatric AIDS Foundation
eIDSR	electronic integrated disease surveillance and response
EQA	external quality assurance
FGD	focus group discussion
GEMNet-Health	Global Evaluation and Monitoring Network for Health
HBC	home-based care
HBHCT	household-based HIV counseling and testing
HDC	Health Data Collaborative
HH	household
HIS	health information system(s)
HMIS	health management information system(s)

HR	human resources
ICT	information, communication, and technology
IDI	in-depth interview
IP	implementing partner
IR	intermediate result
IRS	indoor residual spraying
ITN	insecticide-treated net
JSI	John Snow, Inc.
KI	key informant
KM	knowledge management
LGA	Local Government Authority
LLIN	long-lasting insecticide-treated mosquito net
MC	Municipal Council
MCN	malaria case notification
MDA	ministries, departments, and agencies
MDH	Mkuranga District Hospital
M&E	monitoring and evaluation
MEEDS	Malaria Early Epidemic Detection System
MER	monitoring, evaluation, and reporting
MEval-TZ	MEASURE Evaluation–Tanzania
MLEEC	Ministry of Labor, Empowerment, Elderly and Children
MMH	Mnazi Mmoja Hospital
MSDQI	malaria services data quality improvement
MOHCDGEC	Ministry of Health, Community Development, Gender, Elderly, and Children
MoMoVec	Mobile Phone Monitoring of Malaria Vector Control Coverage
MOU	memorandum of understanding
MVC	most vulnerable children
MUHAS	Muhimbili University of Health and Allied Sciences
MC	Municipal Council
NACP	National AIDS Control Programme
NGO	nongovernmental organisation
NMCP	National Malaria Control Programme
NRL	National Reference Laboratory
OCA	organizational capacity assessment
OD	organizational development
OVC	orphans and vulnerable children
PCR	polymerase chain reaction
PEPFAR	United States President’s Emergency Plan for AIDS Relief
PIUMA	Pima Uishi kwa Matumaini
PLHIV	people living with HIV
PM&E	participatory monitoring and evaluation

PMI	President's Malaria Initiative
PMMEH	Project Management, Monitoring, and Evaluation in Health
PMTCT	prevention of mother to child transmission of HIV
PO-RALG	President's Office–Regional Administration and Local Government
RACC	Regional AIDS Control Coordinator
RADZEC	Reactive Case Detection in Zanzibar Effectiveness and Cost
RCD	reactive case detection
RDD	random digit dialling
RDT	rapid diagnostic test
RHIS	routine health information system(s)
RHMIS FP	Regional Health Management Information System Focal Person
RHMT	Regional Health Management Team
RHS	Regional Health Secretary
RMO	Regional Medical Officer of health
RRCHCo	Regional Reproductive and Child Health Coordinator
SNP	School Net Programme
SOP	standard operating procedure
SOW	scope of work
SRH	sexual and reproductive health
THPS	Tanzania Health Promotion Support
TA	technical assistance
TACAIDS	Tanzania Commission for AIDS
TVCSP	Tanzania Vector Control Scale-up Project
TWG	technical working group
UCC	universal coverage campaign
USAID	United States Agency for International Development
VF	verification factor
VMC	Village Malaria Coordinator
WDH	women who delivered at home
WHO	World Health Organization
WLHA	women living with HIV/AIDS
ZAC	Zanzibar AIDS Commission
ZACP	Zanzibar National AIDS Control Programme
ZIHHTLP	Zanzibar Integrated HIV, Hepatitis, Tuberculosis, and Leprosy Programme
ZAMEP	Zanzibar Malaria Elimination Programme

EXECUTIVE SUMMARY

Overview

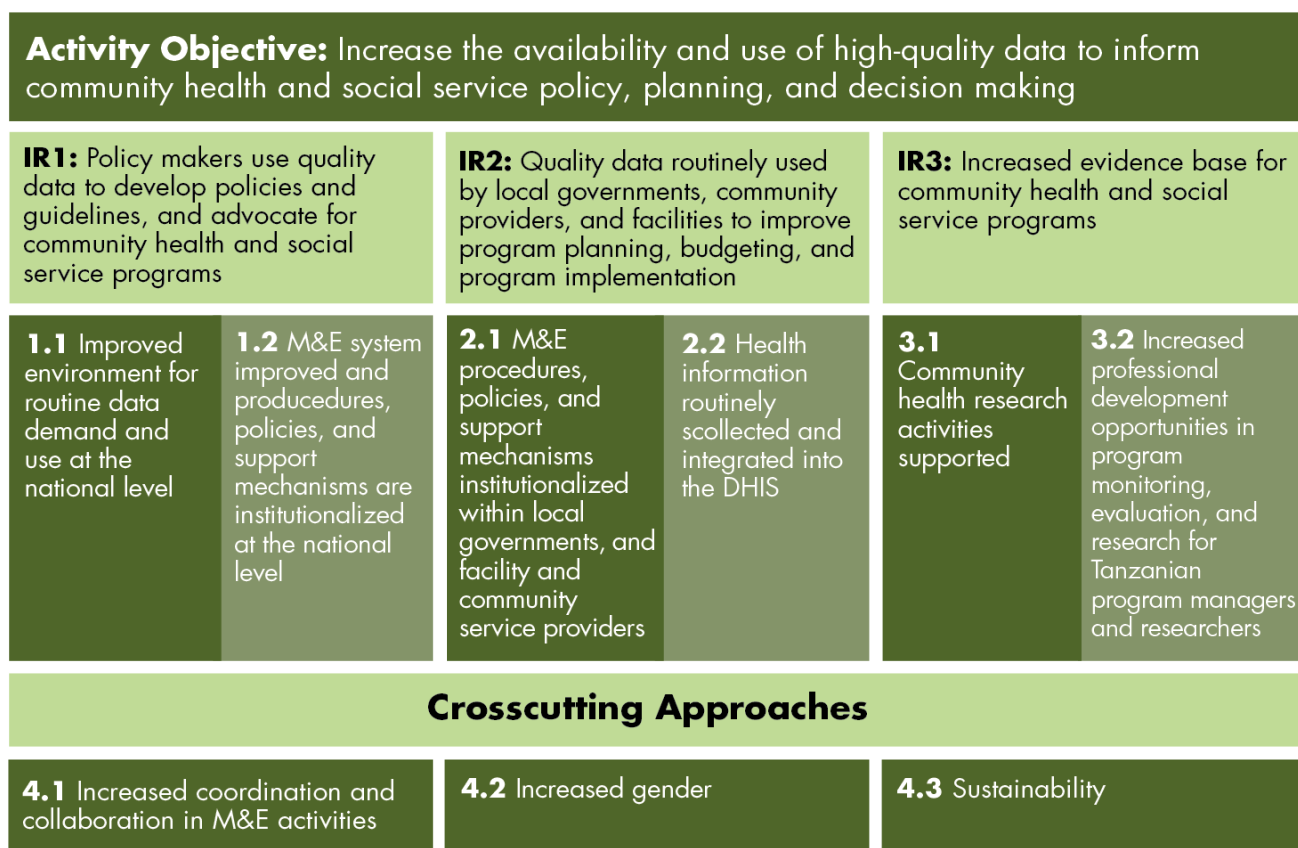
The five-year MEASURE Evaluation–Tanzania (MEval-TZ) Associate Award (AA) began on February 28, 2014 and ends on September 30, 2019. The project was funded by the United States Agency for International Development (USAID), the United States President’s Emergency Plan for AIDS Relief (PEPFAR), and the President’s Malaria Initiative (PMI). The aim was to strengthen monitoring and evaluation (M&E) and research capacity of community health and social service programmes in the United Republic of Tanzania for malaria and HIV control programmes in Mainland Tanzania and Zanzibar.

MEval-TZ addressed three intermediate results (IRs):

- IR 1: Policy makers use quality data to develop policies and guidelines, and advocate for community health and social service programs (*activities to strengthen national-level M&E systems, data quality, and data use*)
- IR 2: Quality data routinely used by local governments, community providers, and facilities to improve program planning, budgeting, and program implementation (*subnational strengthening of M&E, data quality, and data use with health management teams, local government, and implementing partners*)
- IR 3: Increased evidence base for community health and social service programs (*crosscutting activities to strengthen the evidence base and enhance capacity for M&E and research*)

The project’s technical approach assumed that health and social service programmes are more successful when supported by relevant, robust, and timely information to guide resource allocations and programming. Two complementary pillars were described to achieve this: (1) the foundation of an enhanced evidence base derived from evaluation, monitoring, and focused research; and (2) widespread use of this evidence to develop policies and guidelines; advocacy for community health and social service programmes; and the details of programme planning, budgeting, and implementation. The project worked at the national and subnational levels. Figure 1 illustrates this results framework.

Figure 1. MEval-TZ's results framework



Underpinning the project's work were the principles of collaboration, gender integration, and sustainability. Working in a **collaborative** and participatory manner while fostering relationships with government and non-governmental partners, the project sought to establish and strengthen systems that would be **sustained** through enhanced local capacity. By focusing on **gender** as a crosscutting issue, the project sought to highlight gender disparities in health access, programming, and health outcomes, and to promote investigation and action to address those issues to ensure the best services for all Tanzanians. Gender integration encompassed three strategies: (1) gender-focused M&E training with M&E staff at selected ministries; (2) increased availability of sex-disaggregated and gender-specific data; and (3) support for special studies related to gender.

Technical Approach

At the national level, activities to enact strategies focused on (1) **assessments** of M&E systems and data use and consequent development of action plans; (2) **enhanced processes** for supervision and standard operating procedures (SOPs) to improve systems and the use of data; and (3) **implementation** through training programmes, mentorship, and supervision for institutionalising data use approaches, and strengthening technical working groups (TWGs) as a mechanism for coordinating M&E activities.

At the subnational level, the project focused close to the service delivery level—where data quality and data use are, or should be, generated. The project conducted data quality and data use assessments and developed associated strengthening plans. These plans incorporated data and performance review meetings coinciding with quarterly reporting or the annual planning cycle, with results reported through the District Health Information Software (DHIS2), the national data management system for tracking performance against targets. The project focused efforts on regional and council health management teams (RHMTs; CHMTs) as the structures for supportive supervision, enforcing standards, and promoting and sustaining progress. RHMTs and CHMTs are government employees who supervise, monitor, and coordinate health service delivery. These teams consist of regional medical officers and health secretaries, health management

information system (HMIS) focal persons, and disease-specific focal persons for AIDS, malaria, and reproductive and child health.

For the crosscutting work to build research and M&E capacity (IR 3), the project used a small grants scheme targeting local researchers, government, and community-based organizations (CBOs). It also worked with local institutions to develop curricula for M&E training and a two-year graduate course and established a community of practice (COP) for M&E professionals as a platform for knowledge, information, and resources exchange.

In practice, the project organised its work into four technical “clusters”: most vulnerable children (MVC), HMIS, malaria surveillance and operations research, and capacity building for research and M&E. It used this organization—rather than the structure of the IRs—because the three IRs, if rigidly applied, would mask the complementarity of activities and technical approaches and also the overlap of beneficiaries. For example, the data demand and use (DDU) activity belonged to IR 1 but depends on the quality of data reported through the HMIS and the capacity for analysing it, which was an activity under IR 2.

Achievements

MEval-TZ achieved important results in the four technical clusters, advancing the state of the health information system (HIS) in Mainland Tanzania and Zanzibar. Three highlights are:

- The preexisting MVC database in Tanzania was very rudimentary. It has been extensively developed and is now fully integrated and sustained by the host government.
- The DDU strategy identified and supported Data Use Champions who are integral to successful data use in the districts.
- The Master's Program emerged as an essential capacity building strategy that serves as a “permanent academic stamp” in project management and M&E in health.

1. In the area of HIV and MVC, the project was able to improve the M&E and data systems by:

- Integrating MVC indicators in the national DHIS2 platform to enhance referrals to services
- Assessing knowledge and skills among regional- and council-level HIV focal persons and developing and implementing a capacity-building plan based on the findings
- Improving the M&E plan and data management system for MVC through better data quality, reduced system fragmentation, and enhanced system flexibility and sustainability, and by developing a national guideline for supervising MVC programmes using the system
- Creating a TWG to coordinate efforts and empowering the Department of Social Welfare (DSW) to be the national repository for MVC data
- Further improving referrals through a national referral handbook and a data analysis tool to overcome challenges in lack of coordination and lack of SOPs on how referrals should operate
- Improving the DSW's organizational capacity with leadership and management training to enhance its M&E function

2. The project improved HMIS, data quality, and data use by:

- Assessing baseline capacity of health team end-users of DHIS2 and building tailored training activities that would enhance overall functioning of the national HMIS
- Identifying and supporting DDU champions to reinforce improved use of data for decision making
- Supporting opportunities for regular data reviews to look at data quality and performance of health indicators for malaria and HIV, identify gaps in data and services, and develop action plans to address those gaps
- Developing national guidelines for data quality assessment (DQA) in health

3. The project improved malaria surveillance and operations research by:

- Conducting routine system strengthening, including data and performance reviews, training, supervision, and dissemination of malaria surveillance data to improve data quality and use
- Supporting work in Zanzibar on the Malaria Early Epidemic Warning System passive surveillance activities (through the Malaria Early Epidemic Detection System [MEEDS]), and active surveillance through malaria case notification (MCN)
- Supporting the production and dissemination of booklets for weekly malaria case reporting from health facilities through MEEDS and for the electronic integrated disease surveillance and response (eIDSR) system and malaria case investigation guidelines, case investigation forms, and creation of databases for Zanzibar
- Supporting seven operations research studies on many aspects of malaria surveillance and vector control, such as school bed-net distribution programmes, a holed nets study, and malaria case notification, among others

4. The project improved capacity for research and M&E by:

- Assessing HIV referral systems between communities and health facilities and assessing needs for home-based care (HBC) in United States government-supported areas
- Assessing the availability and use of sex-disaggregated data in Tanzania
- Monitoring outcomes among the beneficiaries of Kizazi Kipya (a USAID-funded MVC service delivery project implemented by Pact)
- Administering small grants to local universities and nongovernmental organisations (NGOs) to increase the evidence base for community health and social service programmes and to build capacity
- Developing in collaboration with Muhimbili University of Health and Allied Sciences (MUHAS) a postgraduate master's degree programme in project management and M&E in health.

Challenges

In both Mainland and Zanzibar, operational challenges in mobile phone function and network coverage sometimes hampered timely reporting of malaria surveillance data. To address this, the project regularly reviewed data from health facilities and supported a designated staff member trained on the electronic data transmission system.

While the MVC M&E system, including the data management system, have now been adopted by the government, challenges remain in its rollout in districts not covered by the USAID-funded orphans and vulnerable children (OVC) projects. Further, well into the project timeframe, PEPFAR shifted its geographic focus to the most high-burdened HIV areas, requiring a corresponding shift in where project activities should be concentrated. As such, the level of engagement with and technical assistance (TA) to some districts may have been inadequate to bring about meaningful results.

Weak M&E governance systems and misalignment of data collection systems and indicators in the Tanzania HIS highlighted the need for harmonising primary data recording and reporting. A need remains for improved accessibility, analysis, and use of survey data. Also, digital systems are fragmented, leading to limited analysis and data use and, therefore, limited understanding of what data are saying.

Other important challenges clustered around limited human resources (HR) and budget constraints. Both the project and the government had HR challenges. The project had limited technical and field staff; the government did not have enough staff to implement recommended M&E system improvements. Further, many project strategies were implemented through regional health teams with the expectation that those teams would extend the skills to the health facility level. However, teams often lacked resources to do this. Against this context, the project's impact may have been limited at the health facility level.

Lessons Learned

When baseline M&E system assessments form the basis of project planning, it is important to agree on the scope of support expected. This is because MEval-TZ's approach for structured baseline assessments carries the risk of generating greater demand for interventions than the project can fulfil.

Comprehensive M&E TA is important, especially among government partners, and should encompass what is needed for the entire government programme rather than subparts. As an example, the project worked to strengthen the MVC M&E system within the DSW. However, this system is only one among eight programmes in the department and some of the required organizational changes were slowed, because other programmes (e.g., juvenile justice, people with disability, etc.) were not part of TA.

Collaboration with local institutions and government is critical for sustainability. The MVC M&E rollout was successful largely because of the collaborative approach taken by the project, which enhanced government ownership of the system and, therefore, sustainability. Effective collaboration with the government in Tanzania requires continuous commitment to relationship building over time. This time commitment can take one-third of a project's lifetime, as it did in this case. However, this relationship building is essential to successful project implementation. Routine data quality assessment (RDQA) enhances M&E system strengthening and provides a path to improve both data quality and data use. Partners undergoing DQAs underscored the importance of the capacity building provided to address identified gaps. Further, consistent and structured quarterly performance and data reviews with health teams enhance data quality and use and help create a culture of data use.

Recommendations

Based on challenges and achievements, the project recommends a suite of continued TA to help Tanzania sustain its progress in health systems and prioritise future improvements. These TA suggestions focus on the following three areas:

1. **Digital data technical assistance** should concentrate on making a switch from paper-based to electronic data systems, developing standards for electronic systems, improving assessments and enhancements for routine health information systems (RHIS), and should consider a TA strategy for use of biometric systems. These improvements would also depend upon reliable equipment support for health facilities—laptops and tablets—as are being used in malaria programmes.
2. **HMIS strengthening** should include a focus on data collection and reporting tools, systems interoperability, and data quality and use.
 - For **data collection**, the project recommends review and revision of existing data collection tools and development of new ones, and regular review of indicators collected in DHIS2.
 - For **interoperability**, we recommend the government put in place interoperability requirements and assistance, to make DHIS2 in Tanzania interoperable with PEPFAR's DATIM system (Data for Accountability, Transparency, and Impact Monitoring) and any other operational systems.
 - For **data quality and use**, we suggest a harmonised DQA approach and assistance for the national rollout of the *DHIS2 Functions and Data Use for HIS Training Manual*, adopted by the government to enhance the capacity of RHMT/CHMTs. The project also recommends continued assistance for quarterly data and performance reviews and data quality improvement at the health facility level. The course established for health M&E at MUHAS should continue, to help address the government's plan to hire M&E personnel at the district level.
3. **Social welfare and M&E systems** recommendations are to provide continued TA for the rollout of the MVC M&E system and for operations research on social welfare and programming. The larger social welfare M&E system should receive TA for developing a single social welfare M&E system, complete with equipment support—such as laptops for DSW officers for council-level data management. In addition, we suggest capacity building for community organizations to support PEPFAR's strategy to direct funding to local organizations and capacity building also in participatory M&E (PM&E).

OVERVIEW

The five-year MEval-TZ AA, funded by USAID, began on February 28, 2014 and ends on February 27, 2019. The project was designed to strengthen M&E and research capacity of the community health and social service programmes in the United Republic of Tanzania. The project's overall objective was to improve systems that monitor and evaluate health and social service programmes, while enhancing local capacity to sustain and use the systems created. The project's TA covered malaria and HIV control programmes both in Mainland Tanzania and Zanzibar.

To achieve its objectives, MEval-TZ's activities addressed three intermediate results (IRs):

- IR 1: Policy makers use quality data to develop policies and guidelines, and advocate for community health and social service programs
- IR 2: Quality data routinely used by local governments, community providers, and facilities to improve program planning, budgeting, and program implementation
- IR 3: Increased evidence base for community health and social service programs

Technical Approach

The technical approach to addressing the project's objectives was premised on the assumption that health and social service programmes are more successful when supported by relevant, robust, and timely information to guide resource allocations and programming. Accordingly, the technical approach rested on two complementary pillars: (1) an enhanced evidence base derived from evaluation, monitoring, and focused research; and (2) widespread use of this evidence for development of policies and guidelines; advocacy for community health and social service programmes; and programme planning, budgeting, and implementation. By enhancing the evidence base and facilitating the use of evidence, the project sought to achieve the overall objective: to increase the availability and use of high-quality data to inform community health and social service policy, planning, and decision making. Figure 1 in the Executive Summary illustrates the project's results framework.

Crosscutting the project's work were the principles of collaboration, gender integration, and sustainability. Gender integration was pursued through three key strategies: (1) gender-focused M&E trainings with the M&E staff of selected ministries; (2) increased availability of sex-disaggregated and gender-specific data; and (3) support for special studies related to gender. Finally, the project used a crosscutting, system-level learning approach to assess its progress toward sustainability. Figure 2 illustrates the project's technical approach.

Figure 2. Technical approach



Strategic Approaches

At the national level (IR 1) and subnational levels (IR 2), the project's key strategies consisted of **strengthening M&E systems, ensuring data quality, and improving data use**. The principal methods used were M&E systems and data use assessments and the development of action plans, supervision checklists, and SOPs to improve the system and use of data. The project then facilitated action plan implementation through training programmes, mentorship, and supervision to institutionalise data use approaches at national and subnational levels of government. The support also included strengthening TWGs as a mechanism for coordinating M&E activities. Table 1 summarises the project's strategies, by result area.

Table 1. Key project strategies

IR 1: National-level	IR 2: Subnational level	IR 3: Research and M&E capacity building
<ul style="list-style-type: none"> • M&E system, data quality and data use assessments • Development and implementation of M&E, data quality, and data use strengthening plans • Development of guidelines and tools • Training and mentorship • M&E coordination through technical working groups 	<ul style="list-style-type: none"> • Data quality and data use assessments • Development and implementation of data use and data quality strengthening plans • Data and performance reviews • Training and mentorship • Supportive supervision 	<ul style="list-style-type: none"> • Generate evidence and strengthen research and M&E capacity • Administer small grants to local researchers, government, and CBOs • Develop curricula for M&E training with local institutions • Establish a community of practice for M&E professionals • Conduct operations research • Conduct secondary data analysis

At the subnational level, the project focused on RHMT/CHMTs as the structures for promoting and sustaining data quality and use. RHMT/CHMTs are government employees charged with overall responsibility for supervising, monitoring, and coordinating health service delivery. The core members of this team are the regional medical officer of health (RMO) and the district/council medical officer of health (DMO), regional health secretary (RHS), district health secretary (DHS), regional health management information system focal person (RHMIS FP) and district health management information system focal person (DHMIS FP), regional AIDS control coordinator (RACC) and district AIDS control coordinator (DACC), Regional Reproductive and Child Health Coordinator (RRCHCo) and District Reproductive and Child health Coordinator (DRCHCo), District Malaria Focal Persons, District Malaria Surveillance Officers (Zanzibar), and District Malaria Response Teams.

Technical Activities

MEval-TZ implemented 17 technical activities covering the three result areas over the project period. As already noted, an organizing framework based on the project's three IRs masks the complementarity of some of the project's activities and technical approaches and the overlap of some of the project beneficiaries. Based on implementation experience, the project activities in Year 4 were organised into four distinct technical activity clusters:

1. HIV and OVC/MVC information systems

This cluster has four activities (TZA 02; TZA 05; TZA 07; and TZA 15) that seek to strengthen the OVC/MVC M&E system, by improving data collection, data quality, and data use and institutional strengthening activities for the DSW to best maintain the systems. The cluster also includes M&E

systems strengthening with the National AIDS Control Programme (NACP) within the Ministry of Health, Community Development, Gender, Elderly and Children (MOHCDGEC), Zanzibar Integrated HIV, Hepatitis, Tuberculosis and Leprosy Programme (ZIHHTLP), and Zanzibar AIDS Commission (ZAC).

2. Health management information systems (HMIS), data quality, and data use

This technical activity cluster has three activities (TZA-01; TZA-04; TZA-06), whose overall purpose is to improve the quality and use of data in decision making at the service delivery point, within the HMIS, and at the national level.

3. Malaria surveillance and operations research

The malaria surveillance and operations research technical cluster has four activities (TZA-09; TZA-17; TZA-18, and TZA-19), whose objectives are to conduct operational research on malaria control, prevention, and surveillance-related activities and strengthen malaria surveillance systems in Mainland and Zanzibar.

4. Research and M&E capacity building

This technical cluster has six activities (TZA 03; TZA 08; TZA 10; TZA 11; TZA 12; TZA 13) with varied objectives to document the project's local learnings, strengthen research capacity through small research grants, conduct targeted operational research studies on HIV HIS and increase opportunities for development of M&E professionals in Tanzania through formal training in collaboration with local academic institutions and an M&E community of practice. This technical cluster also addresses the project's crosscutting gender theme, drawing on the resources of MEval-TZ's consortium partners.

Highlights of the project's key achievements, lessons learned, and recommendations are provided in subsequent sections.

KEY ACHIEVEMENTS/ACCOMPLISHMENTS

Technical Cluster: National HIV and Most Vulnerable Children (MVC/OVC) M&E System Strengthening

Introduction

The project was tasked to work with selected government agencies and departments to strengthen their national M&E systems. To determine existing capacity and prioritise areas for strengthening, the project undertook an M&E system assessment in Year 2 with the NACP, ZIHHTLP, ZAC, DSW, and Mainland and Zanzibar's Department of Elders and Social Welfare (DESW), using the 12 components put forward by UNAIDS in its *Organizing Framework for a Functional National HIV Monitoring and Evaluation System*.¹ The MVC/OVC M&E system strengthening work had a broader scope defined in the project award and is described separately.

Key Achievements

HIV M&E System Strengthening with Selected Government Agencies

The M&E system assessments conducted with NACP, ZIHHTLP, and ZAC identified several potential areas for strengthening. Some of the key recommendations were the following:

- Developing M&E plans for the national HIV response strategies.
- Strengthening the organizational structure for M&E by filling all M&E posts at the national (i.e., M&E unit) and subnational structures (e.g., regional and district M&E officers or focal persons)
- Strengthening human capacity through assessment of knowledge and skills among regional- and council-level HIV/AIDS M&E focal persons, and development of a capacity-building plan
- Strengthening of partnerships by regularizing TWG meetings as a platform for engaging with stakeholders
- Enhancing routine programme monitoring by integrating all HIV indicators in the national DHIS2 platform

M&E plans developed for NACP, ZIHHTLP, and ZAC: A key priority for all three government agencies was the development of an M&E plan. NACP, for instance, had implemented its five-year *Third Health Sector HIV and AIDS Strategic Plan, 2013–2017 (HSHSP III)*² for more than two years without a comprehensive M&E plan. In 2016, the project provided TA to NACP to develop an M&E plan for the HSHSP III. And when the HSHSP III expired, the project provided TA to NACP for the development of an M&E plan for the Fourth Health Sector HIV/AIDS Strategic Plan, 2017–2022 (HSHSP IV).³ In addition, the project provided TA for the development of M&E plans for the *Third Zanzibar Health Sector HIV and AIDS Strategic Plan 2017–2022 (ZHSHSP III)*⁴ (ZIHHTLP) and the *Third Zanzibar National Strategic Plan for HIV and AIDS, 2016/17–2020/21 (ZNSP III)*⁵ (ZAC).

All the M&E plans were developed through a consultative process designed also to enhance collaboration and sustainability. MEASURE Evaluation, jointly with each of the government agencies, conducted a desk review of key documents, including the respective health sector HIV and AIDS strategic plans, to identify appropriate indicators, which were written up in first drafts of the M&E plans. A five-day workshop was

¹ http://www.unaids.org/sites/default/files/sub_landing/files/20080430_JC1769_Organizing_Framework_Functional_v2_en.pdf

² <http://www.nacp.go.tz/site/news/hshsp3final2014.pdf>

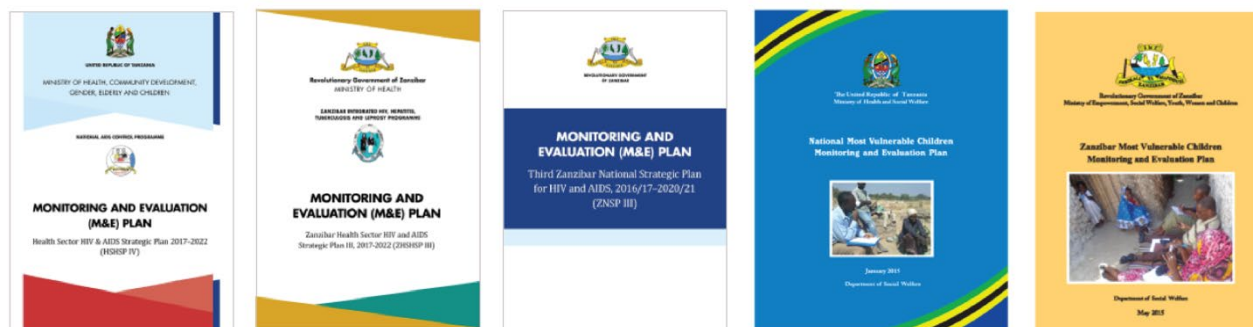
³ <https://www.measureevaluation.org/resources/publications/tr-18-302>

⁴ <https://www.measureevaluation.org/resources/publications/tr-18-303>

⁵ <https://www.measureevaluation.org/resources/publications/tr-18-301>

subsequently conducted with stakeholders of each of the entities to review the draft indicators for the M&E plan. The stakeholder workshops reviewed all the indicators (ensuring their alignment with definitions in key national and global M&E reference documents). They also reviewed data sources and the availability of appropriate data collection tools and set baseline levels and targets for each indicator. The resulting M&E plans provided clear indicators and guidance for tracking the country's progress towards the 90-90-90 targets for epidemic control.

Figure 3. HIV and MVC M&E plans developed and launched



Besides the M&E plans, the project contributed to capacity building of RHMT/CHMTs, strengthened technical working groups, and provided training for the integration of HIV indicators in the DHIS2 (more information about this appears here in the section on the HMIS, data quality, and data use technical cluster).

MVC/OVC M&E System Strengthening

The MVC information stems activities sought to improve the quality of OVC/MVC data, by strengthening the OVC/MVC M&E system, developing a data management system for MVC programme data, strengthening referral services monitoring, and enhancing the M&E function within the DSW, through organizational capacity development.

Key achievements from this work were the following.

a. Developing an MVC M&E plan and data management system

MVC M&E plans developed and launched

Building upon work started in Phase III of the MEASURE Evaluation leader award, in Year 1 MEval-TZ finalised assessments of the MVC M&E system through interviews, document reviews, and workshops with key stakeholders from the national, regional, and district levels and implementing partners (IPs) in Mainland Tanzania and Zanzibar. The assessments indicated that while a national M&E system existed for MVC programmes in Tanzania, it needed to be reviewed and aligned with the *National Costed Plan of Action for Most Vulnerable Children 2013–2017 (NCPA II)*.⁶ The assessment also found that coordination existed for MVC interventions and M&E activities but could be improved at both national and subnational levels through the creation of TWGs. Further, the assessment found that a data management system existed but was largely run by individual projects with little involvement of the government.

Deriving from the assessment findings, MEval-TZ revamped the national MVC M&E TWG as a platform for coordinating the development of the MVC M&E plans. Working with designated staff from the DSW and DESW, MEval-TZ produced a draft outline and contents of the MVC M&E plans that were reviewed at multiple MVC M&E stakeholders' workshops. The M&E plans spell out (1) performance indicators; (2) data sources; (3) data collection methods; (4) data flow; (5) data analysis, use, and reporting; (6) feedback mechanisms; and (7) roles and responsibilities of stakeholders. Once passed by the MVC M&E TWG, the

⁶ https://static1.squarespace.com/static/5519047ce4b0d9aaa8c82e69/t/5551dc83e4b0b7c50bc0c0a1/1431428227730/national_costed_plan_tanzania.pdf

final MVC M&E plans were presented to the management and other staff at DSW and DESW, and the President's Office—Regional Administration and Local Government (PO-RALG) in Mainland, for ownership and buy-in. The final MVC M&E plans were officially launched in 2015. Both documents are now used by the government to facilitate tracking of MVC programme performance.

An innovative MVC data management module within the DHIS2

The MEval-TZ's M&E system assessment indicated that a new MVC data management system was required to address shortcomings: inadequate data quality, system inflexibility, and system unsustainability. Another major challenge of the MVC data management systems was their fragmented nature, which hampered the government's involvement in their operations. It was characteristic for the DSW to refer queries on MVC data to the IPs, because they did not have the data. A new system was necessary to empower the DSW to serve as a national repository of MVC data.

In 2016, MEval-TZ recommended to the MOHCDGEC and DSW the adoption of DHIS2 as the electronic platform for managing MVC data. The adoption of DHIS2 was expected to enable the DSW and DESW to build upon the strong infrastructure and technical expertise already developed, thereby ensuring system sustainability. The use of DHIS2 also promised greater integration of MVC services and data with HIV and other related health data, including referrals to services. MEval-TZ conducted customization of the DHIS2 data management module, in collaboration with the University of Dar es Salaam and the State University of Zanzibar.

In Mainland, the DSW is located within the MOHCDEC. The Ministry's permanent secretary provided a written approval for the creation and maintenance of the data management module. In Zanzibar, where the DESW is housed in a different ministry—the Ministry of Labour, Empowerment, Elderly and Children, (MLEEC)—the health ministry developed a memorandum of understanding (MOU) for the development and maintenance of the data management module at MLEEC.

To support the rollout of the MVC M&E tools as well as the DHIS2 data management system, MEval-TZ developed reference documents (user, training, and technical manuals) and conducted training at national and subnational levels for sustainability.

MVC M&E tools and data management system rolled out

With support from MEval-TZ, the national MVC data collection system was pretested from 2016–2017 in Kinondoni Municipal Council, Wanging'ombe District Council, and Kyela District Council, in Mainland, and in the Mjini Magharibi and Chake Chake Districts, in Zanzibar. The goal was to test how easily community volunteers could use the data collection tools and the effectiveness of the data flow: from community volunteers to village and ward executive officers, to MVC committees, and, ultimately, to DSW officers. The test showed that community volunteers could use the primary data collection tools (MVC registration, MVC monthly services tracking, and referral forms) effectively. However, summary reporting forms, which required manual aggregation from individual records, challenged them. The feedback from the pilot was used to redesign the data collection tools, update instructions for data tallying, update the data flow structure, and revise the DHIS2 data management platform to mirror the paper-based reporting tools.

USAID subsequently asked MEval-TZ to develop a collaboration framework with two other USAID-funded MVC projects—the MVC service delivery project Kizazi Kipya, implemented by Pact, Inc., and the Community Health and Social Welfare System Strengthening Program (CHSSP), implemented by John Snow Inc. (JSI)—to support the rollout of the MVC M&E system. Through this collaboration, the Kizazi Kipya project supports the use of the core MVC M&E data collection tools in more than 80 supported district councils and entry of the data in the national database. As part of its social welfare strengthening work, the CHSSP supports printing and distribution of the data collection tools and trains community caseworkers and other stakeholders to use the tools them. Table 2 shows the cadres trained on the MVC M&E data collection tools.

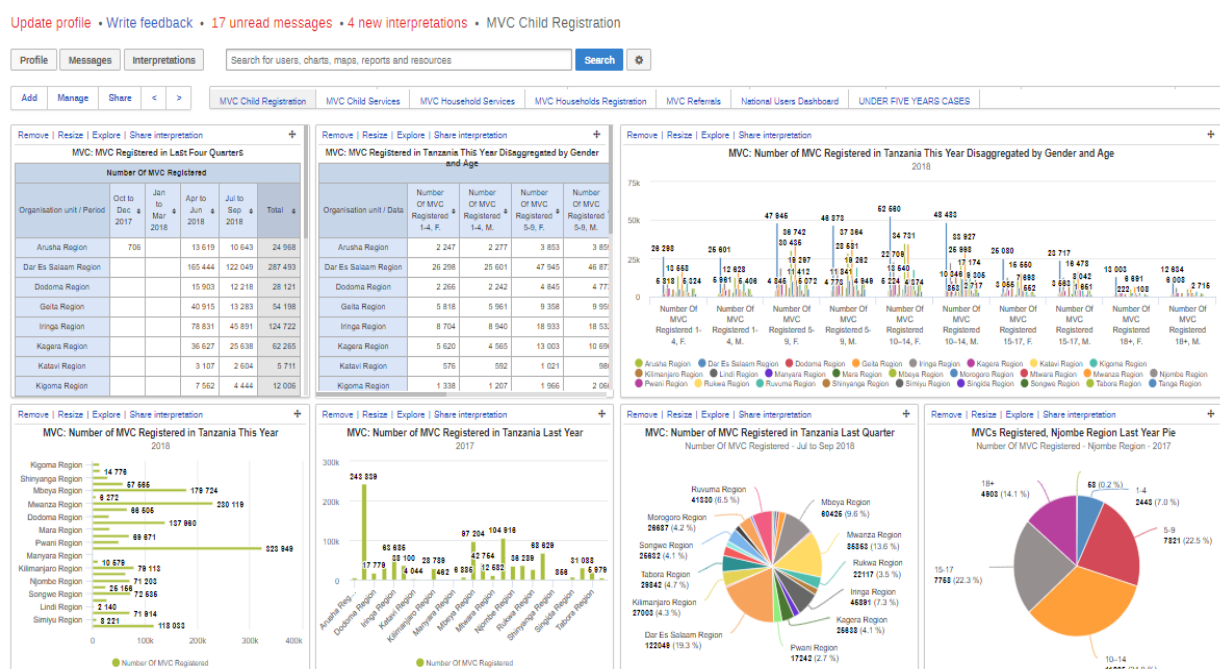
Table 2. Cadres that MEval-TZ trained on the MVC M&E data collection tools in the initial 68 district councils

Cadre trained	Number trained
National facilitators	15
District trainer of trainers	466
Ward-level community case worker (CCW) supervisors	1,267
Lead CCW	1,737
CCW	14,293

In addition to the MVC M&E data collection tools training, MEval-TZ trained district social welfare officers (DSWOs) in 44 councils covered by Kizazi Kipya, to support data entry. The project also created interoperability of Kizazi Kipya's DHIS2 tracker database and the national MVC DHIS2 database that takes in data in aggregate form. Relevant data collected by Kizazi Kipya since 2017 were imported in the national MVC database and an interface created to support automatic import of data from the Kizazi Kipya database to the national MVC database every 15th day of the subsequent month. This arrangement opens an opportunity for other projects that use compatible databases to automatically report into the national database.

The rollout of the MVC M&E system has been greatly facilitated by the PO-RALG, which oversees health and social services at the subnational level. In September 2018, the PO-RALG issued an official circular requiring all regional commissioners in Mainland Tanzania to ensure collection of MVC data using the standard national tools and entry of data in the national database. Although the government has adopted the MVC M&E system, including the data management system, its rollout in districts not covered by the USAID-funded OVC projects has challenges. The Kizazi Kipya project continues to support rollout of the system throughout its 106 target districts out of Mainland Tanzania's 184 districts. Through the system, data on national MVC indicators are now accessible in readily usable formats, aided by customised DHIS2 dashboards, as illustrated in Figure 4.

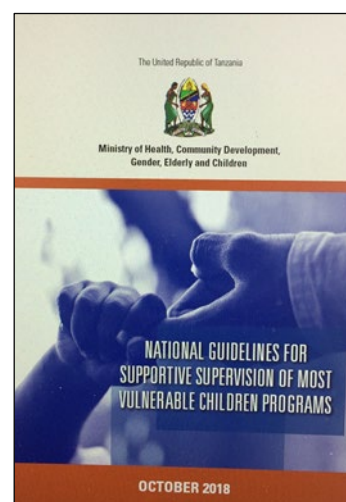
Figure 4. An illustration of the MVC DHIS2 dashboard



b. National guidelines for supportive supervision of MVC programmes developed

The MVC M&E Plan provides a set of core reporting indicators for all stakeholders working to improve the well-being of MVC and their households. However, because programmes and services for MVC are frequently implemented and delivered in settings where health and social systems have been stretched beyond their limit, and capacity and resources are limited or scarce, there is need for supportive supervision to ensure the quality of services provided and data collected.

Building upon the MVC M&E system strengthening work, MEval-TZ provided TA for the development and piloting of a national guideline for supportive supervision of MVC programmes. The guideline helps stakeholders implement MVC programmes in Tanzania to conduct effective supportive supervision from the national and regional secretariat level to the local government authority (LGA) level. Supportive supervision is a critical intervention in improving service provision performance in the short and long term.



c. Referral system strengthened

To achieve PEPFAR's 90-90-90 goal, clients will require access to a range of HIV treatment and support services. These services are often delivered by different providers working out of diverse locations that range from the community to tertiary hospitals. Establishing strong referral systems across services is imperative for ensuring that clients can access the full continuum of care and receive the critical services they need in a timely fashion.

A study of referral monitoring systems completed, and the findings used to improve interventions

The MEval-TZ AA aimed to strengthen referral services between community and health facilities. The project started by conducting a study in 2015 to examine the functioning of referral systems linking service providers in the community and at health facilities, focusing on programmes for MVC (with the DSW) and home-based care (HBC) (with the NACP). The study had a cross-sectional design with quantitative and qualitative components. Semi-structured interviews were completed with 35 community workers, 43 facility providers, and 12 HBC focal persons. Group interviews were conducted with 17 district coordinators and 24 staff from CBOs.

From the study, nearly 90 percent of HBC providers and MVC volunteers reported that they made referrals to other clinical or support services; 21 percent of HBC providers and 44 percent of MVC volunteers had done so in the past month. In contrast, only 28 percent of facility providers reported making referrals to the community. The majority (89%) of community workers said they had received training on referrals, but only 31 percent had received written instructions on referral procedures. In comparison, 12 percent of facility providers said they had received trainings on referrals. The existing referral systems challenges were (1) lack of standardised referral procedures; (2) no written protocols; (3) limited coordination around referrals; and (4) little guidance on how referral systems should operate.

Using the study findings, the referrals monitoring technical team gave input on the MVC referral data collection tool to ensure that it captured essential referrals data. The referral tool developed was converted into an electronic referral system, through the Kizazi Kipya project, to facilitate recording and tracking of referrals through mobile phones.

The MVC Community Referral Handbook developed

In addition, the project developed an MVC Community Referral Handbook. The handbook offers MVC service providers standard guidance on how to initiate referrals and follow them up, with an emphasis on

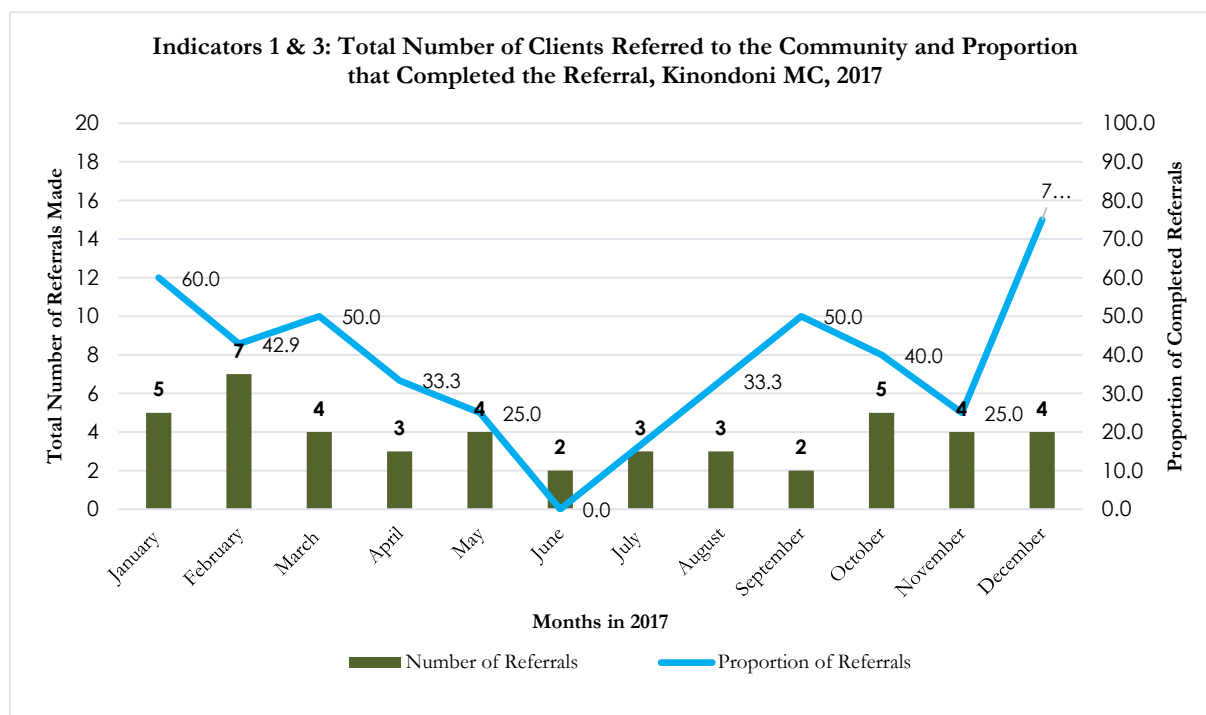
referral documentation using standardised national tools (including national MVC referral forms, referral registers, and monthly summary reporting forms). Finalised towards the end of the project, the MVC Community Referral Handbook is expected to be disseminated by the Kizazi Kipya project.

A referral data analysis tool developed and used with subnational programme managers

MEval-TZ developed an Excel-based referral analysis tool for HBC data that are collected using standardised national tools in Year 3. The tool was piloted with Kinondoni MC, Wanging'ombe DC, and Kyela DC. The piloting involved data review meetings with HBC coordinators and supervisors and other members of the CHMT. The Kinondoni MC, for example, used the tool to analyse referral data from January–September 2017. Analysis showed improvements in the number of HBC community providers submitting reports and in the proportion reporting referrals to prevention of mother to child transmission of HIV (PMTCT), tuberculosis, and opportunistic infections services. The proportion of providers submitting the reports had increased from 84.3 percent in February 2017 to 94 percent in September 2017.

The review meetings helped HBC supervisors understand factors affecting the referral monitoring system, including improper form completion and lack of follow-up by community volunteers to confirm referral completion. The data visualization provided by the tool was of particular interest to HBC supervisors, because it signalled areas with low referral initiation and completion rates. Efforts to integrate the tool in the national referral data management system through NACP were unsuccessful. However, NACP recognised that the tool was helpful in promoting discussions on and improvements of referral data quality at the community level. Figure 5 is an illustrative visualization from the referral data analysis tool.

Figure 5. An illustrative data visualization from the referrals data analysis tool



d. DSW organizational capacity development

MVC services fall within the DSW in the MOHCDGEC. During the course of the project, MEval TZ worked closely with the department's leaders to strengthen their organizational capacity and encourage strategic vision for effective monitoring and evaluation of MVC and other programmes. Organizational capacity was assessed, leadership and management training were developed, and the project helped the

department develop its first strategic plan,⁷ which included a resource mobilization strategy, a knowledge management action plan, and an M&E framework for the department to use to monitor progress. A position was created for an information, communication, and technology (ICT) officer to increase DSW's ability to improve data use and programming and to fully engage its network of government officials in the MVC HIS.

As part of efforts to strengthen the M&E function for social welfare services, the project conducted a series of training workshops on leadership for officials from the MOHCDGEC, PO-RALG, and selected LGAs. Three workshops were conducted in the LGAs of Dar es Salaam. Another workshop was conducted in Bagamoyo for top leaders in the MOHCDGEC and PO-RALG. The workshops exposed participants to key concepts in leadership and management and provided opportunities for participants to reflect on their work environment and propose actions for improving leadership and management practices, with the aim of improving social welfare service delivery in the country. MEVal-TZ completed the development of the M&E framework document for social welfare service delivery in Tanzania. The DSW achieved **70 percent of the leadership targets it had set**. Partly because of the organizational capacity development activities undertaken by the project, both the PO-RALG and DSW increasingly provided leadership for the national MVC M&E system implementation.

Technical Cluster: Health Management Information Systems (HMIS), Data Quality and Data Use

Introduction

Under this area, MEASURE Evaluation sought to facilitate data demand and use and strengthen data quality at both national and subnational levels, focusing on HIV and malaria programmes (details on malaria appear in the section of this report on the malaria surveillance and operations research technical cluster). National-level work was primarily with the Department of Policy and Planning, which houses the central M&E functions within the MOHCDGEC, NACP, and DSW. Subnational level work was conducted primarily with RHMT/CHMTs and IPs. Some of these activities were in response to the priorities identified from the M&E system assessments described in the preceding technical cluster.

In addition to the M&E system assessments already described, in project Years 1 and 2, MEVal conducted data use and HMIS/DHIS2 capacity assessments. The data use assessments were conducted with selected ministries, departments, and agencies (MDAs)—NACP, ZIHHTLP, and ZAC—as well as selected RHMT/CHMTS. HMIS/DHIS2 capacity assessments were primarily with RHMT/CHMTS. The data use assessments looked at how data were currently used and opportunities for strengthening the demand for and use of data in decision making processes. Participatory workshops and key informant (KI) interviews were held with stakeholders, to understand from an operational perspective barriers to using available data. Many of the KIs attributed the lack of data use to the weak capacity of staff within the health system to analyse, interpret, and present data. Among the priorities identified to improve data use were to (1) develop guidelines for data analysis, presentation, and use; (2) conduct HMIS/DDU trainings and supportive supervision linked to key decision making moments; (3) update supervision guidelines to include data use; and (4) support data review forums at national and subnational levels. A DDU strengthening operational plan was developed for each of the national entities.

⁷ Owing to DSW's internal processes and changes in management and leadership structures, the strategic plan has not yet been formally adopted.

Key Achievements

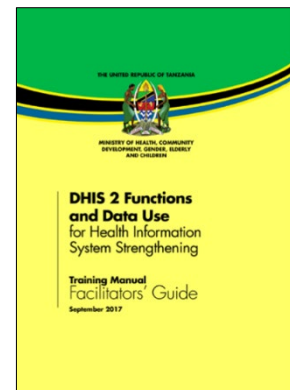
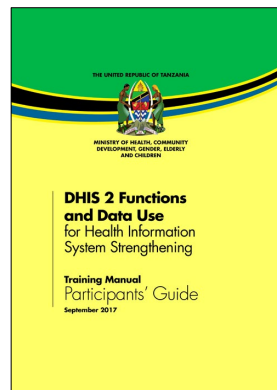
HMIS and DDU Activities

a. DHIS2 and data use capacity enhanced

An overarching goal of MEval-TZ was to improve the systems that monitor and evaluate health and social service programmes while enhancing local capacity to sustain and use these systems. To this end, the project supported the HMIS Unit of the MOHCDGEC to strengthen the HMIS, by institutionalising the use of DHIS2 (electronic platform) through training and capacity building at the national, regional, and district levels.

In the first year of the project, MEval-TZ conducted a series of DHIS2/DDU status review workshops in priority regions and districts, to establish the baseline capacity of CHMTs and RHMTs—the end users of the DHIS2—to use the system and the data it generates. The status review workshops were designed to help each CHMT identify its unique DHIS2 implementation needs, system use, and data quality and data use challenges, and help it to develop strategies and action plans to address those challenges. In addition to providing baseline capacity measures, the findings from the workshops were also informative in designing subsequent capacity building interventions. For example, the status review workshops revealed the major gaps in the knowledge and skills of the CHMTs and RHMTs to use the DHIS2 to its optimal potential and regularly use data for decision making. Consequently, MEval-TZ developed—in close collaboration with the MOHCDGEC and in partnership with the University of Dar es Salaam—the *DHIS2 Functions and Data Use for Health Information System Strengthening Training Manual*.

The training package is a standardised, practical training resource for building the skills and competence of health system staff to employ DHIS2 to analyse and use system data to improve evidence-informed decision making at local and national levels. The training resource addresses competencies that will enable CHMTs and RHMTs to improve the quality, analysis, and use of routinely collected HMIS data for effective health programme monitoring, planning, and decision making. By highlighting the connection between competent system use and improved data quality and use, the training resource elucidates a pathway for strengthening the country's HIS. The training package, which has been adopted by the MOHCDGEC as a national training resource material, consists of slide decks for five modules and a facilitators' guide (available here:

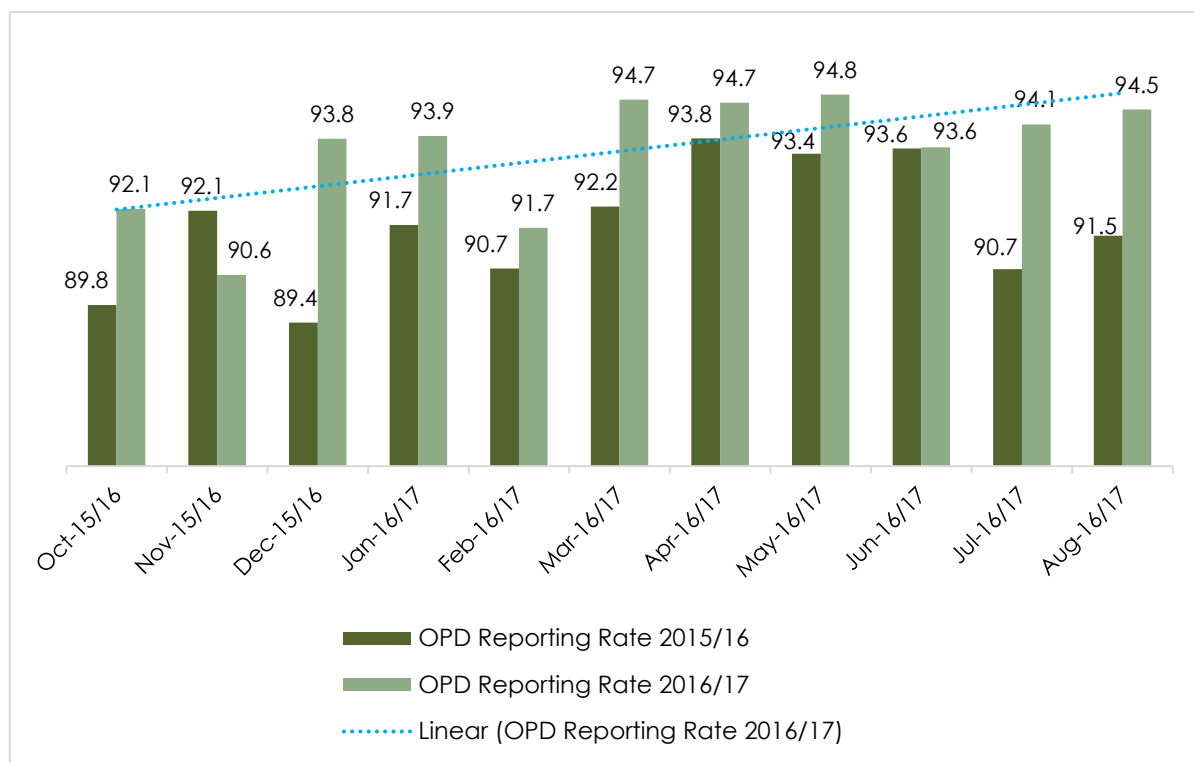


<https://www.measureevaluation.org/resources/publications/ms-17-123a/>) and a participants' guide (available here: <https://www.measureevaluation.org/resources/publications/ms-17-123b/>).

MEval-TZ used the DHIS2/DDU training manual to implement capacity strengthening activities with RHMTs and CHMTs in Dar es Salaam, Dodoma, Iringa, Mbeya, Morogoro, Mwanza, Njombe, and Singida Regions during project Years 2 and 3. The training activities enabled the 422 participants (228 male and 194 female) to use routine health data to improve the quality of health and social services in their areas of jurisdiction. In addition, the manual was used with the NACP to train 60 (24 male and 36 female) regional and district HIV/AIDS coordinators in 21 councils as part of efforts to mainstream HIV data reporting through the DHIS2.

The combined DHIS2/DDU training activities saw improvements in reporting rates into the DHIS2 among the project's epidemic control focus districts, as Figure 6 shows.

Figure 6. Average monthly OPD reporting rates in MEval-TZ's 19 priority districts, financial year (FY) 2015/2016 versus FY 2016/2017



b. Data demand and use (DDU) champions identified and developed to foster local-level data use

Integral to MEval-TZ's data-use strengthening strategy was the identification and capacity strengthening of DDU champions. DDU champions were identified from among members of the RHMT/CHMTs reached by the project and trained to serve as trainers and leaders for DDU-related activities. This capacity building approach entailed (1) a three-day workshop on DDU concepts and practical approaches to using data in decision making; (2) a five-day DHIS2 and DDU training to improve RHMT/CHMTs' capacity to use DHIS2 for routine data analysis and interpretation; (3) a two-day quarterly data/performance review meeting; (4) ongoing supportive supervision, coaching, and mentoring through trained DDU champions; and (5) annual meetings to review progress and learn from one another.

Thirty-eight DDU champions were identified from 26 districts/councils. The DDU champions have been recognised in their localities as mentors, particularly to health facility staff. DDU champions have improved the quality of annual comprehensive council health plans (CCHPs). In Mbeya region, for instance, all CCHPs submitted for 2016/2017 were approved on the first submission because of the quality of data they presented—much better than in previous years, when MEval-TZ did not work in this region. Through the efforts of DDU champions, all the targeted districts/councils included data use activities—for example, data/performance review sessions—in their CCHPs. The DDU champions have remained active even



DDU champions at their annual meeting in 2016, held in Dar es Salaam. Photo: MEval-TZ

in the districts that the project phased out of in Year 2, when PEPFAR launched a district pivoting/targeting strategy for epidemic control.

c. Data performance reviews routinised

To support the institutionalisation of processes to routinely review, analyse, and use data at the subnational level, MEval-TZ supported priority RHMTs and CHMTs to conduct performance and data review meetings. There, participants reviewed the quality of data and programmatic performance of their key health indicators, identified data and service delivery gaps, and developed action plans to address those gaps within their municipal councils. The action plans focused on addressing data quality issues and improving programme performance through supportive supervision and data verification at the health facility level.



Group discussion during performance review meeting.
Photo: MEval-TZ.

MEval-TZ facilitated **19 annual and quarterly performance reviews**. These reviews created an interest in data and encouraged RHMT/CHMTs to investigate potential errors in the data before their use in planning or programming decisions. In one of the reviews in Dar es Salaam during project Year 2, participants identified some indicators that looked similar but had inconsistent data, posing challenges as to which of the data were appropriate to use (see Table 3).

Table 3. Selected RMNCH and PMTCT indicators with inconsistent data in the DHIS2

Indicators (as defined in the DHIS2)	Data (April–June 2016)		
	Temeke MC	Ilala MC	Kinondoni MC
Delivery rate in facility	98	99	98
% institutional deliveries	50	79	26
Deliveries by skilled attendants	82	93	97
% deliveries with skilled attendant	85	95	98
HIV-exposed infants using antiretroviral (ARV) prophylaxis	94	97	99
HIV-exposed infants using ARV prophylaxis	97	94	104

Because such challenges were common in other councils, too, MEval-TZ took up further work with the MOHCDGEC to clean up the DHIS2 to enhance subnational-level data use (see details below).

DHIS2 Indicators and Standard Reports Updated for Improved Data Use

At the national level, MEval-TZ strengthened its partnership and collaboration with the MOHCDGEC, particularly the M&E Unit, and IPs that provide HMIS/DHIS2 support to the ministry. The project supported the improvement of the quality of data in DHIS2, by supporting the MOHCDGEC's indicator review and revision processes. In project Year 4, MEval-TZ supported and facilitated a meeting that

brought together the MOHCDGEC programme units to validate and update the most current indicator sets for each of the programmatic areas. Using the validated list of indicators from each programme unit, indicators and indicator groups in DHIS2 were updated and old and redundant indicators were removed from the system. The MOHCDGEC programme units were also asked to define standard reports that did not exist but would be helpful for the programme areas to have. In this way, 10 new standard reports were developed, 15 more standard reports were revised, and the data in the DHIS2 were cleaned to remove redundant indicators. The review and clean-up of indicator data in DHIS2 as well as the development of the new and improved standard reports not only will contribute to improving data quality but will also improve the use of information by the MOHCDGEC programme units and other stakeholders for programme planning and decision making.

DQAs and Targeted Skills Strengthening

Over the life of the AA, three rounds of DQAs were conducted, covering 140 health facilities, as summarised in Table 4. USAID identified IPs for each DQA round; selection of health facilities for the assessments was conducted in consultation with the MOHCDGEC, PO-RALG, and USAID.

Table 4. DQAs conducted by MEval-TZ, 2014–2017

Round 7 (2014)	Round 8 (2015)	Round 9 (2016/17)
Organizations and programmes assessed: 1. AMREF: HTC 2. Baylor: Pediatric HIV 3. Elisabeth Glaser Pediatric AIDS Foundation (EGPAF): PMTCT and HBC 4. Deloitte Consulting Limited: Care & treatment and PMTCT	Organizations and programmes assessed: 1. Selian Lutheran Hospital: HTC and OVC programmes 2. Africare: OVC 3. World Education Inc. (WEI): OVC 4. Deloitte Consulting Limited (Tunajali II): HTC and PMTCT 5. PASADA: HTC 6. Pact Inc.: OVC	Organizations and programmes assessed: 1. Deloitte Consulting Limited: PMTCT, care and treatment, and HTC 2. EGPAF: PMTCT, care and treatment, and HTC 3. Pact: OVC
Number of health facilities covered: 27	Number of health facilities covered: 49	Number of health facilities covered: 64
Number of wards covered (community-based programmes): 10	Number of wards covered (community-based programmes): 10	Number of wards covered (community-based programmes): 10
Number of districts covered: 13	Number of districts covered: 8	Number of districts covered: 8

Several tools were designed or adapted for the DQA activities. For example, an RDQA tool was adapted to assess the M&E system and the accuracy of data reported; a community trace and verify tool was adapted to verify services provided to clients of community-based programmes, such as programmes for MVC. Health facility data were verified, by reviewing reported data against original source documents from health facilities, such as client registers and reporting tally sheets.

USAID relied on the project to assess IPs' M&E strengths and weaknesses, build skills in management and reporting systems and the quality of data reported, strengthen the capacity of IPs to carry out DQAs without external support, and make recommendations to improve an organization's M&E system. The DQAs that MEval-TZ conducted were usually followed by M&E capacity-building activities, such as

training M&E officers and data clerks at an IP on key M&E concepts and administering supportive supervision visits.

The project hired two local subcontractors (Kepler Associates and JL Consultancy) while conducting DQAs to build sustainable local capacity. These contractors conducted data collection and analysis and wrote drafts of reports of findings. Increasingly, they became involved in post-DQA capacity strengthening activities and are now able to successfully support the DQA process. For instance, in 2017, MEASURE Evaluation Phase IV engaged four representatives of the two subcontractors for DQA work in Zambia.

Finally, MEval-TZ provided TA to the MOHCDGEC's for the development of **National Guidelines for Health Data Quality Assessment**.⁸ In addition to sharing with and supporting the ministry in the adaptation of DQA tools, MEval-TZ provided TA for development of training materials for the implementation of the national DQA guidelines.

a. Understanding the effects of the DQA activities

The purpose of DQA is to improve data management practices, hence data quality, at the primary data source: the health service delivery point. One element of data quality is the accuracy of the reported data. A verification factor (VF)—a measure of accuracy of the reported data—is calculated, by dividing data recounted from original source documents, such as health facility registers, and the data reported in the national HMIS and to USAID for specific indicators. The VF is expressed as a percentage. A VF higher than 100 percent indicates underreporting by a health facility or the M&E unit of a programme, whereas a factor lower than 100 percent means over-reporting. A VF of 100 percent indicates perfect accuracy in reporting. The acceptable range for a VF is 95–105 percent.

Changes in data quality can be assessed by comparing VFs between two or more timepoints for programmes and facilities with more than one DQA round. Table 5 presents verification factors for a sample of health facilities assessed under the MEval-TZ AA more than once on two PEPFAR indicators: TX_CURR (Number of adults and children currently receiving ART) and HTS_TST (Number of individuals who received HIV testing services (HTS) and received their test results).

Table 5. Data verification factors for selected indicators at selected health facilities, 2014/2015 and 2017

Health facility name	Baseline		Follow-up	
	TX_CURR (2014)	HTS_TST (2015)	TX_CURR (2017)	HTS_TST (2017)
Iringa Regional Hospital, Iringa MC	103%	43%	95%	95%
Malangali Health Centre, Mufindi DC	110%		98%	
Igowole Dispensary, Mufindi DC		35%		107%
Lugoda Hospital, Mufindi DC		49%		161%
Arusha Lutheran Medical Centre, Arusha CC		116%		100%

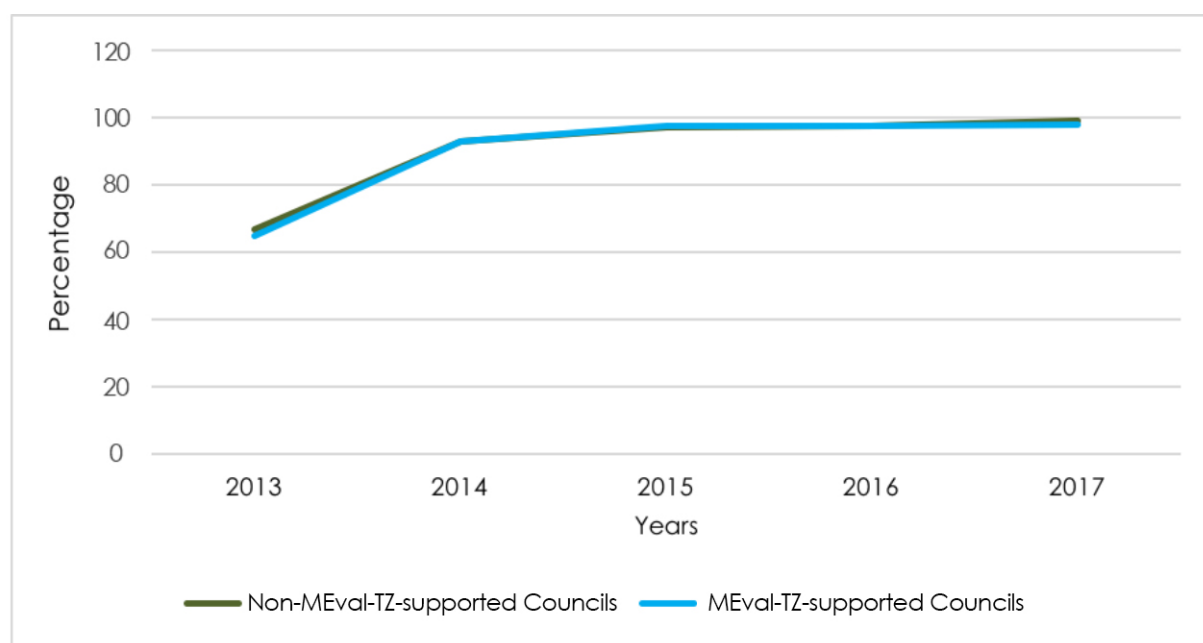
Results show changes in TX_CURR from a baseline of under-reporting by six percent to acceptable levels of accuracy at the follow-up assessment at Malangali Health Centre. Both Igowole Dispensary and Lugoda Hospital had over-reported by huge margins at baseline and under-reported at follow-up, despite capacity building interventions conducted after the baseline survey. As HIV testing services are provided at multiple points, the primary source of error for both facilities at the follow-up assessment was the omission from the

⁸ The guideline can be accessed at <https://www.medbox.org/national-guidelines-for-health-data-quality/download.pdf>.

testing report of HIV tests conducted in the family planning section. These findings reinforce the importance of internal RDQA at the health facility level.

Quantification of the effects of DQA and related capacity building is, however, not straightforward. In 2017, MEval-TZ conducted a secondary analysis of data quality indicators (reporting rate and timeliness) based on data reported through the DHIS2 comparing 43 district councils supported by MEval-TZ with another 45 non-MEval-TZ-supported district councils. Average proportions for the two indicators were analysed for the period 2013/2014 to 2016/2017 for antenatal care (ANC) services—one of the most basic services provided and reported at all levels of the health system. Reporting rate was calculated as the total number of reports received against the total number of reports expected from health facilities. Timeliness was calculated as the proportion of reports received by the due date out of all reports submitted from the health facilities for the ANC indicator. Figure 7 presents reporting rates for the ANC indicator.

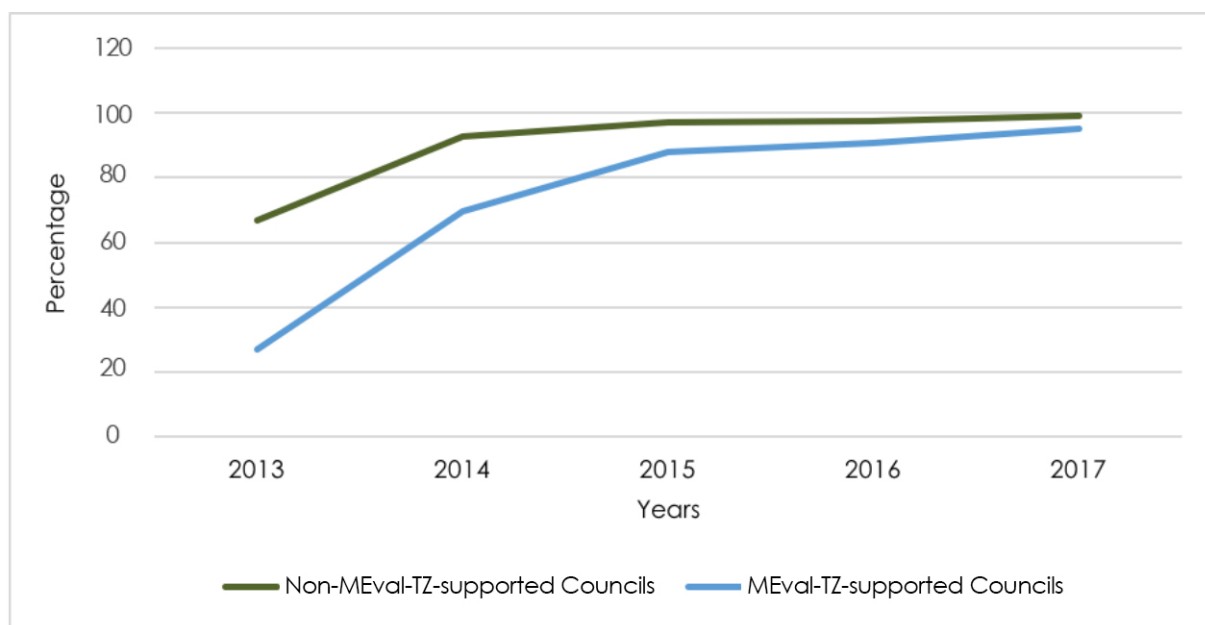
Figure 7. ANC reporting rates in MEval-TZ- and non-MEval-TZ-supported district councils, 2013–2017



ANC reporting rates improved significantly both in MEval-TZ-supported district councils and non-MEval-TZ-supported district councils, from an average of 65 percent in 2013 to above 95 percent in 2015—two years later—and thereafter maintained above 95 percent. These improvements are largely explained by the MOHCDGEC's national rollout of the DHIS2 from 2013.

Figure 8 presents reporting timeliness for the ANC indicator for MEval-TZ- and non-MEval-TZ-supported district councils.

Figure 8. ANC reporting timeliness in MEval-TZ and non-MEval-TZ-supported district councils, 2013–2017



Even though changes occurred in the ANC reporting timeliness from 2013 in both MEval-TZ-supported and non-MEval-TZ-supported districts, marked changes were in the latter, rising from just about 25 per cent in 2013 to over 85 per cent over the next two years. The non-MEval-TZ-supported districts appear to have had consistently better ANC reporting timeliness in comparison with that of the MEval-TZ-supported districts. This could point to the effectiveness of the selection criteria for DQA districts, which included poor quality of data reported to USAID. Towards 2017, there was more convergence in the timeliness of reporting between MEval-TZ-supported and non-MEval-TZ-supported districts, potentially pointing to the success of the MOHCDGEC's DHIS2 national rollout programme.

Participatory M&E Developed and Piloted

In project Year 2, MEval-TZ developed a curriculum of tools, manuals, and PowerPoint slides on participatory monitoring and evaluation (PM&E) for Tanzania's health and social service programmes.⁹ The PM&E programme is designed to enhance the well-being of the target group, the performance of the service providers, and the supervision and management practices of the technical and resource providers.

⁹ <https://www.measureevaluation.org/measure-evaluation-tz/participatory-monitoring-and-evaluation-curriculum/>

In project Year 3, MEval-TZ conducted a four-day training of trainers course using the PM&E package for 19 participants,¹⁰ to orient them to the PM&E tools. Further, in Year 4, MEval-TZ, in collaboration with JSI/CHSSP, organised a PM&E training workshop with 22 civil society organisations (CSOs) subcontracted by Kizazi Kipya. This workshop aimed to orient participants on the PM&E manual, tools, and approaches, enhancing community involvement in planning and M&E activities and supporting CSOs' staff to develop a plan for scaling up PM&E implementation within their organizations. The CSOs trained developed involvement plans and tools with community groups (community leaders, caregivers/parents, and volunteers) to enhance their contributions to the achievement of MVC programme results in a participatory way. PM&E skills enhance the capacity of CSOs to receive and manage grants in line with PEPFAR's new drive for increased funding to local organizations.



A community PM&E session. Photo: Sono Kusekwa, MEval-TZ

Technical Cluster: Malaria: Surveillance and Operations Research

Introduction

While the award anticipated that MEval-TZ would undertake activities related to malaria operations research and surveillance, the latter were well defined only in project Year 3 (July 2016). The requirement was for the project to work closely with the National Malaria Control Programme (NMCP) and the Zanzibar Malaria Elimination Programme (ZAMEP) to ensure uninterrupted operation of the existing malaria surveillance systems at the expiry of the USAID-funded Tanzania Vector Control Scale-up Project (TVCSP). The project held transition meetings with RTI International, the implementer TVCSP, NMCP, and ZAMEP, culminating in the project hiring two malaria surveillance and M&E advisors—one each for Mainland and Zanzibar—who had been employed by the TVCSP project. The buy-in from NMCP and ZAMEP for the project's TA was facilitated by the project's role in the complementary malaria operations research and its high reputation, especially in HIV M&E-related activities in the country. With the two staff, and in close consultation with PMI resident advisors and programme manager and NMCP and ZAMEP, the project developed new workplans to support malaria surveillance activities.

Key Achievements

Malaria Case Reporting and Data Analysis

In Mainland Tanzania, malaria surveillance is conducted as part of the MOHCDGEC's weekly eIDSR—a system linked to the DHIS2. The eIDSR system uses mobile phone technology for data transmission from health facilities into the DHIS2. At health facilities, registered users are required to submit weekly reports that can be viewed in DHIS2 and accessed by officials at district, regional, and national levels. Since July 2016, this work has been supported in eight malaria-prone regions (Dar es Salaam, Dodoma, Geita, Kagera, Manyara, Mara, Mwanza, and Singida) in more than 2,000 health facilities.

The project's TA focused on two areas: (1) malaria surveillance, epidemic detection, and rapid response; and (2) routine system strengthening. Activities in the second area—data and performance reviews, training,

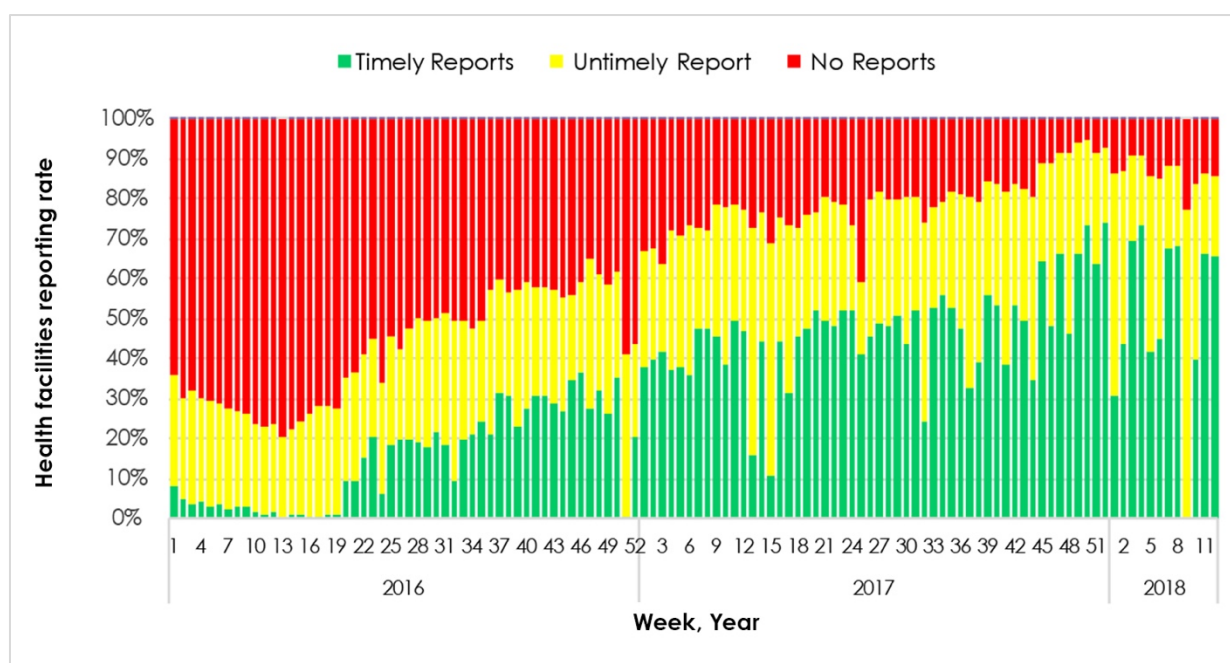
¹⁰ Organizations represented were Watoto Walio Katika Mapambano ya Ukimwi (WAMATA), PACT/Kizazi Kipya Program, National Council of People Living with HIV/AIDS (NACOPHA), KIHUMBE, JSI/CHSSP, NACP, and MOHCDGEC.

supportive supervision, and packaging and dissemination of malaria surveillance data—were conducted to improve malaria data quality and use towards the objective of NMCP’s Medium-Term Strategic Plan (2015–2020): “Improve quality, completeness, and timeliness of malaria indicators within the routine health information system to reach 90 percent of health facilities reporting monthly through the HMIS by 2020.”

In Zanzibar, the malaria surveillance work included support to the Malaria Early Epidemic Warning System, support for passive surveillance activities through the MEEDS, and active surveillance through MCN. The MEEDS supports weekly reporting of malaria case data by health facilities using mobile phone technology. The frequent reporting enables surveillance, monitoring, and evaluation teams to detect outbreaks within two weeks of onset and helps them decide what actions are needed when a sudden increase in malaria transmission is identified. The MCN system uses the national malaria case register to record more detailed information about confirmed malaria cases. Data from the register are reported by means of the short message service (SMS) mobile system and integrated in a surveillance application, accessed on tablets. These confirmed cases are followed up individually by district malaria surveillance officers (DMSOs) at the household level. During these visits, other members of the index-case household and the surrounding households are tested for malaria and information on their travel history and use of long-lasting insecticide-treated mosquito nets (LLINs) is collected.

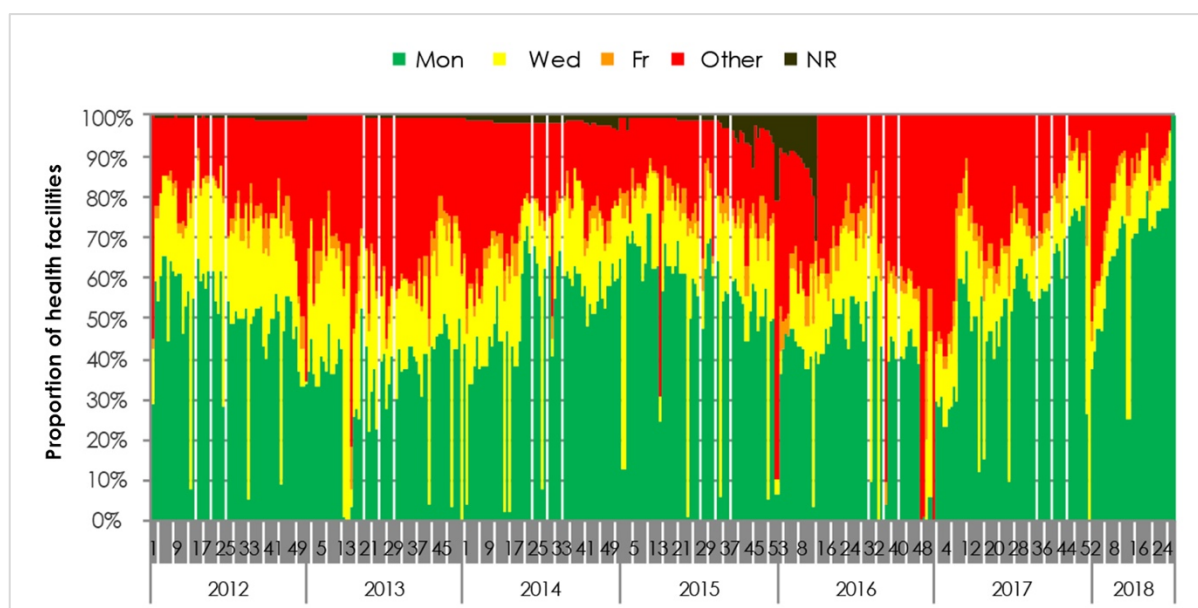
The MEval-TZ AA provided TA to NMCP and ZAMEP for analysis of malaria surveillance data. In Mainland, the average reporting rate across the regions implementing eIDSR improved from 30 percent in August 2016 when MEval-TZ took over the surveillance activity to 88 percent in December 2017 (and mostly above 80 percent for the subsequent months). NMCP’s national target is 90 percent; the target of the World Health Organization (WHO) is 80 percent.

Figure 9. Trends of weekly malaria case reporting rates in eIDSR implementing regions, Mainland Tanzania, 2016–2018



In Zanzibar, the average malaria case reporting rate through MEEDS also improved. Unguja Island moved from a 69 percent reporting rate in July 2017 to 86 percent a year later. Pemba Island went from 58 percent in July 2017 to 93 percent in July 2018. Training in data analysis and data use, strengthened supportive supervision, and feedback meetings with DMSOs contributed to these improvements.

Figure 10. Trends of weekly malaria case reporting rates through MEEDS, Zanzibar, 2012–2018



Note: Mon – Monday; Wed – Wednesday; Fr – Friday; NR – Not reported

Despite improvements in malaria case reporting, the project was limited in the changes it could make, especially to address regular technical problems with the data management systems (MCN and MEEDS) in Zanzibar. This was because the systems had been developed and were still being maintained by the predecessor project under an arrangement with both PMI and ZAMEP. Nevertheless, the project effectively coordinated with the system developers and ZAMEP to ensure limited interruption to the surveillance system.

In both Mainland and Zanzibar, operational challenges related to mobile phone functionality and network coverage sometimes hampered timely reporting. As the project managed the subcontract for the telecommunication company providing the e-health platform for Zanzibar's systems, it was easier to follow up with the provider to address technical hitches, such as dysfunctional phone lines. In the mainland, the project regularly reviewed data from health facilities, to ensure that there was a designated staff member trained on the electronic data transmission system. Regular review meetings were conducted with district malaria focal persons to verify this information and provide training, as appropriate.

Malaria Surveillance Guidelines and Tools

MEval-TZ supported ZAMEP to print and distribute MCN and MEEDS booklets to more than 200 health facilities. The MCN booklets provide tools for recording individual malaria cases reported from health facilities; the MEEDS booklets contain tools used to collect weekly summaries of malaria cases reported at health facilities. Similar support was provided in Mainland for the printing and distribution of eIDSR booklets to more than 2,000 health facilities in eight regions. The eIDSR booklets list priority diseases for immediate and weekly reporting from health facilities to the district, regional, and national levels.

MEval-TZ provided further TA to ZAMEP for the development of malaria case-investigation guidelines and case investigation forms and creation of their respective databases. The databases were created using a free and open-source software that can develop a data collection tool, collect data using a mobile device, aggregate the collected data, and transmit data to the server. The database also allows transformation of data into different formats for analysis.

Strengthening Data Use

As part of its strategies for improving malaria data availability and use, MEval-TZ supported NMCP to prepare the first malaria bulletin, in June 2017, providing current data to stakeholders. Subsequently, the project has provided TA for NMCP's efforts to strengthen malaria data use through the rollout of malaria dashboards developed within the DHIS2 at the district council and health facility levels.

MEval-TZ AA, in collaboration with ZAMEP, conducted bimonthly feedback meetings with DMSOs to review surveillance data and share field experiences. These meetings were effective in improving both the level of reporting and the quality of malaria surveillance data.

Malaria Operations Research

MEval-TZ paired operations research experts from Tulane University with the Ifakara Health Institute (IHI) and the Swiss Tropical and Public Health Institute to conduct operations research activities. The work with IHI had a capacity building component. Here is a short description of key operations research studies conducted through MEval-TZ's AA.

School Net Programme (SNP) evaluations: Mainland Tanzania uses schools as major distribution points for LLINs in some regions of the country. Four rounds of SNP distribution occurred, with evaluation surveys conducted following each SNP round (three of these evaluation rounds were funded through MEval-TZ). The evaluations sought to provide information on the status of programme rollout and to assess the contributions of the SNP to maintaining “keep-up” of LLINs. The field work for the evaluation surveys targeted four districts of Tanzania mainland: Mtwara Mikindani MC and Nachingwea DC in the Southern Zone (intervention area) and Sengerema DC and Chato DC in the Lake Zone (comparison area). Overall, results found LLIN use to be somewhat higher in the SNP-4 survey than during the SNP-1 & 2 surveys. The evidence generated through these assessments provided support to NMCP's strategy for continued use of schools for net distribution.

Holed Nets study: The holed nets study aimed to understand the determinants of net entry for local malaria vectors, in order to better advise industry on LLIN design and provide data useful to behaviour change campaigns (BCC) on net care for Afro-tropical countries with malaria transmission by pyrethroid resistant and susceptible *Anopheles gambiae*. Another objective was to determine if a cut-off “end of useful life of LLINs” exists, based on LLIN functionality, depending on the state of physical damage, which could be used to advise national malaria control programmes on the time until “end of useful life” for LLINs in Tanzania and other sub-Saharan countries. Finally, the project aimed to synthesise its results, by developing a risk-weighted proportional hole index for operational monitoring of LLINs in Africa.

Major findings of this study were solid quantitative evidence that increased pyrethroid resistance reduces mosquito mortality induced by insecticidal nets, independent of hole surface area (i.e., the magnitude of net damage). Regardless of insecticide resistance, treated nets with large holes (too torn) are still protective, so too-torn nets should never be thrown away unless the home has enough good insecticide-treated nets (ITNs) for all sleeping spaces. Insecticidal nets are superior to untreated nets, even with resistant mosquitoes. These findings are relevant to NMCP's social BCC campaigns to promote the use of treated nets for individual- and community-level protection, even if they are damaged, as opposed to no nets at all.

Reactive Case Detection in Zanzibar Effectiveness and Cost (RADZEC) study: Under this study, with a focus on systems effectiveness, the processes and data of all components of the currently implemented surveillance-response system were investigated. In particular, this included the MEEDS, the MCN reporting, and the MCN household follow-up activities, as well as other targeted interventions informed by the surveillance-response system. The research questions were addressed through several complementary activities covering a range of methodological approaches: a procedural audit of existing programme data and records, including resampling and aggregation of health facility data; a rolling cross-sectional household survey as extended and in-depth follow-up of reactive case-detection activities; patient

follow-up to establish treatment adherence in asymptomatic household members; and cost analysis to assess the cost of surveillance activities as well as operational variants of the surveillance and response system.

A primary finding of the study with operational implications for ZAMEP's surveillance strategy was that the probability of case detection during a reactive case detection (RCD) investigation is significantly higher in index households relative to neighbouring households. The findings provide support for the need to intensify household-level follow-up of confirmed index malaria cases.

Mobile Phone Monitoring of Malaria Vector Control Coverage (MoMoVec study): This study aimed to assess if the mobile phone-based surveys can be used for the rapid monitoring of LLIN coverage indicators in Tanzania. It was designed to assess the inter-rater reliability of household surveys compared to that of follow-up telephone surveys of those same households for standard indicators related to LLIN ownership, access, and use. An additional component of this study assessed the population-level reliability of these same indicators, calculated from comparisons of the nationally representative Malaria Indicator Survey and population representative estimates through random digit dialling (RDD) telephone surveys. Preliminary results from this study indicate correlation between the two survey modalities, even when unadjusted for confounding factors. This supports the feasibility of using mobile phone-based polling for ongoing monitoring of LLIN coverage in Tanzania.

Assessment of the Epidemic Alert System in Mainland Tanzania: This study entailed a fact-finding mission and data analytic approaches to (1) determine the reason that no epidemic alerts or alarms have been notified by the existing system to date, and (2) to identify appropriate algorithms for use in the early epidemic detection system moving forward. The methods were stakeholder interviews and retrospective data analysis of eIDSR malaria surveillance data. The eIDSR epidemic early detection system for malaria was found not to be functional. While upwards of 25,000 alerts would have been expected since the start of 2017, no events were in fact notified. This is probably because of a system-level failure rather than an insensitivity of the algorithm. This analysis provides data that can guide NMCP in reviewing the functionality of the notification system in the eIDSR and the alert algorithm itself.

Zanzibar Bed Net Effectiveness Plausibility Analysis: This study aimed to document the strategy, processes, and outcome of indoor residual spraying (IRS) campaigns and LLIN distributions conducted in 2016 and 2017, and if data were available, for the previous two to three years; estimate coverage and use of LLINs or ITNs in Zanzibar prior to the mass distribution in 2016, using routinely reported data from 2016–2017 and previous years; develop statistical models to estimate the impact of the 2016 LLIN distribution campaign on malaria burden, after accounting for climate and any other relevant contextual factors; strengthen the capacity of ZAMEP M&E staff to use existing data in analysis for programme decision making; and compare MEEDS and HMIS data to explore if observed reductions in malaria cases reported can be partly attributed to discrepancies between the two reporting systems. Results indicated that the proportion of households with at least one ITN would have declined below 80% in North Unguja and South-Central Unguja, below 70% in North and South Pemba, and below 60% in Urban-West Unguja, in the absence of the 2016 LLIN distribution campaign.

External Quality Assurance for Malaria Entomological Surveillance: Mainland Tanzania has recently developed and initiated a nationwide community-based entomological surveillance programme with explicit guidance for a supervisory mechanism to oversee the work conducted at the community level. MEval-TZ and NMCP developed and deployed a national external quality assurance (EQA) programme designed to assess objectively the performance of the people implementing these surveillance and supervisory activities. Following established strategies, the EQA programme sought to prevent, detect, and correct problems through assessment of structural, process, and outcome measurements.

In sum, the malaria operations research studies completed through MEval-TZ provided practical recommendations for strengthening the surveillance systems. Because of the active involvement of local staff both from ZAMEP and NMCP in the studies, these studies also contributed significantly to research capacity building. Indeed, as part of some of these studies, MEval-TZ in project Year 4 conducted targeted training in geographic information systems and data analysis for 11 and 8 ZAMEP and NMCP staff, respectively.

Technical Cluster: HIV Research and M&E Capacity Building

Introduction

This technical cluster captures the project's work to generate evidence through operations research and strengthen research and M&E capacity by administering small grants to local researchers, government, and CBOs, developing curricula for M&E training with local institutions, establishing a community of practice for M&E professionals and conducting secondary data analysis. This cluster also documents the project's local learnings on sustainability and the crosscutting gender theme.

Key Achievements

Generating Evidence through Directly Implemented Research Studies

The project sought to generate evidence on HIV¹¹ programmes through studies implemented directly and through small research grants to local organisations. Collaboratively with USAID and government partners, the project identified four HIV research operational research studies for direct implementation, as listed below.

- An assessment of HIV referral systems between communities and health facilities in Tanzania¹²
- HBC needs assessment among U.S. government-supported areas in Tanzania
- An assessment of the availability and use of sex-disaggregated data in Tanzania
- A baseline evaluation of well-being outcomes among Kizazi Kipya project beneficiaries

Brief details of these studies and application of their findings is provided below.

HBC Needs Assessment among U.S. Government-Supported Areas in Tanzania: This study took place between May and August 2015 in five regions in Mainland Tanzania where the U.S. government was supporting HBC programmes (Dar es Salaam, Iringa, Kilimanjaro, Mara, and Mwanza). The study objective was to obtain a better understanding of how best to deliver HBC services in the context of changing client needs, because effective and accessible treatment is transforming HIV from a terminal to a chronic condition. A random sample of 606 active people living with HIV was selected for the study. Descriptive and basic inferential analyses, including T-test and Chi-square tests, were used to address the study objective. The study sample was predominantly female (67.5%) and urban-based (58.1%). Respondents' mean age was 41 years, but higher among males (mean 43.7 years) than females (mean 40.9). Almost all (98%) of study respondents were not bedridden and three-quarters reported their health condition as being good at the time of the survey. Over three-quarters of respondents reported their satisfaction with services received at health facilities and during the last visit by a volunteer, including education on the importance of treatment adherence. Among respondents currently using ARV, almost all (99%) reported adherence. As a strategy for continued treatment adherence, the majority (77%) of respondents asked for more than one month's supply of ARV drugs. Psychosocial support by counsellors or social workers was also commonly requested, with 82 percent of respondents indicating that need. To sustain reported high levels of treatment adherence, the study recommended that consideration should be given to providing a bigger supply of ARV drugs at a time, as well as providing more psychosocial support. These recommendations were incorporated in updated national guidelines for community-based health services.

Assessment of the Availability and Use of Sex-Disaggregated Data in Tanzania: MEval-TZ conducted a data and gender assessment of the national and subnational RHIS in 2015 in Tanzania, to understand the current availability and use of sex-disaggregated and gender-sensitive indicators. The assessment team conducted a desk review of the Tanzania RHIS M&E plans, M&E data collection tools,

¹¹ Malaria-related operations research studies are presented under a separate technical cluster.

¹² The details of this study and use of findings appear under the HIV and MVC M&E systems cluster.

and government reports and documents written using the DHIS2 and TOMSHA¹³ databases. Additionally, the assessment team conducted interviews with 15 KIs from the MOHCDGEC; the National Bureau of Statistics; PO-RALG; Tanzania Commission for AIDS (TACAIDS); the Tanzania Gender Network Programme; and UN Women.

The study found a range of experience with an understanding of the meaning and value of sex-disaggregated and gender-sensitive data. Several KIs were unable to give examples of sex-disaggregated data, few KIs were able to offer concrete examples of how one would use sex-disaggregated data for decision making, and one KI felt gender was not important to their work. The desk review revealed that most indicators are sex-disaggregated, though a few important ones are not. Notably, ART follow-up data lacked disaggregation. Many of the national reports periodically analysed routine HIV data by sex to understand epidemiological outcomes, but the analyses were not fully used to make programme or policy decisions.

MEval-TZ used these findings to enrich its training activities, including an emphasis on gender-sensitive analysis in the newly developed DHIS2 and DDU training manual, described here in the section on the HMIS, data quality and data use technical cluster. Building upon these findings also, the project conducted trainings on gender and M&E (described below).

OVC Research—MVC Household Study and MER Survey: When MEval-TZ conducted an evaluation of the Kizazi Kipya project,¹⁴ the two evaluation questions were:

- What is the change in PEPFAR monitoring, evaluation, and reporting (MER) indicators of well-being among Kizazi Kipya beneficiaries over time?
- Under what circumstances does caregiver participation in a savings group contribute to changes in the uptake of HIV testing, retention in HIV care, and adherence to HIV medication among caregivers and children?

MEval-TZ conducted a household panel study among Kizazi Kipya beneficiary households (HH) enrolled in project Year 1 (2016–2017) that were selected using a two-stage cluster sample design. The survey team completed 679 interviews with the caregivers of 2,315 children. The survey response rate was 90.5 percent. Thirty-two percent of the sample was rural. A standardised electronic questionnaire was used to interview OVC caregivers about the services they received, their own well-being, and the well-being of the children in the HH. HHs had an average of 5.5 members. Sixty-five percent of the HHs included an orphaned child. HHs had a 48 percent likelihood of falling below the US\$1.25 poverty line (higher than the national average). Forty percent of the HHs reported outstanding debt, and only 8 percent reported savings. In 26 percent of the HHs, the responding caregiver was HIV-positive, and 6.5 percent of the children for which caregivers provided information were reported to be HIV-positive (see Appendix 1 for detailed results). MEval-TZ discussed the findings of this study with the Kizazi Kipya project to guide programme implementation. A follow-on survey is due in 2019 to measure changes associated with the Kizazi Kipya project strategies.

All the HIV operations research studies were conducted in collaboration with government partners from NACP and MOHCDGEC and local subcontractors as a strategy to strengthen local research capacity.

¹³ TOMSHA (Tanzania Output Monitoring System for Nonmedical HIV and AIDS) is database maintained by the Tanzania commission for AIDS (TACAIDS) for multisectoral HIV interventions.

¹⁴ Kizazi Kipya is a five-year (2016–2021) project funded by PEPFAR through USAID, implemented by Pact and its partners. In support of HIV-infected positive and other vulnerable children and adolescents, Kizazi Kipya works to increase caregivers' financial resources and parenting skills, and to improve the availability of services in support of this population, especially those hardest to reach. To improve financial well-being, the project is rolling out community savings groups and, in future years, will connect the target population with other HH economic strengthening activities.

Research Capacity Building through Small Grants

Small grants are one mechanism to promote research capacity and provide financial support for health research conducted in low-income countries. When host country teams research issues, develop strategies, and implement solutions, those actions promote self-reliance—a goal that USAID champions.

MEval-TZ administered small grants to local universities and NGOs in Tanzania to increase the evidence base for community health and social service programmes through conducting research and building research capacity. The objectives of the small grants programme were to address research gaps in HIV/AIDS services and interventions, provide opportunities for data dissemination and use by local stakeholders for informed decision making, and build the research capacity of local agencies

The project conducted two rounds of small grants, each with five awards. The research focus for the first round was to address gaps in community health and social service programmes for HIV/AIDS. The second round focused on addressing gaps in the evidence base for linkages and retention in HIV/AIDS care and treatment programmes. Table 6 provides a summary of the small grants.

Table 6. Small grants, by the numbers

Number of applications received	62	82
Number of proposals awarded	5	5
Average award amount (direct costs only)	USD \$9,207	USD \$12,940
Number of subgrant awards to local universities	2	1
Number of funded subgrants with a female principal investigator (PI)	3	2

All 10 subgrantees successfully completed their proposed research projects. The reports are posted on the MEASURE Evaluation website (<https://www.measureevaluation.org/our-work/capacity-building/>). The research findings were widely disseminated locally, through meetings with RHMTs and CHMTs, feedback workshops with local government representatives and NGOs, and oral presentations at international conferences. A synopsis of the ten studies is provided in Appendix 2.

According to the final research capacity self-assessment, the research teams had achieved most or all of the objectives in their action plans. They reported feeling supported and empowered to conduct additional health research. Many of them shared how this opportunity and the direct TA received had strengthened their abilities and afforded them valuable research experience.

This research project that we conducted through the small grant was a great opportunity to build capacity of our team, especially on how to define problems, set objectives and priorities, identify solutions to problems as well as proper planning of resources. For example [one of the researchers] has been appointed to lead two national projects as PI...With the skills he gained through this research, he feels very confident with designing implementation plans of the said projects.

– Anna Mbiye, PI, Jerusha (T) Ltd.

M&E Capacity Building

M&E capacity building is the foundation of MEval-TZ's work and is systematically woven into the project's workplans, benchmarks, and deliverables. The project creates products to support government systems at the national and subnational levels of government for health areas related to HIV and malaria. M&E plans and guidelines; programming in DHIS2 guidelines; and supervision, data quality, and data review guidelines are developed and implemented through the lens of capacity building towards self-reliance.

Beyond capacity building for specific M&E activities, professionals in the field expressed a need for more systematic access to learning opportunities as well as opportunities and platforms to share knowledge and experiences. It was noted that master's level M&E training for health was limited, but the growing emphasis

on data-informed decision making and the introduction of electronic data collection platforms and a need for real-time data reporting created a market for master's level training.

In response, the project invested in a community of practice for M&E professionals and entered into partnership with MUHAS and the Global Evaluation and Monitoring Network for Health (GEMNet-Health) to support faculty in the development of a two-year degree programme titled Project Management, Monitoring and Evaluation in Health (PMME).

In project Year 2, MEval-TZ entered into an MOU with MUHAS to support the development of a master's degree programme. MEASURE Evaluation took responsibility to support the development and launch of the two-year master's degree programme through faculty training and support in the development of competencies and course content.

Supported by MEval-TZ and GEMNet-Health, MUHAS developed a programme that has been incorporated in its university offerings. MUHAS is looking for opportunities to formally join GEMNet-Health and establish an internship programme with the government to place students needing practical research and public health experience in health ministry while filling HR gaps in regions of need.

SUSTAINABILITY

Facilitating a culture of sustainability and self-reliance began early in the project.¹⁵ The project team developed a vision using the following question: “What would you want an evaluator assigned to do a post-project evaluation of the state of the Health Information System in Tanzania in 2020 to find?” A sustainability framework was then developed. The framework has four domains and used USAID’s PMP indicators to measure progress towards the desired outcomes.

A common understanding of sustainability and the vision for a self-reliant HIS in Tanzania supported activity planning and implementation. The commitment of project staff and local counterparts to a sustainable HIS was reflected in how local partners led planning and implementation for activities where possible, which reduced the need for elaborate or prolonged transition plans upon project end.

Through the process of planning for sustainability and transition to local partners and institutions, the MEval-TZ project team encouraged all stakeholders to take a broad and long-term view at what a viable and integrated HIS in Tanzania could look like. This affected implementation throughout the past five years, by emphasizing collaboration with and capacity building for local institutions and strengthening systems to carry activities forward. Some examples of where achievements can be sustained and used as a catalyst are the following:

- Local nongovernmental organizations and universities have great interest in undertaking research, which could be further optimized with investments in building skills and direct funding for research.
- Continue to use data use champions to promote high-quality data collection.
- Build on investments in the DHIS2 to incorporate innovations and improvements on MVC modules and others that benefited from MEval-TZ.
- Continue to fill research gaps in local HIV/AIDS programmes, through small grants that provide hands-on research experience and build grant-writing capabilities.
- Continue investments in the MUHAS master’s degree programme in evaluation, to build practical learning opportunities for students and fill gaps in the health system.

Carrying activities forward will require adequate resources, and where these do not exist locally, outside sources must be sought. Future implementation should continue to strengthen local capacity, to reduce dependence on outside funding and promote self-reliance.

Defining Sustainability for MEval-TZ

Sustainability is the process of using available resources to ensure that services are persistent, self-reliant, and durable.

MEval-TZ’s Vision for the Year 2020

Increase the availability and use of high-quality data to inform community health and social service policy, planning, and decision making.

¹⁵ This section is drawn from *Sustainability Planning for MEASURE Evaluation–Tanzania* (R. Hobson, J. Yourkavitch, & R., Bishwakarma, 2018; Chapel Hill, NC, USA: MEASURE Evaluation, University of North Carolina). The complete text of the report is available here: <https://www.measureevaluation.org/resources/publications/tr-18-304?searchterm=tr+18+304>.

PROJECT PERFORMANCE MONITORING PLAN: SELECTED INDICATORS

Introduction

MEval-TZ's performance was measured in two ways. The first approach focused on deliverables identified in the approved work plan, which were tracked on a quarterly basis for each activity. The second approach tracked the project's results, which could be contributed to by more than one activity. For the latter, the project developed a Performance Monitoring Plan (PMP), with defined outputs and short- and long-term outcomes. The PMP results were analysed at the end of each fiscal year.

PMP Indicators

The PMP had 29 indicators. Some were mapped to the project's IRs; others were crosscutting, such as training, coordination and collaboration in M&E activities, gender integration, and sustainability. Most of the data for these indicators were collected routinely, through project activities; some were obtained from secondary sources, such as the HMIS. The matrix in Table 7 summarises the PMP indicators.

Table 7. A summary of MEval-TZ AA PMP indicators

Intermediate Results (IR 1)	Indicator
IR1: Policy makers use quality data to develop policies and guidelines, and advocate for community health and social service programs	
IR 1.1. Improved environment for routine data demand and use at the national level	<p><u>A1</u>: Number of beneficiary institutions supported to develop data use strengthening plans</p> <p><u>A2</u>: Number of beneficiary institutions holding performance data review and interpretation meetings.</p> <p><u>A3</u>: Number of policies, plans, advocacy materials, program strategies and national guidelines developed that are informed by data</p>
IR 1.2. M&E system improved and procedures, policies and support mechanisms are institutionalized at the national-level	<p><u>A4</u>: Number of beneficiary institutions that generate reports and analyse data using the national databases and special studies.</p> <p><u>A5</u>: Number of beneficiary institutions/service programs with harmonized M&E plans being implemented</p>
IR2: Quality data routinely used by local governments, community providers and facilities to improve program planning budgeting and program implementation	
IR 2.1. M&E Procedures, policies and support mechanisms institutionalized within local governments, facility and community service providers	<p><u>B1</u>: Number of data quality assessments implemented with support from MEval-TZ</p> <p><u>B2</u>: Proportion of targeted beneficiaries that routinely and independently conduct joint data reviews and data quality assessments</p> <p><u>B3</u>: Proportion of targeted districts with improved referral monitoring systems</p>
IR 2.2. Health Information routinely collected and integrated into the DHIS	<p><u>B4</u>: Percentage of health facilities in focus regions submitting timely reports to the HMIS or DHIS</p> <p><u>B5</u>: Percentage of districts in focus regions with improvements in DQ and/or data quality in HMIS or DHIS</p>

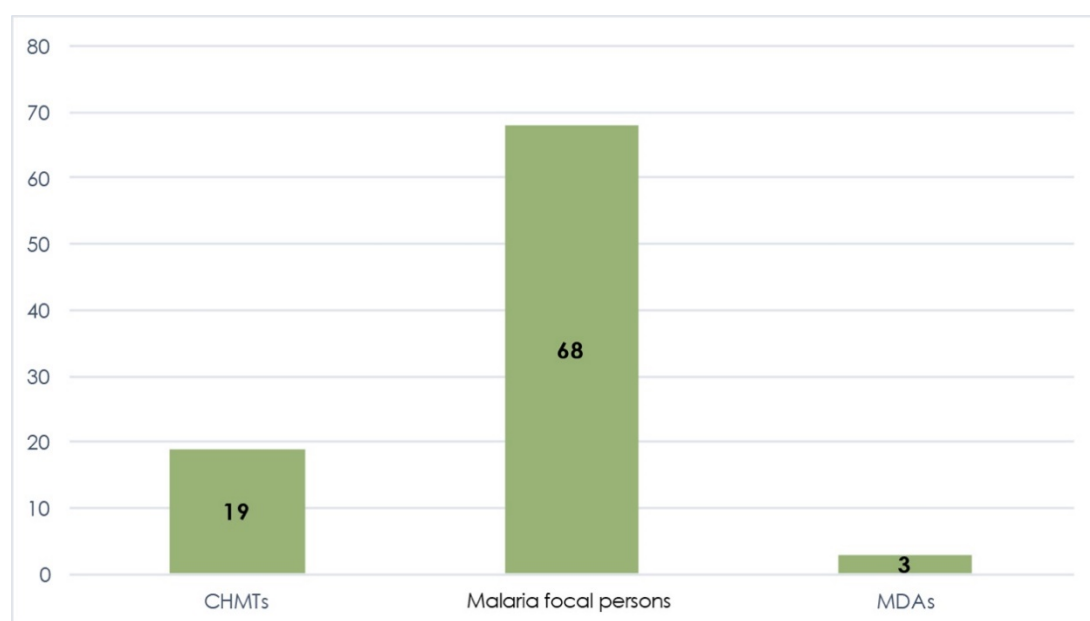
Intermediate Results (IR 1)	Indicator
	<u>B6</u> : Number of documented instances when Council Health Management Teams (CHMTs) use DHIS data to inform health planning, budgeting and program implementation
IR 3 Increased evidence base for community health and social service programs	
IR 3.1 Community health research activities supported	<u>C1</u> : Number of community health research projects funded to investigate community health and social service challenges <u>C2</u> : Number of local research institutions with evaluation/ research capacity building plans developed or implemented through support by MEVal-TZ
IR 3.2 Increased professional development opportunities in program monitoring evaluation, and research for Tanzanian program managers and researchers	<u>C3</u> : Number of electronic and print publications produced with MEVal-TZ support <u>C4</u> : Number of presentations supported by MEVal-TZ at international, national or regional dissemination events
IR 3.3 Increased institutionalization of M&E through Organizational Development support	<u>C5</u> : Number of districts implementing improved procedures for routine health and service monitoring at the district, facility and community levels <u>C6</u> : Number of health information system studies completed in collaboration with the MOH
Crosscutting indicators	
Training	<u>IR 1</u> : Number of trainings held with MEVal-TZ support <u>IR 2</u> : Number of people trained at MEVal-TZ trainings <u>MP 1</u> : Number of finalized key M&E/HIS reference documents, tools and/or curricula that have been newly developed or improved with assistance from MEVal-TZ
Coordination and collaboration in M&E activities	<u>CC1</u> : Number of national, regional or local M&E coordinating mechanisms in Tanzania (i.e., TWGs) in which project staff are actively participating <u>CC2</u> : Number of members in MEVal-TZ moderated COP <u>CC3</u> : Number of COP events held and moderated by MEVal-TZ
Gender integration	<u>G1</u> : Number of ministries departments or agencies (MDAs) and civil society organizations assisted/supported in integrating gender into M&E activities <u>G2</u> : Number of ministries departments or agencies (MDAs) and civil society organizations analysing sex-disaggregated data and making the findings available
Sustainability	<u>S1</u> : Number of activities initiated by project that have been taken over by local programs, institutions and staff <u>S2</u> : Number of instances where country organizations or programs request and/or secure non-USAID funding for M&E or HIS staff and/or activities as a result of MEASURE Evaluation activities <u>S3</u> : Number of instances where country institutions, organizations or programs take on increased levels of responsibility for trainings conducted through initial support by MEVal-TZ

This section highlights some of the project's results from the PMP.

Indicator A4: Short-Term Outcome: Number of beneficiary institutions that generate reports and analyse data using the national databases and/or special studies (IR 1)

The project's TA aimed to increase use of data from the national databases (e.g., DHIS2) and/or special studies. The purpose of this indicator was to track changes in beneficiary institutions' capacity to use data and the value these institutions placed on DDU and M&E activities. In total, **90** beneficiary institutions generated reports and analysed data using the national databases, as summarised below.

Figure 11. Number of beneficiary institutions that generated reports and analysed data using the national databases



Beneficiary institutions included CHMTs in 19 HIV epidemic-control priority councils in Dar es Salaam, Iringa, Mbeya, Mwanza, and Njombe Regions; malaria focal persons in 68 district councils (58 PMI-supported malaria surveillance districts in the mainland and 10 in Zanzibar); and five government MDAs: ZAMEP, DSW, DESW, MOHCDGEC, and NMCP. The HIV epidemic-control priority councils generated monthly service reports using the DHIS2 data; the malaria focus districts, NMCP, and ZAMEP generated weekly and monthly malaria surveillance reports using the DHIS2/eIDSR and MEEDS/MCN databases in the Mainland and Zanzibar, respectively. With the project's TA, the MOHCDGEC analysed DHIS2 to generate the 2017 Annual Health Sector Performance Profile Report.

Indicator A5: Long-Term Outcome: Number of beneficiary institutions/service programs with harmonized M&E plans being implemented (IR 1)

As a long-term outcome, the project expected some of its beneficiaries to implement harmonised M&E plans. A harmonised M&E plan was considered one that had undergone review by multiple stakeholders to ensure that interests and priorities across stakeholders were accounted for and represented in the plan. **Five** beneficiary institutions/service programmes developed harmonised M&E plans that were being implemented.

MEval-TZ provided TA to the DSW and DESW to develop national M&E plans for the MVC programme, launched officially in 2015. The harmonised workplans are being implemented by the DSW, DESW, and other stakeholders—notably the USAID-funded Kizazi Kipya and CHSP.

MEval-TZ provided TA for the development of M&E plans for the Third Health Sector HIV and AIDS Strategic Plan, 2013–2017 (HSHSP III) and its successor, the Fourth Health Sector HIV and AIDS Strategic Plan, 2017–2022. The M&E plans were developed through a consultative process under NACP's leadership.

In addition, the project provided TA for the development of M&E plans for the Third Zanzibar Health Sector HIV and AIDS Strategic Plan 2016–2021 (ZIHHTLP) and the Third Zanzibar National HIV&AIDS Strategic Plan, 2017–2022 (ZAC). The M&E plans are being implemented to track the country's progress towards the global 90-90-90 targets for epidemic control.

Indicator B2: Short-Term Outcome: Proportion of targeted beneficiaries that routinely and independently conduct joint data reviews and data quality assessments (IR2)

TA for data reviews constituted a major part of the project's work. The purpose of this indicator was to track changes in DDU practices from data consumer perspectives at the subnational level. Specifically, the project aimed to track how many of the project beneficiaries review data and check the quality of the data they are using, believing that if high-quality data are reviewed, decision makers are more likely to make informed, evidence-based decisions backed up by those data. Beneficiary organizations were expected to conduct data reviews and/or DQAs on a regular schedule, such as once per month, quarterly, once per year, or anywhere in between. Over time, the beneficiary organizations would carry out the reviews on their own.

All (100%) of the project's 19 HIV epidemic control and 58 PMI-supported malaria control councils reported instances of routinely and independently conducting joint data reviews and DQAs. Some of the results are highlighted below.

Table 8. Examples of how targeted beneficiaries routinely and independently conducted joint data reviews

Institution	Data review description	Number of beneficiary institutions*
Dar es Salaam Regional Health Management Team (RHMT)	Through MEval-TZ's TA, the Dar es Salaam RHMT and CHMTs of Ubungu MC, Kigamboni MC, Kindondoni MC, Ilala MC and Temeke MC independently conducted health programme data reviews for the development of their 2016/2017 and 2017/2018 Comprehensive Council Health Plans (CCHPs).	6
Mbeya Regional Health Management Team (RHMT)	Through MEval-TZ's TA, the Mbeya RHMT and CHMTs of Mbeya CC, Mbarali, Chunya, Kyela, Rungwe, Busokelo and Mbeya District Councils independently conducted health programme data reviews for the development of their 2016/2017 and 2017/2018 CCHPs.	8
Iringa Regional Health Management Team (RHMT)	Through MEval-TZ's TA, the Iringa RHMT and CHMTs of Iringa MC and Mufindi DC independently conducted health programme data reviews for the development of their 2016/2017 CCHPs.	3
Njombe Regional Health Management Team (RHMT)	Through MEval-TZ's TA, the Njombe RHMT and CHMTs of Njombe TC and Wanging'ombe DC independently conducted health programme data reviews for the development of their 2016/2017 CCHPs.	3
Mwanza Regional Health Management Team (RHMT)	Through MEval-TZ's TA, the Mwanza RHMT and CHMTs of Nyamagana, Buchosa and Sengerema District Councils independently conducted health programme data reviews for the development of their 2016/2017 CCHPs.	4

Note: The RHMTs are counted separately from the CHMTs, even though they conduct the reviews jointly.

Council-level malaria surveillance teams in the project's 58 focus districts also independently conducted analysis of eIDSR data in the DHIS2 using different functionalities of the DHIS2 software, such as pivot tables and maps, in two-day workshops conducted at least twice a year.

Indicator B5: Short-Term Outcome: Percentage of districts in focus regions with improvements in data quality in HMIS or DHIS

Reporting timeliness and completeness are key elements of data quality. This indicator was designed to track data quality improvements in the project's supported districts. Figures 19 and 20 present reporting timeliness and completeness in the DHIS2 for 2014 and 2018 among the project's HIV epidemic control focus districts.

Figure 12. Reporting timeliness in DHIS2 among MEVal-TZ's HIV epidemic-control focus districts, 2014–2018

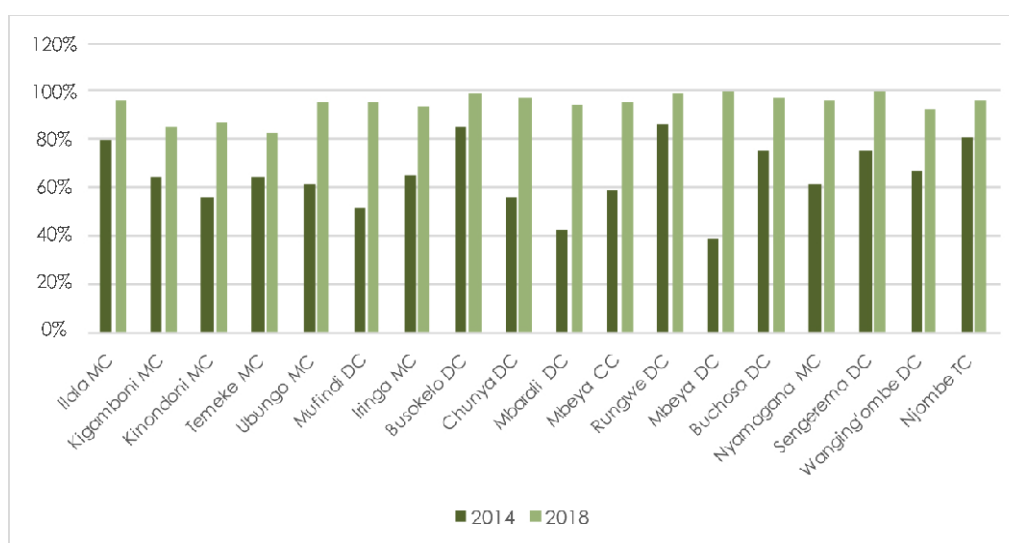
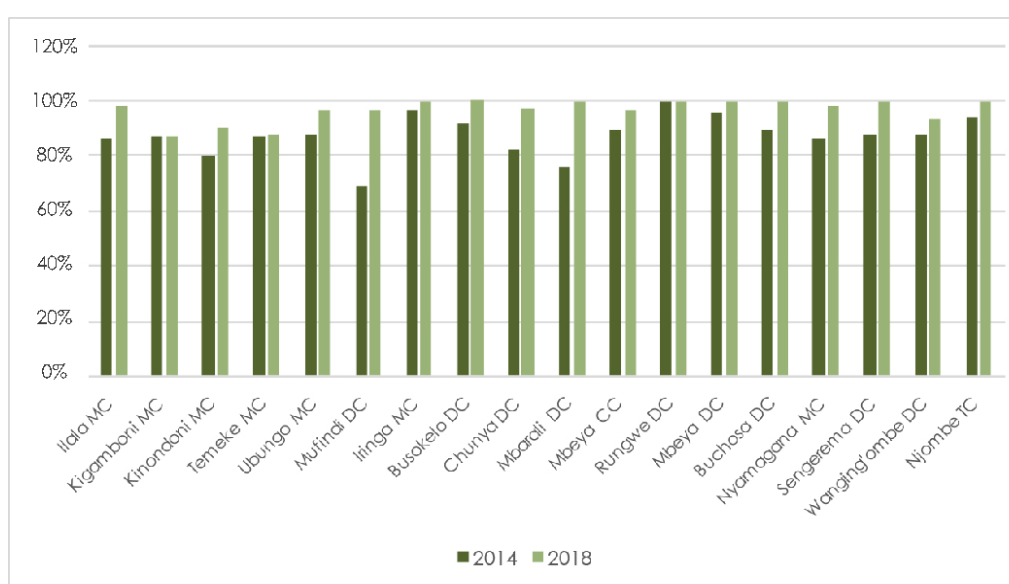


Figure 13. Reporting completeness in DHIS2 among MEVal-TZ's HIV epidemic-control focus districts, 2014–2018



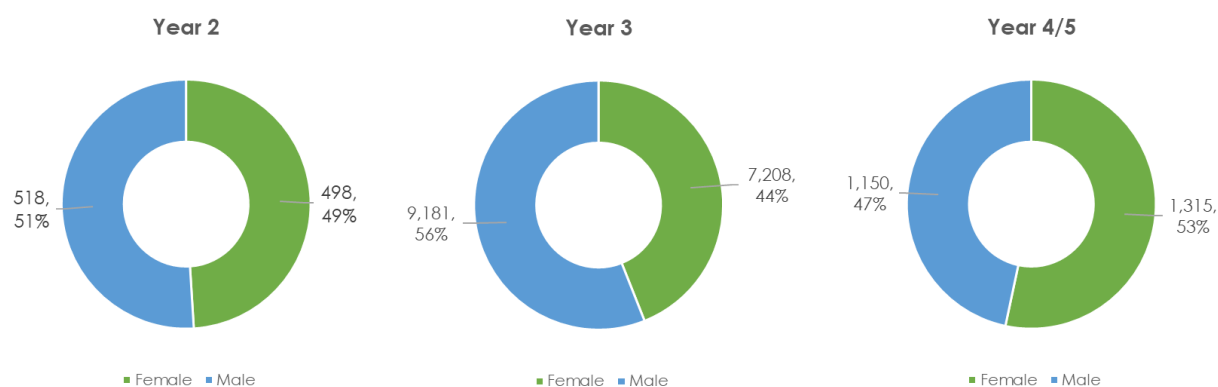
The results above show improvements in both indicators of data quality over the project's life. This was partly contributed to by DHIS2 rollout trainings and data and performance reviews conducted regularly with RHMT/CHMTs.

TR2: Input: Number of people trained at MEval-TZ trainings

Training was one of the project's primary strategies for building M&E capacity. This output indicator was used to measure the amount and type of trainings implemented by MEval-TZ. MEval-TZ trainings include all workshops, courses, and trainings that are organised, conducted, and/or funded by the project. The project trained 1,016 participants in Year 2, 16,389 in Year 3, and 2,465 in Year 4/5, as summarised below, with the gender distribution of participants also shown.

The bulk of the training in Year 3 (95%) was for community case workers responsible for collecting MVC M&E data.

Figure 14. Number of people trained through MEval-TZ



LESSONS LEARNED, CONCLUSIONS, AND RECOMMENDATIONS

Lessons Learned

Key lessons learned from the MEval TZ's work are as follows:

Clear communication is necessary on the scope of support to be expected when baseline M&E system assessments are used as a planning tool: MEval-TZ's structured approach to M&E system strengthening, which involves baseline assessments (e.g., M&E system, data use, and DQAs) for identifying and prioritizing capacity building interventions, is positively valued but risks opening up greater demand than a project can fulfil. The 12-components M&E assessments of government entities, for instance, identified more areas of need than the project could practically address.

Close collaboration with and involvement by local institutions and government are critical for sustainability: The successful development and rollout of the MVC M&E system was largely a function of the collaborative approach taken by the project, which enhanced government ownership of the system. In Tanzania it takes a lot of time – in this case nearly two years- to build relationships with the host country. Thereafter, program implementation was wholly and smoothly supported

Comprehensive M&E technical assistance is important, especially among government partners: Closely linked to the point just made is the importance of considering M&E system-strengthening needs at the level of an entire government programme or entity rather than its parts. One of the major activities of the project was strengthening the MVC M&E system within the DSW. However, the MVC programme was just one of eight programmes run by the department. Some of the organizational changes required to entrench the MVC M&E system were slow to come, because the other interdependent programmes (e.g., juvenile justice and people with disability) were not part of the TA plan.

M&E system strengthening requires flexibility, commitment and long-term engagement: MEval-TZ's success in strengthening the M&E system was largely because of its responsiveness to government needs as they emerged. Responsiveness to the government's priorities, such as training for the mainstreaming of HIV data reporting into the DHIS2, enhanced the project's position as a committed partner. Long-term engagement was critical to the success of MVC M&E plan development that underwent iterative processes for stakeholder buy-in.

RDQA is a path for M&E systems' strengthening IPs undergoing DQA underscored the importance of the capacity building provided to address the gaps identified. When used effectively, DQA provides a pathway to improvement in both data quality and data use.

Consistent and structured quarterly performance and data reviews with RHMTs and CHMTs enhance data quality and use: To engender a culture of data use, opportunities must be deliberately created for reviewing data and programme performance. All the priority councils served by the project now include in their Comprehensive Council Health Plans budgets for conducting regular data and performance review meetings.

Challenges

The key challenges in the project's implementation were as described below.

Limited human resources: The challenge of limited HR (in number and skills) affected both the project and host government partners. The project operated from a central office in Dar es Salaam with a limited number of technical staff. Requirements for field-level supportive supervision could not be adequately met by project staff. Similarly, among government partners, there was a shortage of staff to carry out some of the recommended M&E system-improvement activities. Government agencies tended to favour secondment of staff to their offices, but even this did not seem to be an adequate solution to the staff shortage.

Budgetary constraints: Many of the project strategies were implemented through RHMT/CHMTs, with the expectation that they would extend the skills to the health facility level. However, the RHMT/CHMTs often lacked resources to reach the health facilities. Even when RHMT/CHMTs included M&E system activities, such as data and performance reviews, in their CCHPs, the funds were often inadequate. Given this context, the project's impact may have been limited at the health facility level.

Fragmented project design: The project design separated certain activities that would have been better implemented jointly and possibly by the same technical staff. For instance, data use strengthening activities were included under IR 1 but were dependent on HMIS/DHIS2, defined under IR2. During implementation, the project team enhanced synergy among related activities, leading to the technical clustering of activities as presented in this report.

Conclusions and Recommendations

MEval-TZ fulfilled its objectives in the following ways:

- Facilitating DDU at the national and subnational levels
- Supporting institutionalisation of DQAs and associated capacity building with the MOHCDGEC and other stakeholders
- Supporting the MOHCDGEC to institutionalise DHIS2 through capacity building at national and subnational levels, and developing and implementing tools and resources to enhance system use
- Strengthening the M&E system for MVC/OVC through development of an M&E plan and a data management system
- Working with MUHAS to develop and implement a new postgraduate course in project management, monitoring, and evaluation in health
- Building local M&E capacity through small research grants and communities of practice

In the course of the project's implementation, new initiatives with implications for the future of HIS development in Tanzania emerged, in which the project was a key player. The MOHCDGEC developed the Tanzania Digital Health Investment Roadmap, 2017–2022,¹⁶ to facilitate digitization of health data collection and enhance capacity for data use. MEval-TZ was a key informant during the development of this roadmap. The Tanzania Health Data Collaborative (HDC),¹⁷ a collaboration spearheaded by the government (MOHCDGEC and PO-RALG), was launched in 2018 to strengthen coordination and improve efficiency of data collection and use. Again, the project sat in the HDC secretariat. The key challenges of the HIS and their remedies, as identified by the HDC, were as follows:

- Weak M&E governance system: need for one M&E framework and better coordination among stakeholders
- Misalignment of data collection systems and indicator: need for harmonisation of primary data recording and reporting
- Poorly coordinated population-based and other representative surveys: need for improved accessibility, analysis, and use of survey data

¹⁶ The document is available here: https://www.healthdatacollaborative.org/fileadmin/uploads/hdc/Documents/Country_documents/THE_TANZANIA_HEALTH_DATA_COLLABORATIVE_REPORT12.12.2017.pdf.

¹⁷ The HDC communique is available here: https://www.healthdatacollaborative.org/fileadmin/uploads/hdc/Documents/Country_documents/SIGNED_Tanzania_HDC_Communique_7Feb2018.pdf.

- Fragmented digital information systems: need to address limited understanding of what exists, coverage, use, and effectiveness
- Limited capacity for data analysis and use: need for pre- and in-service training in data use competencies and improved dissemination of data

During its pre-closeout event in September 2018, MEval-TZ sought the views of government representatives¹⁸ on HIS strengthening priorities for Tanzania going forward. The panellists identified the following priorities:

- Technological solutions (e.g., computers, tablets, phones) for health facilities to improve data collection, analysis, and use and reduce double counting
- Strengthen the HMIS through data collection and reporting tools, DHIS2 dashboards, and standard reports
- Strengthen interoperability of information systems
- Strengthen data quality assurance systems to improve both paper-based and electronic information systems
- Strengthen capacity in data analysis, presentation, and use at national, regional/council, and health facility levels
- Develop a comprehensive social welfare M&E system (beyond MVC)
- Develop a functioning data warehouse to facilitate data sharing

Building on MEval-TZ's own implementation experiences and emerging needs, as identified above, the project presents the following recommendations for future HIS strengthening projects:

1. TA for electronic/digital data collection systems

- TA for use of biometric systems
- TA for developing standards for switching from paper-based to electronic systems
- TA for routine HIS assessment
- Equipment support for health facilities—laptops, tablets—as seen in malaria programmes

2. TA for HMIS strengthening

Data collection and reporting tools

- Review/revise data collection tools and develop new ones
- Conduct regular review of indicators collected by the tools and data in the DHIS2

Interoperability

- TA to the government put in place requirements for HIS interoperability (e.g., using MEASURE Evaluation Phase IV's HIS Interoperability Maturity Toolkit and Stages of HIS Improvement Toolkit)
- TA to make DHIS2 in Tanzania interoperable with DATIM and any other operational systems

¹⁸ Six panelists contributed to this discussion, representing TACAIDS, MOHCDGEC, NMCP, DSW, PO-RALG, and Zanzibar's health ministry.

3. TA for data quality and data use strengthening

- TA for a harmonised DQA approach following the MOHCDGEC's DQA guideline
- TA for national rollout of the DHIS2 Functions and Data Use for HIS Training Manual, adopted by the government to enhance the capacity of RHMT/CHMTs in data quality and data use
- TA for quarterly data and performance reviews by RHMT/CHMTs
- TA for data quality improvement at the health facility level
- TA to MUHAS to enrich practical aspects of the master's degree programme in project management and M&E in health as a pre- and in-service M&E training programme. This can help address the government's plan to hire M&E personnel at the district level.

4. Technical Assistance for a Comprehensive Social Welfare M&E System

MVC/OVC M&E System

- TA for continued rollout of the MVC M&E system
- TA for operations research on social welfare and programming
- TA for an assessment of the larger social welfare M&E system, with a view to developing one social welfare M&E system
- Equipment support: laptops to social welfare officers for council-level data management

Capacity building for CSOs to support PEPFAR's new strategy for funding of indigenous organizations

- Organizational capacity assessments and development
- TA in PM&E: roll out MEASURE Evaluation's PM&E training package

APPENDIX 1. DETAILED RESULTS OF THE OVC MER SURVEY

Orphans and Vulnerable Children (OVC)/Most Vulnerable Children (MVC): Monitoring, Evaluation, and Reporting (MER) Study

This activity was to conduct an evaluation of the USAID-funded Kizazi Kipya project, implemented by Pact.¹⁹ The impetus behind this evaluation was twofold. First, the USAID mission in Tanzania wanted to better understand the impact of the savings groups implemented by Kizazi Kipya on the well-being of orphans and vulnerable children (OVC) households (HHs) supported by the United States President's Emergency Plan for AIDS Relief (PEPFAR). Second, USAID/Tanzania, together with the Kizazi Kipya project, were required in 2017 to report to the Office of the Global AIDS Coordinator on the PEPFAR MER essential survey indicators, which could only be obtained through an external household survey of the beneficiary population. The table below summarises findings on key outcome indicators for the Kizazi Kipya project.

Table A.1. Outcomes of the Kizazi Kipya project

Indicator	n	N	%	95% confidence interval	
				Lower limit (LL)	Upper limit (UL)
Household economic well-being and resilience					
Percent of households able to access money to pay for education expenses	82	524	16.2	12.5	20.7
Percent of households able to access money to pay for healthcare expenses	67	458	15.5	10.9	21.5
Percent of households able to access money to pay for unexpected household expenses*	46	308	14.6	10.9	19.4
Household food security					
Percent of households experiencing little to no hunger	342	679	51.4	[41.9,	60.8]
HIV					
Percent of caregivers with comprehensive knowledge of HIV	227	679	32.7	[28.6,	37.1]
Percent of caregivers with comprehensive knowledge of PMTCT	344	679	51.2	[45.1,	57.2]
Percent of HIV+ caregivers currently on ART	128	139	91.9	[83.0,	96.3]
Percent of HIV+ caregivers who are currently on ART who report adherence to ART	122	128	95.8	[90.1,	98.3]
Percent of children ever tested for HIV	1007	2230	43.9	[39.2,	48.7]
Percent of children for which the caregiver knows their HIV status	931	2315	39.1	[34.3,	44.0]
Percent of HIV+ children currently on ART	50	56	90.1	[76.1,	96.3]

¹⁹ Kizazi Kipya is a five-year (2016–2021) project funded by PEPFAR through USAID, implemented by Pact and its partners. In support of HIV-infected and other vulnerable children and adolescents, Kizazi Kipya works to increase caregivers' financial resources and parenting skills, and to improve the availability of services in support of this population, especially those hardest to reach. To improve financial well-being, the project is rolling out community savings groups and, in future years, will connect the target population with other HH economic strengthening activities.

Indicator	n	N	%	95% confidence interval	
				Lower limit (LL)	Upper limit (UL)
Percent of HIV+ children who are currently on ART who report adherence to ART	36	50	70.5	[49.2,	85.6]
Child health					
Percent of children too sick to participate in daily activities*	406	2315	17.7	[15.3,	20.4]
Percent of children under 5 years who were sick with fever in the last two weeks	138	432	31.0	[25.6,	37.0]
Nutrition					
Percentage of children <5 years of age who are undernourished*	9	380	2.5 †	[1.3,	4.7]
Percent of children reporting a minimally diverse diet	180	2315	8.2	[5.5,	12.2]
Early childhood development					
Percent of children <5 years of age who recently engaged in stimulating activities with any household member over 15 years of age*	309	432	70.4	[62.3,	77.3]
Protection					
Percent of children who have a birth certificate*	254	2315	10.8	[8.1,	14.4]
Percent of children ages 5-14 years who worked outside home more than 3 hours on a school day during past week	13	1458	0.9	[0.5,	1.7]
Percent of caregivers that report that any children in their household were hit, slapped, or beaten by a household member in past 4 weeks	153	679	22.3	[17.8,	27.5]
Percent of caregivers who agree that harsh physical punishment is an appropriate means of discipline or control in the home or school*	347	679	50.2	[42.9,	57.6]
Education					
Percent of children ages 3-5 years enrolled in pre-primary education	42	220	19.6	[13.6,	27.3]
Percent of children (ages 5-17 years) regularly attending school*	599	1073	55.7	[47.4,	63.6]
Percent of children who progressed in school during the last year*	999	1181	84.6	[81.6,	87.2]
Caregiver psychosocial well-being					
Caregiver reports self-efficacy (range 0–20)	679	10	9.2		4.8
Caregiver reports self-esteem (range 0–30)	679	16	15.7		4.2
Caregiver reports social support (Oslo; range 0–11)	679	6	5.5		2.2
Caregiver reports social support (Rand; range 0–4)	679	4	3.4		1.1
Caregiver reports being hopeful (range 0–56)	679	31	30.1		11.2

APPENDIX 2. A SYNOPSIS OF SMALL GRANT-FUNDED STUDIES

Development Studies Institute, SUA

How Gender Affects Adherence to Antiretroviral Therapy in Tanzania

SUA used a cross-sectional design, and data were collected in Njombe District using a structured questionnaire at one public permanent care-and-treatment centre (CTC) and one mobile CTC. A total of 132 people living with HIV (PLHIV) completed the questionnaire. Data collection also included key informant interviews with health workers, NGOs, and caretakers at the family level; two focus group discussions (FGDs) with PLHIV; and secondary data from Njombe District health facilities.

The study found that heterosexual intercourse with a spouse was the leading cause of HIV transmission for more than two-thirds of the women (65%), and casual sex outside of marriage was the major cause for more than half of the men (54%). The main reasons respondents gave for getting tested for HIV were compulsory HIV screening during prenatal visits, HIV awareness campaigns (especially for men), and unhealthy symptoms such as weight loss and frequent diseases. Most PLHIV (86% of men and 80% of women) started on ART within the same year they were diagnosed. Partners did not usually get tested for HIV together; men were typically more reluctant, and they denied the problem, usually asserting that their wives were the source of the virus.

Women were less likely than men to consult a spouse or partner before getting tested and less likely to get support from a partner after they were tested. Women (especially married women) were more likely to face social problems, including stigma, when disclosing their HIV status to their partners. Some women feared family quarrels and harsh consequences, such as being physically abused or divorced. Communication barriers early in the decision-making process, when women were deciding whether to get tested for HIV, and the poor responses women received when they consulted their partners affected the next phase of living with HIV and had a negative impact on ART access and adherence to services. Respondents had a working knowledge of how to adhere to ART and practice safe sex, but they rarely followed safe-sex practices. Though nearly all the women (97%) took all their medicine, they were less likely than the men to follow the clinic schedule precisely. Women said that heavy household workloads made it more difficult to take their medications on time.

The study found gender inequity adversely affects adherence to ART in different ways for women and men living with HIV. This study improved understanding of gender differences in ART access and adherence and can contribute to the development of more effective gender-based interventions that can potentially enhance ART access and follow-through.

Wambura and Jacque Company Limited

Effective Linkages from Point of HIV Testing to Care and Treatment in Tanga Region, Tanzania

Wambura and Jacque collected routine data at high-volume CTCs using standard national patient monitoring system tools. Among the 16,041 adults, from the three study districts, who were enrolled at a CTC from 2010 to 2014, 1,096 clients from the sampled CTCs were recruited into the study and completed a structured questionnaire. FGDs were held with healthcare providers, and in-depth interviews (IDIs) were conducted with CTC clients.

The median CD4 count at enrolment was 218 (87–397) cells/mL, with more than half (56%) having CD4 counts of fewer than 350 cells per millilitre (mL). Nearly all (91%) of the clients presented at a CTC within three months of receiving a positive HIV test. Although most HIV clients sought early treatment at a CTC, there was a marked increase of those who waited more than three months to seek treatment after finding out they were HIV-positive, with 8 percent delaying treatment in 2010 and 12 percent delaying treatment in 2014. Factors that remained significantly associated with early entry in a CTC were level of education, CD4

count, and point of diagnosis. Those with no formal education were 14.6 times more likely to enter a CTC early than those who completed secondary school education. Clients with low baseline CD4 counts had higher odds of early entry in care and treatment than those with high baseline CD4 counts. Clients who were diagnosed at points other than a health facility or voluntary counselling and testing centre had a 5-percent lower chance of early entry in care, compared to those who were diagnosed at such a centre. Late entry into care-and-treatment programmes and failure to adhere to medication after testing HIV-positive have been linked to fear and stigma.

Although the rate of early entry in care-and-treatment services is high, it is still below the 90-percent global target set by PEPFAR and UNAIDS. To meet the target, issues such as disclosure and stigma must be addressed, and people who test positive for HIV must be enrolled in a CTC as early as possible.

Institute of Development Studies, University of Dar es Salaam

Investigating Risky Sexual Behaviours among Youth in the Context of the HIV Epidemic in Mbeya Region, Tanzania

This study focused on 54 individuals from three categories: youth ages 15–24 years old; gatekeepers; and health service providers. Data collection involved IDIs, FGDs, and document review.

The majority of youth studied had heard about HIV and its related effects; however, condom use, and attendance at sexual and reproductive health (SRH) services is very low in this population. The respondents believed that government, parents, NGOs, religious institutions, and health service providers play a role in addressing risky sexual behaviours among youth. They thought parents had some responsibility for youth engaging in risky sexual practices. Influencers included poor marital relationships and instability in the home, poor supervision of children, failing to communicate with their children about HIV and prevention of sexually transmitted infections, and putting children in unsafe and vulnerable situations. However, many other factors contributed to youth participating in risky sexual practices; some examples follow:

- Lack of education about HIV and SRH by schools and other institutions
- Lack of decision-making power
- Drug and alcohol abuse
- Household poverty
- Desire for material goods
- Lack of appropriate income-generating activities for youths
- Poor implementation of policies and laws that have the potential to decrease HIV transmission

Despite increased government and NGO measures against HIV and attempts to minimise youths' vulnerability to the disease, the community still does not fully support these efforts, and youth behavior change remains a challenge. The study recommends that the Tanzanian government remain engaged and demonstrate leadership by effectively contributing to initiatives that address the HIV epidemic and create an environment that supports youths' access to and use of SRH services.

Governance Links Tanzania

Women's Property and Inheritance Rights and HIV in Farming Communities around Lake Victoria, Northwestern Tanzania: Quantitative Analysis

The study was conducted in smallholder farming communities around Lake Victoria in Northwest Tanzania. Fifty-two women living with HIV/AIDS (WLHA) (supported by two CBOs in Ilemela and Magu Districts) completed questionnaires. (The final analysis was conducted on 36 women, after eliminating those who knew their husband's HIV status before their husband died.) FGDs were conducted both with widows

and inheritors. A conceptual framework was constructed for concurrent analysis of HIV/AIDS progression and its influence on the lives of women and their marital families.

Most of the widows in the study (69%) were immediately inherited after the death of husbands. Although most (89%) were not forced to have sex with the inheritors, they still engaged in risky sexual behaviour. More than two-thirds of the inheritors (67%) did not use condoms, and in most cases (62%), the widow did not know the inheritor's HIV-positive status. Most widows (82%) were unaware of the HIV status of the ritual cleanser and no condom was used during sex with him. Moreover, 14 of the 36 widows (39%) were involved in transactional/casual sex for monetary or material gain, and five in that group (36%) did not use a condom. Widows were inherited for childbearing (47%), sexual companionship, and ritual sexual cleansing purposes.

Social, economic, and cultural factors influenced inheritance decisions for individuals and communities. The monthly income of widows was a factor, much more so than location, educational level, religion, and occupation. Most of the widows lost their household assets (land [58%], houses [39%], and livestock [17%]) immediately following the husband's death. Most study participants were unaware of widows' rights to inherit property, and male dominance continues to perpetuate wife inheritance.

In rural Tanzania, WLHA continue to be at risk because of inadequate social, economic, legal, and emotional support. Social exclusion and the erosion of asset bases reinforce their vulnerability. This study revealed a deep, complex set of social and economic challenges that must be addressed with innovative strategies to ameliorate gender-based stereotypes that disempower women. Interventions should be designed to strengthen the role of WLHA and reduce the incidence of transactional sex, gender-based violence, and other social HIV risk behaviours.

Jerusha (T) Limited

How Access to Smartphones Affects HIV Risk among Students in Tanzania: A Case Study of Selected High Schools in the Dar es Salaam Region

Twelve private and government high schools in Ilala and Kinondoni Municipalities, both day and boarding schools, participated in this study. Questionnaires were administered to 240 students, ages 17–22 years. FGDs were facilitated with students and IDIs were conducted with stakeholders, including parents of high schoolers, district education officials, teachers, and education and health officials from NGOs. Secondary data were collected through a document review.

Eighty-two percent of the high school students interviewed (more day students than boarders) owned or had access to a smartphone. Older boys and girls (18- to 24-year-olds) and young girls (14- to 17-year-olds) who lived in urban centres had a higher rate of smartphone adoption than those who lived in semi-urban and rural areas. Although respondents mentioned that a smartphone could be used to improve academic performance and health, many students in fact used their smartphones for purposes other than education or health. Interview responses from teachers and officials in education and other NGOs suggested that even most teachers were not aware of specific education and health websites. Connecting through social media was one of the most common uses of smartphones among the students surveyed, as was viewing pornography. Two-thirds of the students (70%) stated that they had accessed pornographic videos and photos on their phones. Eighty-eight percent of students believed that smartphone use can help increase awareness of HIV and improve academic performance. However, 43 percent of the students used smartphones to search for materials that are not related either to health or education, which renders their smartphone use less beneficial to them and puts them at greater risk of contracting HIV.

These findings point to the need for education on the proper use of technologies, including smartphones. Parents and guardians should monitor their children's smartphone use and parents, teachers, and community members should restrict the use of smartphones among young students.

Tanzania Health Promotion Support (THPS)

Enhancing HIV Retention and Clinical Outcomes in Kigoma, Tanzania through Pediatric- and Adolescent-Friendly Services

Set in Kigoma Regional Hospital, in western Tanzania, this mixed-methods study used a retrospective cohort analysis of secondary data from the national CTC2 database that routinely collects patient-level information from all HIV clients receiving care and treatment. Several outcomes were compared among two groups of pediatric clients: those enrolled before (Group I) and after (Group II) the establishment of pediatric- and adolescent-friendly HIV care-and-treatment services. Using structured questionnaires, qualitative data were collected through FDGs and IDIs to assess perceptions of adolescents, health providers, and parents or guardians of pediatric and adolescent HIV services.

Data were extracted from the CTC2 database on 490 clients with 204 (61%) in Group I and 286 in Group II. Documentation on the four clinical stages at ART initiation established by WHO was available for two-thirds of study participants ($n=331$). Nearly half (46%) of participants in Group I began ART at clinical stage IV. Late initiation of ART in clinical stage IV was more common before the establishment of pediatric- and adolescent-friendly services (37% in Group I compared to 19% in Group II). Three-quarters of children and adolescents initiated on ART (75%) had an immunological assessment at baseline in Group II compared to less than half (40%) in Group I. Retention rates for children and adolescents at three, six, nine, and 12 months was better after the establishment of the friendly clinic. The probability of the child not remaining in HIV care after 12 months was higher in Group I. Qualitative analysis revealed that pediatric- and adolescent-friendly services provided support for disclosure of HIV status and strategies for coping with the disease. Participants agreed that adolescents would seek HIV services from health facilities if the services were friendly and the environment favourable for pediatric and adolescent clients. Findings from the FGDs showed that stigma and discrimination is still an important barrier to optimal pediatrics/adolescent-friendly HIV services. About half of both guardians and children mentioned that stigma and discrimination at various points affect their retention in HIV care.

This study showed that pediatric- and adolescent-friendly services for HIV care and treatment improve retention in HIV care. Furthermore, the services improve CD4 assessments and support early initiation of, and adherence to, ART.

PIUMA

The Children Left Behind: Barriers to Testing and Enrolling Children in HIV Care and Treatment in Njombe Region, Tanzania

This was an exploratory, descriptive, and retrospective qualitative study using IDI for data collection. The study population included 132 parents and guardians of HIV-exposed children who did not receive an HIV test, parents and guardians of infants and children who were confirmed HIV-positive but had not started ART, parents of HIV-positive children who had begun ART but stopped or were lost to follow-up, and 50 healthcare workers at CTCs and facilities with PMTCT services.

Although the parents and guardians of HIV-exposed children and infants knew their children were at risk, 61 percent of such children were not tested for HIV. Parents and guardians gave the following reasons for not seeking HIV testing service for the children: not living with the children; failing to obtain permission from their spouse; conflicts between the parents; lack of awareness of the importance of testing children; fear of a positive test result; stigma; not feeling motivated, because of a lack of symptoms or signs of illness; the inconvenience of going to get tested; unavailability of services and staff; and the cost of travelling to a testing site. Parents and guardians acknowledged that it was important for the HIV-exposed children to be tested and for HIV-positive children to start treatment. The main barriers to enrolling children in HIV care-and-treatment programmes were lack of understanding of how the HIV care-and-treatment system works and negligence. Other factors were self-denial, fear, embarrassment, feeling too shy to go to a treatment

centre, and self-stigma. Healthcare workers said that parents and guardians declined to get their children tested, because of low levels of awareness among adults of the importance of testing, along with barriers related to transportation. A barrier for orphans is not having a parent or guardian to care for their health.

There is no system for identifying HIV-positive infants and children outside health facilities. The policy that requires parents' or guardians' consent for children under 15 years old to be tested limits the access of HIV-exposed children to HIV testing and counseling services. Healthcare workers agreed that this requirement creates a significant barrier. Parents and guardians suggested that a knowledge gap and inadequate awareness of the importance of testing their HIV-exposed children were key barriers to testing children.

Kilimanjaro Christian Medical Centre–AMO–General School

Feasibility of Scaling-Up Home-Based HIV Counseling and Testing among Women Delivering at Home: A Geita District Council Case, Tanzania

A longitudinal household survey was conducted in Geita Region, Tanzania. The study involved all mentally able women who delivered within two years preceding the survey and their children under the age of two.

Of the 993 women who participated in the study, a total of 879 (89%) had ever been tested for HIV and 791 (80%) tested during an antenatal care visit. Nearly all (981; 99%) accepted household-based HIV counseling and testing (HBHCT) from the research team. Of the 565 women who delivered at home (WDH), 486 (86%) had ever tested for HIV. Among these, 433 (77%) tested during an ANC visit and 562 (99%) accepted HBHCT. Of the 981 participants who accepted HBHCT, 52 (5%) tested HIV-positive. Among the women who were newly identified during HBHCT, 21 (40%) were enrolled in PMTCT services. Of the 32 HIV-positive participants who delivered at home, eight (26%) were enrolled in PMTCT.

HBHCT detected new HIV infection among WDH as well as seroconversion among women with previously negative HIV tests. HBHCT can be used as an intervention to improve PMTCT services among WDH, because it was acceptable for detecting new HIV infection among WDH as well as seroconversion among women with a negative HIV test in their previous PMTCT HIV testing.

Mmakija Survey Management

Attrition from HIV Care and Treatment Services in Tanzania: Magnitude and Reasons

This study used retrospective record review and a cross-sectional study design involving PLHIV enrolled in treatment between 2006 and 2014 in two high-volume CTCs in Mnazi Mmoja Hospital (MMH) (Dar es Salaam region) and Mkuranga District Hospital (MDH) in Pwani Region.

A total of 5,499 PLHIV initiated ART in the two health facilities during the study period, January 2006 through December 2014. Attrition was 0.9 percent in MDH and 19 percent in MMH. "Lost to follow-up" was the most common cause of attrition cited in MDH (84%), whereas in MMH, the most common cause of attrition was death (62%). The magnitude of attrition among PLHIV who initiated ART gradually increased as the time after initiation of ART increased; 2011 had the highest attrition of all of the follow-up periods. Attrition was 26 percent at six months and 41 percent at 12 and 24 months. In both health facilities, the most common reason for stopping ART (among PLHIV in ART who were traced to their homes) was stigma at the clinic or community (37% in MDH and 64% in MMH). Religious belief was the least common reason (5%) in MDH and lack of food (3%) was the least common reason in MMH.

Attrition of PLHIV from ART is still a public health problem in Tanzania. Death and loss to follow-up are the most common types of attrition, and PLHIV mentioned stigma as the most common reason for stopping ART services. A robust vital registration system for death registration, a robust tracking system for loss to follow-up, and interventions to address stigma are needed to improve retention.

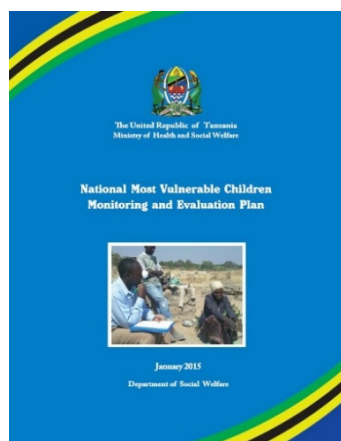
Prevention Needs and Priorities among Vulnerable Female Populations Living with HIV: The Case of Temeke Municipality, Tanzania

Using a mixed-methods approach relying on qualitative and quantitative research methods, survey data were collected from 246 females living with HIV (i.e., pregnant women, adolescent girls, female sex workers, and female elders) who were attending four CTCs across Temeke Municipality in the Dar es Salaam region. FGDs were conducted with 50 selected respondents and eight policy-related questionnaires were completed by programme administrators.

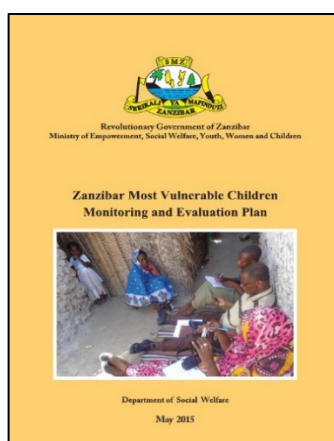
Three-fourths of the respondents had disclosed their HIV test results to just one person since they had been tested, three to five years prior. Most participants (62%) had not used any family planning method two months prior to the study. More than three-quarters of the participants said they were not receiving HIV-related services at an NGO or civil society organization apart from the CTC they were attending; moreover, consistent condom use was reported by only half (49%) of the respondents. A quarter said they used a condom sometimes or infrequently. The four categories of study participants identified the same top five prevention needs: cotrimoxazole prophylaxis, ART, psychological counseling and services, PMTCT, and income-generating activities. Participants reported stigma among family members and the community as the top barrier against attaining socioeconomic prevention needs, because they were not ready to disclose their serostatus. Paying for medicine to prevent and treat opportunistic infection was a significant challenge for most of the participants, owing to meagre incomes. Participants lacked other social support to help them.

Findings from this study overwhelmingly show that vulnerable females living with HIV have specific prevention needs and priorities that can be categorised as biomedical, structural, and behavioral. The Government of Tanzania has implemented HIV prevention measures. Hence, determining the prevention needs and priorities of at-risk populations and establishing the social, economic, and individual factors that limit the effectiveness of interventions are essential steps if stakeholders want to attain the goal of healthy living for PLHIV and reducing HIV and AIDS across Tanzania.

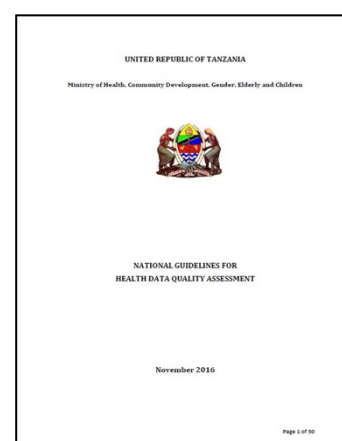
APPENDIX 3. LINKS TO SELECTED PUBLICATIONS



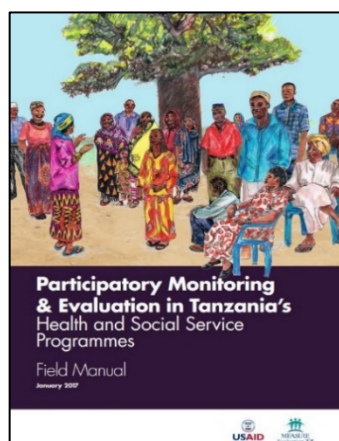
National Most Vulnerable Children Monitoring and Evaluation Plan



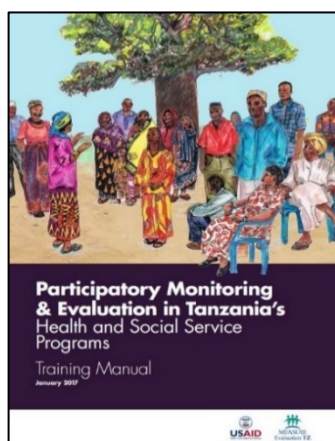
Zanzibar Most Vulnerable Children Monitoring and Evaluation Plan



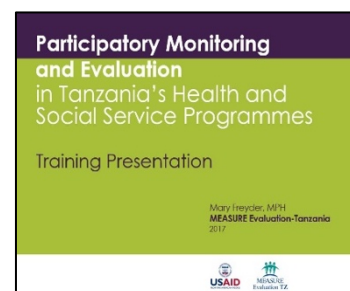
Tanzania National DQA Guidelines



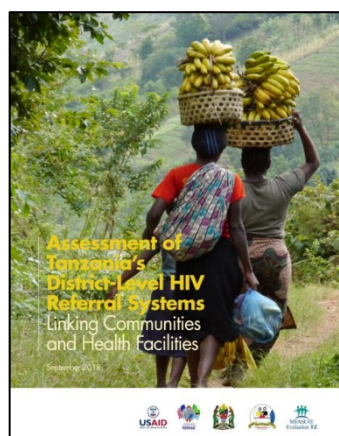
Participatory Monitoring & Evaluation in Tanzania's Health and Social Service Programmes: Field Manual



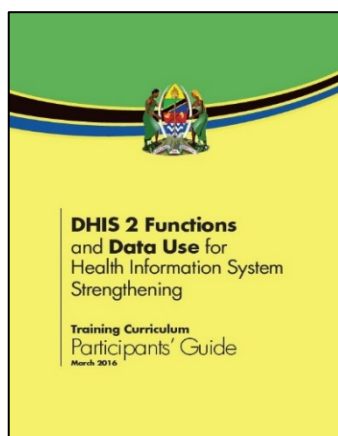
Participatory Monitoring & Evaluation in Tanzania's Health and Social Service Programs: Training Manual



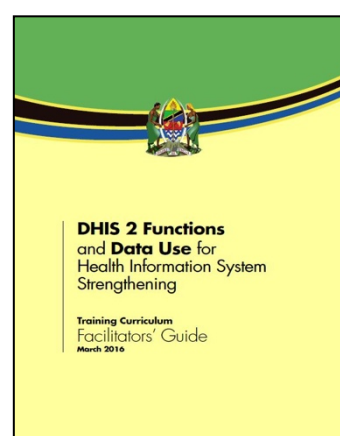
Participatory Monitoring and Evaluation in Tanzania's Health and Social Service Programs: Training Presentation



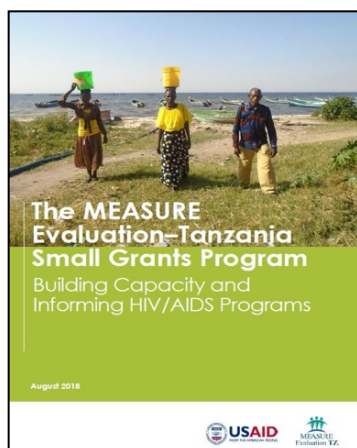
Assessment of Tanzania's District-Level HIV Referral Systems: Linking Communities and Facilities



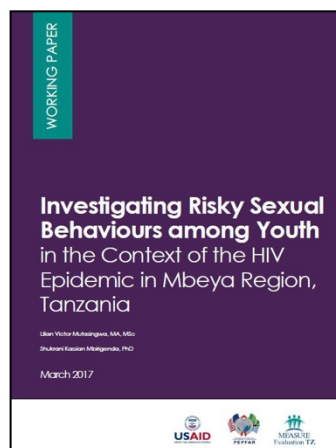
DHIS2 Functions and Data Use for Health Information System Strengthening Training Manual: Facilitators' Guide



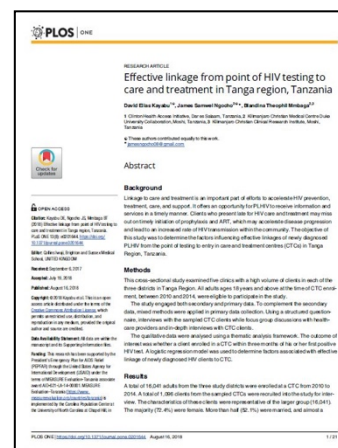
DHIS2 Functions and Data Use for Health Information System Strengthening Training Manual: Participants' Guide



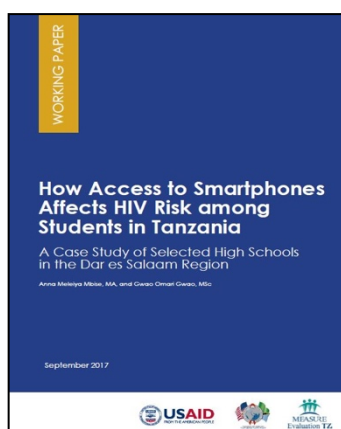
The MEASURE Evaluation–Tanzania Small Grants Program: Building Capacity and Informing HIV/AIDS Programs



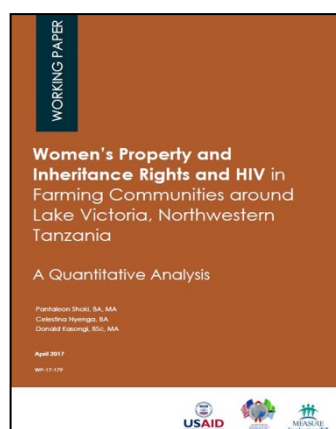
Investigating Risky Sexual Behaviours among Youth in the Context of the HIV Epidemic in Mbeya Region, Tanzania



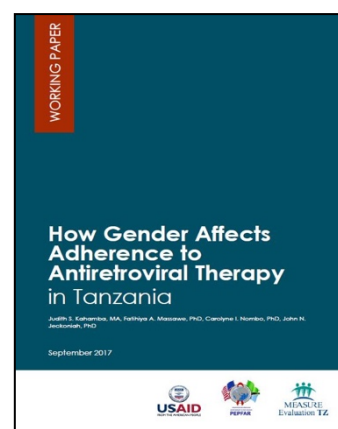
Effective linkage from point of HIV testing to care and treatment in Tanga region, Tanzania



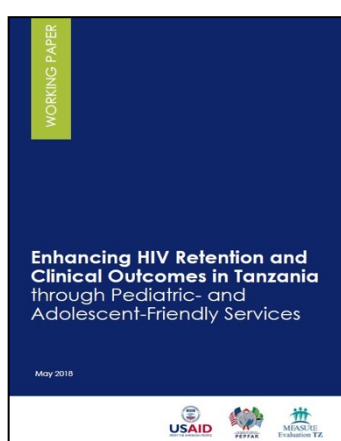
How Access to Smartphones Affects HIV Risk among Students in Tanzania: A Case Study of Selected High Schools in the Dar es Salaam Region



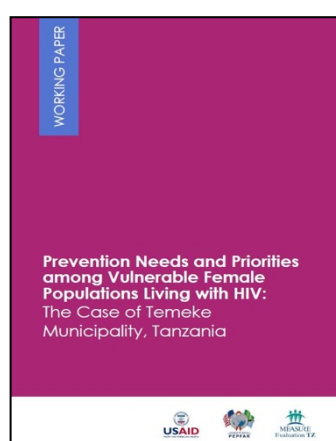
Women's Property and Inheritance Rights and HIV in Farming Communities around Lake Victoria, Northwestern Tanzania – A Quantitative Analysis



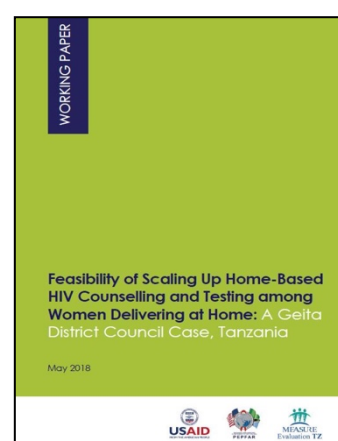
How Gender Affects Adherence to Antiretroviral Therapy in Tanzania



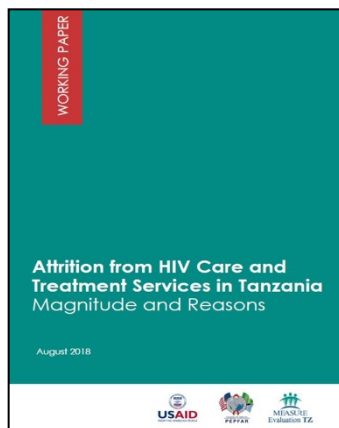
Enhancing HIV Retention and Clinical Outcomes in Tanzania through Pediatric- and Adolescent-Friendly Services



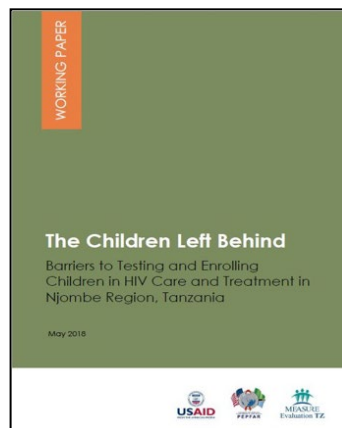
Prevention Needs and Priorities among Vulnerable Female Populations Living with HIV



Feasibility of Scaling Up Home-Based HIV Counselling and Testing among Women Delivering at Home: A Geita District Council Case, Tanzania



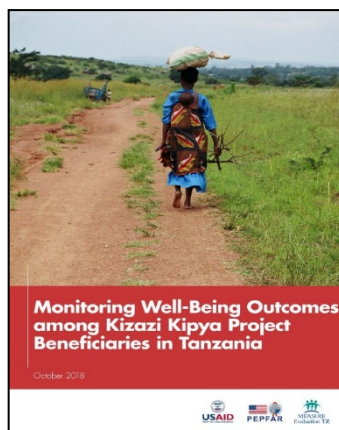
Attrition from HIV Care and Treatment Services in Tanzania: Magnitude and Reasons



The Children Left Behind: Barriers to Testing and Enrolling Children in HIV Care and Treatment in Njombe Region, Tanzania



Home-Based Care (HBC) Needs Assessment among U.S. Government-Supported Areas in Tanzania



Monitoring Well-Being Outcomes among Kizazi Kipya Project Beneficiaries in Tanzania



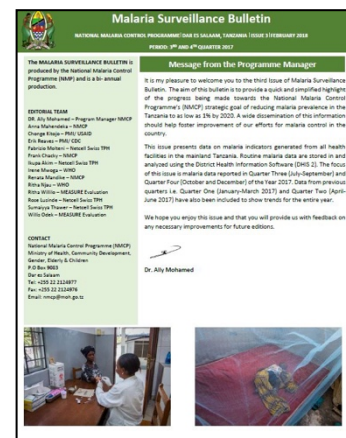
Applied Monitoring and Evaluation Postgraduate Course Launched in Tanzania



Malaria Surveillance Bulletin Issue 1 (June 2017)



Malaria Surveillance Bulletin Issue 2 (December 2017)



Malaria Surveillance Bulletin Issue 3 (February 2018)



Malaria Surveillance Bulletin Issue 4 (February 2018)

APPENDIX 4. LIST OF ALL PROJECT DELIVERABLES

Year 1, Quarter 1

1. Subcontract agreement and/or MOU with Ifakara Health Institute
2. Initial needs assessment report determining PMI's priority operations research and community surveillance activities
3. Protocols for operations research activities identified by PMI

Year 1, Quarter 2

1. Final Mainland MVC M&E Plan

Year 1, Quarter 3

1. NACP DDU assessment reports
2. Final Zanzibar MVC M&E Plan
3. DQA findings reports
4. Documented research priorities in health and gender in Tanzania
5. Results from Organizational Development Assessment

Year 1, Quarter 4

1. DSW Mainland and Zanzibar DDU assessment reports
2. ZACP DDU Assessment Report
3. NACP M&E Systems Assessment Report
4. Capacity building roadmap and capacity assessment plan designed for a select district
5. Deloitte Capacity Building Training Report
6. Elisabeth Glaser Pediatric AIDS Foundation (EGPAF) PMTCT Capacity Building Training Report
7. EGPAF HBC Capacity Building Training Report
8. Workshop and targeted mentoring reports from regional and district level trips made for DHIS2 data entry and data management
9. Year 1 report on the progress of the DHIS2 rollout in USAID-supported regions
10. University of Dar es Salaam MVC MIS implementation contract
11. The MOU on MVC MIS implementation initiative for the Ministry of Empowerment, Social Welfare, Youth, Women and Children (MESWYWC) in Zanzibar and the health ministry in Mainland
12. Protocol for operations research studies supported by PMI
13. Initial round of small grants issued to local research institutions
14. M&E online COP
15. List of training needs/opportunities that may be developed in subsequent years
16. Established COP for Tanzanian M&E professionals
17. Initial COP for Tanzanian M&E professionals discussion forum
18. Report from workshop on Turning Training into Results
19. Finalized OD support plans

Year 2, Quarter 1

1. MVC M&E Plan, training materials
2. DSW Mainland M&E/ICT HR assessment report
3. Report of school net programme (SNP2) Household Survey
4. Research capacity building assessments and action plans completed by subgrantees
5. Outlines for training modules for workshop(s) to be completed in Year 2
6. First Tanzanian M&E COP meeting

Year 2, Quarter 2

1. Composite data assessment tool
2. DSW Zanzibar M&E/ICT HR assessment report
3. Abstract: Strengthening the Capacity of Council Health Management Teams on HMIS/DHIS2 and Data Use in Tanzania: The Need for a Comprehensive Training Curriculum
4. Gender integration into HMIS/DHIS2 and Data Use Curriculum for Health Information System Strengthening
5. Round II subgrantees selected
6. Round II subgrant orientation workshop
7. Scope of work for the expert contribution to a curriculum development process
8. MOU for Master of Science course in Project Management, Monitoring, and Evaluation in Health (MSc PMMEH)
9. M&E training package

Year 2, Quarter 3

1. Information dissemination and use plan for NACP
2. ZACP data use strengthening plans
3. Sustainability framework for the Measure Evaluation–Tanzania AA
4. Year 1 sustainability baseline report
5. M&E systems DQA findings reports
6. Mainland MVC MIS work plan
7. Protocol for school net programme (SNP-3) household survey
8. Signed subagreements for Round II subgrantees
9. Strategic plan (drafts) for DSW and NACP
10. Workshop report on leadership and management training
11. Workshop report on performance management training for DSW staff

Year 2, Quarter 4

1. DDU champions' identification and strengthening guideline
2. ZACP M&E systems assessment report
3. Reports on M&E capacity building among IPs
4. Report on M&E capacity building provided to DQA subcontractors
5. Report of the PM&E field test
6. Referral system assessment report

7. Approved harmonized M&E Strengthening Initiative (MESI) work plans for Mainland
8. Reports from training workshops and mentoring visits
9. Review and feedback meeting reports
10. Gender training of DDU facilitators working on TZA-01 team on improving analysis and use of results of sex-disaggregated and gender-sensitive data for programme planning and policy decisions
11. Protocol for national quality assurance (QA) system for entomological surveillance system
12. Report on the first round of the small grants programme produced
13. Research capacity building plans developed and reassessed at the end of the research projects
14. HBC study report
15. Capacity building plan for research institutions
16. Partial scholarships for short-term training opportunities
17. Monthly malaria report August 2016
18. Monthly malaria report September 2016
19. Monthly malaria report July 2016
20. Number of health facilities that reported malaria cases
21. Number of weekly, monthly, and quarterly reports

Year 3, Quarter 1

1. Training materials for data communication and advocacy for decision makers at the national and subnational level
2. Data and performance review guideline for subnational level
3. Performance review meeting guideline
4. Region/district action plan (#1) to improve data quality and use
5. MVC M&E plan pilot report
6. National DQA guidelines for the Tanzania Ministry of Health and Social Welfare
7. Excel tool for analysing HBC referral monitoring data at district level
8. HIS and data use training curriculum
9. Mainland MVC MIS database developed within the DHIS2
10. Mainland MVC MIS standard training/user's manuals
11. Zanzibar MVC MIS work plan
12. Zanzibar MVC MIS standard training/user's manuals
13. Mainland MVC MIS Pilot Report
14. Mainland MVC MIS standard training/technical/user manuals
15. Zanzibar MVC MIS standard training/technical/user manuals
16. RCD study protocol
17. EQA Study protocol
18. SNP4 study protocol
19. Protocol for RCD Evaluation in Zanzibar
20. Draft working papers submitted for round I subgrantees
21. Resource mobilisation document
22. Knowledge management (KM) strategy document
23. KM strategy for national and subnational levels (draft)

24. Resource mobilization strategy (draft)
25. Sustainability strategy (draft)
26. Monthly report submitted to PMI – September 2016
27. Monthly report submitted to PMI – October 2016
28. Monthly report submitted to PMI – November 2016

Year 3, Quarter 2

1. Revised MVC data collection tools
2. Revised MVC M&E Plan training curriculum
3. PM&E curriculum
4. Revised MVC referral tools
5. Report on SNP-3 evaluation
6. Working Paper: Investigating Risky Sexual Behaviours among Youth in the Context of the HIV Epidemic in Mbeya Region, Tanzania
7. Web-based platform for the Tanzania M&E COP
8. Supportive supervision report (#1)
9. Supportive supervision report (#2)
10. January quarterly review meeting report
11. January Malaria Bulletin (#1)

Year 3, Quarter 3

1. Supportive supervision report
2. DSW Mainland DDU assessment report and DDU strengthening plan
3. DSW Zanzibar DDU assessment report and DDU strengthening plan
4. DDU champion identification and development guideline
5. MOHCDCGEC's Health in Figures Pocket Book
6. Region/district action plan (#2) to improve data quality and use
7. ZACP M&E systems implementation plan
8. Subcontractor M&E capacity building reports
9. Specification and requirement document for DHIS2 standard
10. Reports on supportive supervision and mentoring activities
11. HMIS data quality and use
12. Mentoring and coaching tool
13. Zanzibar MVC MIS pilot report
14. Final Round I working papers
15. IRB-approved study protocol on the OVC essential survey indicators
16. Conduct leadership workshop for DSW
17. Supportive supervision report (#3)

Year 3, Quarter 4

1. DDU best practices document at national and subnational level
2. Update of the sustainability framework indicators through the PMP system.

3. MVC dashboards available in DHIS2
4. Data review meeting reports – Mwanza, Mbeya, Dar es Salaam, Iringa, and Njombe
5. Mainland MVC MIS costed rollout plan
6. Zanzibar MVC MIS costed rollout plan
7. EQA preliminary report
8. First quarterly report on national QA system for entomological surveillance
9. Second quarterly report on national QA system for entomological surveillance
10. Third quarterly report on national QA system for entomological surveillance
11. Manuscripts finalized for Round I subgrantees
12. Cleaned OVC indicator data file
13. M&E training curricula
14. Number of MEEDS facilities reporting malaria data: Pemba, Unguja, and Zanzibar
15. Developed and distributed weekly, monthly, and quarterly reports

Year 4, Quarter 1

1. Data use champions workshop report
2. Data use case studies
3. Quarterly reports on MVC M&E systems implementation (in collaboration with Pact's Kizazi Kipya and JSI's CHSSP), Mainland #1
4. Quarterly reports on MVC M&E Systems implementation (in collaboration with Pact's Kizazi Kipya and JSI's CHSSP), Zanzibar #1
5. Year 2 sustainability progress report
6. DQA findings reports
7. Subcontractors M&E capacity building report
8. SNP-4 report
9. Baseline MER essential survey indicators
10. Presentation of MER indicators to USAID and Pact
11. Seminar report with MUHAS faculty on competencies
12. Seminar with MUHAS staff
13. Third progress report for the OD component MEval–Tanzania project Year 3
14. October 2017 monthly Malaria Bulletin
15. November 2017 monthly Malaria Bulletin
16. Quarter 1 financial reports

Year 4, Quarter 2

1. Report on annual performance review meetings with RHMT's/CHMT's #1
2. Quarterly reports on MVC M&E Systems implementation (in collaboration with Pact's Kizazi Kipya and JSI's CHSSP), Mainland #2
3. Quarterly reports on MVC M&E Systems implementation (in collaboration with Pact's Kizazi Kipya and JSI's CHSSP), Zanzibar #2
4. District council action plans
5. Report on MVC DHIS2 stakeholder's training, Zanzibar

6. Report on training of DSWOs on MVC DHIS2 with Pact's Kizazi Kipya project, Mainland #1
7. Report on training of DSWOs on MVC DHIS2 with Pact's Kizazi Kipya project, Mainland #2
8. Report on training of DSWOs on MVC DHIS2, Zanzibar #1
9. Final THPS working paper
10. Final Seeds of Hope working paper
11. Final Kilimanjaro Christian Medical Centre working paper
12. Report: Training of trainers workshop with MUHAS
13. Quarterly Malaria Bulletin #2
14. Quarter 1 DMSO review report
15. Quarter 1 ZAMEP work plan
16. Quarter 1 ZAMEP progress report
17. Quarter 2 financial reports
18. Quarter 2 ZAMEP work plan
19. Quarter 2 ZAMEP progress report

Year 4, Quarter 3

1. Quarterly reports on MVC M&E systems implementation (in collaboration with Pact's Kizazi Kipya and JSI's CHSSP), Zanzibar #3
2. Upgraded HMIS web portal
3. Report on MVC DHIS2 stakeholder's training, Mainland
4. Quarter 1 report on Tanzania MVC M&E system Implementation/ MVC data analysis and use experience
5. Report on training of DSWOs on MVC DHIS2 with Pact's Kizazi Kipya project, Mainland #3
6. Report on training of DSWOs on MVC DHIS2, Zanzibar #2
7. Epidemic alert threshold report
8. Final THPS working paper
9. Final Piuma working paper
10. Progress report to NIMR (OVC MER survey)
11. Brief on the MER findings
12. Abstract submitted to conference: "Building strong structures from weak frames," American Evaluation Association, 2018
13. Report of a workshop on gender and M&E with Tanzania Gender Network Programme & USAID IPs
14. Training report for scaling up OVC leadership training for the MOHCDGEC
15. Workshop report for scaling up OVC leadership training for LGAs (Dar es Salaam, Mbeya, and Mwanza)
16. Comprehensive training report for the rollout of malaria surveillance guidelines
17. Quarter 3 financial reports
18. Quarter 3 ZAMEP work plan
19. Quarter 3 ZAMEP progress report

Year 4, Quarter 4

1. Annual health sector performance profile report
2. Report on pre-test of national guidelines for supportive supervision of MVC programmes in Dodoma city, October 15–19, 2018
3. MVC Mainland: National MVC supportive supervision guidelines for M&E
4. MVC Zanzibar: National MVC supportive supervision guidelines for M&E
5. Supportive supervision report
6. Quarterly reports on MVC M&E systems implementation (in collaboration with Pact's Kizazi Kipya and JSI's CHSSP), Zanzibar #4
7. Report on DQA training for Data for Development project
8. DQA and PM&E documented successes stories
9. EQA final report
10. Zanzibar LLIN plausibility analysis report
11. EQA publication draft
12. Training report – Zanzibar
13. Training report – Mainland
14. Final Mmakija working paper
15. Final Round II working papers
16. Final report on the MEval–Tanzania small grants programme
17. Dissemination and data use meeting on full baseline results (and conference presentation, if accepted)
18. M&E framework experts technical meeting
19. M&E framework stakeholders workshop
20. Report on process of developing M&E Plan for DSW strategic plan
21. Quarterly malaria bulletins #1–5
22. Supportive supervision report #1–2
23. Performance review meetings report
24. Malaria surveillance and response success stories
25. Report on rainfall data
26. Report on report supervisions conducted
27. Report on events held on dissemination and use of surveillance data
28. Quarter 2 DMSO review report
29. Quarter 3 DMSO review report
30. Harmonized malaria surveillance SOPs, manuals, and guidelines.
31. Developed and distributed weekly, monthly, and quarterly reports in Year 4
32. SOP surveillance manual for health facilities, DMSOs, and surveillance, monitoring, and evaluation team
33. National guideline for malaria surveillance and response
34. Guidelines for district malaria response team
35. Malaria surveillance data analysis and interpretation
36. Report on refresher trainings to health providers on malaria data transmission using the USSD system
37. Quarter 4 DMSO review report
38. Quarter 4 financial reports
39. Quarter 4 ZAMEP work plan
40. Quarter 4 ZAMEP progress report

Year 5, Quarter 1

1. Tanzania Health Sector HIV and AIDS Strategic Plan IV, 2017–2022 (HSHSP IV) Monitoring and Evaluation Plan
2. Zanzibar Health Sector HIV and AIDS Strategic Plan III, 2017–2022 (ZSHSP III) Monitoring and Evaluation Plan
3. Zanzibar National HIV and AIDS Monitoring and Evaluation Plan: 2016/17–2020/24. Ministry of Health Community Development Gender Elderly and Children Department of Social Welfare – Community Referral Handbook for MVC Service Providers. December 2018
4. HMIS Standard Reports User Manual
5. Ministry of Health Community Development Gender Elderly and Children Department of Social Welfare's Progress Report for Development of Standard Reports and Revision of HMIS-DHIS 2 Metadata
6. Ministry of Health Community Development Gender Elderly and Children's National Guidelines for Supportive Supervision of Most Vulnerable Children Programs. October 2018
7. Report on Mainland and Zanzibar MVC MIS use
8. Quarter 2 Report on Tanzania MVC M&E system Implementation/MVC Data Analysis & Use experience
9. Quarter 2 MVC Program Data Summary Report (based on DHIS2 data)
10. Quarter 3 Report on Tanzania MVC M&E system Implementation/MVC Data Analysis & Use experience
11. Quarter 3 MVC Program Data Summary Report (based on DHIS2 data)
12. Quarter 4 Report on Tanzania MVC M&E system Implementation/MVC Data Analysis & Use experience
13. Quarter 4 MVC Program Data Summary Report (based on DHIS2 data)
14. The Holed Net Study Final Report: LaHoSA (Location adjusted hole surface area): A simple method to estimate functional efficacy of LLINs (long lasting insecticidal nets) during operational durability monitoring
15. Operational research to increase the effectiveness of the malaria surveillance and response system in Zanzibar – DRAFT
16. Operational coverage and timeliness of reactive case detection for malaria elimination in Zanzibar: from initial diagnosis to household follow-up – DRAFT
17. Plausibility assessment of declines in malaria burden in Zanzibar in 2016–2017 – DRAFT
18. Mobile phone monitoring of malaria vector control coverage: Technical Report
19. Monitoring Well-Being Outcomes among Kizazi Kipya Project Beneficiaries in Tanzania
20. Zanzibar Malaria Elimination Program Expenditure Summary for the Period of October 2018
21. Zanzibar Malaria Elimination Program Expenditure Summary for the Period of November 2018
22. Zanzibar Malaria Elimination Program Expenditure Summary for the Period of December 2018

Year 5, Quarter 2

1. Quarterly reports on MVC M&E Systems implementation (in collaboration with Pact Kizazi Kipya & JSI –CHSSP), Mainland #3
2. Quarterly reports on MVC M&E Systems implementation (in collaboration with Pact Kizazi Kipya & JSI – CHSSP), Mainland #4

Year 5, Quarter 3

1. MVC M&E and DHIS2 training report
2. MVC M&E supportive supervision training, Mainland

Year 5, Quarter 4

1. MVC M&E supportive supervision training report, Mainland
2. MVC M&E supportive supervision visits report, Mainland

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U.S. President's Malaria Initiative

