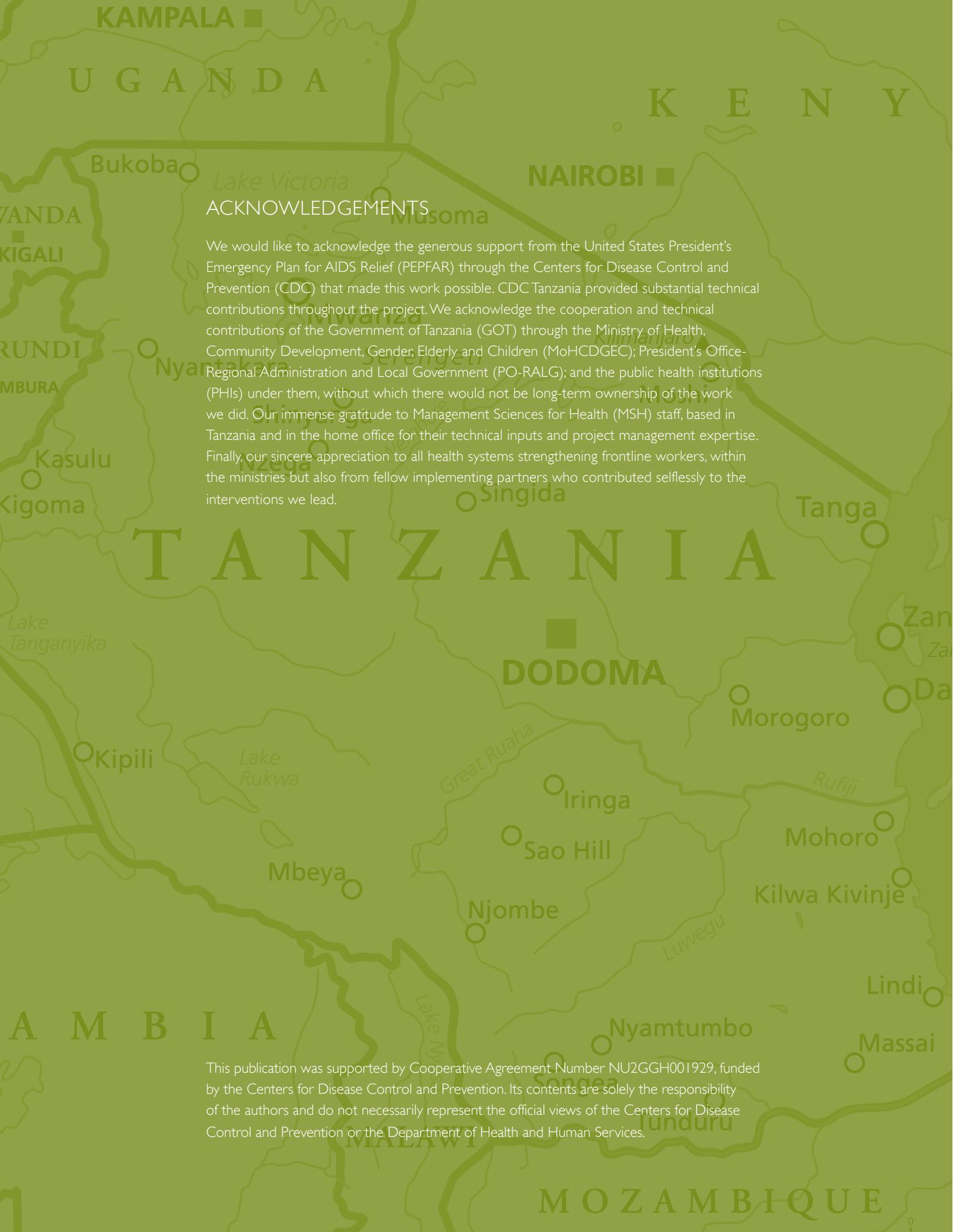


Technical Support Services Project

FINAL PERFORMANCE PROGRESS AND
EVALUATION REPORT 2016 – 2021
TANZANIA





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ACRONYMS

| | |
|----------|--|
| AcQuIT | Accelerated Quality Improvement Tracking |
| AIHA | American International Health Alliance |
| ART | antiretroviral therapy |
| CCHP | comprehensive council health plan |
| CDC | Centers for Disease Control and Prevention |
| CLDS | client-level data system |
| COP | country operational plan |
| CPD | continuing professional development |
| CQI | continuous quality improvement |
| CRVS | Civil Registration and Vital Statistics Systems |
| DHIS2 | District Health Information Software 2 |
| DHP | district health profile |
| DQA | data quality assessment |
| DREAMS | Determined, Resilient, Empowered, AIDS-free, Mentored, and Safe |
| e-CPD | electronic continuing professional development |
| EMR | electronic medical record |
| EOP | end of project |
| EPMP | evaluation and performance measurement plan |
| GOT | Government of Tanzania |
| GoTHoMIS | Government of Tanzania Hospital Management Information System |
| HCW | health care worker |
| HIS | health information system |
| HMIS | health management information system |
| HRH | human resources for health |
| ICT | information and communication technology |
| IP | implementing partner |
| IPT | isoniazid preventive therapy |
| M&E | monitoring and evaluation |
| MESF | Monitoring and Evaluation Strategic Framework |
| MESI | Monitoring and Evaluation Strengthening Initiative |
| MoHCDGEC | Ministry of Health, Community Development, Gender, Elderly, and Children |
| MSH | Management Sciences for Health |
| NHCR | National Health Client Registry |
| NIMART | nurse-initiated and managed antiretroviral therapy |
| PEPFAR | US President's Emergency Plan for AIDS Relief |
| PHI | public health institution |
| PMTCT | prevention of mother-to-child transmission |
| PO-RALG | President's Office-Regional Administration and Local Government |
| QA | quality assurance |
| QI | quality improvement |
| RHP | regional health profile |
| ROP | regional operational plan |
| SRA | Star Rating Assessment |
| TB | tuberculosis |
| THEA | Tanzania Health Enterprise Architecture |
| TSSP | Technical Support Services Project |
| UNAIDS | Joint United Nations Programme on HIV/AIDS |
| WAO | Workforce Allocation Optimization |
| WHO | World Health Organization |

EXECUTIVE SUMMARY

In recent years, Tanzania realized impressive progress in strengthening its health system to control the spread of HIV and provide the best client-centered care to people living with HIV. To support Tanzania's HIV program efforts, the United States President's Emergency Plan for AIDS Relief (PEPFAR), through the Centers for Disease Control and Prevention (CDC), drew on the expertise of Management Sciences for Health (MSH), awarding it the five-year (2016–2021) Technical Support Services Project (TSSP), in partnership with the Government of Tanzania (GOT) through its Ministry of Health, Community Development, Gender, Elderly, and Children (MoHCDGEC) and local public health institutions (PHIs).

TSSP's technical strategy is grounded in PEPFAR's vision for an AIDS-free generation, with an overarching goal of supporting and strengthening Tanzania's health system to help it move toward its target goal of achieving epidemic control. Over the five-year project, TSSP built on its strong partnership with MoHCDGEC and the President's Office-Regional Administration and Local Government (PO-RALG) to address urgent HIV priorities. By delivering evidence-based technical assistance and promoting innovative use of data sets for decision making, TSSP enhanced the capacity of these and other PHIs over time. The collaborative approach, which aligned with Tanzania's national priorities and evolving needs, focused on providing technical assistance while allowing owners of the health systems to make critical decisions during the project to guide sustainable activities that are responsive to local needs.

TSSP provided targeted technical assistance in four main areas:

- Supporting digitization of HIV and other client data in PEPFAR-supported sites so that continuity of medical care is ensured across the network of HIV service providers (client-level data systems [CLDS])
- Strengthening the national Health Management Information System (HMIS) to support HIV and other health programs' management
- Improving human resources for health (HRH) management to meet service delivery requirements
- Strengthening continuous quality improvement (CQI) of health care services

Overall, TSSP's strategies have strengthened a foundational partnership between MoHCDGEC, local government, and stakeholders and promoted greater national ownership and project sustainability; delivered targeted, tailored, and transformational technical assistance; and promoted the innovative use of datasets to generate evidence. Programs have brought about significant improvements in national health systems, enabling the GOT to achieve sustainability of HIV epidemic control.

In the final year of the project, TSSP worked to complete initiatives, transfer capacities, and share information so that MoHCDGEC can strengthen its health system and reduce the burden of HIV. In support of ongoing programs, TSSP transferred capacities for CLDS, HMIS, HRH, and CQI streams to MoHCDGEC and other stakeholders.

The achievements, critical challenges, lessons learned, and recommendations for addressing HIV/AIDS in Tanzania highlighted in this report guide the way for sustainable programming and bridging the gaps in unmet HIV prevention and treatment needs throughout Tanzania.

INTRODUCTION

Funded by PEPFAR through CDC, the MSH-led TSSP provided technical assistance and support to the Tanzania MoHCDGEC, PO-RALG, and PHIs to lead and manage the HIV response and to build and sustain health systems in regions across Tanzania.

THE ORIGINAL STATED AIMS OF THE PROGRAM WERE:

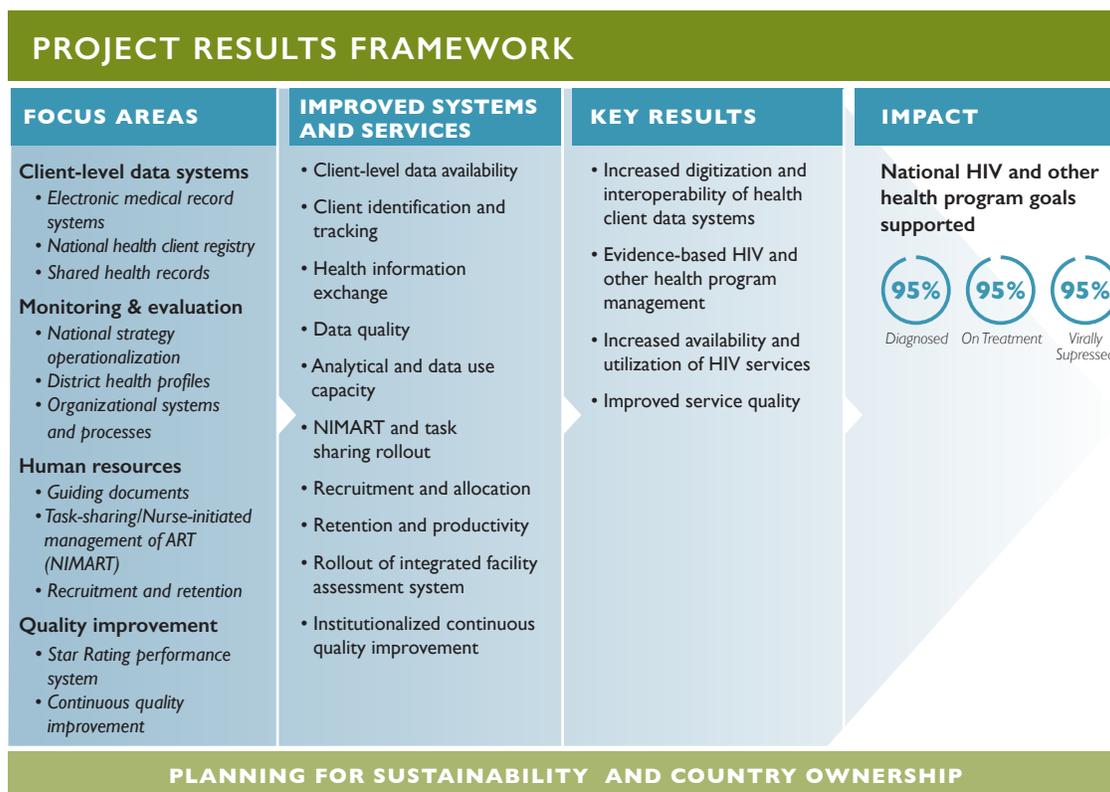
- Guiding documents updated according to GOT priorities that create supportive environments and remove obstacles to accessing HIV services
- Data analysis, dissemination, and use that support evidence-based decision making for increased evidence-based planning, geographical prioritization, and scaling up evidence-based HIV interventions
- Surveillance, HMIS, and monitoring and evaluation (M&E) that produce quality HIV-related data for evidence-based decision making
- Health information systems (HIS) and information and communication technology (ICT) that support access to data for evidence-based decision making and that strengthen and improve efficiency in managing the full cascade of HIV services
- Management that increases numbers of HRH in priority HIV districts and improves quality of service among health care workers (HCWs) practicing task sharing
- Implementation science that evaluates performance and informs decision making for HIV
- Quality improvement (QI) and quality assurance (QA) that continuously improve HIV services by increasing the number of accredited HIV service delivery facilities

TSSP's technical strategy was grounded in PEPFAR's vision for an AIDS-free generation. In collaboration with PEPFAR and stakeholders, TSSP's results framework (figure 1) combined evidence-based solutions that target evidence-based interventions for populations at greatest risk in areas with the highest HIV incidence with better access to affordable, high-quality, patient-centered interventions. Working in four technical areas (CLDS, HMIS and M&E, HRH, and CQI), TSSP provided technical assistance to improve systems and services that resulted in increased digitization and interoperability of health client data systems; ensured evidence-based HIV and other health program management; increased the availability and utilization of HIV services; and improved service quality to support Tanzania's national effort to reach its HIV service targets.

From 2016 to 2021, TSSP worked to integrate these services into Tanzania's health system to reach the ambitious UNAIDS 95-95-95 targets: that by 2030, 95% of people living with HIV know their HIV status, 95% of people who know their status are receiving treatment, and 95% of people on HIV treatment have suppressed viral loads.

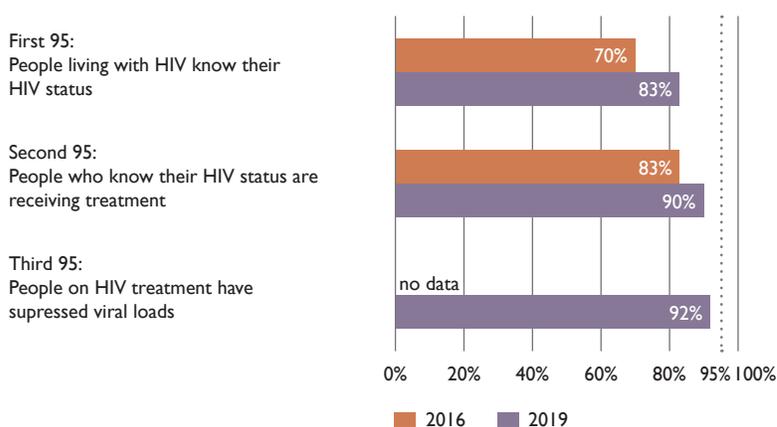
To scale up the interventions to reach the 95-95-95 targets, TSSP helped improve availability, quality, dissemination, and use of HMIS data to support HIV program management; helped boost recruitment and retention of HCWs; implemented nurse-initiated and managed antiretroviral therapy (NIMART) and task-sharing programs to meet service delivery requirements; and strengthened CQI initiatives to support health facilities in using limited resources, thereby contributing to sustainable quality and performance improvement.

Figure 1. Project results framework



Tanzania has made steady progress toward the 95-95-95 targets. In 2016, 70% of people with HIV knew their HIV status, and 83% of those were on antiretroviral therapy (ART).¹ In 2019, the most recent year for which data are available, 83% of people with HIV know their HIV status, 90% of these are currently on ART, and 92% of those on ART are virally suppressed (figure 2).²

Figure 2. Tanzania progress toward UNAIDS 95-95-95 targets



Despite this progress, 1.7 million people are estimated to be living with HIV in Tanzania, with an estimated 300,000 people not yet knowing their HIV status and, therefore, are not receiving treatment. This final report summarizes the project's accomplishments, key lessons learned, and recommendations for achieving HIV epidemic control in Tanzania.

PROJECT APPROACH

TSSP initiated its technical assistance with a collaborative and engaging approach to ensure that local stakeholders guided the efforts, were involved in key decisions, and developed ownership of project activities to ensure sustainability of the work.

TSSP's goals were aligned with Tanzania's national priorities and the evolving needs of the country's health systems. To achieve its targets in the four technical areas (CLDS, HMIS and M&E, HRH, and CQI), TSSP used the following strategies:

- Provided technical assistance to strengthen HIV and health program management by creating accessible, shared information services and infrastructure
- Mentored MoHCDGEC staff to manage various digital interventions in the health sector
- Created a sustainability framework by establishing policies, strategies, guidelines, and tools in coordination with stakeholders
- Developed capacity by developing a clear agenda, facilitating discussions, writing reports, and supporting follow-on activities

“The Government of Tanzania realizes the importance of accurate data to improve patient care, especially for HIV, and to make evidence-based decisions for its health system and was, therefore, supportive of TSSP efforts.”

—DR. KENNETH LEMA, TSSP DIRECTOR



RESULTS



STRENGTHENING CLDS

TSSP sought to address health service delivery in Tanzania through an integrated health system strengthening approach. Historically, data collection in the nation had been organized along vertical lines by disease and health programs. To deliver data on HIV prevention and control, TSSP created client-tracking systems that support effective, seamless, whole-person care. Prior to the development of new data systems, patient information had been written on paper or stored in unconnected electronic systems. As a result of TSSP's work on CLDS, clients' records can be transferred across separate medical facilities, providing HCWs with key health information and medical histories. Client-level data has allowed stakeholders to recognize patterns and trends that were not visible in the existing aggregate data reporting systems, and, as a result, has bolstered systemwide outcomes on HIV prevention and care. MoHCDGEC has recognized the potential of this information technology to transform health service delivery, operations, management, and decision making.

HIGHLIGHTS

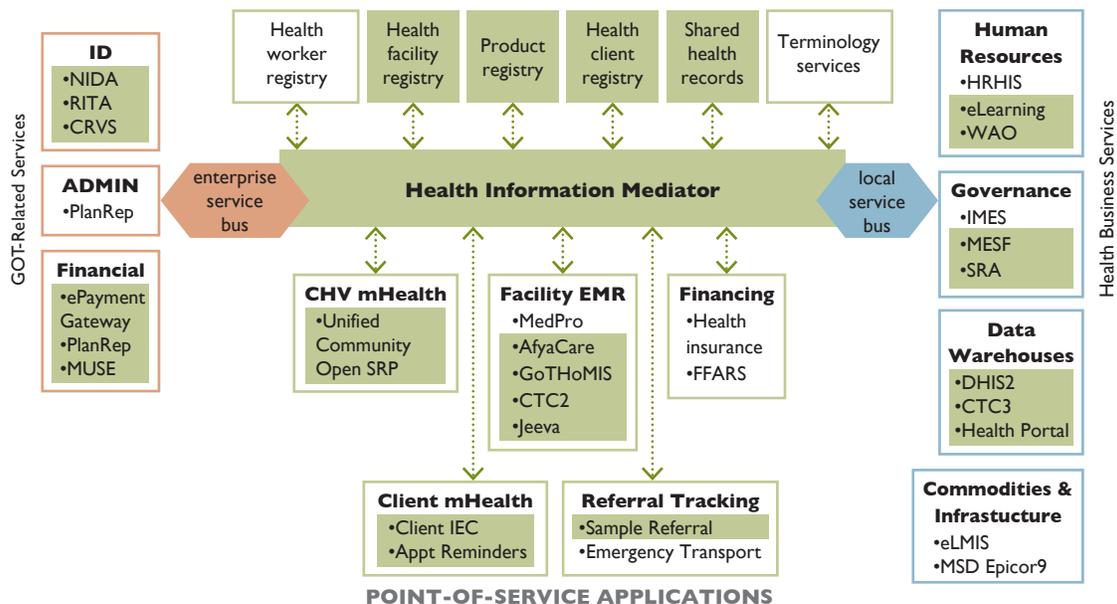
Improvements to CLDS and services resulted in the following outcomes:

- Increased digitization and interoperability of health client data systems
- Bolstered systemwide outcomes on HIV prevention and care through access to client-level data that showed patterns and trends not previously noticeable
- Developed evidence-based HIV and other health program management
- Increased availability and utilization of HIV services
- Improved service quality

TSSP's approach is aligned with the PEPFAR country and regional operational plan (COP/ROP) guidance issued from 2016 to 2021³ and with GOT's ambitious Digital Health Strategy (2019–2024).⁴ The strategy, together with the Digital Health Investment Roadmap for 2017–2023,⁵ prioritizes the implementation of digital health investment recommendations at different levels of health care delivery, with a focus on a patient-centric approach. This promotes timely HIV diagnosis and sustained ART and helps ensure that ART results in viral suppression. Throughout the project, TSSP provided technical assistance to MoHCDGEC to plan and create shared information services and infrastructure that were leveraged to implement the PEPFAR-supported HIS, while ensuring compliance with the Tanzania Health Enterprise Architecture (THEA) framework.⁶

The country laid out a National e-Health Strategy (2013–2018),⁷ including THEA, to guide development of the national integrated HIS. In 2019, during the process of reviewing the concluded National e-Health Strategy (2013–2018) and developing the new Digital Health Strategy (2019–2024),⁴ it was observed that there are over 160 digital health or health-related systems at various degrees of operation and integration in the country. Areas in figure 3 that are highlighted in green are key components of the THEA framework to which TSSP made significant contributions.

Figure 3. Shared digital health services⁸



National Health Client Registry

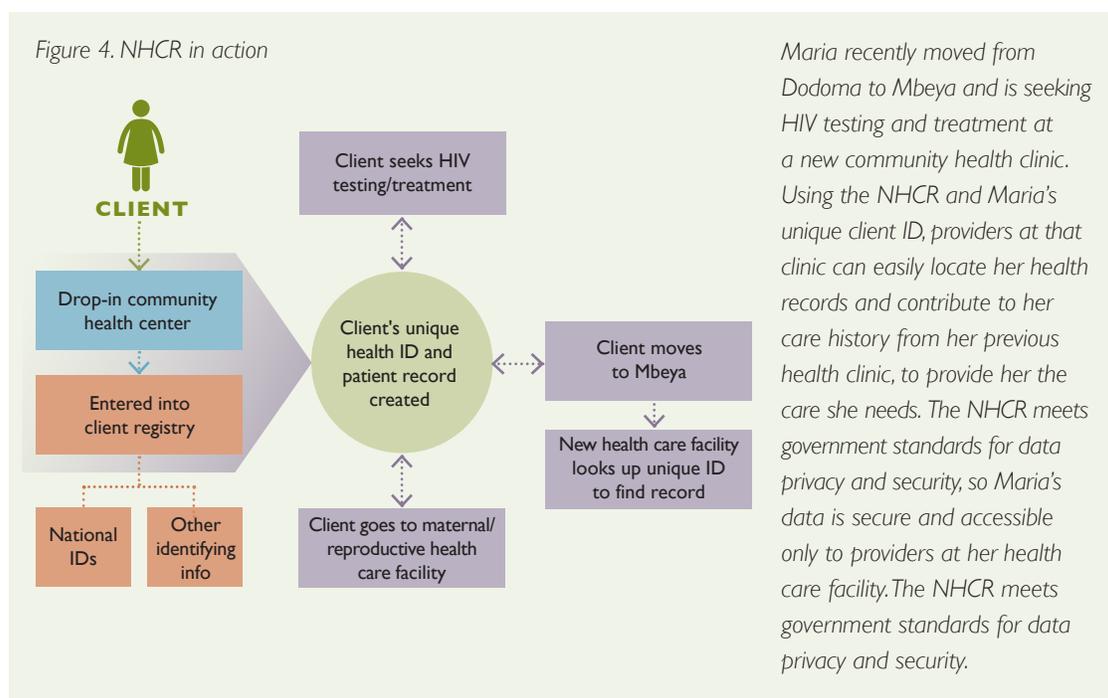
During the project, TSSP helped develop the National Health Client Registry (NHCR)—a groundbreaking innovation that gives each patient a unique health sector identifier. Once fully implemented, the NHCR will enable the flow of data across information systems and support the continuity of HIV and other services by allowing access to medical histories and improving the quality of data used to make efficient client-specific and public health decisions.

The NHCR was among GOT's critical efforts to digitize HIV client data in PEPFAR-supported sites. The TSSP team developed technical requirements for the NHCR, coordinated vendors and government partners, and led the process of drafting national health client identifying standards for data access and sharing. Completed in 2021, the NHCR application streamlined the HIV client data at PEPFAR-supported sites to ensure continuity of care, help manage health care costs, and target health communications to educate patients and provide links to care.

Client identification for the NHCR includes:

- A unique health sector ID
- Personal ID, such as a national ID number
- Other identifying information, such as name, date of birth, address, mobile phone number, and biometrics

With implementation of the NHCR, individual client data flows from local health facilities to the central level, where it enables advanced data analytics. With integrated records, PHIs can better plan programs and track results; resources can be more appropriately allocated; and unified patient records contribute to better public health reporting and clinical research.



Development of the NHCR rigorously integrated initial system specifications gathered from key stakeholders within the GOT and other health sector stakeholders. The system is integrated with the AfyaCare electronic medical record (EMR) system through the interoperability layer, also known as the health information mediator.

Integration with national population registries is in an advanced stage; the Registration Insolvency and Trusteeship Agency is already integrated with the NHCR system and the National Identification Authority is expected to be completed in late 2021. Among the key successes in the NHCR initiatives are:

- Development of a true matching algorithm for deterministic and probabilistic matching to ensure that the correct client data is accessed
- Approval of the NHCR system by the e-Government Authority after evaluating the system requirements specifications, technology solution, development approach, and its compliance with the Tanzania Enterprise Architecture standards
- High-level acceptance by the political leadership and other stakeholders, including financial investment and close follow-up by the minister of health

Electronic Medical Records

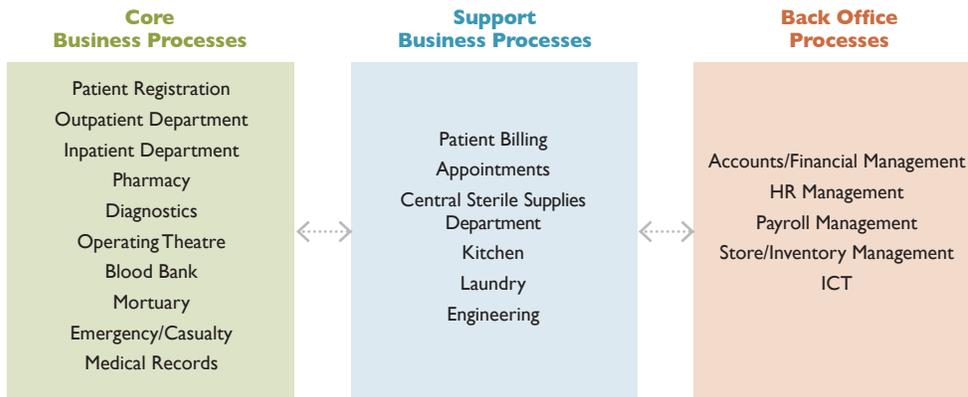
TSSP facilitated the development and implementation of AfyaCare, an EMR system in Tanzania. AfyaCare is a comprehensive patient information system used by service providers to record health encounters, diagnostic test results, and treatment plans in digital form. In addition to facilitating individual case management, the system facilitates data exchange and aggregation of data for program management. A critical part of the CLDS work involved TSSP overseeing the development and implementation of AfyaCare in 15 health facilities, including 13 regional referral hospitals (Manyara, Njombe, Tanga, Temeke, Sekou Toure, Mbeya, Shinyanga, Tabora, Lindi, Mtwara, Singida, Songea, and Sumbawanga), one tertiary hospital (Mirembe Specialized Hospital), and one health center (University of Dar es Salaam Health Center) operating the EMR system—including technical requirements, software development, training, implementation, and interoperability—and seamless integration with other electronic data systems, including the NHCR. Through the implementation process, TSSP staff assisted the MoHCDGEC team in creating detailed rollout plans, configuring the platform to specific needs, orienting hospital leadership, and training system administrators and end-users so that MoHCDGEC had the tools and experience needed to sustain ongoing implementation and support of AfyaCare in other hospitals. Following successful transition of the AfyaCare system to the MoHCDGEC, they are continuing with deployment of the system in the remaining regional referral hospitals and conducting system reviews (internally and with the e-Government Authority) to ensure it is constantly improved to sustain the impact.

Vision for the EMR system

- Streamline workflow
- Provide seamless integration among specialized health services for TB, leprosy, HIV/AIDS, and reproductive, maternal, newborn, child, and adolescent health so that an integrated, up-to-date view of the client's health and treatment status is available for all services
- Improve the availability of medicines and other medical supplies
- Enable client tracking to improve continuity of care
- Identify emerging health priorities and improve quality of client care

The EMR system is key to increased data quality and granularity, integration, and automation for next-generation data management and informed decision making at the case management and central levels to stem the HIV epidemic. A learning exercise conducted by MSH in 2019 revealed an average user satisfaction of 90% among health facility staff using AfyaCare at Mirembe and University of Dar es Salaam Health Centers.⁹ TSSP also developed a guideline for migration of HIV service data to the EMR system to ensure data quality and utility.

Figure 5. Health facility business process framework ¹⁰



AFYACARE IMPLEMENTATION IN REGIONAL REFERRAL HOSPITALS

Working with TSSP and MoHCDGEC, 15 regional referral hospitals and Mirembe Specialized Hospital in Dodoma implemented the AfaCare EMR system from 2019 to 2021. Preliminary results from the learning exercise conducted in Mirembe Specialized Hospital showed:

- Better stock management, which supports appropriate prescribing
- Consistent medicine availability
- Improved case management resulting from the ability to cross-check diagnoses and case history

How TSSP Met EMR Challenges

- **Change management:** TSSP conducted workshops to help hospital administration and other system users understand and accept the technology prior to deployment.
- **Inadequate infrastructure:** At TSSP's recommendation, the EMR system was designed to support modular usage with scale-up as devices and systems are added to the facility.
- **Low staffing capacity:** TSSP engaged PEPFAR implementing partners (IPs) closely from the rollout planning stage, during the deployment, and after the regional referral hospitals started using the EMR system. Guidelines and tools were shared to ensure there is local capacity to support users to manage hospital expectations, monitor results, and confirm that health facility staff adopt the system.
- **Unreliable power and network connectivity:** To support facilities and IPs that may experience power and network failures, TSSP developed checklists and procedures for troubleshooting and protecting the network and hospital data, including backup strategies.
- **Inadequate storage space:** For facilities with limited space for system hardware, TSSP located strategic areas where such equipment could be placed with minimal interference.

Shared Health Records

Building on the success of digitizing client-level data and the fact that AfaCare stores data on local servers within hospitals, the shared health records system aimed to provide a mechanism through which different

health facilities share health data in a central repository. Early in the project, TSSP coordinated and provided technical advice to initiate the shared health records system in Tanzania by engaging health sector stakeholders and building local capacity through knowledge transfers to MoHCDGEC and other IPs.

The project later developed a guideline to migrate existing HIV services data to the EMRs and provided technical assistance in developing the shared health record strategy and vision that provides the foundation for the MoHCDGEC to facilitate access to digital clinical information among health providers and promote continuity of care, service quality, and efficiency. TSSP also played a vital role in the country's effort to implement a health enterprise architecture framework.

During the COVID-19 pandemic, TSSP assisted GOT and the PHIs to implement the Digital Health Strategy (2019–2024) by using online methods despite the challenging situation posed by restrictions on in-person technical assistance.

“These health data are critical to improving HIV and other health services in Tanzania. We will have an overview of specific outcomes at health facilities, with which we can align investments and worker training.”

—PAUL BWATHONDI, TSSP DEPUTY PROJECT DIRECTOR

STRENGTHENING HMIS AND M&E

GOT aims to improve the performance of their health system as advocated in the Tanzania Development Vision 2025.¹¹ To implement this initiative, TSSP worked with MoHCDGEC to improve the quality, availability, and use of HMIS data to support HIV and other health area program management and the overall sustainability of its HIS.

M&E Strategic Framework

The Monitoring and Evaluation Strategic Framework (MESF) 2020–2025 focuses on strengthening implementation capacity and better coordinating initiatives for data quality, analysis, dissemination, and use. It also focuses on digitizing health facility and community-based data, improving surveillance, and coordinating surveys. It is MoHCDGEC's expectation that stakeholders at all levels will use this strategy as a guide for achieving individual and collective M&E objectives. MESF succeeds the M&E Strategic Initiative II (2015–2020). In 2021, TSSP worked with MoHCDGEC to develop the first draft of the MESF implementation plan with a list of strategic objectives, activities, indicators, goals, outcomes, outputs, and timelines and introduced a costing tool to develop detailed budgets for three out of nine strategic objectives. Once costing of the remaining strategic objectives is finalized, MoHCDGEC intends to share the reporting tool with all HMIS stakeholders for regular reporting to them.

DQA Initiatives

TSSP assisted in developing digital supportive supervision guidelines, linking them to the DQA reporting template. This enabled detailed and thorough documentation of DQA results, which then could be compared across facilities, councils, and regions. TSSP also facilitated the review and updating of program indicators used during DQA exercises and the development of a DQA system assessment and data verification scores tracking tool to be linked with DHIS2. This tool that hosts DQA data for both system assessment and data verification linked to prepopulated DQA targets is already being used by MoHCDGEC.

DHPs and RHPs

In 2013, MoHCDGEC began preparing DHPs and RHPs to gain insights into population health status, HIV and other health services delivery, health system performance, and human and financial resources in each region and district. Users discovered weaknesses in the reports' accuracy, completeness, data compilation, and analysis. Several years after the rollout, none of the 52 target user districts had completed reports that met baseline quality standards.

During the project, TSSP worked with GOT to update the country's DHP data tool. Achieving the 95-95-95 targets and the necessary planning requires that each district has timely, accurate, easily accessible data, and DHPs are particularly helpful as a source of data for development of annual comprehensive council health plans (CCHPs), which detail delivery of health services. To overcome barriers to implementing updates to the DHP data tool, TSSP worked with GOT, the World Health Organization (WHO), and other partners to ensure that the DHPs aligned with the Tanzania National AIDS Control Program and PEPFAR priorities and supported effective data synthesis, presentation, analysis, and use. This work included developing national DHP guidelines and a National Cross-Cutting Dashboard, as well as training key staff at the council level to support local administrators in using DHPs for decision making and the council health management teams' annual review processes and CCHP development.

HIGHLIGHTS

Strengthening data evaluation and access resulted in the following outcomes:

- Targeted health indicators aligned with national priorities
- Strengthened and standardized data quality assessment (DQA) reporting
- Expanded utility of district health profiles (DHPs), regional health profiles (RHPs), and Star Rating Assessments (SRAs) that inform decision making and improve health services
- Developed cross-cutting dashboards integrated with the District Health Information Software 2 (DHIS2) database

TSSP's approach to developing DHPs and RHPs

- **Listening:** TSSP gathered feedback from report writers and end users to determine strengths and weaknesses in the program.
 - What we heard:* The original tool had 75 indicators, and district health managers found the report too extensive to complete on time and of limited practical use because of suboptimal quality and poor alignment with current program priorities.
- **Data refinement:** TSSP worked with MoHCDGEC and health care officials focusing on priority health areas to focus the tool on 37 essential indicators, including indicators for HIV/AIDS and related targets.
- **Data access:** In collaboration with the University of Dar es Salaam, TSSP developed a series of cross-cutting dashboards presenting DHP and RHP data linked to DHIS2. TSSP worked with MoHCDGEC and other IPs to roll out access to the DHP and RHP dashboards in all 26 regions and 184 councils of Tanzania.
- **Training:** The team invited one health information manager representing each target district to a system training session. M&E staff from MoHCDGEC and PO-RALG were engaged to ensure strong understanding on how to collect, present, interpret, analyze, and leverage use of the data to achieve programmatic goals. The team developed a review process publication to provide clear guidance and set up a WhatsApp group to provide a forum to exchange experiences and solve challenges related to implementation. TSSP also trained all 52 district and 26 regional representatives on how to develop and use DHPs and RHPs.
- **Review:** TSSP worked with M&E staff from MoHCDGEC to review the initial reports and address data quality, presentation, and use. The project also developed a DHP review guide to standardize the process and emphasize the value of evidence-based planning.
- **DHP and RHP guidelines:** The project developed national DHP and RHP guidelines to assist users in updating data in these reports, so they are high quality, timely, and of practical use.

National Health Cross-Cutting Dashboard

“The centralized dashboard is a vital component of a digital information strategy in Tanzania. It is a user-friendly interface that allows quick and easy access to data—tables, maps, charts, reports—for more efficient reporting from DHIS2, which is a web-based platform used to collect data in all public health facilities.”

—ISAELLY NAGUNWA, TSSP STRATEGIC INFORMATION ADVISOR

In early 2020, MoHCDGEC, in collaboration with WHO and TSSP, identified the need to develop a centralized set of cross-cutting dashboards that would allow for more efficient reporting from DHIS2, the national health information data repository.

providing critical support to reducing maternal and newborn mortality. Stakeholders are now able to access data on the number of maternal and newborn deaths per quarter at a specific facility at the district, regional, and national levels. And data can be retrieved on the number of HIV patients enrolled on ART and how many viral load tests will need to be supported.

Figure 7. DHIS2 cross-cutting dashboards e-learning course



“The TSSP-led HMIS support to the MoHCDEG and PO-RALG add the vital value of using data and strategic information to achieve effective health service delivery planning and decision making.”

—ISAELLY NAGUNWA, TSSP STRATEGIC INFORMATION ADVISOR

IMPROVING HRH

Despite the success of ART in Tanzania at reducing viral load and, thus, the rate of infection, an estimated 1.7 million people are living with HIV. In 2019, nearly 27,000 people died of AIDS-related illnesses,¹³ in part because a crucial shortage of doctors and skilled HCWs has affected the country's ability to support continuity of ART and ensure linkages to post-diagnosis care for people living with HIV. HRH is the backbone of any health care system. A critical shortage of health workers, with a 53% vacancy rate,¹⁴ has exacerbated Tanzania's HIV epidemic and has limited access to care, especially in rural and hard-to-reach areas. The TSSP HRH approach was designed and implemented to improve the supply of HCWs with the appropriate skills mix and to ensure that they are available to deliver HIV/AIDS and other services at priority health care sites.

Task-Sharing/NIMART Plan

Task sharing aims to mitigate the impacts of health workforce shortages by redistributing tasks among available health and social welfare workers for effective and efficient delivery of quality health services. In 2017, TSSP worked with MoHCDGEC to develop a comprehensive plan to implement national task-sharing policy guidelines to strengthen Tanzania's health system, with a focus on human resources and improving availability of HIV/AIDS and other services. TSSP developed a task-sharing training plan, prioritizing in-person training for 10,243 HCWs who operate in facilities with large staff shortages in the communities with the highest prevalence of HIV/AIDS. Approximately 7,000 of the HCWs are nurses who are anticipated to complete NIMART training.

Because nurses and midwives make up a large percentage (27%) of the health care workforce in Tanzania, prioritizing their training has had a big impact on the quality and accessibility of ART delivery. The NIMART initiative was started by the American International Health Alliance (AIHA), who worked with MoHCDGEC to launch the program in 2018, which included piloting and collecting baseline information. After the AIHA program ended in 2019, AIHA's role with NIMART transitioned to TSSP; TSSP provided technical assistance to MoHCDGEC and to clinical institutions receiving US Government funding on developing training plans and provided technical guidance on training for HCWs.

PEPFAR's Tanzania COP 2019 included recommendations to incorporate NIMART into task-sharing training programs.¹⁶ The plan included

HIGHLIGHTS

Improvements to HRH resulted in the following outcomes:

- Comprehensive plan to implement national task-sharing policy guidelines to strengthen Tanzania's health system and improve availability of HIV/AIDS and other services¹⁵
- Greater rate of recruitment, allocation, and retention of HCWs as result of applying WAO and Workload Indicators of Staffing Need tools
- Increased availability of training, coaching, and mentoring opportunities for HCWs to improve skills following rollout of task sharing and NIMART
- Improved access to clinical facilities and improved quality of HIV treatment services, especially in rural areas
- Coordinated the HRH technical working group meetings to allow greater stakeholder engagement that facilitated development and endorsement of at least 11 guiding documents, such as policies, strategies, and plans related to task sharing and NIMART, and at least 6 related to HRH recruitment, allocation, and retention
- Increased training of nurses and midwives, which reduced mother-to-child transmission of HIV by improving access to HIV treatment for pregnant women. Through the technical assistance from TSSP, almost 1,300 nurses and midwives have been trained since the program kicked off in 2018, despite the challenges brought by COVID-19 restrictions.



"I like this job because I want to help others," says Anna Mzeru. With the NIMART training she received, Mzeru says both her work performance and patient attendance rate have improved.

key strategies and approaches, such as integrating task sharing and NIMART into national health sector technical documents, including National Guidelines for the Management of HIV and AIDS¹⁷ and National Supportive Supervision Guidelines;¹⁸ training plans; task sharing; regulatory frameworks; and continuing professional development (CPD) learning modules.

Both task-sharing and NIMART programs helped expand HIV testing and treatment services to a wider population. Preliminary findings in the Bagamoyo District indicate that over 50% of HCWs provide HIV services through the task-sharing/NIMART approach. And the addition of trained nurses and midwives has helped reduce mother-to-child transmission of HIV and improved access to HIV treatment for pregnant women.

“To date, over 50% of HIV/AIDS treatment services are administered by health workers through NIMART and task-sharing activities. This means more people know their HIV status and more people living with HIV are being treated with antiretrovirals.”

—PETER MBAGO, TSSP PRINCIPAL TECHNICAL ADVISOR, HRH

Additionally, TSSP:

- Integrated task-sharing and NIMART indicators into the CTC2/3 electronic system that assists MoHCDGEC and HIV IPs in tracking and providing technical and policy recommendations on task sharing and NIMART. A total of 4 indicators were integrated including the number of persons newly initiated on ART at the facility during the reporting quarter; number of clients who started on isoniazid preventive therapy (IPT) care during the quarter; number of clients who received care during the quarter; and number of clients who started on TB treatment (pre-ART and ART).
- Assisted in developing the regulatory framework required to ensure that HCWs at all levels of health care delivery practiced task sharing, according to the national standards and scope of practices
- Helped create both in-person and electronic training modules to efficiently educate HCWs on task-sharing skills
- Supported the development of task-sharing CPD training modules to support online training, coaching, mentoring, and regular follow-up at all levels of health care delivery
- Coordinated overall NIMART and task-sharing training through clinical IPs, conducted gap analysis, and collaborated with AIHA in preparation of training modules. The initiative trained over 1,430 (14% of the 10,243 HCWs trained) clinicians, pharmacy workers, and other health professionals who operate in facilities with large staff shortages in communities with the highest prevalence of HIV/AIDS
- Provided technical assistance on developing the National Health Sector e-CPD (electronic continuing professional development) Coordination Framework
- Provided technical assistance to MoHCDGEC on supervision visits to priority sites to assess task-sharing/ NIMART service delivery gaps

HRH Recruitment and Retention

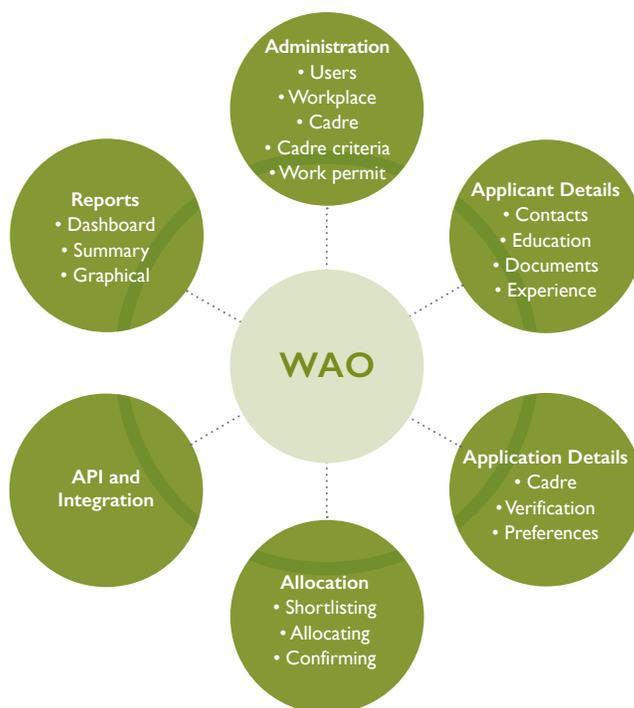
In an effort to recruit medical doctors into the health care workforce, particularly in rural areas, TSSP assisted MoHCDGEC in developing and refining the National Health Workforce Allocation Optimization (WAO) Tool,¹⁹ which had been initiated by the Public Health Informatics Institute and Health Informatics Training and Research Advancement Centre. This online HRH recruitment system uses an evidence-based approach and health indicators to drive health workforce allocation decisions in health facilities. The system enables online applications to vacant posts, automated filtering of applications to select the most qualified candidates for consideration, and allocation to available work sites based on applicants' skills and the expertise needed by facilities with vacancies and the applicants' preferences. The tool allowed MoHCDGEC and other PHIs to improve allocation of Tanzania's health workforce based on need and maximum employee satisfaction by deploying workers to their preferred working stations.

“Often, when health workers are deployed to undesirable locations, they do not report for duty.”

—MARTIN MAPUNDA, ASSISTANT DIRECTOR, MOHCDGEC

In 2018, TSSP worked with MoHCDGEC to identify technical requirements (both software and human resource) to finalize the WAO Tool as per the Tanzania recruitment system and process, including system design, data entry, and system launch. MoHCDGEC began using the WAO Tool in 2019, leading to improved recruitment, allocation, and retention of HCWs. In 2020, tracking showed that 99% of HCWs (385 out of 390) reported to their assigned duty station compared to the manual recruitment system where only 71% reported (433 out of 610).²⁰ Based on these findings, using a systematic process to allocate HCWs according to deployment location preferences is associated with higher retention rates.

Figure 8. WAO Tool functions (adapted from the Tanzania HRH planning and allocation process analysis, Public Health Informatics Institute, 2016)



STRENGTHENING CQI

The rapid scale-up in Tanzania of comprehensive HIV care and treatment services presented a challenge: ensuring consistent quality of these new services. Since its start, TSSP assisted MoHCDGEC with various CQI initiatives to improve services.

Star Rating Assessments

SRA TOOL ENHANCEMENT

The SRA is a health care facility performance management rating system that rates service delivery of health care facilities, including dispensaries, health centers, and council hospitals, on a scale of 1 to 5 stars, with more stars corresponding to better quality service. The SRAs conducted in 2016 and 2018 found that Tanzania needed to better assess the compliance of health facilities with the national HIV/AIDS program and case management standards and recommended an increase in indicators in services that were not covered in previous SRAs.

In 2019, in preparation for future rounds of health facility assessments, TSSP worked with MoHCDGEC through their Health Quality Assurance Unit, PO-RALG, and the Department of Computer Science and Engineering at the University of Dar es Salam to integrate HIV and other health quality indicators into the SRA Tool, which is used to collect data during assessments. TSSP focused first on harmonizing CQI initiatives and key QA and QI program indicators and incorporating these indicators into the SRA Tool to better assess how well health care facilities provide treatment. TSSP helped develop quality indicators for priority clinical programs aligned with national QA/QI guidelines and plans. The HIV-specific indicators were necessary to assess programs in HIV testing and counseling, index HIV testing, adult and pediatric treatment, care of TB and HIV, and prevention of mother-to-child transmission (PMTCT) of HIV. In addition, indicators were integrated into the tool for nutrition; malaria; HRH; reproductive, maternal, newborn, child, and adolescent health; and the Global Health Security Agenda.

Integrating these indicators into the SRAs was a lengthy process. Through the national meetings of the technical working group on CQI, partners updated standards and supporting documentation, incorporated the updates into the SRA database, and developed the capacity of critical technical and managerial staff involved in CQI work. Piloting the revised SRA Tool required validating HIV/AIDS indicators and other health indicators and later finalizing integration with DHIS2. TSSP facilitated the phased implementation of the SRA Tool in the Coast and Mbeya regions by ensuring that national assessors received training and orientation on the new indicators in the revised SRA according to MoHCDGEC specifications. TSSP also assisted in developing the QI plan and SRA feedback reporting systems in DHIS2.

With the additional key indicators integrated into the SRAs, including for HIV/AIDS, the system can serve as the national quality assessment tool across the health sector. The goal was to support health facilities in the appropriate use of limited resources, thereby contributing to sustainable quality and performance improvement. And integrating HIV/AIDS service indicators is a major contribution toward complying with PEPFAR quality standards and achieving the national 95-95-95 goals.

TSSP also helped create a mobile Android app to assess health facilities that was piloted in the Kibaha Town Council and Bagamoyo District Council in the Coast region and the Chunya District Council in the Mbeya region. The Android mobile app can be used offline and allows stakeholders to enter data into the central DHIS2 database by using a phone or tablet without relying on internet connectivity (figure 9).

HIGHLIGHTS

Strengthening QI initiatives resulted in the following outcomes:

- Inclusion of HIV-specific quality indicators in the SRA Tool allows for better informed local, regional, and national decision making
- Mobile app to assess health facilities allows input of more consistent and timely data integrated into DHIS2
- Updated Tanzania Quality Improvement Strategic Framework better guides stakeholders in decision making and in using QI tools

TSSP handed the updated SRA system back to MoHCDGEC for approval and planning the national rollout of the SRA in late 2021.

DEVELOPMENT OF THE SRA DATA ANALYSIS PLAN AND SRA TRAINING MANUAL

TSSP facilitated the review and development of a proposal of the SRA data analysis plan and the SRA training manual for primary health care facilities across the country. These are critical initiatives, given the role of primary health care services to achieving universal health coverage. MoHCDGEC, PO-RALG, and PHIs will use the data analysis plan and training manual to enhance quality performance management in health care facilities. The data analysis plan and training manual will also provide guidance to regional and council health management teams and QI teams so they can self-assess; include the SRA in planning for sustainable CQI; and analyze SRA data to inform policy actions and resource allocations for CQI efforts at all levels.

TSSP provided the proposal for the SRA data analysis plan to the Health Quality Assurance Unit, which has since completed the plan and is releasing it nationally, concurrent with the SRA rollout slated to commence in late 2021. TSSP submitted the SRA training manual to MoHCDGEC for approval and use, and the manual was used to hold national SRA training of trainers sessions in August 2021. The training of trainers sessions will be deployed nationally during the SRA rollout in late 2021.

ACCELERATED QUALITY IMPROVEMENT TRACKING FOR STAR RATING IN PRIMARY HEALTH CARE FACILITIES

TSSP facilitated the review of the Accelerated Quality Improvement Tracking (AcQuIT) system to facilitate rapid and timely implementation of QI plans developed after the SRAs; determine implementation progress and challenges and timely strategies to address them; and provide required technical support. This necessitated a robust, continuous, and effective monitoring system for tracking the implementation of QI plans and results. The AcQuIT system is a transparent mechanism for tracking implementation of QI plans to inform all levels of the health system. The system tracks implementation and improvement in performance of priority indicators on a quarterly basis. TSSP provided the guide to MoHCDGEC in 2020 for approval and use. The AcQuIT guide was finalized during the national SRA Training of Trainers sessions in August 2021.

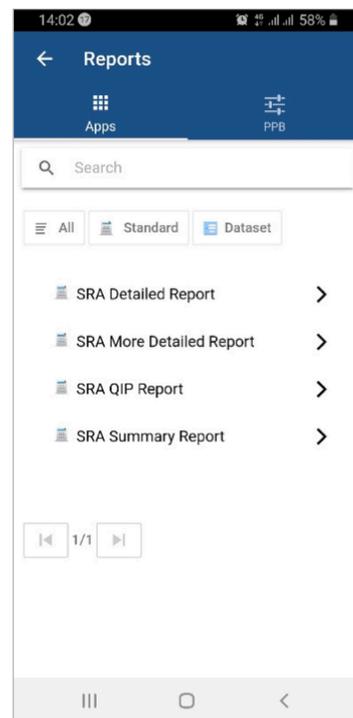
Institutionalization of CQI Initiatives

NATIONAL QI MATERIALS

TSSP guided MoHCDGEC in strengthening quality in PHIs. The project supported the review of the National TB and Leprosy Programme Manual²¹ to ensure that it incorporated activities for CQI.

TSSP facilitated institutionalization of CQI and data use initiatives for HIV care and treatment services, including PMTCT. TSSP participated in the National AIDS Control Program's PMTCT stakeholders' meetings that reviewed national guidelines on HIV/AIDS services and cofacilitated dissemination of QI training materials and initiatives for PMTCT.

Figure 9. Screenshot of SRA Tool mobile app



TSSP worked with MoHCDGEC to adapt and modernize national CQI training materials to the e-CPD framework by holding meetings with the MoHCDGEC HRH and PHI QA teams to review and validate the CQI training materials under the coordination of the TSSP HRH program stream. Materials were adapted from existing national CQI training materials and reorganized into the e-CPD format. These materials will be deployed to the e-CPD framework as part of respective e-learning courses.

TANZANIA QUALITY IMPROVEMENT STRATEGIC FRAMEWORK

TSSP gathered input from MoHCDGEC, PO-RALG, CDC, and PHIs on finalizing the Tanzania Quality Improvement Strategic Framework,²² including consultative meetings with their representatives to reach consensus and ensure that their comments were incorporated into the final strategic framework. TSSP provided the final strategic framework to MoHCDGEC leadership for final review and approval. The MoHCDGEC is planning to finalize the strategic framework before the end of 2021 after completing the assessment that is currently underway in five regions (Singida, Shinyanga, Mtwara, Kilimanjaro, and Songwe).

“TSSP’s collaboration with the Government of Tanzania helped ensure that the Star Rating Assessment is a priority and position it as a promising initiative to motivate change at the health facility levels. An MoHCDGEC-led approach will enhance national ownership and commitment for monitoring interventions to address the HIV epidemic.”

—SALLI MWANASALLI, DDS,
TSSP SENIOR TECHNICAL ADVISOR, QUALITY ASSURANCE AND IMPROVEMENT

OTHER AREAS OF TECHNICAL ASSISTANCE

DREAMS Activity Implementation

From 2016 to 2017, TSSP provided operational support to strengthen the Tanzania Commission for AIDS in their work to reduce HIV infections among adolescent girls and young women as recipients of PEPFAR funding to implement Determined, Resilient, Empowered, AIDS-free, Mentored, and Safe (DREAMS) activities. TSSP teamed with Tanzania Commission for AIDS staff to increase engagement of PEPFAR IPs in DREAMS activities, improve knowledge of district health care providers on basic data management, and improve quality, timeliness, and completeness of the program data submitted by the districts. TSSP coordinated venues and payments for DREAMS supportive supervision in three implementing regions (Dar es Salaam, Mbeya, and Shinyanga) as well as M&E training for community implementers on basic data management, reporting skills, and a data quality audit.

Pfizer Global Health Fellows

Global Health Fellows is a Pfizer international corporate skills-based volunteer program that places highly qualified Pfizer staff in short-term, three–six-month fellowships with international development organizations to help bring about meaningful and systematic improvements in health service delivery for people with the greatest need. MSH was selected to host Global Health Fellows in three consecutive years (2018–2020). The fellows were assigned to TSSP, providing the opportunity to leverage the investment made by the CDC in the project. Four Pfizer fellows—two in 2018 and two in 2019—made strong contributions to TSSP's work; however, the program was paused in 2020 due to the COVID-19 pandemic. Each year, one fellow was assigned to the CLDS workstream, and the other was assigned to the HRH workstream. The fellows' accomplishments in CLDS included supporting the development of the client registry concept note, landscape analysis, EMR training and material development, infrastructure testing, M&E planning, and data analysis. Fellows' accomplishments in HRH included supporting digital usage and internet penetration surveys among HCWs, development of promotional and training materials for the Open Performance Review and Appraisal System, and development of a digital strategy playbook and CPD courses associated with task sharing.



SUSTAINING RESULTS

LEADERSHIP DEVELOPMENT AND OWNERSHIP

TSSP Internship Program

TSSP and CDC recognized the benefits that could be derived from an internship attachment program, particularly in the CLDS technical stream. Therefore, the project, in collaboration with CDC, developed an internship program to provide opportunities for career development and foster the pipeline of qualified ICT professionals in the health sector. In 2019, the internship program was initiated as a learning program to help emerging ICT professionals develop the skills and capacity needed to support the health sector in Tanzania. The program was offered to candidates who were out of school, on sabbatical, or wanting to offer services as a form of community service.

Six interns made notable achievements in rolling out components of the THEA, particularly the AfyaCare EMR system and improvements in HRH recruitment and retention. The interns developed skills that are much needed by the health sector, such as preparing system rollout plans, documenting user requirements, developing HIS using approved standards like HL7, and providing user support during mission-critical situations. Many health sector stakeholders expressed appreciation for the interns' contributions and observed the value derived from the program. Following their internships, all six interns were hired by GOT, nongovernmental organizations, and private companies working in the health sector.

National Ownership and Project Sustainability

TSSP initiated its technical assistance with a collaborative and engaging approach to ensure that local stakeholders guided the efforts, were involved in key decisions, and developed ownership of project activities to ensure sustainability of the work. This also strengthened the foundational partnership between GOT (MoHCDGEC, PO-RALG, PHIs) and stakeholders.

In the final year of the project, TSSP worked to complete initiatives, transfer capacities, and share information so that MoHCDGEC can continue to strengthen its health system and reduce the burden of HIV. In support of ongoing programs, TSSP transferred capacities for CLDS, HMIS, HRH, and CQI streams to MoHCDGEC and other stakeholders. Because MoHCDGEC and other stakeholders were involved collaboratively in the work from the start, they have ownership over the work, which will help ensure project sustainability.

RESILIENT SYSTEMS AND ALTERNATE DELIVERY

The COVID-19 pandemic has profoundly impacted global health programs. TSSP was able to successfully pivot to alternative means of delivering technical assistance. The team adopted virtual strategies for implementation in compliance with CDC requirements and for the global trend to utilize virtual strategies more broadly for health and resource efficiency. TSSP focused on developing e-learning materials for training users on the new cross-cutting dashboards, upcoming SRAs, and deployment of task-sharing training modules by the Centre for Distance Education. Some of these approaches will continue to be sustained by the country because of the lower costs of e-learning platforms over in-person training. The investments made in digital systems proved to be essential during the pandemic and will support systems in being more resilient in the face of other emergencies and epidemics.



KEY LESSONS LEARNED & RECOMMENDATIONS

KEY LESSONS LEARNED & RECOMMENDATIONS

During the project, the four work streams acted together in a collaborative approach to strengthen the health care system in Tanzania.

Implementing EMR at the Client Level

- During the AfyaCare EMR system development and implementation, it became evident that standardizing the steps comprising hospital patient case management among health facilities is important for optimal system use. In addition, stakeholders must share a strong vision, backed by sustainable use cases, prior to development. And EMR system implementation is a resource-intensive undertaking. So, where resources are limited, the system should be implemented using an iterative approach. This relies on an agile project management methodology and modular implementation to achieve value early. (This modular approach implements one or two sub-applications to support key health service areas, brings them to full implementation, and then implements additional sub-applications or systems in other facilities.)
- Because of the need to secure patient identification information and privacy, it is critical to have a fully engaged process with the country's identification authorities and stakeholders and to obtain a formal approval from a government mandated body, i.e., e-Government Authority, to ensure success of the client registry system.
- It is important to first establish country health-information exchange standards and health enterprise architecture in order to obtain efficiency in HIS/CLDS investment and avoid building unsustainable systems, rebuilding systems before they have reached the production stage, or spending more resources on integrating systems. This became evident while observing development trends of systems, such as Tanzania's health information mediator and DHIS2.

Strengthening HMIS and M&E

The development and publication of DHPs and RHPs as tools for facilitating data use for decision making has proven to be effective in local government councils where, in the past, most of the data collected was only submitted to the central government to support planning.

The births and deaths data collected by Civil Registration and Vital Statistics Systems (CRVS) through the community process differs from data collected through health facilities. This poses a big challenge on CRVS data quality. It is critical that key agencies and stakeholders be involved to harmonize tools and processes used to collect the data and process it for various programs reporting to address inconsistencies.

Motivating Changes at Health Facility Level

TSSP's collaboration with GOT helped ensure that SRA is a priority and positioned it as a promising initiative to motivate change at the health-facility level. An MoHCDGEC-led approach will enhance national ownership and commitment for monitoring interventions to address the HIV epidemic.

TSSP learned during review of the SRAs that, because the assessment was paper-based, some health facilities did not always submit the most recent version of the form, instead using a previous year's questionnaire with outdated fields. So TSSP developed the new SRA Tool as an offline app, which reduces the need for printing outdated assessment questionnaires and enables quality standards to be revised and updated more easily.

The SRA Tool should be reviewed following the nationwide assessments to ensure that indicators align with health priorities and accurately assess quality of health facilities.

Addressing HRH and Leadership Challenges to Provide Essential Health Care Services

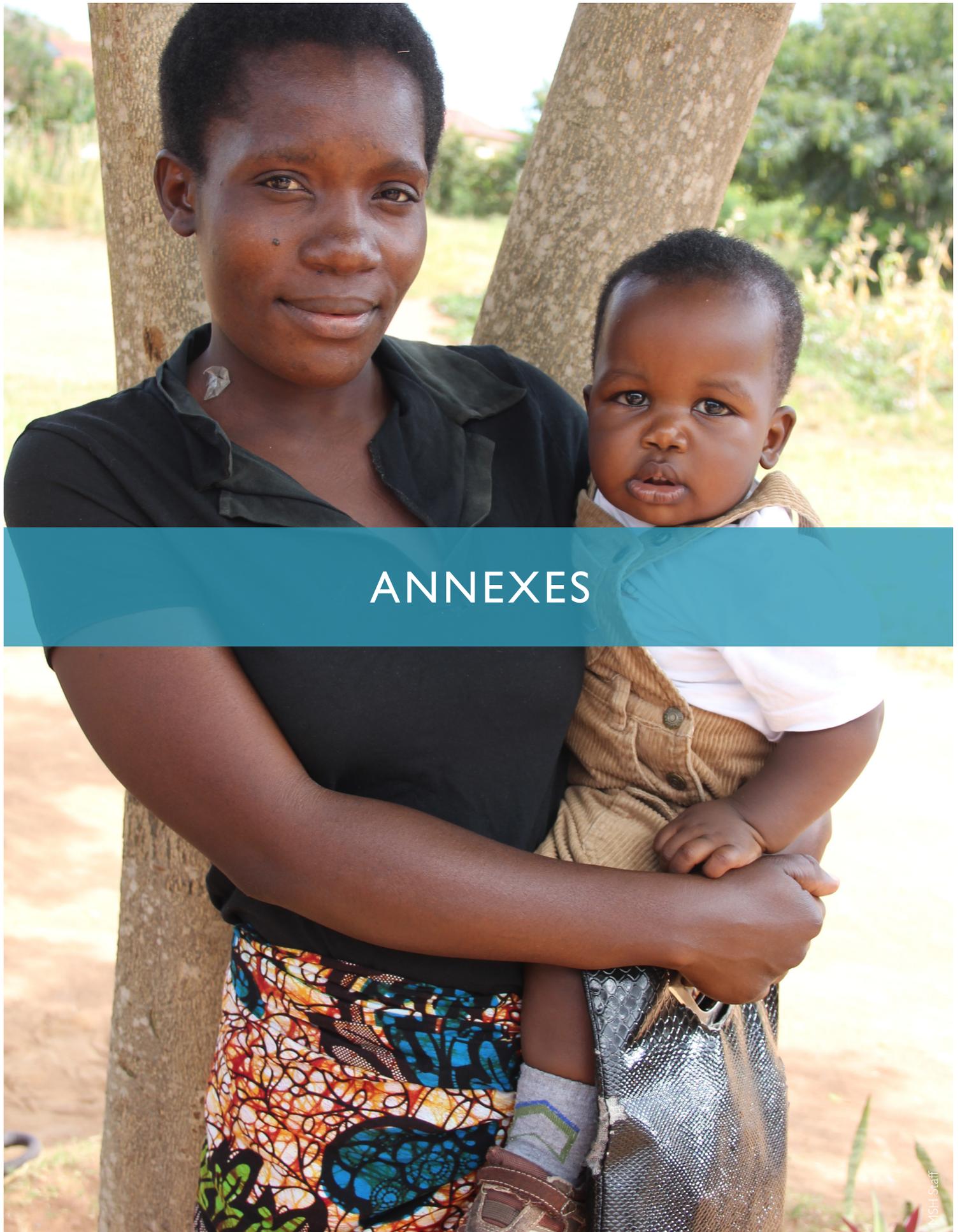
Health facilities are understaffed, HCWs are often stretched beyond their capacity, and adding tasks to their work may lead to other tasks being dropped. Additionally, staffing in rural areas remains difficult; many HCWs prefer urban areas.

To help ensure that patients receive consistent, quality care, recruitment systems should be used to improve retention and productivity of health care providers, and task-sharing initiatives should be linked with health-financing interventions to increase motivation and accountability of HCWs. For example, we have seen that WHO's Workload Indicators of Staffing Need Tool can be useful to assess facility-specific staffing needs, whereas the WAO Tool has proven it can help ensure that staffing decisions are made using evidence-based strategies, so there is a sustainable recruitment, deployment, and retention of trained health workers in health facilities. Task-sharing initiatives combined with non-financial incentives, like training in additional skills, would motivate HCWs, but also would increase service availability of HIV/AIDS care, better delivering on UNAIDS' goals.

Beyond task-sharing initiatives, e-learning opportunities offer greater access for HCWs to learn skills that can expand their roles in health care facilities. Transforming the traditional in-person learning environment, which leverages group discussion to help participants learn key concepts, into standardized virtual modules requires incorporating different ways of learning, such as multimedia, interactive content, and check-in questions. The steep learning curve observed for HCWs to use the e-learning platform will require motivating HCWs to complete the online modules. We also recommend assessing how to bring down the learning curve by making the platform more intuitive.

Effective leadership at all levels will be a vital part of the future success of reducing the vacancy rate of HCWs in Tanzania. Supervisors must ensure that HCWs are adequately implementing tasks after training and certification to ensure that patients receive quality care, as well as reinforce to HCWs how important their efforts are in helping patients and to provide appropriate, constructive feedback. Facility leadership must also ensure appropriate task-sharing implementation and leadership training for both supervisors and health care facility leaders that could help improve results.

HRH is the backbone of the health care system. Even if you have good equipment, good diagnostic services, medicine, and drugs, without the staffing capacity to provide these services, it will fail. Additional investment in HRH training, hiring, and retention would expand the availability and use of quality HIV/AIDS services by the citizens of Tanzania.



ANNEXES

I. EVALUATION AND PERFORMANCE MEASUREMENT PLAN FINAL REPORT

Results for All Project Years

In 2017, TSSP established the project evaluation and performance measurement plan (EPMP) to monitor, assess, evaluate, and report on the overall performance of the project in close collaboration with the CDC Tanzania staff. The EPMP was adjusted periodically to ensure its alignment with the PEPFAR and CDC cooperative agreement and any other relevant CDC reporting mechanisms. The EPMP was revised in 2020 to emphasize visibility of service delivery indicators for the project, while maintaining key project performance indicators.

The EPMP is structured around four program areas: CLDS, HMIS, HRH, and CQI, with 28 indicators as depicted in table A.1. Targets were set for 27 indicators in year 4 (Y4) and 24 indicators in year 5 (Y5). No target was set for Indicator 2.2.2 Number of HIV data errors reported, which was captured by the validation tool in DHIS2 and disaggregated by forms (HTC, care and treatment, TB/HIV, PMTCT, STI, HBC) in Y4. Despite the negative impact of COVID-19, the project managed to maintain good performance overall. Great progress was observed on indicator 2.2.2 where the number of errors captured decreased by over 58% from April 2020 to June 2021. Out of the 27 indicators with set project targets in Y4, the following 3 indicators were no longer applicable in Y5: 1.4.1 HIS sustainability framework and plan developed and approved by MoHCDGEC leadership; 2.1.1 Monitoring and Evaluation Strengthening Initiative (MESI) strategy signed by MoHCDGEC leadership; and 4.1.1 HIV and other disease-specific QI requirements added in revised SRA Tool. Of the 22 remaining indicators, some of the indicators achieved the target and others exceeded the target; 16 indicators achieved between 80% to 196% of their respective targets, and 12 achieved 98% to 196% of the Y4 target. In PY5, 20 indicators were set with EOP targets, and 12 of them achieved between 80% and 140% of the end of year project (EOP) target.

In reporting against the EPMP, it must be noted that TSSP was an above site, technical assistance mechanism and, as such, several IPs, MoHCDGEC, and other stakeholders contributed to the results described and many reported against the same indicator(s).

Table A1. Performance monitoring plan indicator performance against EOP targets

| Tanzania TSSP indicators | Reporting frequency | Quarter | | | | | Target | | | |
|---|---------------------|--------------|--------------|--------------|--------------|--------------|-----------|---------------|-----------|---------------|
| | | Apr-Jun 2020 | Jul-Sep 2020 | Oct-Dec 2020 | Jan-Mar 2020 | Apr-Jun 2020 | Y4 Target | Y4 target met | Y5 Target | Y5 target met |
| 1.1.1 Percentage of HIV clients currently on treatment (TX_CURR) supported by electronic CLDS, including CTC2/GoTHOMIS in PEPFAR sites | Quarterly | 96% | 96% | 94% | 96% | 94% | 96% | 98% | 98% | 96% |
| 1.1.2 Number of public health facilities using GoTHOMIS/EM-R/CTC2 system | Quarterly | 2,629 | 2,629 | 2,629 | 3,004 | 3,159 | 3,000 | 88% | 3,200 | 99% |
| 1.1.3 Percentage of HTS clients who tested HIV positive supported by electronic CLDS, including CTC2/GoTHOMIS | Quarterly | 0 | 3.2% | 3.2% | 3.2% | 3.2% | 2% | 160% | 15% | 21% |
| 1.2.1 Percentage of HIV clients currently on (TX_CURR) linked to the client registry | Annual | NA | 0% | NA | NA | 0% | 30% | 0% | 50% | 0% |
| 1.3.1 Percentage of ART patients screened for TB supported by shared health record | Annual | NA | 0% | NA | NA | 0% | 20% | 0% | 40% | 0% |
| 1.4.1 HIS sustainability framework and plan developed and approved by MoHCDGEC leadership | Quarterly | I | 0 | I | NA | NA | 100% | 100% | NA | NA |
| 1.4.2 Score of the sustainability index dashboard (strategic information performance data) | Annual | NA | 5.99 | NA | NA | 5.99 | 6.98 | 86% | 6.99 | 86% |
| 2.1.1 MESI strategy signed by MoHCDGEC leadership | Annual | NA | I | NA | NA | NA | 100% | 100% | NA | NA |
| 2.1.2 Proportion of MoHCDGEC partners reporting implementation of MESI | Semi-annual | 0 | 0 | 0 | 0 | 0 | 30% | 0% | 60% | 0% |
| 2.2.1 Average number of DQAs focusing on HIV data captured in DHIS2 per PEPFAR scale-up facility disaggregated by facility level, IP | Quarterly | I | I | I | I | I | 100% | 100% | 100% | 100% |
| 2.2.2 Number of HIV data errors report captured by validation tool in DHIS2 disaggregated by forms (HTC, care and treatment, TB/HIV, PMTCT, STI, HBC) | Quarterly | 751 | 609 | 577 | 511 | 313 | NA | NA | NA | NA |
| 2.2.3 Percentage of facilities submitting HIV forms in DHIS2 on time disaggregated by form: | | | | | | | | | | |
| HTC | Quarterly | 59% | 58% | 59% | 61% | 62% | 90% | 65% | 90% | 67% |
| Care and treatment | | 95% | 93% | 94% | 93% | 95% | 95% | 98% | 95% | 99% |
| PMTCT | | 63% | 62% | 63% | 58% | 56% | 90% | 70% | 90% | 65% |
| STI | | 92% | 93% | 92% | 91% | 94% | 90% | 103% | 90% | 102% |
| CHBC | | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| VMMC | | 56% | 55% | 59% | 62% | 68% | 80% | 70% | 85% | 74% |
| Average | | NA | NA | NA | NA | NA | NA | 81% | NA | 82% |

Table A1. Performance monitoring plan indicator performance against EOP targets

| (continued) Tanzania TSSP indicators | Reporting frequency | Quarter | | | | | Target | | | |
|---|---------------------|--------------|--------------|--------------|--------------|--------------|-----------|---------------|-----------|--------------------|
| | | Apr-Jun 2020 | Jul-Sep 2020 | Oct-Dec 2020 | Jan-Mar 2020 | Apr-Jun 2020 | Y4 Target | Y4 target met | Y5 Target | Y5 target met |
| 2.2.4 Percentage of facilities submitting complete data to DHIS disaggregated by form: | | | | | | | | | | |
| HTC | Quarterly | 60% | 61% | 62% | 63% | 64% | 98% | 61% | 98% | 64% |
| Care and treatment | | 98% | 97% | 98% | 97% | 97% | 98% | 99% | 98% | 99% |
| PMTCT | | 69% | 70% | 68% | 68% | 63% | 98% | 71% | 98% | 68% |
| STI | | 94% | 94% | 94% | 93% | 95% | 95% | 99% | 95% | 99% |
| CHBC | | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| VMMC | | 58% | 58% | 62% | 66% | 71% | 80% | 72% | 85% | 78% |
| Average | | NA | NA | NA | NA | NA | NA | 81% | NA | 82% |
| 2.3.1 Percentage of councils having DHPs with a section on HIV posted in the MoHCDGEC web portal | Quarterly | 0% | 98% | 98% | 98% | 100% | 60% | 82% | 90% | 110% |
| 2.3.2 Percentage of regions having RHP with a section on HIV posted in the MoHCDGEC web portal | Quarterly | 0% | 100% | 100% | 100% | 100% | 60% | 100% | 100% | 100% |
| 2.3.3 Proportion of councils accessing the national dashboard at least quarterly | Quarterly | 0% | 98% | 98% | 98% | 98% | 50% | 196% | 70% | 140% ²³ |
| 3.1.1 Percentage of HCWs practicing task sharing who are enrolled in a professional development certification program on HIV service delivery | Annual | NA | 6% | NA | NA | 14% | 10% | 60% | 25% | 56% |
| 3.1.2 Number MoHCDGEC policies, plans, tools, and strategies with integrated task sharing including NIMART components with a focus on HIV tasks | Annual | NA | 7 | NA | NA | 6.6 | 7 | 100% | 11 | 60% |
| 3.1.3 Number of CPD modules on task sharing for different categories of health staff | Quarterly | 11 | 11 | 11 | 11 | 11 | 11 | 100% | 11 | 100% |
| 3.1.4 Percentage of nurses initiating ART | Quarterly | 29% | 29% | 29% | 29% | 31% | 50% | 10% | 60% | 50% |
| 3.2.1 HRH vacancy rate in PEPFAR scaleup councils | Annual | NA | 51% | NA | NA | 51% | 48% | 106% | 46% | 111% |
| 3.3.2 HRH retention rate in PEPFAR scale-up councils | Annual | NA | NA | NA | NA | NA | 82% | NA | 85% | NA |
| 4.1.1 HIV and other disease specific QI requirements added in revised SRA Tool | Annual | NA | 100% | NA | NA | NA | 100% | 100% | NA | NA |
| 4.1.2 Percentage of health facilities assessed with the updated SRA Tool and developed their quality improvement plans | Annual | NA | NA | NA | NA | NA | 80% | NA | 80% | NA |
| 4.1.3 Percentage of SRA results available on DHIS2 | Annual | NA | NA | NA | NA | NA | 90% | NA | 90% | NA |
| 4.2.1 Percentage of health facilities implementing quality improvement plans | Quarterly | NA | NA | NA | NA | NA | 10% | NA | 30% | NA |
| 4.2.2 Number of documented QI bestpractice highlights for HIV/AIDS and/or resource allocation | Semi-annual | 4 | 4 | 6 | 6 | 6 | 4 | 100% | 6 | 100% |
| 4.2.3 Percentage of facilities rated 3 or more stars based on the revised star rating system | Annual | NA | NA | NA | NA | NA | 60% | NA | 80% | NA |

2. LIST OF PUBLICATIONS

msh.org/projects/tssp

- Eliminating HIV and AIDS
- Supporting the Development of a National Health Cross-Cutting Dashboard in Tanzania
- Finalizing a Health Workforce Allocation Tool in Tanzania
- Developing a Health Services M&E Implementation Plan in Tanzania
- A Review of the National Data Quality Assessment (DQA) Strategy in Tanzania
- Strengthening HIV Data and Use in Tanzania via a National Health Information Dashboard
- Introducing District Health Data Profiles in Tanzania
- Implementing a Task Sharing Plan for Health Workers in Tanzania
- Technical Support Services Project Fact Sheet
- Developing a Health Care Workforce Requirement and Recruitment Plan in Tanzania
- Developing Quality Indicators for HIV Services and Treatment in Tanzania
- Developing an Electronic Medical Record System in Tanzania
- A National Health Client Registry in Tanzania
- Developing a National Health Sector Client Registry in Tanzania
- The Comparative Recruitment of Medical Doctors Through the Health Workforce Allocation Optimization (WAO) Tool

ENDNOTES

- 1 UNAIDS Data 2017, which presents data for 2016, was the first year this report included data on knowledge of HIV status and ART. It did not include data for viral suppression.
- 2 UNAIDS Data 2020
- 3 <https://www.state.gov/country-operational-plans/>
- 4 MoHCDGEC. Digital Health Strategy July 2019-June 2024.
- 5 GOT. Tanzania Digital Health Investment Road Map 2017-2023.
- 6 MoHCDGEC. Tanzania Health Enterprise Architecture. September 2020, version 1.
- 7 Ministry of Health and Social Welfare. Tanzania National e-Health Strategy 2013-2018. May 2013.
- 8 Adapted from Tanzania's Health Information Mediator Architecture, 2021
- 9 MSH. EMR Phase I Learning exercise, Mirembe Specialized Hospital. September 2019.
- 10 GOT. Guidelines and Standards for Integrated Health Facility Electronic Management Systems. January 2016.
- 11 Tanzania Development Vision 2025.
- 12 Example from "2.1 Dashboard and control bar" in DHIS2 Crosscutting Dashboard User Manual, MoHCDGEC, 2020
- 13 UNAIDS Data 2020
- 14 MoHCDGEC. National Human Resources for Health Strategy for 2020-2025. November 2020.
- 15 MoHCDGEC. Health Sector Task Sharing Policy Guidelines: Implementation Plan. 2017.
- 16 Tanzania Country Operational Plan: COP 2019: Strategic Direction Summary. May 2019.
- 17 National AIDS Control Program. National Guidelines for the Management of HIV and AIDS. 4th ed.
- 18 MoHCDGEC. National Supportive Supervision Guidelines for Quality Health Services. January 2017.
- 19 TSSP. Finalizing a Health Workforce Allocation Tool in Tanzania. September 2020.
- 20 TSSP. Comparative Recruitment of Medical Doctors through the Health Workforce Allocation Optimization (WAO) Tool. July 2021.
- 21 National Tuberculosis and Leprosy Programme. Manual for Management of Tuberculosis and Leprosy in Tanzania. 7th ed. April 2020.
- 22 MoHCDGEC. Tanzania Quality Improvement Strategic Framework in Health Care 2020-2025.
- 23 The targets set for Y4 and Y5 were 50% (92) and 70% (129) of councils, respectively, able to access the cross-cutting dashboards. Through collaboration with other partners, including WHO and PATH, MSH exceeded the target, and 184 councils (196%) in PY4 and, again, 184 councils (140%) were able to access and use the dashboards through the national health portal.



KAMPALA

UGANDA

KENYA

NAIROBI

Bukoba

Lake Victoria

Musoma

RWANDA

KIGALI

Mwanza

Kilimanjaro

BURUNDI

Nyantakara

Serengeti

MBURU

Shinyanga

Moshi

Kasulu

Nzega

Wembere

Kigoma

Singida

Tanga

TANZANIA

Lake Tanganyika

DODOMA

Zar

Za

Da

Morogoro

Kipili

Lake Rukwa

Great Ruaha

Iringa

Rufiji

Sao Hill

Mohoro

Mbeya

Njombe

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Nyamtumbo

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